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# Leopold Eidlitz: Becoming an American architect

Kenneth Franklin Jacobs
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Eidlitz approved of the emerging convergence of engineering and architecture, but he also believed in the socially redemptive role for art advanced by German Idealist philosophers. He considered architecture to be an art and was certain that science would assure its progress by eliminating the arbitrariness associated with indefinable and unsupportable notions of "taste." In this way, art would be reconciled with technology and assure its progress. Emulation of or rupture with the past would not be necessary for architecture because beautiful forms would be valued for the knowledge they imparted rather than the precedent they conveyed.

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LEOPOLD EIDLITZ: BECOMING AN AMERICAN ARCHITECT

Kenneth Franklin Jacobs

A DISSERTATION

in

Architecture

Presented to the Faculties of the University of Pennsylvania

in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

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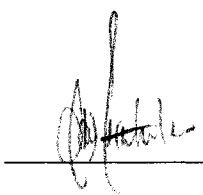

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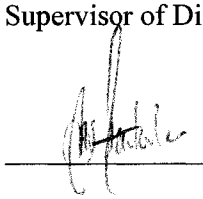

Graduate Group Chairperson

DEDICATION

For

George who started it,

Molly and Alex who put up with it,

and

Evelyn who inspired it.

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Thanks to my Dissertation Committee (David Leatherbarrow, David Brownlee, and Peter McCleary) for scholarship, persistence, and patience.

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ABSTRACT

LEOPOLD EIDLITZ: BECOMING AN AMERICAN ARCHITECT

Kenneth Franklin Jacobs

David Leatherbarrow, Supervisor

Leopold Eidlitz (1823-1908) was born in Prague and trained in Vienna as a land manager, a position in which he would have worked for the Austrian government as a building inspector or designer of small, rural structures. He came to the United States seeking work as an architect in 1843. Arriving alone, he quickly settled into American society, and within three years moved from a job with Richard Upjohn, the English-born designer of Trinity Church, Wall Street, into his own practice. He subsequently married into an old New England family and began a career in which he worked with the most prominent members of the New York City and State political and architectural communities Although Eidlitz's architectural ideas were progressive, they were not unique for their time. He held that a building's massing should emerge from its plan, that materials should be used in a rational manner, and that ornament should be used to enhance structure, materials, and function. For these reasons, some have considered him an organicist or proto-functionalist. However, his philosophical and architectural concerns were more complex.

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# PREFACE

Leopold Eidlitz (1823-1908) was born in Prague and trained in Vienna as a land manager, a position in which he would have worked for the Austrian government as a building inspector or designer of small, rural structures. He came to the United States seeking work as an architect in 1843. Arriving alone, he quickly settled into American society, and within three years moved from a job with Richard Upjohn, the English-born designer of Trinity Church, Wall Street, into his own practice. He subsequently married into an old New England family and began a career in which he worked with the most prominent members of the New York City and State political and architectural communities. Eidlitz simultaneously acclimated himself to American culture and advanced his career by speaking at public and private meetings and publishing his papers and talks in art, architecture, and real estate journals of local, regional, and national significance. These pieces were among the first examples of architectural criticism and theory published in the United States, and they exerted a strong and widely acknowledged influence on his contemporaries that has only recently begun to be re-examined.

Although his architectural ideas were progressive, they were not unique for their time. Eidlitz held that a building's massing should emerge from its plan, that materials should be used in a rational manner, and that ornament should be used to enhance structure, materials, and function. For these reasons, some have considered him an organicist or proto-functionalist. However, his philosophical and architectural concerns were more complex. Eidlitz approved of the emerging convergence of engineering and architecture, but he also believed in the socially redemptive role for art advanced by German Idealist philosophers. He considered architecture to be an art and was certain that science would assure its progress by eliminating the arbitrariness associated with indefinable and unsupportable notions of "taste." In this way, art would be reconciled with technology and assure its progress. Emulation of or rupture with the past would not be necessary

for architecture because beautiful forms would be valued for the knowledge they imparted rather than the precedent they conveyed.

The pragmatic and democratic themes implicit in these ideas made them particularly attractive to the shapers of American intellectual, architectural, and educational life during the last half of the nineteenth century, and contributed to Eidlitz's stature here and abroad. By the beginning of the twentieth century, however, the situation had changed. In a letter to Peter B. Wight dated 8 October 1902, Russell Sturgis, Jr., a former employee of Eidlitz and a respected architectural writer, expressed a desire to write a photographically illustrated article on the "disappearing monuments of architecture."[1] It was to include work by Wight, Frederick Diaper, Leopold Eidlitz, and "such other buildings in New York and other cities as we might think of."[2] Sturgis realized that photographs would be difficult to obtain because many of the buildings he wished to include had been demolished before photographic processes became reliable and widely available.

> As for Eidlitz, there again I am unfortunate. I fully expected to find among my photographs views of the American Exchange Bank and of the Continental Bank, which have now disappeared altogether, but they are not there. I am prepared to give a good price for such photographs if I could get them. The Tabernacle Church is not important, I think, but those banks are really a great loss to us. Besides the Academy of Music (Brooklyn) and Temple Emanuel there is the bank at the corner of Second Street or Third Street and the Bowery, and of course his work on the Capitol at Albany, of which much remains, although the Assembly Chamber has been, very properly, altered out of all recognition. Montgomery Schuyler knows Eidlitz well and admires him greatly, and I have imagined intended to write an article about his work. He is also a constant contributor to the 'Architectural Record,' and I fancy that if [Harry W.] Desmond [the Vice-President and General Manager of the publication]

[1] Peter B. Wight, "Reminiscences of Russell Sturgis," *Architectural Record*, vol. 26, no. 2 (August 1909), p. 129.

[2] Wight, "Reminiscences of Russell Sturgis," p. 129.

> thought there was room for such a paper as I suppose, Schuyler would have written it long ago.[3]

Schuyler's "paper," a three-part memorial, was published during the final months of 1908, the year in which Eidlitz died.[4] Two years after it appeared, Schuyler wrote to Glen Brown, then, the Secretary of the American Institute of Architects, to offer the organization a photograph of Eidlitz, "the 'dean' of his guild in New York, and probably the United States."[5] The letter was prompted by correspondence from Charles Babcock, a former associate of Eidlitz and, at the time, a professor at Cornell University, who noted that he remained the only surviving original member of the Institute after Eidlitz died. Brown declined Schuyler's offer on grounds that he had published photographs of the four oldest living members, including Babcock and Eidlitz, in the Institute's journal several years earlier.[6]

This lack of interest reflected the drastic decline in Eidlitz's importance within the American architectural community. The most obvious reason was his disappearance from public view. He had not built anything of substance for the last twenty years of his life, and most of his work was demolished before he died. Although he had once been a prolific speaker and writer, his last public appearance was in 1896, his last professional paper was presented and published in England, and his final book was on a topic that seemed to bear little relationship to architecture.[7]

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[3] Wight, "Reminiscences of Russell Sturgis," p. 129.

[4] Montgomery Schuyler, "A Great American Architect: Leopold Eidlitz I. Ecclesiastical and Domestic Work," *Architectural Record*, vol. 24, no. 3 (September 1908), pp. 164-79; "The Work of Leopold Eidlitz, II: Commercial and Public," *Architectural Record*, vol. 24, no. 4 (October 1908), pp. 277-92; "The Work of Leopold Eidlitz, III: The Capitol at Albany, New York," *Architectural Record*, vol. 24, no. 5 (November 1908), pp. 365-78.

[5] Montgomery Schuyler, "Leopold Eidlitz I," p. 164.

[6] Letter from Glenn Brown to Montgomery Schuyler dated 22 July 1910. The photographs appeared in "Founders of the Institute Now Living," *American Institute of Architects Quarterly Bulletin*, vol. 8, no. 1 (April 1907), p. 22 *et seq.*

[7] "An Exhorter's Work Criticized," *New York Times*, 17 December 1896, p. 2; Leopold Eidlitz, "The Educational Training of Architects," *Journal of the Royal Institute of British Architects*, vol. 4 (November 1896-October 1897), pp. 213-17, paper read at the 1 May 1897 General Meeting of the Royal Institute of

The situation was compounded when, one month after Eidlitz died, Talbot Hamlin, the newly installed "Executive Head" of the School of Architecture at Columbia University, published a revue of trends in American architecture and architectural education. It neglected to mention Eidlitz, and dismissed most of the work built during the period of his greatest influence.

> During the Civil War, and the ten years preceding it and following it, our architecture was floundering in the lowest depths of tastelessness and artistic poverty. There were few educated architects; the popular standards were almost grotesquely inartistic, and really fine architecture was nearly as impossible to execute as unlikely to be appreciated. A few brave souls were, however, striving, in the face of these conditions, to raise the standards of public taste and of their profession, by the quality of their own work as well as by their training of young men in their offices, whom they fired with the enthusiasm of their own zeal. Three names stand foremost in this roll of honor: R. M. Hunt, H. H. Richardson and W. R. Ware; and all three drew from Paris a large part of their inspiration; ...Until the beginning of the great art revival which dates from 1876, these three were like "voices crying in the wilderness," but in the following years their labors began to bear fruit, and they became the acknowledged leaders of the movement.[8]

Eidlitz's reputation also lost favor to the aesthetic and economic force of Richardson's version of the Romanesque and Hunt's version of the Beaux Arts. Both were able to meet the demands for increasingly larger religious, governmental, and commercial buildings that accompanied the rapid economic growth of the mid-nineteenth century better than Eidlitz's reasoned, but less immediately appealing, responses.

Loss of interest in Eidlitz can also be attributed to the pure density of his writing. His most important book, *The Nature and Function of Art, More Especially of Architecture*, published at the beginning of a long period of professional setbacks and lack of new work, is difficult,

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British Architects; *On Light, An Analysis of the Emersions of Jupiter's Satellite I* (New York: Knickerbocker Press, 1899).

[8] Talbot Hamlin, "The Influence of the Ecole des Beaux-Arts On Our Architectural Education," *Architectural Record*, vol. 23 (April 1908), pp. 241-42.

rambling, and filled with references that are predominantly European and frequently obscure. No matter how insightful or useful the book's ideas were, its cultural and temporal specificity made it increasingly unintelligible and irrelevant to most of his readers. In the decades after Eidlitz died, this problem become exacerbated by American rejection of nearly all things German.

Only Montgomery Schuyler,[9] a New York City writer born the year that Eidlitz arrived in America, retained much interest in him. He described Eidlitz's intentions as

> a rationalization of architectural form in general, that it should express and conform to the mechanical facts of structure; and the works which manifest this purpose manifest also a powerful artistic individuality.[10]

Schuyler learned about architecture and became a part of the architectural circle in New York City through Eidlitz, and his writings about him and his son (also an architect) were widely published. He described Eidlitz as "about the most interesting acquaintance made in the whole course of [my] life,"[11] and his concern for his mentor's reputation remained constant.

Although Schuyler called his memorial series on Eidlitz "A Great American Architect," he began with a reference to the Eidlitz's European roots, and in his criticism, he often took note of its "German" qualities. In his last published article, however, Eidlitz seemed to put the matter of "otherness" to rest. Referring to himself as "an American from America, a man without

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[9] Schuyler (1843-1914) was born in Ithaca, New York. He attended but did not graduate from Hobart College and came to New York City in 1865. He was a journalist for the *New York World* until 1883 when he joined the *New York Times* and remained there until he retired in 1907. Schuyler also served as managing editor of *Harper's Weekly* from 1885 to 1887, worked for Harper & Bros. as an editor and writer from 1887 to 1894 and contributed to the *New York Sun* and several magazines. He was a member of the American Institute of Architects, the National Institute of Arts and Letters, and the Century Club. "Old Member of *Times* Staff Dead," *New York Times*, 17 July 1914, p. 9.

[10] Montgomery Schuyler, "Cyrus L. W. Eidlitz," *Architectural Record*, vol. 5, no. 4 (August 1896), p. 413.

[11] Montgomery Schuyler, "The Work of Leopold Eidlitz, II," p. 277.

traditions or proper respect for antiquity,"[12] he finally took on the role for which he willingly prepared himself.

[12] Leopold Eidlitz, "The Educational Training of Architects. A Rejoinder," *Journal of the Royal Institute of British Architects*, vol. 4 (November 1896-October 1897), p. 464.

# 1. INTRODUCTION

At the time of Leopold Eidlitz's departure to America, German-speaking Europe was more a state of mind than a political or cultural reality. Born in Bohemia, a crown province of the Austrian Empire, Eidlitz dwelled in diverse group of lands whose commonality, other than an official language, was frequently difficult to perceive and whose inhabitants occupied locales that ranged from rural duchies to the imperial city of Vienna.[1] The educational and professional opportunities made available to nearly all of the Empire's subjects due to the considerable needs of its physical and bureaucratic infrastructure were not lost on Eidlitz, and it is unlikely that he could have become an architect as easily elsewhere in Europe. The product of a culture that was overtly hierarchical yet inherently diverse, he initially saw American society in precisely the opposite manner and over the course of his life changed from a cautious critic of that difference to an active supporter.

*The Development of German-speaking Europe*

At the beginning of the nineteenth century, most German-speaking Europeans lived in roughly 300 independent principalities and more than 1,500 semi-sovereign bodies joined together in a loose confederation of secular and ecclesiastical groups that ranged in size and importance from rural villages to powerful nations. While Prussians, Bavarians, Bohemians, Silesians, and other geo-cultural groups shared a common language, their religious beliefs and political allegiances neither permitted nor encouraged them to consider themselves citizens of a single nation. This situation was reflected in the affiliation of the member states that comprised the Heiliges Römisches Reich Deutscher Nation (Holy Roman Empire of the German Nation), the political entity in charge of this complex mix. The Empire was established in 962 when Pope John XII crowned Otto I of Germany "Emperor of the Romans" as a reward for helping him retain possession of the Papal States.

[1] The Austrian Empire lasted until 1866, more than twenty-five years after Eidlitz left Europe for America. The Austro-Hungarian Empire that succeeded it dissolved after World War I.

Although it had little in common with its ancient predecessor, its proponents regarded the new Empire as a restoration and continuation of the Roman Empire. It was presided over by German kings until 1806, a period during which they ruled most of central Europe and Italy; its six largest cities were Vienna (207,000), Berlin (173,000), Hamburg (100,000), Prague (76,000), Breslau (57,000), and Dresden (53,000).[2] The Empire was not, and did not aspire to be a German state, and it excluded the German-speakers in Switzerland, Greater Hungary, and East Prussia, while admitting such non-German speakers as Czechs, Poles Slovenes, Italians, Walloons, and Flemings.[3] While threats from the Ottoman Empire or Louis XIV of France occasionally stimulated cooperation among its members, they were more often occupied with concerns for their own welfare.

Although the Empire was notorious for its inefficiency and political intrigue, the Emperor's value as mediator was recognized, and contemporary critics believed that English, Danish, and Swedish interference caused the most harm to German affairs. After the end of the Seven Years War (1756-63), calls were made for preservation and modernization of the Empire, but the growing imbalance of power among its members made the idea increasingly impractical.[4] The situation was most obvious in Prussia and Austria, the largest of the German-speaking states. In Austria, after a series of military defeats by Prussia and the loss of Silesia during the War of the Austrian Succession (1740-48),[5] Empress Maria Theresa introduced reforms between 1748 and 1755 that increased centralization of governmental power and substantially enlarged the army. Similar policies initiated after the Seven Years War reached a peak during the reign of her son, Joseph II (reg. 1780-90), who, despite his

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[2] David Blackbourn, *The Long Nineteenth Century: A History of Germany, 1780-1918* (New York: Oxford University Press, 1998), p. 33.

[3] Blackbourn, p. 13.

[4] Blackbourn, pp. 17-19.

[5] In 1740, Frederick II of Prussia invaded Austria without declaring war. Prussia quit the war in 1742 without consulting its allies, reentered it in 1744, and quit again in 1745. The resultant treaties allowed him to transfer nearly all of Silesia to Prussia.

position as Emperor, came to oppose the Empire's financial, religious, and political inefficiencies and made German its common official language in 1784.[6]

A similar consolidation of power occurred in Prussia between the middle of the seventeenth century and the death of Frederick II ("the Great") in 1786. Prussia, in the modern sense, came into existence in 1701 when the elector of Brandenburg assumed the title "king in Prussia," a designation that had no precedent in the Holy Roman Empire. Before that event, the term "Prussia" merely referred to a flat, sandy region that bordered the Baltic Sea and was separated from Brandenburg by a part of Poland. The original inhabitants of Prussia, the Borussi, were of Baltic ancestry and were conquered and nearly exterminated during the thirteenth century by the Knights of the Teutonic Order, an event that became increasingly associated with the Germanization of Prussia. In contrast to Austria, Prussia's initial territorial holdings were modest, and expansion was achieved through "judicious marriages, strategic land purchases and – above all in the Frederician period – military conquest."[7] In 1720, Prussia gained its first new territory, the eastern part of Swedish Pomerania, as a result of the Northern War. However, during the next twenty years, Frederick William I used diplomatic means to create a unified state. Although his son Frederick II had won new territory in the War of Austrian Succession, he gained no land from the Seven Years War. Nevertheless, Prussia emerged from it as the chief European military power, its size and population nearly doubling after partitioning Poland in 1772, 1792, and 1795. Prussia did not fare as well toward the end of the rule of Frederick Wilhelm II nor under Frederick Wilhelm III during the French Revolutionary Wars and the wars of Napoleon I (1789-1815). Defeated by France, Prussia withdrew from the anti-French coalition in the Treaty of

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[6] Joseph considered renouncing the title at one point, an action consistent with his desire to strengthen the Austrian position in the German states, areas he referred to as "provinces" of Habsburg lands; Blackbourn, p. 21.

[7] Blackbourn, p. 22.

Basel (1795) and remained neutral until 1806.[8] However, in 1807, Prussia became a virtual dependency of France, losing all of its lands west of the Elbe and most of its share of Poland after its armies were defeated by Napoleon in the battles of Jena and Auerstedt.

The victors met in Vienna 1814-15 after Napoleon's loss and, under the leadership of Austrian Chancellor Fürst Metternich, attempted to restore the pre-war political situation. As part of that attempt, the Congress of Vienna established the Deutscher Bund (German Federation) that consisted of thirty-five sovereign monarchs and four independent cities. Although the Federation was intended to guarantee the external and internal peace and independence of its member states, their only commonality was the Bundestag, a legislative body located in Frankfurt and presided over by the Austrian president. The Bundestag could do little to advance conditions in its member states because it required a unanimous or two-thirds majority vote for most decisions and delegates were strictly bound to instructions issued by their respective governments. Economic development of these predominantly small and economically unviable states was also hindered by extensive border and customs regulations, and in rural areas where eighty percent of the population lived, land ownership by the aristocracy and church and servitude of farmers and peasants remained unchanged. While student associations at German universities and some other groups became increasingly concerned with the disparity between the social and economic possibilities suggested by the idea of a single nation and the reality of living in a multitude of separate states, Metternich's strong conservative influence, backed by Prussia, dominated the Federation until 1848, when revolution swept through Germany and Austria.[9] However, it did not produce a unified German nation, and Austria remained a separate force in German affairs until defeated by Prussia in 1866.

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[8] On March 6, 1806, Francis II, who had previously assumed the title of Emperor of Austria, abdicated as Holy Roman Emperor in response to Napoleonic pressure and declared the Holy Roman Empire dissolved.

[9] David Watkin and Tilman Mellinghoff, *German Architecture and the Classical Ideal* (Cambridge, MA: The MIT Press, 1987), pp. 8-15. At the Congress of Vienna, Prussia gained the entire Rhine province and

*The Development of Bohemia*

Bohemia was a part of the Austrian state and its name ("Böhmen" in German, "Cechy" in Czech) comes from a Celtic people, the Boii. Settled by Slavic Czechs during the fifth or sixth century, it was Christianized in the ninth and ruled by the Přemyslid family until 1306 when Václav III was assassinated and John of Luxembourg was offered the crown four year later. John's son, Charles, was raised in the French Court by the future Pope Clement VI and elected king of Bohemia in 1341 by an assembly of nobles. Supported by the Electors of Germany, he became Holy Roman emperor Charles IV in 1346. Although Bohemia had been a part of the Holy Roman Empire since 1198, Charles was the first emperor to make Prague its capital. He founded Europe's first university there in 1348 and the growing city became a hub of intellectual, artistic, and commercial activity within central Europe. The Luxembourg dynasty ended during the rule of Charles' son, Václav IV (1378-1419), and after a series of disputes over succession, the Jagiellon family assumed power in 1417. Their rule was harsh and ineffective, and they were ousted when Archduke Ferdinand I of Austria established Habsburg control of Bohemia.

Ferdinand did not assume power at an auspicious time. During the early fifteenth century, Bohemia suffered from the effects of the contentious Jagiellon succession and disputes between the Catholics and the followers of Jan Hus (b. 1369), a Prague-born university rector and religious reformer who was burned as a heretic in 1415. Wars between Bohemian Hussites and Roman Catholics in Bohemia and Germany swept the kingdom until agreements made in 1436 reduced the power of the Roman Catholic church and granted limited religious freedom to a moderate branch of the Hussites. A Roman Catholic, Ferdinand pursued moderation in religious affairs, but confrontations culminated in a Protestant revolt against the Habsburgs in 1618. After the Roman Catholics defeated the Bohemian Protestants at the Battle of White Mountain (8 November 1620), Ferdinand I reasserted Habsburg

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Westphalia, the northern half of Saxony, the remainder of Swedish Pomerania, and a large part of western Poland, including Danzig, Pozna, and Gniezno in addition to its recovered territories.

authority over Bohemia, Protestantism was suppressed, and most of the population gradually converted to Roman Catholicism. During this period, Bohemia lost several provinces (the two Lusatias in 1635, Silesia in the mid-eighteenth century), and was absorbed into the Austrian Empire.

Czech nationalism was suppressed during this period and German became the language of instruction in grammar schools and the university as well as for government, culture, and social communication among the nobility and bourgeoisie. Only the lower classes continued to speak Czech and the language became increasingly marginalized. After expelling the Czech aristocracy, the Habsburgs made the city a second imperial capital, but Vienna remained the political, intellectual, and cultural center of the empire and German and foreign art, particularly Italian, was privileged. Serfdom was abolished after Czechs living in Bohemia and Moravia unsuccessfully revolted against the Habsburgs in 1848, and some economic power began to pass from the local aristocracy to the middle classes. Continued Czech agitation for autonomy within the Austrian empire was matched by Slovak opposition to Habsburg rule, and at the end of World War I, the two groups joined in an independent Republic of Czechoslovakia, with Bohemia its westernmost province and industrial center.

*Prague*

Leopold Eidlitz (29 March 1823-22 March 1908),[10] the son of Adolf (d. 1847)[11] and Julia Eidlitz (1800-80), was born in Prague, the main city of the Stredocesky region of Central Bohemia, then a province of the Austrian empire. The surname "Eidlitz" ("Udlice" in Czech) is associated with families whose origins are in several small villages located near Vienna, although it also had a long standing in the city of his birth. Prague straddles a bend in the Vltava ("Moldau" in German) River, and the city's historic center consists of four unique districts: Hradčany, located on the hill above the

[10] The year of Leopold's birth is not entirely certain. His age was given as 54 in the 1880 United States census; this would mean that he was born in 1826. However, all published material states that he was born in 1823.

[11] The year of Adolf's death was mentioned in *Marc Eidlitz & Son, 1854-1917* (New York: 1914).

left bank, Malá Strana (Little Quarter) below it, and Staré Město (Old Town) and Nové Město (New Town), on the right bank. Architecturally and politically, Prague's greatest period extended from the mid-fourteenth century, when it became the seat of the Holy Roman Emperor, to the early eighteenth, when Emperor Joseph II's reorganization of local government in 1784 diminished the independence of the four districts because they were seen as contrary to the centralizing and Germanizing policies of the Austrian government located in Vienna. Joseph's abolition of serfdom in 1783 enabled free movement within the empire, and many former serfs headed for Prague. Although efforts at civic improvement, such as filling in moats, begun in the 1760s were not implemented for nearly twenty-five years, by about 1820, the growth of industry in the outlying areas made the city into a busy commercial center, and it was confronted with urban problems such as increased traffic, housing shortages, and an inadequate water supply.

*Coming to America*

The details of the European lives of Eidlitz and his parents are unknown and he was said to have arrived by himself in America in 1843.[12] A New York City guidebook published shortly thereafter noted that 1,832 ships arrived from foreign ports during that year. Of those, 402 were American, eight were British, and sixteen were from Bremen, the most likely point of embarkation for Eidlitz, with the remainder from Sweden, Hamburg, France, and elsewhere.[13] Leopold was twenty-one years old when he landed, and his younger brother, Marc[us], is said to have arrived three years later.[14] Most biographical accounts claim that Leopold studied land stewardship at the Vienna Polytechnical

[12] Leopold Eidlitz I, p. 164; "Leopold Eidlitz" in *The Public Service of the State of New York. Historical, Statistical, Descriptive, and Biographical. Illustrated with Views and Portraits*, Paul A. Chadbourne, editor-in-chief, Walter Burritt Moore, associate ed. (Boston: James R. Osgood and Company, 1882), vol. 2, p. 77.

[13] *The Great Metropolis: or New York in 1845* (New York: John Doggett, Jr., 1845), p. 68.

[14] Neither arrival is documented in *Passenger and Immigration Lists Index*, P. William Filby and Mary K. Meyer, eds., 31 vols. (Detroit: Gale Research Company, 1981-2002).

Institute,[15] but no documentation has been located to confirm this and many aspects of his American career are similarly obscure. If he left any written records, they not been located, possibly because they were written in German and have not been identified.[16] Because of this, nearly all biographical material is based on two sources: a brief account prepared by his son that appeared as an obituary published by the American Institute of Architects[17] and a three-part series that appeared in *Architectural Record.* This material can be correlated with accounts of his work and personal life using sources such as newspapers and census records.

The reasons for Leopold and Marc's departure from Europe are not known, and several factors may have played a part in their decision. Thomas Čapek, the primary historian of the Bohemians in America, paraphrased an unidentified contemporary writer to the effect that before 1840, no one in Bohemia thought of leaving because of the prosperous conditions that followed the Napoleonic wars. In 1840, however, the country was assaulted by droughts and a failure of the potato crop and emigration from ports located in Hamburg, Le Havre, Antwerp, and Bremen began.[18] Emigration had also become common for young Austrians with technical or scientific training, because the Habsburg

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[15] *The American Art Annual,* vol. 7 (1910), p. 75; "The late Leopold Eidlitz," *Journal of the Royal Institute Of British Architects*, vol. 15, (November 1907-October 1908), pp. 654; Montgomery Schuyler, "A Great American Architect: Leopold Eidlitz I. Ecclesiastical and Domestic Work," p. 164. Kisch claimed that Eidlitz also studied in Bologna; pp. 157-58, an assertion reflected in a passage that appears on p. 25 of *Otto Eidlitz: September 18, 1860 – October 30, 1928* (New York, 1929), a privately printed biography of one of Marc's sons and business partners. The passage also mis-dates the arrival in America of Leopold and Marc, claiming that both immigrated in 1847; Elizabeth Eidlitz, the daughter of Ernest Eidlitz, Marc's youngest son, brought the passage to my attention. Curran claimed that Leopold trained as an engineer in Vienna and only *The Western Architect* suggested that Eidlitz had anything that may have approached a formal architectural education, writing, "after spending several years of his youth studying architecture in Vienna, and elsewhere in Europe, he came to this country." Kathleen A. Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange* (University Park, PA: The Pennsylvania State University Press, 2003), p. 266; "Obituary. Leopold Eidlitz," *The Western Architect*, vol. 11 (June 1908), p. 74.

[16] Eidlitz's surviving architectural drawings and a collection of photographs assembled by him and his son are located in the Avery Library of Columbia University. The single written notation that appeared in the material was in German.

[17] "Leopold Eidlitz, F.A.I.A.," *American Institute of Architects Quarterly Bulletin*, vol. 9, no. 1 (April 1908), pp. 37-38.

Empire generated little demand for those with such skills during the first half of the nineteenth century.[19]

Eidlitz arrived in America at the midpoint of a period often referred to as the "Greek Revival."[20] Talbot Hamlin wrote that it extended "roughly from 1820 to 1860, [and] might more fittingly be called 'Middle American,' because at this time the young nation had gained its feet and was striding forward with conscious vigor and confidence."[21] As Hamlin explained,

> These decades from the twenties to the sixties were vital in every phase of development. Politically, the system of government was crystallizing, and at the same time gaining flexibility to administer to the needs of an increasingly complex society. Economically, the expansion was fabulous, for the seemingly limitless natural resources were being developed (and exploited); and the industrial power which has since carried us to national greatness was being established.[22]

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[18] Thomas Čapek, *The Čechs (Bohemians) in America, A Study of their National, Cultural, Political, Social, Economic and Religious Life* (New York: Arno Press, 1969), reprint of first ed. (Boston and New York: Houghton Mifflin Company, 1920), pp. 25, 34. Čapek's Čechs included Bohemians, Moravians, and Silesians.

[19] Gary B. Cohen, *Education and Middle-class Society in Imperial Austria, 1848-1918* (West Lafayette, IN: Purdue University Press, 1996), p. 15.

[20] Greek Revivals also appeared throughout Europe in England, Italy, Denmark, France, Hungary, Poland, Finland, the Baltic states, and Russia at various times between 1770 and 1840. They primarily affected the design of public buildings, although they also influenced residential, furniture, and interior design. Their gradual spread coincided with and was dependent on the growth of archaeological investigations in Greece during the eighteenth and nineteenth centuries. The built and written work of archeologist-architects such as James Stuart and Nicholas Revett, William Wilkins, and C. R. Cockerell (England), Jacques-Ignace Hittorff and Henri Labrouste (France), and Léo von Klenze (Germany) were largely responsible for its diffusion in Europe. Although accurate replication of classical Greek architectural elements first appeared in mid-18th-century England in the context of garden structures, the approach came to be associated in Germany, Scotland, and America with expressions of enlightened civic virtues, and its forms were widely adopted in comprehensive urban-planning schemes; Roger G. Kennedy, *Greek Revival America* (New York: Stewart Tabori & Chang, 1989), p. 5; David Watkin, "Greek Revival" in *Grove Dictionary of Art*, vol. 13, pp. 607-13.

[21] Talbot Hamlin, *Greek Revival Architecture in America: Being and Account of Important Trends in American Architecture and American Life prior to the War Between the States* (London, New York, Toronto: Oxford University Press, 1944), xv.

[22] Hamlin, *Greek Revival Architecture in America*, xv.

The American manifestation of the Greek Revival overlapped a similar phenomenon that began in Europe during the eighteenth century with the "discovery" of Greece.[23] Although the presence of Greek ruins in southern Italy and Sicily was known before that time, access to sites within Greece was nearly impossible because the areas were under the control of the Ottoman Empire until 1832. The situation changed substantially after the mid-century publication of detailed drawings of the major Greek monuments in *Les ruines des plus beaux monuments de la Grèce; Ouvrage divisé en deux parties, ou l'on considère, dans la première, ces monuments du côté de l'histoire, et dans la seconde, du côte de l'architecture* by Julien-David Le Roy[24] and *The Antiquities of Athens, Measured and Delineated by James Stuart and Nicholas Revett, painters and architects.*[25] Although initially intended to document a portion of the classical canon that had dominated Western European architecture since the Renaissance, these publications inadvertently contributed to the end of classicism as a universal style of architecture because actual Greek forms were differed significantly from expectations despite earlier discoveries such as the Doric temples at Paestum. Mitchell Schwarzer has claimed that this period marked the beginning of a modern esthetic sensibility that emphasized individuality and reason over collective faith and persuasion and called the Greek Revival "integral to the cognitive and aesthetic project of the German Enlightenment" because it contributed to the end of "the Aristotelian paradigm of mimesis."[26] This issue was of extreme importance to Eidlitz, and it permeated his thought and writing.

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[23] For a discussion of this process see Robin Middleton, Introduction to Julien-David Le Roy, *The Ruins of the Most Beautiful Monuments of Greece*, David Britt, trans. (Los Angeles, CA: The Getty Research Institute, Los Angeles, 2004), translation of *Les ruines des plus beaux monuments de la Grèce; considère du côté de l'histoire et du côte de l'architecture*, 2 vols., second ed. (Paris: H. L. Guérin & L. F. Delatour, 1770).

[24] *Les ruines des plus beaux monuments de la Grèce; Ouvrage divisé en deux parties, ou l'on considère, dans la première, ces monuments du côté de l'histoire, et dans la seconde, du côte de l'architecture* (Paris: H. L. Guérin & L. F. Delatour, 1758).

[25] London: Printed by John Haberkorn, 1762, 1789.

[26] Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity* (Cambridge, UK and New York: Cambridge University Press, 1995), p. 38.

Hamlin described American social and intellectual changes that were no less significant, and pointed out

> a conscious separation from Europe and a fierce will to be American. There was a spirit of confidence.... The people had embarked upon a great experiment in government, and had made it work. They had conquered a continent and were beginning to profit from the fruits of their labors. They were witnessing the miracle of science changing the world before their eyes, and they were sure that the change was progress. They looked upon government not as a mere agent for policing and defense, but as an institution for the administration of human welfare; Science and Government should solve the problems of the world.[27]

This positivistic view of society was counterbalanced by a body of intellectual and artistic work whose genesis was in the particulars of the American situation but whose concerns were often highly personal. Hamlin identified, but did not analyze, the particular change in American society led to such and unusual situation and merely noted "before 1815 culture had been rationalist and theocratic and after that it became primarily aesthetic and libertarian."[28] The year 1815 marked the end of hostilities between the United States and England that began three years earlier, and after that year, European claims on American territory were effectively voided. The work of post-1815 writers such as Ralph Waldo Emerson, Henry David Thoreau, James Fenimore Cooper, Washington Irving, and Nathaniel Hawthorne was paralleled by that of painters such as Asher Durand and Thomas Cole in an increasing concern for the real and the local rather than the ideal and universal. While Hamlin claimed "The eclecticism implied by the term 'Greek Revival' is not the true characteristic of the period,"[29] he also acknowledged that

> It was no accident that this period became the great era of strange sects, of free-thinkers, of all types of free-love communities that scandalized the righteous. The 'great [religious] revival' of the

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[27] Hamlin, *Greek Revival Architecture in America*, xv-xvi.

[28] Hamlin, *Greek Revival Architecture in America*, pp. 317-18.

[29] Hamlin, *Greek Revival Architecture in America*, xv.

> forties may have been partly a protest against the aesthetic and moral freedom of the thirties.[30]

In architecture, for example, Periclean details determined the range of the acceptable architectural vocabulary for many structures, especially houses and churches, between 1825 and 1845.[31] However, the combinations in which the details were assembled and the ways in which they were applied were uniquely American and Hamlin concluded, "Never before or since has there been less influence from Europe."[32]

Roger Stein claimed that architecture was necessarily "the most sophisticated of American arts" by 1840 because painting and sculpture were considered luxuries while building was a necessity.[33] This view is supported in the number of American magazines in which Architecture was written about, a situation that began in 1790 and increased after 1815.[34] Publications came from local as well as European sources, and more than sixty books on architectural subjects had been printed in America by 1840. Most of them, however, were concerned with construction and reflected the influence of the English writer, Peter Nicholson.[35]

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[30] Hamlin, *Greek Revival Architecture in America*, p. 318.

[31] Denys Peter Myers, Introduction to Minard Lafever, *The Beauties of Modern Architecture* (New York: Da Capo Press, 1968); reprint of first ed. (New York: D. Appleton & Co., 1835), v.

[32] Hamlin, *Greek Revival Architecture in America*, xvii. See Ada Louise Huxtable, *Classic New York, Georgian Gentility to Greek Elegance* (New York: Anchor Books, 1964), pp. 61- 123, for examples in New York City. W. Barksdale Maynard makes a strong case for the continuity of European traditions in America during this period in *Architecture in the United States, 1800-1850* (New Haven, CT and London: Yale University Press, 2002).

[33] Roger B. Stein, *John Ruskin and Aesthetic Thought in America, 1840-1900* (Cambridge, MA: Harvard University Press, 1967), p. 8.

[34] Hamlin, *Greek Revival Architecture in America*, p. 320 and Appendix B, Sarah H. J. Simpson Hamlin, "Some Articles of Architectural Interest Published in American Periodicals prior to 1851," pp. 356-82; Henry-Russell Hitchcock, *American Architectural Books, a list of books, portfolios, and pamphlets on architecture and related subjects published in America before 1895*, third ed. (Minneapolis, MN: University of Minnesota Press, 1946).

[35] Myers, vi. Nicholson (1765-1844) was born in Scotland. He was the son of a stonemason and apprenticed to a carpenter, but his abilities in mathematics led him to architecture. He established a school of carpentry and joinery in London in the 1780s and published the first of twenty-four books on the technical aspects of construction in 1792. Jack Quinan, "Peter Nicholson" in *Macmillan Encyclopedia of Architects*, vol. 3, p. 300.

> The manifold handbooks usually were both technical manuals and style books. The designs in the most influential ones can be found, often in line-for-line copies, in buildings throughout the regions then comprising the United States. As guides to style, the handbooks might be described as books of etiquette establishing architectural manners... It was through the use of these handbooks that quite unsophisticated vernacular builders achieved in so many instances remarkably well-proportioned, suave, and often subtle results.[36]

The role that European influence should play in American architecture came into question around 1840 in response to increasing consciousness and study of the historical styles of architecture. Partisans of Greek, Roman, and Gothic forms quarreled among themselves, and notions of correctness replaced the freer approaches previously embodied in vernacular and professional work. Although many American architects shared these concerns with their European counterparts, a perception developed in America that the European origin of the historical styles made them inherently unsuitable for the New World. The relationship of ornament and construction was also examined in Europe and America at this time. Having lost its original role as a supplemental but necessary aspect of construction, ornament had become a subject of heightened interest and increasingly synonymous with decoration. This process led to a growing distinction between architecture and building on both continents, with the former increasingly defined by the presence of ornament. Consequently, building was increasingly relegated to technicians while architecture became the realm of artists.

> A main difference between our times and the medieval times is that then the scientific constructor and the artistic constructor were one person, now they are two. The art of architecture is divided against itself. The architect resents the engineer as a barbarian; the

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Philologus Brown, a fictional architect invented by Eidlitz to represent the sort of practitioner that still relied on Nicholson during the mid-nineteenth century appeared in his satirical essays and poems; Leopold Eidlitz, "The T Squares. No. I – Philologus Brown," *The Crayon*, vol. 5 (February 1858), pp. 48-50; unsigned; "The T Squares. Philologus Brown. – (*Continued.*)" *The Crayon*, vol. 5 (March 1858), pp. 77-79; unsigned; "The T Squares. Philologus Brown. – (*Concluded.*)" *The Crayon*, vol. 5 (April 1858), pp. 107-08; unsigned; "The Architect of Other Days," *The Architects and Mechanics Journal*, vol. 1, (3 March 1860), pp. 171-72.

[36] Myers, vi.

> engineer makes light of the architect as a dilettante. It is difficult to deny that each is largely in the right.[37]

The split between design and construction became a major preoccupation of mid- to late nineteenth-century critics in Europe and America, and its early manifestations were inescapable when Eidlitz arrived in New York City.

*The Growth of New York City*

Several governmental actions had contributed to the rapid economic growth of New York City after peace was made with England in 1815.[38] The Tariff Act of 1816 and the imposition of additional duties two years later encouraged new industries, and institutions that could provide banking and transportation services grew and prospered. Simultaneously, the success of the southern cotton industry sent large sums of money to the city, and immigration increased. Perhaps most significantly, completion of the Erie Canal (1817-25) between Albany and Buffalo made New York City the main distribution center for goods passing between Europe and the American interior.[39] Before these events, New York City commerce was primarily regional; after them, the city assumed decisive control of foreign trade.

A new financial center developed on Wall Street in lower Manhattan as the United States Branch Bank (Martin Euclid Thompson, 1822-24; demolished) and the first Merchant's Exchange (Martin Euclid Thompson, 1825-27; demolished) provided a suitably scaled and designed environment for commerce, the first in the English Georgian and the second in the Greek Revival style. Few privately

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[37] Montgomery Schuyler, "Modern Architecture," *Architectural Record*, vol. 4, no. 1 (July-September 1894), p. 13.

[38] This discussion of the early financial development of New York City is based on Lois Severini, *The Architecture of Finance, Early Wall Street* (Ann Arbor, MI: UMI Research Press, 1983), pp. 23-53.

[39] The canal was advocated by New York State governor De Witt Clinton as early as 1810, and by the time it was finished, it cost $7.6 million and extended for 363 miles. Arthur G. Adam, "Erie Canal" in *The Encyclopedia of New York City*, Kenneth T. Jackson, ed. (New Haven, CT and London: Yale University Press; New York: New York Historical Society, 1995), p. 382.

built financial institutions had existed in the area before 1830, however, wealth continued to increase rapidly, and the population of New York City surpassed that of Philadelphia during that year.

Development and growth briefly paused when a fire broke out on the night of 16 December 1835 and destroyed nearly 700 buildings in the nascent financial district. The disaster was followed by a national financial crisis that culminated in a banking collapse in 1837. Nevertheless, a new Customs House (Alexander Jackson Davis with John Frazee and William Ross, 1834-42)[40] was built on the site of the old City Hall, and a new and larger Merchants' Exchange (Isaiah Rogers, 1836-42; altered and enlarged 1907 by McKim, Mead & White, now a hotel) replaced the existing building, although by 1849 it was considered too small. Five private banks were also built while the Merchants' Exchange was in construction. Private banks were usually family-run institutions involved in brokerage, shipping, or merchandising. They made loans and investments, issued paper money, and accepted deposits. In contrast to commercial banks, they did not require a charter from state or national government and were permitted to lend amounts that exceeded their deposits. Private banks emphasized their autonomy and privacy; however, commercial banks were answerable to the public and perceived as corporate, forceful, and, most importantly, stable.[41]

The gradual stabilization of the financial system that encouraged all of this was initiated in 1838 when New York State legislature passed banking laws that linked formation of new banks to adequacy of capital rather than political influence. Andrew Jackson's 1841 closure of the Second Bank of the United States in Philadelphia, an institution that operated as a de facto central bank, also encouraged such activity. Concurrent with these events, railroads began to supplant canals and their funding mechanisms gradually shifted from bonds to stocks. After the demise of the Second Bank,

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[40] Frazee (1790-1852) was a self-taught sculptor who appeared in New York City directories in 1840; Dennis Steadman Francis, *Architects in Practice, New York City 1840-1900* (New York: Committee for the Preservation of Architectural Records, n.d. 1980?), pp. 32, 66. I have not been able to identify William Ross.

[41] Severini, p. 2.

Boston became a center for financing stocks, but when its bankers were caught short of capital during an 1847, New York City financiers assumed their obligations and solidified their claim to financial leadership. Two years earlier, Wall Street had experienced another fire that destroyed $5-7 million of property, including 345 buildings. Such was the mood of optimism, however, that nearly all of the surviving structures were also pulled down and by 1848, just before gold was discovered in California, twenty-five banks were operating in the city. Within a few years, that number doubled, largely due to the inflow of western gold.

After the Civil War, social and economic conditions changed dramatically.

> The years from 1850 to 1870... were among the most remarkable in our entire history. The days of a stable balance between agriculture and industry were over. The sense of equilibrium had vanished. Everything and everyone was on the move. Immigrants by the millions... poured into this promised land, bringing with them their own traditions, which in due course, were absorbed into the mainstream of our culture. It is against this vital and shifting background that one must try to understand the architecture of the time. A single dominant style, such as the classical revival, was no longer capable of expressing the complicated tensions of the period; even the delicate balance between the Greek and Gothic revivals, so long maintained, was impossible now.[42]

This absence of aesthetic agreement affected groups of buildings as well as individual structures. In the older cities of the East Coast, this was especially noticeable. At the beginning of the nineteenth century, areas in these cities tended to reflect traditional notions of enclosure and boundary that reinforced social, economic, and architectural distinctions between the public and private realms. Street grids regulated the placement of built fabric and, with the exception of civic and religious monuments, the size, height, setback, and even appearance of most buildings was relatively uniform. After the Civil War, commercial and political concerns manifested greater presence in these areas in the form of exceptionally large and, often, freestanding structures such as department stores, office

[42] Ellen W. Kramer, "Contemporary Descriptions of New York City and Its Public Architecture ca. 1850," *Journal of the Society of Architectural Historians*, vol. 27 no. 4 (December 1968), p. 18.

blocks, railroad stations, and governmental buildings. Pre-War relationships based on location, use, and appearances were intentionally and drastically altered, and cities increasingly adapted themselves to interests that were commercial, governmental, and private rather than civic, residential and public. This was particularly true in New York City.[43]

*The Eidlitz Family*

In 1846, the year in which he received his first commission, Leopold Eidlitz married Harriet Amanda Warner (1823?-91),[44] the daughter of Cyrus Lazelle Warner (1788/9-1852) and Elizabeth Wadland Adams Warner (1792-1860).[45] Although Montgomery Schuyler, Eidlitz's biographer and close friend claimed that Warner was "an architect with whom [Eidlitz] was professionally associated soon after coming to the United States,"[46] he did not always mention Warner in his accounts of Eidlitz's life. The manner in which they met and nearly all other aspects of their personal relationship are unknown. No record of any collaboration has been located, although Biruta Erdmann claimed that Eidlitz worked for Warner until he opened his own office in 1846.[47]

Little is known about Warner or his work. Said to have come from "old New England stock, and able to trace his ancestry as far back as 1632," a family memoir claimed that he was born in Ashfield, Massachusetts, and his wife in Leicester, Vermont.[48] At some time before 1822, they moved to

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[43] See Christine M. Boyer, *Manhattan Manners, Architecture and Style 1850-1900* (New York: Rizzoli: 1985), pp. 1-7.

[44] The year of Harriet's birth is uncertain. Her age was given as 52 in the 1880 United States census; this would mean that she was born in 1828 and, therefore, two years younger than Leopold. However, her obituary stated that he was 68 when she died in 1891, making her year of birth 1823, the same as his.

[45] Montgomery Schuyler, "Leopold Eidlitz," *Dictionary of American Biography*, vol. 6, p. 61.

[46] Montgomery Schuyler, "Leopold Eidlitz," in *Dictionary of American Biography*, vol. 6, p. 61.

[47] Biruta Erdmann, *Leopold Eidlitz's Architectural Theories and American Transcendentalism* Thesis (Ph.D.) University of Wisconsin-Madison, 1977 (Ann Arbor, MI: UMI Dissertation Services, 1989), p. 46 n. 6.

[48] Katherine Warner Radash and Arthur Hitchcock Radash, *Register of the Ancestors and Descendents of Samuel Warner of Wilbraham, Massachusetts*, second ed. (Springfield, MA: The Samuel Warner Association, 1956), pp. 76, 78; Barbara W. Jamieson, *The Commercial Architecture of Samuel A. Warner* unpublished

Geneseo, a small village located in western New York near Rochester. Settled in 1790, the town became a county seat in 1821 and was incorporated in 1832. Warner was mentioned in 1829 in a local newspaper account as the designer of St. Michael's Episcopal Church; however, the building was demolished in 1866. He moved to New York City about 1837 where he worked as a builder and architect, appearing in New York City directories from 1839 to 1851. He made a rendering of Isaiah Rogers' Second Merchants Exchange that was published as a colored lithograph by John H. Bufford in 1837.[49]

Some have also credited Warner with the design of Kahal Kadosh Beth Elohim (Hazel Street) Synagogue (1841, Charleston, SC), but the attribution is not certain.[50] The domed Greek Revival building was a replacement for an earlier structure that burned in 1838. Hamlin and Beatrice St. Julien Ravenel did not know if Warner or Russell Warren (1783-1860), an architect who worked in Providence, RI, and New York City designed it.[51] Jonathan Poston claimed that Warner might have been the drafter rather than designer, although Rachel Wischnitzer pointed out that contract assigned the design to Warner, "the architect of New York" even though he was not involved in the construction.[52] Roger Kennedy suggested (and Gene Wadell confirmed) that Charles Friedrich

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Thesis (MA) Pennsylvania State University, 1972, pp. 6, 11 n. 4, 12 n. 13, 14; *Architects in Practice, New York City, 1840-1900*, p. 80; "Harriet [Amanda Warner] Eidlitz," *New York Times*, 23 February 1891, p. 5.

[49] The image was reproduced in Isaac Newton Phelps Stokes, *The Iconography of New York City Island, 1498-1909, compiled from sources and illustrated by photo-intaglio reproductions of important maps, plans, views and documents in public and private collections*, (New York: Robert H. Dodd, 1918), vol. 3, pl. 118.

[50] *Records of Buildings in Charleston and the South Carolina Low Country*, Harley J. McKee, compiler (National Park Service, United States Department of the Interior, Philadelphia: Eastern Office of Design and Construction, 1965), p. 11; The Preservation Society of Charleston, *The Churches of Charleston and the Lowcountry* (Columbia, SC: University of South Carolina Press, 1977), pp. 55-57; Gerald Bernstein, "Two Hundred Years of American Synagogue Architecture," p. 11 in *Two Hundred Years of American Synagogue Architecture*, exhibition catalogue, The Rose Art Museum, Brandeis University, Waltham, MA, 30 March-2 May 1976 (Waltham, MA: The American Jewish Historical Society, 1976).

[51] Hamlin, *Greek Revival Architecture in America*, p. 200; Ravenel, p. 156.

[52] Jonathan H. Poston, *The Buildings of Charleston: a guide to the city's architecture* (Columbia, SC: University of South Carolina Press, 1977), p. 450; Rachael Wischnitzer, *Synagogue Architecture in the United States, History and Interpretation* (Philadelphia: The Jewish Publication Society of the United States, 1955), p. 39.

Reichardt, a New York City contemporary of Warner, was involved at one time but nothing came of his participation.[53] Wadell suggested the most plausible scenario after a review of congregational minutes. He determined that local builders/contractors Tappan & Noble prepared the accepted design and specifications for the building. He also found that congregational trustees sent the design drawings to Warner in New York where he made the construction drawings and numerous changes to the design. The extent of the changes is unknown, however, because neither the Tappan & Noble nor the Warner drawings survived.[54] Rachel Wischnitzer also claimed that Warner designed the Marble Collegiate (Reformed Protestant Dutch) Church (New York City, 1851-54); however, his son, Samuel, designed it.[55]

Cyrus and Elizabeth had four children: Samuel Adams (1822-97),[56] Francis Cyrus (1831-56), Hulda Delia (d. 1859) and Benjamin Wilcox. All of the boys were said to be architects,[57] but no information on the career of Francis or life dates for Benjamin could be found. Samuel, the oldest, was born in Geneseo and appeared in New York City directories as an architect from 1849 to 1871; Benjamin appeared from 1859 to 1902. As was customary at the time, both trained in their father's office. Samuel began his practice in 1849; he and Benjamin maintained individual offices except when they shared one as partners in 1871.[58] Samuel was a founding member of the American Institute of Architects and became a Fellow in 1869. He was financially successful and designed many commercial buildings in New York City and several important public buildings in Texas,

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[53] Kennedy, p. 141 n. †; Wadell, p. 22.

[54] Wadell, pp. 22-32.

[55] Wischnitzer, *Synagogue Architecture in the United States*, p. 39.

[56] The 1880 United Sates census gave his year of birth as 1819.

[57] Montgomery Schuyler, "Leopold Eidlitz," *Dictionary of American Biography*, vol. 6, p. 61.

[58] "Samuel A. Warner" in *Biographical Dictionary of American Architects (Deceased)*, Henry F. and Elsie Rathburn Withey, eds. (Los Angeles, CA: Hennesy & Ingalls, Inc. 1970), p. 634.

Louisiana, and North Carolina.[59] He also served with Leopold Eidlitz on an American Institute of Architects committee that, in 1867, advocated formation of a polytechnical school to be operated by the Institute in New York City.[60] Cyrus died in Geneseo but was buried with his wife and son, Samuel, in the Green-Wood Cemetery in Brooklyn along with several members of Leopold's family.[61]

Leopold's younger brother Marc (1826-92) followed his elder sibling to New York, founded a major American construction dynasty, and achieved a level of financial success that eluded Leopold. Born in Prague, he attended school until he was twelve years old when he was forced to look for work. He left in 1847 when his father died and arrived in New York City where he apprenticed himself to a mason-builder for four years. In 1854, he married the Austrian-born Mathilde Sohr (1830-1910) and began work as a general contractor. This was a new type of enterprise that emerged around 1850 specifically to manage large institutional and commercial projects. Although he worked on the structurally ambitious Harper & Brothers Building (John B. Corlies and James Bogardus, 1854), he was said to have established his reputation in 1857 when he built the Broadway Tabernacle Congregational Church, designed by his brother Leopold and one of the largest New York City churches of the time. Marc also worked for other architects, mainly in New York City and Long Island.[62] At the time of his death, he was president of the Building Trades Club and the Germania

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[59] "Mr. Samuel A. Warner," *The American Architect and Building News*, vol. 57 (3 July 1897), p. 2; "Samuel A. Warner Dead," *New York Times*, 24 June 1897, p. 7; Francis, pp. 43, 80; James Ward, *Architects in Practice, New York City, 1900-1940* (New York: Committee for the Preservation of Architectural Records, 1989), p. 82; "Samuel A. Warner" in *Biographical Dictionary of American Architects (Deceased)*, p. 634; Jamieson, pp. 6-10.

[60] Leopold Eidlitz, Richard Griffith Hatfield, Emlyn Littell, Samuel Adams Warner, William Robert Ware, "Report of the Committee on Education," in American Institute of Architects, *Proceedings of the Annual Convention Held at the Rooms of the New York Chapter, October 22d and 23d, 1867* (New York: Raymond and Caulon, Publishers, 1867), pp. 4, 13-16.

[61] "Samuel A. Warner Dead," *New York Times*, 24 June 1897, p. 7.

[62] He built the Lord & Taylor store (James H. Giles, 1869-70; altered 1872-1902), the first Metropolitan Opera House (J. Cleveland Cady, 1883), the Steinway & Sons Factory (1859-60) and Hall (Henry Beck, 1868), the Astor Library (Alexander Saeltzer, 1853; Griffith Thomas, 1859; Thomas Stent, 1881), the German Hospital and Dispensary (Carl Pfeiffer, 1869; William Schickel, 1883-84; DeLomos & Cordes, 1888), the Presbyterian

Bank as well as a founding member and the New York Representative of the National Association of Builders.

Marc and his wife had five sons and two daughters. Of the daughters, Virginia died in infancy in 1860; Emily T. was born in 1859, but there is little additional information available on her. The oldest son, Alfred, studied civil engineering at Cornell but died in 1877, the year after he graduated. Otto Mark (1860?-1928)[63] also graduated in civil engineering from Cornell (1881) and became a partner in the family business in 1884. Robert James (1864-1935) studied architecture at Cornell and at the Royal Polytechnic in Berlin. He became a member of the family firm in 1881. Otto and Robert assumed control of the family business in 1888 and renamed it Mark Eidlitz and Son after their father retired.[64] Otto served as a "dollar-a-year man" during World War I, initially as chairman of a committee investigating the needs of wartime worker housing, and later as chairman of the United States Housing Corporation (1917-19), a $100 million program intended to carry out the recommendations of the committee. Robert was an accomplished numismatist, and his *Medals and Medallions Relating to Architects, Compiled and Edited, and Reproduced in Great Part from the Collection of Robert James Eidlitz*,[65] is the standard work in its field. Charles (1867-1951) went to

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Hospital (Richard Morris Hunt, 1868-72; J. Cleveland Cady, 1889), St. Vincent's Hospital (William Schickel, 1882), the Church of the Incarnation (Emlyn T. Littell, 1864-65), the Gallatin Bank Building (J. Cleveland Cady, 1886), and the residences of Ogden Goelet (McKim, Mead & White, 1885) and John Pierpont Morgan (existing building 1853; altered by H. H. Richardson, 1888).

[63] Otto's year of birth is given as 1861 in the 1880 United States census.

[64] After Robert died, the firm became known as McKenzie, Voorhees & Gmelin and based much of its practice on the design of telephone company buildings. By the 1920s Ralph Walker (1889-1973), a master of Art Deco, joined the firm, now named Voorhees, Gmelin & Walker. That firm is now Haines Lundberg Waehler. Kisch, pp. 158-59; "Death of Marc Eidlitz, Builder," *The American Architect and Building News*, vol. 36, (May 7, 1892), p. 77; "Marc Eidlitz," *New York Times*, 16 April 1892, p. 4; "Robert James Eidlitz," *Architectural Forum*, vol. 63, no. 1 (July 1935), p. 34; "An Historic Firm," *Architectural Record*, vol. 5 (April-June 1896), pp. 454-55; Woods, *From Craft to Profession: The Practice of Architecture in Nineteenth-century America*, pp. 154, 156-57, p. 226 n. 3; "C. L. Eidlitz Dead; Trade Arbitrator," *New York Times,* 28 January 1951, p. 76; *King's Handbook of New York City, an outline history and description of the American metropolis, with over one thousand illustrations form photographs made expressly for this work*, Moses King, ed., second ed. (Boston, MA: Moses King, 1893), pp. 836, 838.

[65] New York: privately printed [The Scribner Press], 1927.

Columbia University and worked for Thomas Edison. After opening an electrical contracting business, he became increasingly involved in settling labor disputes and founded the Electrical Contractor's Association, National Electrical Contractor's Association, and Building Trades Employers Association. The youngest son, Ernest Frederick (1868-1959) studied at Cornell and was a socially prominent lawyer.[66]

Harriet and Leopold Eidlitz had six children: Harriet Francis, (1851-1940),[67] Elizabeth Warner (1851-1931),[68] Cyrus Lazelle Warner (1853?1921),[69] Julia T. (1855-1927),[70] Leopold, Jr. (1857-1929),[71]

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[66] "Ernest F. Eidlitz, Lawyer 60 Years, "New *York Times*, 23 May 1959, p. 31.

[67] Harriet's obituary noted that she was descended from John Adams and educated in New York and Europe. In 1874, she married Schuyler Quackenbush (1847-1917) who, at his death, was the oldest member of the New York Stock Exchange. The Quackenbush family farm had been located in lower Manhattan within the area that is now located between 34th to 40th Street and Third to Madison Avenue. "Mrs. F. Quackenbush," *New York Times*, 16 February 1940, p. 24. Harriet's brother, Cyrus, designed a large, shingled, gambrel roof vacation house with Colonial Revival details for Quackenbush (1898-99, Lee Avenue, East Hampton, L.I.). His own house, "Overlea" (1896-97; Ocean Avenue, East Hampton, L.I.; alterations and additions 1898, 1901), located across the street, was considerably smaller. Quackenbush also commissioned a second house, probably as a rental property in 1915 (Lee Avenue), but used John Custis Lawrence as his architect. Lawrence (1867-1944) was born and lived in East Hampton. Trained as a sailor, carpenter, and builder, he altered and designed many "dune homes" in the area including his own and those of Ring Lardner and Grantland Rice (both 1927) and was an associate architect for the Hotel McAlpin (1904, F. M. Andrews & Company, Broadway between 33rd and 34th Street), then the largest in the world. *East Hampton's Heritage, An Illustrated Architectural Record*, Robert J. Hetner, ed. (New York: W.W. Norton, 1982), pp. 70, 83, 85, 173-75, 191-92; Sherrill Foster, "C. L. W. Eidlitz, 1853-1921" in *Long Island Country Houses and Their Architects, 1860-1940*, Robert B. McKay, Anthony K. Baker, and Carol A. Traynor, eds. (New York: W. W. Norton, 1997), p. 153; "J. C. Lawrence Dead, Architect 40 Years," *New York Times*, 27 August 1944, p. 33; *Long Island Country Houses and Their Architects, 1860-1940*, pp. 250-52; Stern *et al*, *New York, 1900*, p. 272; David E. Tarn, "New York's Newest Hotel, Notes on the Hotel McAlpin, F. M. Andrews & Company, Architects," *Architectural Record*, vol. 33, no. 3 (March 1913), pp. 231-41.

[68] "Elizabeth Warner Eidlitz," *New York Times*, 6 March 1931, p. 21; 7 March 1931, p. 16. I found little information on Elizabeth other than a passenger record indicating that she returned to New York City after a trip to Europe in 1896.

[69] Cyrus' year of birth is given as 1854 in the 1880 United States census. He was born in Schenectady, New York.

[70] Julia was likely named after Leopold's mother. An amateur painter who was active in the New York City area ca. 1890-1903, she was a board member of the Woman's Art Club and exhibited there and at the National Academy of Design. "Woman's Art Club," *Collector*, vol. 1, no. 1, 1890, p. 77; "Woman's Art Club," *New York Times*, 14 February 1894, p. 8; "Julia T. Eidlitz" in Chris Petteys, *Dictionary of Women Artists, an international dictionary of women artists born before 1900* (Boston, MA: G. K. Hall & Co.), p. 226; "Julia T. Eidlitz" *Who Was Who in American Art 1564-1975, 400 years of artists in America*, Peter Hastings Falk, ed., 3 vols. (Madison, CT: Sound View Press, 1999), vol. 1, p. 1025; "Julia Eidlitz," *New York Times*, 23 October 1927, p. 17.

[71] "Leopold Eidlitz [, Jr.]," *New York Times*, 7 June 1929, p. 19.

and Mari Imogene (b. 1860).[72] Both sons were architects. Cyrus was born the same year his maternal grandfather died, was sent to school in Geneva when he was twelve years old, and entered the Royal Polytechnic School in Stuttgart three years later. He returned to New York in 1871 and began work as a draftsman for his father. He did not maintain his own office until Leopold died and little is known about the extent of their collaboration. His first independent project was the 1878-79 post-fire reconstruction of St. Peter's Church (the Bronx), a building designed and completed by Leopold in 1855. That work was followed by commissions for railroad stations in Detroit (1881) and Chicago (1885) and the winning entry in an invited competition for the Buffalo Public Library (1884-87).[73] Although his practice was primarily regional, Cyrus built throughout the United States. His early buildings recalled his father's version of the German Romanesque; however, he soon began to include an increasing number of classical elements.[74] His practice was primarily institutional and he is best known for the twenty-five story New York Times Tower (1903-05) designed with Andrew C. MacKenzie (1861-1921), a structural engineer with whom he formed a partnership in 1895. Cyrus

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[72] Mari Imogene married Walter Dannat Starr, the youngest son of Mary Caroline Dannat Starr, co-founder, and manager of the House of the Holy Family, a Catholic charity founded in 1869 as the Association for Befriending Children and Young Girls, a mission school that provided poor women in New York City with training as seamstresses and in household management skills. Starr and the other co-founder, Monsignor Thomas S. Preston, pastor of St. Ann's Catholic Church, were converts to Catholicism, and Starr eventually assumed the name "Mother Mary Veronica." "Weddings in Early June," *New York Times*, 3 June 1887, p. 5; "Married," *New York Times*, 3 June 1887, p. 5; "Women's Work for Women," *New York Times*, 18 May 1876, p. 2. Leopold Eidlitz may have met Starr when her congregation purchased and moved into a building owned by Temple Emanu-el from 1854 to 1870.

[73] See *The Buffalo Library and Its Building, illustrated with views, also brief historical sketches of the Buffalo Fine Arts Academy, the Buffalo Society of Natural Sciences, and the Buffalo Historical Society, which occupies parts of the same building* (Buffalo, New York,: Art-Printing Works of Matthews, Northrup & Co., Office of the "Buffalo Morning Express," 1887), pp. 6-33.

[74] The process can be seen in his First National City Bank (1886, 213 East Commerce Street, San Antonio, TX) and adjoining San Antonio Loan & Trust Building (with Charles McKenzie, 1903, 235 East Commerce Street). The asymmetrical two-story earlier structure featured Alhambra-esque decorative motifs, round-headed window arches supported on colonettes, and an arcuated cornice, domed clock tower, and stepped pyramidal entry porch supported on polished granite columns. The second building was linked to the first by a short, recessed wing that employed a simplified version of the older structure's details and window forms and introduced the flat-headed windows used in the newer structure. The tripartite, five-story symmetrical volume of the addition employed classical details such as corner pilasters, projecting stringcourses, and a bracketed cornice. *A Guide to San Antonio Architecture*, Chris Carson and William McDonald, eds. (San Antonio, TX: The San Antonio Chapter of the American Institute of Architects, 1986), p. 27. Schuyler does not mention the building in "Cyrus L. W. Eidlitz," *Architectural Record*, vol. 5, no. 4 (August 1895), pp. 411-35.

married Jennie Dudley Turner (b. 1852), a descendent of Gov. Thomas Dudley of Massachusetts, in 1877.[75]

Relatively little is known about Leopold, Jr. He appeared in New York City directories in 1897 and 1900-01 and shared an office with his father and brother. He was mentioned in articles describing the wedding of his sister Mari Imogene and was listed as a member of the Seawanhaka [Long Island] Yacht Club.[76] In 1914, he formed a corporation with Donald and David Ross to provide realty contracting and engineering services. The firm, known as Eidlitz and Ross, eventually specialized in steel contracting.[77]

Leopold, his wife, and several of his children and grandchildren are buried in the Green-Wood Cemetery in Brooklyn.[78] The non-sectarian facility of choice for Manhattan's upper class was laid out 1838-40 by West Point-trained civil engineer, Maj. David B. Douglass. The Eidlitz burial plot is located in Section 99 and consists of two lots: No. 6237 purchased on 28 August 1852 by Eidlitz, and

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[75] "Cyrus Lazelle Warner Eidlitz," *New York Times*, 6 October 1921, p. 17; Montgomery Schuyler, "Cyrus Lazelle Warner Eidlitz" in *Dictionary of American Biography*, vol. 6, p. 60; "Mrs. John B. Jameson, Leader in Club Work," *New York Times*, 1 December 1952, p. 23; "Cyrus L. W. Eidlitz," pp. 411-35; "The Evolution of the Skyscraper, *Architectural Record*, no. 14 (1906), pp. 329-43; "The Romanesque Revival in America," *Architectural Record*, vol. 1, no. 2 (October-December 1891), pp. 166-69; Gwen W. Steege, "Cyrus Eidlitz" in *Macmillan Encyclopedia of Architects*, vol. 2, p.13; Andrew Scott Dolkart, "Cyrus Lazelle Eidlitz" in *Grove Dictionary of Art*, vol. 10, pp. 104-5; Francis, p. 54; Ward, p. 22; "Cyrus L. W. Eidlitz's Funeral," *New York Times*, 8 October 1921, p. 12; "Cyrus L. W. Eidlitz, Architect, Dead," *New York Times*, 6 October 1921, p. 13; "Mrs. Cyrus L. W. Eidlitz," *New York Times*, 20 June 1935, p. 19. An account of the decisions behind the design of the Times Building appeared in "A New Home for the New York Times," *New York Times*, 4 August 1902, p. 1.

[76] "Weddings in Early June"; "Time Allowance in Yacht Races," *New York Times*, 29 November 1881, p. 8; Francis, p. 28; Ward, p. 22. Cyrus Lazelle Warner Eidlitz was also active in yacht racing.

[77] The firm had been in business at least since 1907 and was capitalized at $20,000 when it incorporated. "New Incorporations," *New York Times*, 4 June 1914, p. C7; "Donald Ross Dies in Fall," *New York Times*, 12 February 1931, p. 15; "William H. Higbie," *New York Times*, 1 September 1948, p. 48.

[78] Salem Field, the main Jewish cemetery of New York City was established in 1851. It is located in Queens on the Jamaica Plank Road and contains the family plots and tombs of the wealthiest and most influential Jewish residents of New York City. It was opened by Temple Emanu-el, a client served by Eidlitz as early as 1847. "Salem Fields Cemetery," *New York Times*, 3 September 1877, p. 8; Myer Stern, *The Rise and Progress of Reform Judaism, Embracing a History Made from the Official Records of Temple Emanu-el of New York, With a Description of Salem Field Cemetery, Its City of the Dead, With Illustrations of Its Vaults, Monuments, and Landscape Effects* (New York: Myer Stern, 1895), pp. 204-5.

No. 6238, purchased on the same day and conveyed to him by Samuel A. Warner and Anthony Brower. Warner, his brother Samuel Lazelle Warner, his father Cyrus Lazelle Warner, and other members of their families are also buried in the combined lot. Brower was a lawyer whose relationship to the Eidlitz and Warner families is unknown.[79] The plot is located near that of Stephen Higginson Tyng (1800-85), rector of St. George's Church, Eidlitz's first independent commission. Members of his brother's family are buried in Section 179 on Plot 12129. None of the Eidlitz or Warner grave markers is extant. Cyrus Eidlitz is buried in Buffalo.[80]

*The New York City Architectural Community*

Although Eidlitz could have found a reasonable number of ethnic peers when he arrived in America, the number of practicing architects was considerably smaller; however, the situation changed quickly. In a history of the American Institute of Architects, its author paraphrased a trade journal article that claimed while not more than a half dozen architects were present in New York City in 1840, the number increased nearly a hundred fold during the next twenty years, with most coming from England and Germany.[81] Looking back more than thirty-five years later, *The American Architect and Building News*, a professional journal founded in 1876, suggested some reasons for the change.

> The cosmopolitan composition of our population and of the architectural profession in particular is constantly brought to our attention when we have occasion to look over our list of subscribers, though the custom has made certain names so familiar that it is not easy to remember that they are even more common in

[79] "Burial Transcript for Leopold Eidlitz" and "Catalogue of Heirs" provided by Jane Cuccurullo, Corporate Secretary of the Green-Wood Cemetery.

[80] "Cyrus L. W. Eidlitz's Funeral," *New York Times*, 8 October 1921, p. 12.

[81] "Architecture as a Profession," *The Architects and Mechanics' Journal*, vol. 2, no. 26 (22 September 1860), p. 251, cited in Henry Saylor, *The A.I.A.'s First Hundred Years* (Washington, DC: The American Institute of Architects, 1957), p. 13. Henry Hodgman Saylor (1880-1967), was an architect and journalist whose career began in 1904 when he was named editor of the Boston-based magazine, *Architectural Review*, a position he held until 1957. Between 1910 and 1952, he published about a dozen volumes on architecture including his *Dictionary of Architecture* (New York: John Wiley & Sons, Inc., 1952), the first since Russell Sturgis' work of 1901-02, and books on antiques and gardening. "Henry H. Saylor, Editor, 87, Dead," *New York Times*, 23 August 1967, p. 45.

> foreign countries than in this. Teutonic, Gallic [*sic*] and Slavic names are easy enough to identify, but the Anglo-Saxon alien can be identified only by other attributes than the name he bears. It would be interesting to know what cause led each individual to emigrate to this country – not in these days, but in years ago, when, from a foreigner's standpoint, there was little in this country to attract, or to promise a successful career in his chosen calling. To escape military service, to avoid the consequences of engaging in unsuccessful political movements, to obtain a mere livelihood which was denied through lack of connection or the too crowded condition of the profession, we imagine would account for the presence of many a Continental architect who is now a good citizen of the United States.[82]

Another writer suggested that foreign-born architects came to the United States to introduce an architectural tradition that would not otherwise exist.

> In 1850, so far as architecture is concerned, the United States was Finland. We had no stock of native precedents, no fund of truthful ideas, no developed training; in a word, no fecund tradition.... There was really nothing at home for the architect of talent to begin with. He was forced to act as the colonists had acted before him – import.[83]

Eidlitz seemed to confirm the validity of both views in the text of a paper he intended to read on 12 February 1891 at the final banquet of Fifth Annual Meeting of the National Association of Builders.[84]

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[82] "Jacob Wrey Mould," *The American Architect and Building News*, vol. 19 (26 June 1886), p. 301.

[83] "A Review of Architecture. History of work done in New York during the last quarter of a century," in *A History of Real Estate, Building and Architecture in New York City During the Last Quarter of a Century* (New York: Arno Press, 1967), reprint of first edition (New York: The Real Estate Record Association, 1898), p. 564.

[84] "Builders Dine and Wine," *New York Times*, 13 February 1891, p. 2. Eidlitz did not deliver his talk, probably because his wife Harriet was gravely ill; she died ten days later. Schuyler took his place and began with a quip that he attributed to Eidlitz: "It has been said that... American architecture is the art of covering one thing with another thing to imitate a third thing, which, if genuine, would not be desirable." He ended up speaking, however, about something he considered to be quite serious: "the radical defect of modern architecture in general, if not of American Architecture in particular... the estrangement between architecture and building – between the poetry and the prose, so to speak, of the art of building, which can never be disjointed without injury to both." Schuyler's talk was published as "Architecture" in *Inland Architect and News Record*, vol. 17 (February 1891), pp. 5-6, and as "The Point of View," the opening piece in *American Architecture, Studies by Montgomery Schuyler* (New York: Harper & Brothers, Publishers, 1892), pp. 1-5. The quip also appeared at the end of Schuyler's memorial series on Eidlitz; Leopold Eidlitz III, p. 378. Eidlitz's paper was published as "The Modern Builder," *Real Estate Record and Builders' Guide*, vol. 47 (21 February 1891), pp. 268-69. The *Real Estate Record and Builders' Guide* began publication as the *Record and Guide* in 1868. Initially a compilation of conveyances and mortgage transactions, it soon developed an awareness of the relationship of real estate to politics, the stock market, currency rates, and other markets and changed from a limited trade

> With the exception of Trinity Church, then in the process of construction, and some minor churches built during the next ten years,[85] the current buildings were houses and stores mostly 25 feet front, from 40 to 60 feet deep, and about 45 feet high. Some of these were still built entirely or partly of wood. The cost of these buildings varied from $4,000 to $7,000.[86] The carpenters were the contracting builders of the time, and in most cases the architects of the buildings they contracted for. All others, masons, stone-cutters, roofers and iron men, were sub-contractors.

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review to a more inclusive business journal. In 1891, the *Guide* began publication of a new journal, the *Architectural Record*. Boyer, p. 28; "About Ourselves," *Real Estate Record and Builders' Guide*, vol. 36 (7 March 1885), pp. 227-28.

[85] Although the size, cost, and complexity of Trinity Church was unusual for its time in New York City, Eidlitz neglected to mention the impact of an even larger work: the Croton Aqueduct and the associated High Bridge and distributing reservoir (both 1837-42). Both were commented on extensively in nineteenth century New York City guidebooks. The Bridge, actually a Roman-inspired aqueduct that spanned the Harlem River and valley, and the Egyptian-styled reservoir that it fed, located on the site of what is now the main branch of the New York City Public Library, provided clear evidence of the unprecedented scale and fusion of engineering and architecture that could be commanded in public works project; Dell Upton, "Inventing the Metropolis: Civilization and Urbanity in Antebellum New York" and Morrison H. Heckscher, "Building the Empire City: Architects and Architecture," in *Art and the Empire City: New York 1825-1861*, Catherine Hoover Voorsanger and John H. Kowat, eds., (New York: The Metropolitan Museum of Art; New Haven, CT and London: Yale University Press, 2000), pp. 10, 180.

In his discussion of the relationship between technology, architecture, and nineteenth century public works projects, Peters emphasized the process-driven aspect of the latter, calling it "a hybrid of scientific method and an empirical, associative form of matrix thinking;" Tom F. Peters, *Building the Nineteenth Century* (Cambridge, MA: MIT Press, 1996), pp. 3-93. He also claimed to see similarities of method among architects and engineers of the period, noting, "Designers are matrix thinkers. They use personal and cultural values to define relationships between design elements and relate them to their context. The associative quality of matrix thinking led Isaac Johnson to discover a better hydraulic cement in a kilnload of sintered waste, Karl Althans to *transform* cannonballs into ball bearings or a wagon spring into a truss chord, and Marc Brunel to *translate* information form a zoomorphic to a mechanical format. A transformation remolds information within the boundaries of a field, while a translation process crosses borders and moves it from one field to another." Peters, p. 347.

[86] Eleven engravings showing examples of such buildings, most located in lower New York City, were published in 1846 (vol. 11) in *Allgemeine Bauzeitung mit Abbildungen für Architekten, Ingenieurs, Dekorateurs, Bauprofessionisten, Oekonomen, Bauunternehmer und alle, die an den Fortschritten und Leistungen der neuesten Zeit in der Baukunst und den dahin einschlagenden Fächern Antheil nehmen.* The journal, founded in Vienna in 1836 by architect Christian Freidrich Ludwig von Förster (1797/99-1863) appeared until 1918 and was the most important Central European architectural periodical of its time; Schwarzer, pp. 29-30. Hitchcock reproduced two of the engravings (with their numbers reversed): Plate 20, *Nordamerikanische Bauart, von Schranke. Waarenmagazin; perspectiv. Ansicht und Querdurchschnitt.* (North American Architecture, by Schranke. Warehouse; perspective. View and Transverse Section.), and Plate 23, *Wohnhaus in New-York. Perspektivische Ansicht und Querdurchschnitt* (House in New York. Perspective View and Transverse Section.) The warehouse was located at the corner of Pine and Williams Street; the house near Washington Square. Henry-Russell Hitchcock, "American Influences Abroad" in Edgar Kaufmann, Jr., ed., *The Rise of an American Architecture*, (New York, Washington, DC and London: Praeger Publishers, 1970), pp. 10-11, figs. 1-9 and 1-10. *Allgemeine Bauzeitung* was recommended for purchase in the *Catalogue of Books on Architecture* published by the Committee on Library and Publications of the American Institute of Architects in 1867.

> You ask me, were there no architects? New York counted about ten or twelve practicing architects in 1843 [the year he arrived in the United States], five of whom did not practice because they had nothing to do.[87]

The group of practitioners to whom Eidlitz referred included Martin Euclid Thompson (1786-1876), Ithiel Town (1784-1844), Alexander Jackson Davis (1803-92), James Renwick, Jr. (1818-95) Minard Lafever (1797-1854), and Isaiah Rogers (1800-69).[88] Most of them began their careers in construction, with Thompson, Town, Lafever and Rogers trained as carpenters. Davis, however, trained as printer and Renwick had a degree in engineering from Columbia University.[89] Other European architects, most of who also came from Britain with a similar mix of training, soon augmented their presence.[90] They included James Gallier, Sr. (1798-1866), who arrived from Ireland in 1832,[91] and the English architect Thomas Thomas (1787/88-1871) who came in 1833[92] followed by his son Griffith B. (1820-79) in 1838.[93] Other English architects included Frederick Diaper (1810-

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[87] Eidlitz, "The Modern Builder," p. 267, quoted in Francis, p. 2. Francis also noted that when Eidlitz retired from practice around 1890, over 600 architects were present in New York City and more than four thousand had used the title to describe their jobs.

[88] With the exception of Davis, whose name appeared in New York City directories as late as 1878, and Renwick, who appeared up to 1895, the careers of the others ended between 1841 (Rogers) and 1862 (Thompson); Francis, pp. 25, 48, 64, 65, 75, 76.

[89] Charles D. Elliott, *The American Architect from Colonial Times to the Present* (Jefferson, NC and London: McFarland & Company, Inc., Publishers, 2003), p. 26.

[90] William Robert Ware, "Architecture and Architectural Education in the United States," *The Civil Engineer and Architect's Journal*, vol. 30 (1 April 1867), pp. 108; Heckscher, p. 181; Ellen W. Kramer, "Contemporary Descriptions of New York City and It's Public Architecture ca. 1850," p. 265 n. 8.

[91] Gallier appeared in New York City directories 1833-35. His comments on the architectural scene in early nineteenth century New York City were similar to and confirmed those made by Eidlitz: "The majority of people could with difficulty be made to understand what was meant by a professional architect; the builders, that is, the carpenters and bricklayers, all called themselves architects, and were at that time the persons to whom owners of property applied when they required plans for building; the builder hired some poor draftsman, of whom there were some half dozen in New York [City] at that time, to make the plans, paying him a mere trifle for his services. All this soon changed... and architects began to be employed by proprietors before going to the builders; and in this way, in a short time, the style of buildings pubic and private showed signs of rapid improvement." Francis, p. 33; James Gallier, *Autobiography of James Gallier, Architect* (New York: Da Capo Press, 1973), reprint of first ed. (Paris: E. Briere, 1864), p. 18 quoted in Heckscher, p. 181.

[92] Thomas Thomas appeared in New York City directories 1833-71; Francis, pp. 74-75.

[93] Griffith Thomas practiced with his father from 1839-72 and appeared in New York City directories from 1840-78. The elder Thomas had two other sons with whom he worked, Charles F. and Thomas Thomas, Jr. Charles appeared in New York City directories in 1871 and Thomas Jr. 1837-38 and 1849-71. Francis, pp. 74-

1906) who arrived ca. 1835,[94] Calvert Vaux (1824-92) in 1836,[95] Richard Upjohn (1802-78) in 1839,[96] Frank Wills (1819/20-56/57) ca. 1847,[97] Henry John Dudley (1813-94) in 1851,[98] Frederick Clarke Withers (1828-1901) in 1852,[99] and Jacob Wrey Mould (1825-86) ca. 1853.[100]

German-speaking architects also came to New York City, although later and in smaller numbers. Among them were Alexander and Edward Saeltzer who arrived in 1842,[101] Detlef Lienau (1818-77),

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75; Dennis D. Francis, Joy M. Kestenbaum, and Mosette Glasser Broderick, "Thomas Tomas and Griffith Thomas" in *Macmillan Encyclopedia of Architects*, vol. 4, p. 204.

[94] Diaper (1810-1906) was a prolific mid-nineteenth century New York City architect and appeared in New York City directories 1838-92. Known for his Greek Revival commercial structures and Renaissance Revival residential work, he turned to the Second Empire later in life. Diaper was born in England and studied with Robert Smirke. He was a member of the British Institute of Architects before immigrating to America and was a founding member of the American Institute of Architects. His American collaborators included Henry Dudley and Alexander Saeltzer; Alfred J. Bloor was one of his students. Joan C. Weakley, "Frederic Diaper" in *Macmillan Encyclopedia of Architects*, vol. 1, pp. 570-71; Francis, p. 26.

[95] Vaux appeared in New York City directories 1856-95; Francis, p. 78.

[96] Upjohn appeared in New York City directories 1845-72; Francis, p. 77.

[97] Wills appeared in New York City directories 1848-56; Francis, p. 83.

[98] Dudley appeared in New York City directories 1852-95; Francis, p. 27.

[99] Withers appeared in New York City directories 1856-1900; Francis, p. 83; Ward, p. 85.

[100] Mould appeared in New York City directories 1853-86; Francis, p. 56.

[101] Alexander and Edward appeared jointly in New York City directories 1844-47; Alexander appeared separately 1850-79; Francis, pp. 66-67. Alexander studied with Gärtner; Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," *Journal of the Society of Architectural Historians*, vol. 47 (December 1988), pp. 368-70; "Gärtners Farb- und Ornamentaufassung und sein Einfluß auf England und Amerika," in *Friedrich von Gärtner, Ein Architektenleben, 1791-1847*, Winfried Nerdinger, ed. (Munich: Klinkhardt und Biermann, 1992), p. 212. Schuyler referred to Alexander's original (now south) brownstone wing of the Astor Library (1853, Lafayette Place) as a "tolerable specimen" of a Gärtner-inspired building that was inspired by Gärtner's Staatsbibliothek (1832-43); Leopold Eidlitz II, p. 282; Montgomery Schuyler, *American Architecture and other Writings by Montgomery Schuyler*, William Jordy and Ralph Coe, eds., 2 vols. (Cambridge, MA: Belknap Press of Harvard University Press, 1961), vol. 1, p. 164 n. 76; Montgomery Schuyler, "The Romanesque Revival in New York," *Architectural Record*, vol. 1, no. 1 (July-September 1891), p. 12. Alexander won the commission in a competition held in 1849 beating James Renwick who came in second; Kramer, "Contemporary Descriptions of New York City and It's Public Architecture ca. 1850," p. 273. A brief but useful description of the building is contained in *The 1866 Guide to New York City* (New York: Schoken Books, 1975), reprint of *Miller's New York As It Is; or stranger's guide to the cities of New York, Brooklyn, and adjacent places; comprising notices of every object of interest to strangers; including public buildings, churches, hotels, places of amusement, literary institutions, etc.* (New York: J. Miller, 1866), pp. 48-49. Alexander also worked with Frederic Diaper on the Mills House (1870, demolished) in Millbrae, CA; Weakley, "Frederic Diaper" in *Macmillan Encyclopedia of Architects*, vol. 1, pp. 570-71.

in 1848;[102] Henry Fernbach (1826-83), ca. 1848,[103] Frederick A. Peterson (1808-85) in 1851,[104] and Henry Engelbert,[105] and all arrived in America during a period of high regard for German culture and education. Kennedy claimed that American affection for Germany during the 1830s was based on a mutual dislike of the French and British and seemingly comparable political aspirations,[106] and Ellen W. Kramer pointed out that many Germans who emigrated to the United States were of middle class origins who, with their descendants, formed a sort of "intellectual aristocracy" in contrast to "other" groups, i.e., the Irish.[107] Francis Morrone concluded that

> While in the 1840s English taste was still prevalent in America, it was being given a real run for its money by the immigration, not only of the Germans, but of German ideas, German tastes, German customs. Many things that are "typically American," such as picnics, parades, marching bands, apple pie, kindergarten, the

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[102] Lienau was born in Ütersen, Schleswig-Holstein (then, ruled by Denmark), trained in Germany, worked in Paris, and became a founding member of the American Institute of Architects; Ellen W. Kramer, "Detlef Lienau, an Architect of the Brown Decades," *Journal of the Society of Architectural Historians*, vol. 14, no. 1 (March 1955), p. 18. He appeared in New York City directories 1850-88; Francis, p. 50. Hamlin pointed out the influence of eclecticism ("by 1850... supreme as the dominant New York taste") on Lienau and Eidlitz; Talbot Hamlin, "The Rise of Eclecticism in New York: The Contributions of Four Architects and Two Materials," *Journal of the Society of Architectural Historians*, vol. 11, no. 2 (May 1952), p 6.

[103] Fernbach was a born in Breslau in Prussian Silesia or Lowenberg in Prussia and studied at the Berlin Bauakademie. He appeared in New York City directories from 1856 to 1883. His practice included synagogues, institutional, and commercial buildings. He favored the use of cast iron and designed more than twenty commercial structures using that material during the 1870s and 1880s. He worked with Eidlitz on Temple Emanu-el (1866-68, demolished 1927). Joy M. Kestenbaum, "Henry Fernbach" in *Macmillan Encyclopedia of Architects*, vol. 2, p. 52; Bush, p. 195; Francis, p. 30; "Henry Fernbach," *New York Times*, 13 November 1883, p. 2; Stern *et al*, *New York 1880*, p. 476; Wischnitzer, "The Problem of Synagogue Architecture, Creating a Style Expressive of America" *Commentary Magazine*, vol. 3, no. 3 (March 1947), p. 237.

[104] Peterson, architect, civil engineer and founding member of the American Institute of Architects, was born in Prussia. While serving in the military, he traveled to England and developed political beliefs that caused him to be imprisoned during the 1848 revolution in Germany. After escaping, he was given shelter in an American ship and moved to New York. He appeared in New York City directories 1850-85 and was best known for the Cooper Union Building (1853-59), a structure that Eidlitz altered 1884-85. Henry Saylor, "The Late F. A. Peterson, Engineer and Architect," *The American Architect and Building News*, vol. 17 (30 May 1885), p. 253; Francis, p. 61.

[105] Engelbert appeared in New York City directories 1852-78; Francis, p. 29.

[106] Kennedy, p. 135.

[107] Ellen W. Kramer, "Contemporary Descriptions of New York City and Its Public Architecture ca. 1850," *Journal of the Society of Architectural Historians*, vol. 27 no. 4 (December 1968), p. 265 n. 8.

> preference for lager over ale, and much of our popular music, are in fact imports from Germany.[108]

These feelings changed dramatically after the uprisings of the 1840s when "... Prussia became more like imperial Rome than Peisistraten Athens, [and] both sides in this admiring dialogue came to see how little they had in common."[109]

*Professional Affiliation*

By the end of 1836, a scarcity of professional architects and work led Thomas U. Walter of Philadelphia to assemble a group of twenty-three practitioners from New York, Philadelphia, Boston, Baltimore, Washington, DC, and New Orleans with the intention of forming a professional association.[110] They met on 6 December at the Astor House in New York City where they established "The American Institution of Architects," drafted a constitution, and elected officers.[111] William Strickland, also from Philadelphia, was elected President and Walter became Secretary.[112]

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[108] Francis Morrone, *The Architectural Guidebook to New York City* (Layton, UT: Gibbs Smith, 1998), p. 128.

[109] Kennedy, p. 135. Blackbourn noted that interest in the American Revolution that developed in Germany during the 1770s was replaced with a more immediate concern for seemingly comparable events in France by the end of the 1790s; Blackbourn, pp. 43-44.

[110] This discussion is based on Woods, *From Craft to Profession*, pp. 28-32. Walter (1804-87) was born in Philadelphia and trained with John Haviland and William Strickland. Initially apprenticed to his father as a mason, he took up architecture and his commissions soon extended form Venezuela to China. He was best known as the architect of the dome and extension of the United States Capitol, a commission won in a competition in 1850. He also served as the second president of the American Institute of Architects, the successor organization to his own. "Thomas Ustick Walter" in *Biographical Dictionary of Philadelphia Architects: 1700-1930*, pp. 821-29.

[111] Alexander Jackson Davis served as acting President and Richard Upjohn as secretary; both were from New York City. Also in attendance were Isaiah Rogers, Charles F. Reichardt, William C. Kramp, F. Schmidt, Thomas Thomas and Thomas Thomas Jr., also from New York City; William Strickland and John Haviland from Philadelphia; and Richard Bond, from Boston. Favorable letters were received from Ithiel Town and Minard Lefevre from New York City; Asher Benjamin, Alexander Paris, and William Sparrell, from Boston; Robert C. Long, from Baltimore; Amie B. Young, from Vermont, and James H. Dakin, from New Orleans. All were practicing architects. Thomas Ustick Walter speaking for Richard Upjohn, "Opening Address," American Institute of Architects, *Proceedings of the Fourth Annual Convention of the American Institute of Architects, Held in Philadelphia, November 8th and 9th, 1870*," (Committee on Publications of the American Institute of Architects, 1871), p. 7.

[112] Strickland (1788-1854) was born in New Jersey and moved to Philadelphia with his father, a master carpenter. Strickland apprenticed with Benjamin Henry Latrobe (1764-1820) for two years before going out on his own. His successful entry in the competition for the Second Bank of the United States (1818, Philadelphia)

Membership within the Institution was divided among those who had trained in the building crafts and those who had trained in the offices of architects. All were increasingly involved in large-scale projects funded by governmental, canal, and railroad capital and deeply affected by the parallel emergence of active labor unions. Despite significant differences in social background, these conditions lead the Institution's artisanal and office-trained members to perceive a commonality of interest that reflected economic conditions and professional aspirations. Nevertheless, after its second meeting, held in Philadelphia in May 1837 at the Pennsylvania Academy of the Fine Arts, the Institution never met again. Alexander Jackson Davis, a founding member from New York City, attributed its demise to professional rivalries between New York and Philadelphia, but he also claimed that the group never gained popular support because its library and activities were not opened to the public. The financial panic and depression of 1837 also affected its members, and funds required to sustain operations quickly disappeared.

A successful attempt to form a national organization did not occur until 23 February 1857 when Richard Upjohn and eleven other New York architects held a meeting that lead to creation of the American Institute of Architects.[113] The meeting occurred two years after the American Society of Civil Engineers was founded, and twenty years after the Royal Institute of British Architects received its Royal Charter. The attendees consisted of Charles Babcock, Henry William Cleaveland, Leopold Eidlitz, Henry Dudley, Edward Gardiner, Richard Morris Hunt, Jacob Wrey Mould, Frederick A. Peterson, John W. Priest, John Welch, and Joseph C. Wells. Six were associated with Upjohn's office and, aside from Upjohn, who called and ran the meeting, all were young Americans returned

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advanced neoclassicism and the Greek Revival in the United States as well as his career, but after a decline in local commissions, he moved to Nashville, TN, where he designed the state capitol. "William Strickland" in *Biographical Dictionary of Philadelphia Architects: 1700-1930*, pp. 767-71.

[113] This discussion is based on Glenn Brown, "The American Institute of Architects. 1857-1907," *The American Institute of Architects Quarterly Bulletin*, vol. 8, no. 1 (April 1907), pp. 7-15; Ware, "Architecture and Architectural Education in the United States," pp. 107-8; Woods, *From Craft to Profession*, pp. 33-38, Phoebe Stanton, and *The Gothic Revival and American Church Architecture: An Episode in Taste 1840-1856* (Baltimore, MD: The John Hopkins Press, 1968), pp. 321-22.

from training in Europe or young Europeans who had recently come to America. Except for Hunt, who had recently returned from the École des Beaux-Arts in Paris, they were also advocates of the Gothic or Romanesque revivals. An additional group of eighteen architects consisting of William Backus, Edward C. Cabot, Alexander Jackson Davis, Frederick D. Diaper, Arthur D. Gilman, John Davis Hatch, Richard G. Hatfield, Detlef Lienau, Alpheus C. Morse, James Renwick, Jr., John W. Ritch, Joseph Sands, George Snell, Thomas A. Tefft, Calvert Vaux, Thomas Ustick Walter, Samuel Warner, and Frederick Clarke Withers did not attend the meeting but was invited to a collaborate on a constitution for the organization. Vaux, Walter, Ritch, Sands, and Withers came to a meeting for that purpose on 10 March 1857 where a committee charged with drafting a constitution suggested calling the organization "The New York Society of Architects." Walter, however, convinced the attendees to change the name to "The American Institute of Architects." On 15 April 1857, forty-nine signers approved the new organization's constitution and by-laws, and the organization incorporated under the laws of the State of New York two months later.[114]

The Institute's first board consisted of Richard Upjohn (president), Thomas U. Walter (first vice-president and former secretary of the American Institution of Architects), Richard Morris Hunt (librarian), and Andrew Jackson Davis.[115] When the first membership list was published in 1859, it included thirty-seven members. Consistent with its goal of taking "energetic steps toward diffusing a more general knowledge of Architecture," the Institute arranged for seven public lectures whose subject was pre-determined and could be delivered by either of two presenters chosen by ballot. Eidlitz and Henry Dudley, both specialists in church design and firmly committed to goals of the Institute, were chosen to give "On Church Architecture: the value of precedent, and the modifications

[114] The constitution was published over the name of Richard Morris Hunt, Secretary of the organization in *The Crayon*, vol. 4 (May 1857), pp. 151.

[115] Elliot, p. 44; Heckscher, p. 187.

rendered necessary by modern usages."[116] The scheme may have proven unwieldy, however, and a notice in *The Crayon* stated that due to "certain members finding it inconvenient to lecture as announced," the Committee of Lectures would fill vacancies as needed.[117] Other outreach efforts were made in 1860 when the Institute authorized creation of a committee of five members empowered to "associate with themselves five or seven gentlemen, not members of the Institute, for the purpose of establishing a library and academy for the education of architects."[118] Eidlitz was among this group, perhaps for his ability to charm potential members as evidenced in his humorous after dinner talks and satirical articles published in *The Crayon* and the intellectual rigor of his more serious contributions to that publication.

At a meeting of the Institute held on 6 March 1860, Eidlitz announced that architects from several parts of the country who were not known in New York City had contacted members of the organization and the editors of *The Crayon* and *The Architect's and Mechanics Journal* concerning membership.[119] During the following year, however, the Civil War began and meetings ceased. Despite reorganization in 1864, the Institute retained its New York focus and formation of local chapters continued to be discouraged. After a separate New York chapter was founded on 19 March 1867, chapters were subsequently organized in Philadelphia and Chicago (1869); Boston, Cincinnati, and Baltimore (1870); San Francisco (1871); and Indianapolis, Washington, DC, Michigan, and Central New York (1887).[120]

Richard Morris Hunt was elected the first president of the New York chapter with Eidlitz and James Renwick vice presidents, Edward T. Potter treasurer, and Charles Gambril secretary. The aftermath

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[116] "American Institute of Architects," *The Architects and Mechanic's Journal*, vol. 1, no. 1 (October 1859), pp. 4-5. A similar account appeared in *The Crayon*, vol. 6 (September 1859), pp. 278.

[117] "American Institute of Architects," *The Crayon*, vol. 6 (November 1859), pp. 246.

[118] "American Institute of Architects," *The Crayon*, vol. 7 (February 1860), p. 52.

[119] "American Institute of Architects," *The Crayon*, vol. 7 (April 1860), p. 108.

of the election suggested severe internal problems when Eidlitz declined to serve and was replaced by Calvert Vaux. Eidlitz's decision may have been reflected a dispute with George B. Post and Hunt at the 1867 AIA convention that involved a failed attempt to create a polytechnical school operated by the AIA. Hunt also asked to resign (he had recently left for a visit to the Paris Exposition), but his request was refused while Gambril and Potter's were accepted (they were replaced by Alfred J. Bloor and Detlef Lienau, respectively).[121] Despite refusing to serve as vice president, Eidlitz agreed to serve on the Members Committee on Education with Robert G. Hatfield,[122] Emlyn T. Littell,[123] Samuel A. Warner, and William Robert Ware.[124] During the following year, Eidlitz became Chairman of the Institute's Committee on Education and a member of the Board of Trustees. This was especially significant because the Trustees, rather than the officers, controlled the business side of the organization.[125] Nevertheless, Eidlitz resigned from the Institute altogether in 1869, as did Calvert Vaux and Frederick Clarke Withers.[126] The reasons for the situation are not known but Kowsky suggested tensions that developed between Eidlitz and Withers during a competition held

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[120] Brown, p. 8.

[121] Calvert Vaux and Alfred J. Bloor, "Report of the New York Chapter" in American Institute of Architects, *Proceedings of the Annual Convention Held at the Rooms of the New York Chapter, October 22d and 23d, 1867* (New York: Raymond and Caulon, Publishers, 1867), p. 25.

[122] Hatfield (1815-79) was the first Treasurer of the AIA and served in that position until his death. He practiced in New York City with his brother and specialized in governmental and institutional projects. The Hatfield brothers were considered experts in building construction and published articles on structural theory. "R. G. Hatfield" in *Biographical Dictionary of American Architects* (Deceased), p. 271.

[123] Littell (1840-91) was born and trained in Philadelphia. Active in the New York Chapter of the AIA, he specialized in ecclesiastical projects and built in both cities. "Emlyn T. Littell" in *Biographical Dictionary of American Architects* (Deceased), p. 374.

[124] Ware (1832-1915) is the founder of modern architectural education in America. After studying civil engineering and working for an architect, he joined the atelier of Richard Morris Hunt where he met his future partner, Henry Van Brunt. In 1865, Ware was appointed head of the new architecture program at M.I.T. and based its curriculum on methods he observed at the Paris École des Beaux-Arts. He was called to Columbia College in 1881 to found its department of architecture and remained there until he retired in 1903. Ware was active in the AIA and formulated its rules for competitions. William A. Coles, "William R. Ware," *MacMillan Encyclopedia of Architects*, vol. 4, pp. 373-74.

[125] Saylor, pp. 10, 12; Upjohn, pp. 161, 167-68.

[126] American Institute of Architects, *Proceedings of the Third Annual Convention of the American Institute of Architects, Held in New York, November 16th and 17th, 1869* (Committee on Library and Publications of the

earlier that year by the Church of the Holy Trinity. Neither man won decisively and the church went to Eidlitz while the rectory went to Withers.[127]

*A Jewish Architect?*

Much has been made of Leopold's religion and that of his brother Marc within the American and European Jewish communities. Wischnitzer and Gerald Bernstein reflected a common view that Eidlitz was probably the first Jewish architect in the United States[128] and Olga Bush placed Eidlitz as a member of Temple Emanu-el, "the first Reform congregation in New York which was composed of the city's most affluent and elite German Jews (including the architect himself)."[129] Robert A. M. Stern claimed that Eidlitz's religious beliefs were never disclosed.[130] Perhaps in an attempt to resolve these disparate views, the *Universal Jewish Encyclopedia* included an article on Eidlitz but never mentioned his religion.[131] The only contemporary attribution of religious affiliation appears in an

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American Institute of Architects, 1870), p. 14. Six other members were dropped for non-payment of dues and did not ask for reinstatement.

[127] Kowsky, *The Architecture of Frederick Clarke Withers and the Progress of the Gothic Revival in America After 1850* (Middletown, CT: Wesleyan University Press, 1980), pp. 90-93.

[128] Wischnitzer, *Synagogue Architecture in the United States*, p. 5; Gerald Bernstein, "Two Hundred Years of American Synagogue Architecture," p. 11 in *Two Hundred Years of American Synagogue Architecture*, pp. 12, 15.

[129] Olga Bush, "The Architecture of Jewish Identity: The Neo-Islamic Central Synagogue of New York," *Journal of the Society of Architectural Historians*, vol. 63, no. 2 (June 2004), p. 192.

[130] Robert A. M. Stern, Thomas Mellins, and David Fishman. *New York 1880: Architecture and Urbanism in the Gilded Age* (New York: The Monacelli Press, Inc., 1999), pp. 326.

[131] "Leopold Eidlitz" in *Universal Jewish Encyclopedia*, Isaac Landman, ed., 10 vols. (New York: Universal Jewish Encyclopedia, Inc., 1939-43), vol. 4 p. 22.

Popular identification of Eidlitz with the American Jewish community is probably responsible for the incorrect attribution of the Baxter Memorial Library (1889, 96 Grove Street, Rutland, VT; now the Rutland Jewish Center) to Eidlitz by its present occupants. It was actually designed by Arnold William Brunner (1857-1925) and Thomas Tryon (1859-1920) who practiced together in New York City in from 1886 to 1898. Brunner, who was Jewish, trained with George B. Post and studied in Europe. Among the firm's first major commissions was Temple Beth-El (1890-91, East 76th Street and Fifth Avenue, demolished). Brunner designed several other synagogues after he left Tryon. This situation, and the building's Romanesque detailing, may have contributed to the error. *The Historic Architecture of Rutland County: including a listing of the Vermont state register of historic places*, Curtis B. Johnson, ed. and Elsa Gilberston, ass't. ed. (Montpelier, VT: The Vermont Division for Historic Preservation, 1988), pp. 288, 291; Kathlyn Hatch and Emma Jane Saxe, *National Register of Historic Places Inventory – Nomination Form, H. H. Baxter Memorial Library*, 1978; "Arnold W. Brunner" in

account of the dedication in 1847 of a synagogue designed by Eidlitz: it referred to him as "an Israelite."[132]

Leopold Eidlitz did not write about or publicly discuss his religious affiliation. He and all of his children who married did so outside of the Jewish religion and, with the exception of two synagogue commissions, Judaism did not play an obvious role in his personal life or career. The only written reference to the Jewish religion made by him is inconclusive:

> The Jehovah of the Jews is defined as the God who visits the sins of the fathers upon the children. Christianity teaches a God of love who exacts faith and obedience as the condition of eternal happiness. Modern science, as far as it has an opinion on this subject, tends to the belief that God is law.[133]

Eidlitz's great-niece did not believe that he was Jewish and described two situations in which her father seemed to concur.

> My father was Sr. Warden at The Church of the Resurrection (High Episcopal in NYC), a member of exclusive clubs (in the days when Jews would have been banned), listed in the Social register, and like his immediate family, Episcopalian or Catholic. I had heard from my mother that on their trip to Europe in 1929, he showed her the Christian cemeteries where his relatives were buried in Vienna, anxious to point out that the Eidlitz family was not Jewish.
>
> I also remember as a young teenager hearing that my father had been very upset one September afternoon when he stopped at a newsstand outside his 42nd street law office to buy a paper, and the newspaper seller wished him a Happy New Year![134]

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*Biographical Dictionary of American Architects (Deceased)*, p. 85; Steven McLeod Bedford, "Arnold William Brunner" in *Macmillan Encyclopedia of Architects*, vol. 1, p. 314; "Thomas Tryon" in *Biographical Dictionary of American Architects (Deceased)*, p. 608; *Architects in Practice, New York City 1840-1900*, pp. 18, 76; Joseph Gutmann, "Jewish Participation in the Visual Arts of Eighteenth- and Nineteenth-Century America," *American Jewish Archives*, vol. 15, no. 1 (April 1963), pp. 56-57; Stern *et al*, *New York 1880*, pp. 332-33.

[132] A. Abraham, "Consecration of the New Synagogue Shaaray Tefila" *The Occident, and American Jewish Advocate, A Monthly Periodical Devoted to the Diffusion of Knowledge on Jewish Literature and Religion*, vol. 4, no. 5 (August 1847), p. 222-29.

[133] Leopold Eidlitz, *The Nature and Function of Art, More Especially of Architecture* (New York: A. C. Armstrong & Son; London: Sampson Low, Marston, Searle & Rivington, 1881), p. 182.

[134] Email from Elizabeth Eidlitz, 2 October 2004.

Few Jewish architects had practiced in Europe before 1840. Wischnitzer mentioned only George Basevi (1794-1845) and David Mocatta (1806-82), all of whom began their careers in the late 1820s and 1830s in England, and Albert (Albrecht) Rosengarten (1809-93) in Germany.[135] Paul and Percival Goodman also mentioned Basevi and Mocatta as well as the German architects Georg Heinrich Friedrick Hitzig (1811-81) and Alfred Messel (1853-1909).[136] Carl Herselle Krinsky noted the French architect, Jacob Silveyra[137] and attributed the lack of a Jewish presence in the profession to "... the poverty of most Jews throughout history, the legal regulations applied to them, and the uncertain skills of builders" who created their synagogues. She also suggested that under such circumstances, modification of existing buildings rather than erection of new ones tended to diminish architectural aspirations and claimed that the Talmud encouraged obliviousness to surroundings

[135] Wischnitzer, *Synagogue Architecture in the United States*, pp. 5, 43. Basevi and Mocatta were pupils of John Soane (1753-1837). Basevi (who converted to Christianity) was a prolific architect who designed several classical London terraces including Belgrave Square, Pelham Crescent, and Thurloe Square. He also designed the Conservative Club in London and St. Mary's church in Greenwich but is best known for the winning entry in the 1835 competition for the Fitzwilliam Museum at Cambridge. He was killed while inspecting repairs at Ely Cathedral. Mocatta was born to an English banking family and worked for most of his life for the London Brighton & South Coast Railway. He was a Senior Trustee of the Soane Museum and was associated with John Davies, Nathan M. Rothschild's architect, in the construction of the Romanesque Revival New Synagogue in Great St. Helens, London (1838); "George Basevi" and "David Mocatta" in *Directory of British Architects 1834-1914*, Antonia Brodie, Alsion Felstead, Jonathan Franklin, Leslie Pinfield, Jane Oldfield, eds., (London and New York: Continuum, 2001), vol. 1, p. 129; vol. 2, p. 194; de Brefny, pp. 151-52. Rosengarten, "the first modern architect of Jewish birth in Germany" trained in Kassel, studied with Labrouste in Paris, and visited Rome. In addition to working for the Hessian state building service, he maintained a private practice and was the author of a *Die architektonischen Stylarten: eine kurze, allgemeinfassliche darstellung der charakteristischen verschiedenheiten der architektonischen stylarten* Braunschweig (F. Vieweg, 1857). The book was translated and published in England and the United States as *A Handbook of Architectural Styles* in revised editions from 1858 to 1927. Wischnitzer, *Synagogue Architecture in the United States*, p. 69; Krinsky, p. 68.

[136] Hitzig trained under Schinkel and in Paris. Along with other Schinkel pupils, Hitzig helped define Berlin's domestic residential typologies. Messel built the Wertheim department store, several banks, and the Hesisches Landmuseum. Paul Goodman and Percival Goodman, "Jews in Modern Architecture, After a Late Start" *Commentary Magazine*, vol. 24, no. 1 (July 1957), pp. 30-31; Barry Bergdoll, "Friedrich Hitzig" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 395-96.

[137] Silveyra co-designed, with Philippe-Jérome Sandrié, a neo-classical synagogue located at Rue Notre Dame de Nazareth in Paris (1819-22; demolished); Krinsky, pp. 67, 246; Brian de Breffny, de *The Synagogue* (New York: Macmillan Publishing Co., Inc., 1978), p. 130.

during prayer.[138] Of perhaps greater significance, however, were conditions in Europe before civil emancipation.[139]

> Before emancipation, while some Jews had entered the construction trades in eastern and central Europe, the design and supervisory positions in private and governmental architecture had been reserved for Christians. After the middle of the nineteenth century, it became possible for Jews to take architectural qualifying examinations. As pious boys could not have drawn, written, handled money, or ridden on the Sabbath, Jewish architects and construction engineers came from prosperous and culturally assimilated families who may not have observed all the traditional practices of Judaism.[140]

Much of the speculation about Eidlitz's religion may reflect the long history of the family name in Prague. Jewish traders had settled in the Prague basin by the 10th century, and the Jewish settlement gradually congregated in an area located near the river, in the northwest part of what became the Old Town. The Jewish quarter was first clearly defined in the first third of the 13th century when it was

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[138] Krinsky, p. 20.

[139] The legal emancipation of the Jews was closely tied to the general movement toward increasing political liberty and egalitarianism that began during the late eighteenth century. During the period between the French Revolution and the Congress of Berlin (1789-1878), emancipation defined as achievement of legal equality occurred in France (1789), the Netherlands (1796), Italy (1870), Germany (1871), and Austria-Hungary (1867). In some of these countries, the process occurred in conjunction with cataclysmic political events such as the revolutions of 1789-91, 1830-31, and 1848-49, the unification of Germany and Italy, and attainment of independence in Hungary. In England and Scandinavia, emancipation was achieved through legislation, while application of international diplomatic pressure was necessary to achieve similar results in Switzerland, Serbia, and Bulgaria.

The influence of Enlightenment ideas, especially those contained in the "Declaration of the Rights of Man and of the Citizen" passed by the French National Assembly on 26 August 1789 motivated discussions of emancipation that took place during this period. Advocates claimed that maintaining the politically limited and socially inferior status of the Jews was incompatible with the notion of civic equality, and that it contradicted the principle of natural rights and undermined the civic equality of those who had attained it through revolution or were entitled to it by principle. They also claimed that protection of the natural rights of their citizens should be the objective of all governments. According to this train of thought, Jews should be accorded the liberties, advantages, and political rights of all the citizens of the countries in which they lived, without exception. The recommendation was seen as a reflection of existing social conditions since it had become apparent that, despite their ethnic origin and messianic hopes, Jews adopted the language and the culture of the environments in which they lived, were loyal to the state, and identified themselves with the nationalistic aspirations of their fellow citizens.

[140] Krinsky, p. 67. "Pious boys" might also have been deterred by Second Commandment hostility to the visual arts.

separated from the fortified Old Town by seven gates.[141] Although its walls were removed in the early part of the nineteenth century, if they were Jewish, Eidlitz's family might have lived in the Josefov (ghetto), an area that did not become an official part of Prague until 1850, two years after Jews were granted equality.[142] In 1849, Emperor Franz Joseph I amended the Austrian constitution to state that "the enjoyment of civil and political rights does not depend upon religious confession." Because land ownership, residency, and occupational rights were covered by this clause, all of Vienna became available for Jewish settlement and the ghetto began to empty out. Many of these rights were revoked, however, between 1853 and 1867.[143]

Architectural historian Christian Norberg-Schulz called the Josefov "one of the most characteristic parts of the city" and added "but because of its slum-like conditions it was torn down after 1893."[144] The project, the result of a proposal made in 1885 by Alfred Hurtig and a competition held in 1893 won by Josef Sakař, began as a paving and sewer scheme initiated in response to a series of disastrous floods that plagued the area during the eighteenth and nineteenth centuries. It was also advanced by developers eager to build apartment blocks in the center of the city, and they are now blamed for the extensiveness of the clearance and destruction of historic buildings that began in 1896 and continued to 1913. Because most of the Jewish population had left after the 1849 revolution, nearly all of the buildings in the area associated with their history were razed, with only six

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[141] Jane Pavitt, *Prague* (Manchester, UK and New York: Manchester University Press, 2000), p. 17. An account of the area appeared in Anthony M. Dignowity, M.D., *Bohemia Under Austrian Despotism, Being an Autobiography* (New York: privately published, 1859), pp. 178-82, reprinted in Guido Kisch, *In Search of Freedom, A History of American Jews from Czechoslovakia* (London: Edward Goldston & Son, Ltd., 1949), pp. 195-97. Dignowity attributed the squalid conditions he observed to years of unfair and ill-advised Austrian governmental policy, and compared them to what he considered to be beneficial affects of Jewish assimilation (including modification and abandonment of religion) he observed in Great Britain and America.

[142] Pavitt, p. 17.

[143] Carol Herselle Krinsky, *Synagogues of Europe: Architecture, History, Meaning* (Cambridge MA and London: The MIT Press, 1985), p. 191.

[144] Christian Norberg-Schultz, *Genius Loci – Towards a Phenomenology of Architecture* (New York: Rizzoli, 1984), p. 85; translation of *Genius loci – paesaggio, ambiente, architettura* (Milan: Electa, 1979). The assessment was confirmed by a New York Times correspondent who visited the quarter before it was demolished; "Bohemia," *New York Times*, 21 August 1852, p. 1.

synagogues, the Town Hall, and the cemetery saved. These structures ranged in age from twelfth through early nineteenth century, and from Gothic to Baroque in style. At the start of the twentieth century, blocks of flats in a variety of revival and contemporary styles replaced the demolished buildings, although some of the adverse effects of the first round of work were mitigated by a second competition held in 1902 in which picturesque planning techniques replaced the Hausmann-esque approach of the earlier scheme.[145]

Avraham Barkai wrote that Bavarian Jews, mainly from Franconia, were the pioneers of the mass exodus to the New World, followed closely, and probably in similar quantity by Jews from Bohemia.[146] During the post-Napoleonic period, the Bohemian Jewish community involuntarily returned to its former low status, excluded from most trades and forbidden to own land. Although mass emigration might have alleviated these problems, it was not pursued as a popular response until after 1848, a situation that Guido Kisch attributed to Jewish conservatism and patriotism.[147] Approximately 15,000 Jews lived in America in 1840. Ten years later, the number increased to 50,000, and by 1860, there were 150,000; nearly all were of German descent.[148] In New York City, 500 Jews were present in 1825; by 1848, there were 12,000 to 13,000, and around 60,000 by 1860.[149]

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[145] Radomirá Sedláková, *Prague, an architectural guide*, Michal Schonberg, trans. (Venice: Arsenale Editrice, 1977), pp. 22, 106; Rosislav Švácha, *The Architecture of New Prague, 1895-1945*, Alexandra Büchler, trans. (Cambridge, MA and London: The MIT Press, 1995), pp. 5-22.

[146] Avraham Barkai, *Branching Out: German-Jewish Immigration to the United States, 1820-1914* (New York and London: Holmes & Meier, 1994), p. 15.

[147] Kisch, pp. 13, 21-22.

[148] The 1850 census found 31 Jewish congregations in the United States with accommodations for 16,575 worshipers. Four years later, the *New York Times* found that 65 congregations were in existence, 15 of which were located in New York City and served half of the of the 60,000 American Jewish population. "Jews in America," *New York Times*, 25 March 1854, p.2.

[149] Jacob Lestschinsky, "Jewish Migrations, 1840-1956" in *The Jews: Their History, Culture, and Religion*, Louis Finkelstein, ed., 2 vols. (New York: The Jewish Publication Society of America, 1960), vol. 2, p. 1539; Nathan Glazer, "Social Characteristics of American Jews" in Finkelstein, vol. 2, pp. 1695, 1698. The number is unclear and another source gives a range of from 7,000 to 20,000 in 1860; Stanley Nadel, *Little Germany: Ethnicity, Religion, and Class in New York City*, 1844-80 (Urbana, IL: University of Illinois Press, 1990), pp. 95-99.

After the 1830s, most German-speaking immigrants lived in Kleindeutchland (Little Germany), a Lower East Side neighborhood. Located near what was then the northeast edge of the city, the area was bounded by 14th Street, the East River, Grand and Division Streets, and the Bowery. For many of the Bohemians who landed in New York, Kleindeutchland was a stop on the way to a more permanent home and reports written in 1843 noted that most of the inhabitants were extremely poor and lived in squalid surroundings.[150] The location of Eidlitz's residences prior to 1851 is unknown. However, by 1850, he had begun construction of a house at Riverside Drive and 86th Street, a location far removed from Kleindeutchland.

Joseph Gutman's investigation of American artists of Jewish origin born in or outside of the United States before 1860 showed no major differences between the work of such artists and their contemporaries and he concluded that the work of eighteenth- and nineteenth-century artists of identifiable Jewish descent was indistinguishable from that of their gentile contemporaries.

> No great pioneers or innovators stand out. In an age of artistic mediocrity, they, too, were content, in the main, to gain public and academic acceptance. In style and, for the most part, in subject matter, their works were indistinguishable from the dominant artistic currents of eighteenth- and nineteenth-century America.[151]

Gutmann's assertions of artistic mediocrity apparently did not extend to architecture. While he acknowledged that Jews were active "not only as sculptors and painters," he mentioned only two architects other than Eidlitz: Dankmar Adler, and Arnold W. Bruner. Adler (1844-1900), the son of a rabbi and Louis Sullivan's partner, was born in Germany and came to America in 1859. Bruner

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[150] Barkai, pp. 53-54. The Christian portion of the community was nearly decimated when more than 1,000 of its members were killed in a Hudson River excursion boat explosion and fire on 15 June 1904. Many of the remaining inhabitants moved uptown to Yorkville, Brooklyn, the Bronx, and Astoria in Queens, and the old neighborhood was subsequently taken up by newly arrived Russian and Polish immigrants. Stanley Nadel, "Kleindeutchland," Encyclopedia of the City of New York," p. 639; Čapek, p. 40; "1,000 Lives May Be Lost in Burning of the Excursion Boat Gen. Slocum, "*New York Times*, 16 June, 1904, p. 1.

[151] Joseph Gutmann, "Jewish Participation in the Visual Arts of Eighteenth- and Nineteenth-Century America," *American Jewish Archives*, vol. 15, no. 1 (April 1963), pp. 56-57.

(1857-1925), born in New York City, based his successful career on advocacy of classical modes of design for institutional architecture and city planning. Both were a generation younger than Eidlitz.

## 2. THREE SCHOOLS: PRAGUE, VIENNA, AND BERLIN

The status of architectural education in early to mid-nineteenth century German-speaking Europe reflected its underlying political fragmentation. Leopold Eidlitz attended polytechnical schools in Prague and Vienna, both within the Austro-Hungarian Empire, but most of his German-speaking New York City contemporaries were trained at the Berlin Bauakademie, a Prussian school. His training was of brief duration and narrow scope relative to the material offered at the Bauakademie, and the situation had a strong influence on his approach to design and his interest in architectural education.

### *The Availability of Architectural Training in German-speaking Europe*

Eidlitz's desire to obtain architectural training in a German-speaking school could have been satisfied in a limited number of ways: as a trainee in the office of a practicing architect, as a private student of a practicing or academic architect, or as a student at a building, art, or polytechnical school. This is because in pre-industrial German-speaking Europe, no single system of architectural education existed above the apprentice level, although training was available in military schools, royal academies, art academies, and at the first Prussian Realschule (secondary school).[1] Because these institutions were intended to train government architects and building inspectors, they offered a polytechnical curriculum that emphasized technology rather than art (the better students were encouraged to resolve their aesthetic deficiencies with study in Paris or Rome after graduation).[2] Admission generally required a year of experience in a

[1] Vincent Clark, "A Struggle for Existence: The Professionalization of German Architects," in *German Professions, 1800-1950*, Geoffrey Cocks and Konrad H. Jarausch, eds. (New York and Oxford: Oxford University Press, 1990), p. 145.

[2] Charles D. Elliott, *The American Architect from Colonial Times to the Present* (Jefferson, NC and London: McFarland & Company, Inc., Publishers, 2003), p. 62; Clark, p. 148.

practitioner's office and, after completion of a four-year program, graduates could enter government service or receive a diploma and go out on their own.

As neither Eidlitz nor his biographers ever mentioned apprenticeship or private training, it seems likely that attendance at a state-operated and -funded polytechnical institution was the most feasible way for him to pursue a career as an architect. This supposition is supported in accounts of his attendance at the Royal Bohemian Estates Polytechnical School in Prague, although they do not mention what he studied. Admission to such state-operated schools was based on a student's finances, native language, and, to a lesser extent, religion, and during the early nineteenth century, an increasing percentage of students in colleges and technical schools tended to come from a proto-middle class, "the intermediate strata of shopkeepers, independent craft producers, schoolteachers, and some peasant farmers – the *Mittlestand* in the terminology of Central Europe's old corporate society."[3]

Several factors contributed to this situation, not the least of which were low tuition costs and the ready availability of financial exemptions and scholarships. In Prague, where Czech was spoken, the language of instruction had become less of a concern because of educational reforms introduced by Maria Theresa and Joseph II.[4] Religion, however, was still a factor during the 1830s as reflected in the large number of Catholic teachers in high schools and universities. Even so, eighteenth-century assertions of state power by Joseph II had granted religious toleration to

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[3] Gary B. Cohen, *Education and Middle-class Society in Imperial Austria, 1848-1918* (West Lafayette, IN: Purdue University Press, 1996), p. 130.

[4] While reforms introduced in Hapsburg lands permitted primary school instruction in a student's native language, German was required at the upper levels. Consequently, during the early nineteenth century, nearly all public education in Hapsburg schools above the elementary level was conducted in German. These efforts persisted in Bohemia long after Joseph's death and most middle- and upper-class Czechs tended to present themselves as linguistic and, usually, cultural Germans. Rural peasants were among the few Czechs who continued to speak the national language and maintain traditional customs until the unsuccessful Bohemian and Moravian political rebellions of 1848 legitimized the association of nationalism and language; *In Search of Freedom, A History of American Jews from Czechoslovakia* (London: Edward Goldston & Son, Ltd., 1949), pp. 31-32.

non-Catholics and the ability of adherents of most religions to operate primary schools, attend all university facilities except Catholic theological schools, and obtain degrees.[5] While procedures were available for those wishing to convert or declare themselves "without religion" to pursue social and economic mobility, few did either. Requirements for registration of religious affiliation and payment of taxes to support minority religious institutions were not imposed until the late nineteenth century.[6]

*The Origins of the Polytechnics*

European institutions of higher education that offer programs in the liberal arts descended from the European universities of the Middle Ages. However, polytechnical institutions and technical colleges originated at a different time and place. As European countries began to expand their interest in and reliance on industrialized processes, the need for factories, machinery, power, raw materials, and the knowledge to use them became apparent. Despite the large sums of money involved and the effects of industry on society, the technical education required to support such enterprise developed slowly in Europe.

France moved relatively quickly toward industrialization, thereby creating a demand for trained technicians and engineers. When the National Convention established the École des Travaux Publics in Paris in 1794 by (the name was changed to "École Polytechnique" in 1795), it created a model for comparable institutions throughout Europe and, later, America.[7] The school prepared

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[5] Cohen pp. 129-31.

[6] Cohen, pp. 135-36.

[7] Schwarzer claimed that the process actually began nearly fifty years earlier with the establishment of the École des Ponts et Chaussées, an advanced engineering institution, in 1747; Schwarzer, p. 101. For a history of the French polytechnical schools, see Antoine Picon, *French Architects and Engineers in the Age of Enlightenment*, Martin Thom, trans. (Cambridge, UK and New York: Cambridge University Press, 1992) and *L'Invention de L'Ingénieur Moderne, L'École des Ponts et Chaussées 1747-1851* (Paris: Presses de L'École Nationale des Ponts et Chausées, 1992). The first American schools of engineering were located at the West Point Military Academy (West Point, New York, initiated 1798, opened 1802, instituted as a school of engineering 1818) and the Rensselaer School (Troy, New York, 1824). The latter was the first

its students for military and civil service but emphasized mathematics and technology in a mandatory core curriculum that included mathematics, descriptive geometry, and physics.[8] Schools based on this multi-disciplinary approach were called "polytechnic" from the Greek πολύτεχυος ("skilled in many arts"). Many opened in Europe during the early part of the nineteenth century and focused on science, engineering, and the applied sciences.

The emphasis on useful and practical subjects, however, was only one difference between a polytechnic and a traditional university. The fundamental purpose of the polytechnic movement was to provide the working classes with an education that emphasized practical skills, an end quite different from that of the education of the upper classes whose children were trained in universities for administrative careers. In some cases, particularly where communities of skilled mechanics or technicians already existed, polytechnics enabled those already familiar with the practical side of engineering to formalize their skills. Polytechnics also differentiated themselves from traditional institutions of higher education through "hands on" learning in laboratories and workshops as well as lectures. This emphasis on praxis was particularly important during the early period of the movement because, in addition to intellectual mastery of subject matter, many engineering students had to make their own instruments and tools.

Within Hapsburg lands, polytechnical institutions were established in Prague (1806), Graz (1814), Vienna (1815), Kraców (1833-34), Lemberg (1844), and Brno (1843). However, before

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private technical school in the United States and the first to use a laboratory approach to teaching. In 1833, it became the Rensselaer Institute and its first class of civil engineers graduated in 1835. During the 1830s, the school changed its emphasis from agriculture to the creation of polytechnical institution for architecture and engineering although its name was not changed to "Rensselaer Polytechnic Institute" until 1849. Ulrich Pfammatter, *The Making of the Modern Architect and Engineer*, Madeline Ferretti-Theilig, trans. (Basel, Boston, Berlin: Birkhäuser, 2000), pp. 273-75.

[8] The École Polytechnique was also a preparatory school that sent its best graduates to the École des Ponts et Chaussées, rather than to the École des Beaux-Arts where architecture was taught.

1875, architectural courses were available only in Vienna, Prague, Limberg, and Kraków.[9] Comparable schools within Germany opened in Berlin (the Bauakademie in 1799 and the Gewerbeakademie in 1821), Karslruhe (1825), Darmstatdt (1829), Munich (1827), Dresden (1828), Stuttgart (1829), and Hanover (1829).[10] In all of these places, polytechnical schools quickly assumed a dominant role and came to resemble universities in their rigor and prestige.[11]

*The Polytechnical Institute in Prague*

In January 1705, Christian Joseph Willenberg (1655-1731) petitioned Emperor Leopold I to start a college of engineering sciences in Bohemia. Willenberg, a native of Silesia and a landscape engineer who received his mathematical and technical training in the French army, left France after his service and settled in Prague. Two years later in response to Willenberg's petition, Leopold's son, Emperor Joseph I, ordered the Czech General Estates to found an engineering school there. Because the Bohemian provinces of the Austrian monarchy were exhausted by taxation at the time, money for the new school was not made available and it remained without funds until 1717 when Emperor Charles VI, the son of Joseph I, ordered the Estates to carry out his grandfather's order. The Institute of Engineering Education opened with twelve students in Willenberg's apartment the next year and after 1725, under the direction of Johann Ferdinand Schor, the curriculum expanded to include civil architecture, bridge building and military architecture, drawing, and visits to construction sites. Schor, the author of the school's

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[9] Christopher Long, "East Central Europe: National Identity and International Perspective," *Journal of the Society of Architectural Historians*, vol. 61, no. 4 (December 2002), p. 519; Pfammatter, pp. 210-11. Pfammatter does not include Prague in this list.

[10] Pfammatter, pp. 210, 222; Cohen, p. 14. Neumann distinguished between art and military academies and polytechnics. For the academies, he gave the following dates: Berlin (1706), Dresden (1763), Dusselfdorf (1780), Kassel (1781), Munich (1808). For the polytechnics, he gives: Vienna (1815), Karlsruhe (1825), Munich (1827), Dresden (1828), Stuttgart (1829) Hanover (1831), Brunschweig (1835), Darmstadt (1836), Zurich (1853). Dietrich Neumann, "Teaching the History of Architecture in Germany, Austria, and Switzerland: *Achiteckturgeschichte* vs. *Bauforschung*," *Journal of the Society of Architectural Historians*, vol. 61, no. 3 (September 2002), p. 379 n. 6. Schwarzer noted that engineering schools were also established in Freiburg (1765) and Berlin (1770).

mathematical sciences textbook, was accomplished in field and forest surveying and "correction to political estates."[12] After his death, František Antonín Herget, a professor known for his lectures on practical applications of mechanics, substantially expanded the curriculum to include more scientific and engineering courses. The school's military offerings were eventually transferred to the military academy and other military schools, and after 1787, the department of philosophy of the University of Vienna absorbed the engineering courses. By 1779, more than two hundred students were enrolled, and after Herget's death in 1800, the need for an independent school of engineering that could meet the increasing needs of the industrial and commercial sectors of the Bohemian and Austro-Hungarian economies became apparent.[13] At that time, nearly all governmental infrastructure projects were designed by students of Herget, and one of them, František Josef Gerstner (1756-1832), assumed the leadership role in that quest.

Gerstner was an early hydro-mechanical engineer and a professor of mathematics at Prague University. He was interested in wave theory and took an interest in metallurgy and in improvement of waterwheels as a cheap source of energy for industry. He had devised a model technical and scientific curriculum for Austrian technical schools in 1797 and spoke during the following year at an imperial commission concerned with establishing technical schools based on the French polytechnical model. He advocated retention and expansion of Herget's program while keeping the basic scientific mathematical and scientific course within the department of philosophy of the University of Vienna. However, he also wanted to establish a more advanced course within a new and independent polytechnical school. That new institution would serve the state and society by providing teachers whose students would improve commerce and industry, and recruit civil servants and other governmental types. More specifically, the school would

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[11] Clark, p. 145.

[12] Jelinek, p. 3-19 cited in Pfammatter, p. 212.

[13] Jelinek, p. 19-26 cited in Pfammatter, p. 212.

support the national textile, glass, and iron industries through instruction in chemistry and mechanics. This goal was expanded when the imperial court called for the addition of architecture and architectural engineering to the curriculum.

The new school opened with 106 students on 10 November 1806, making the Prague Polytechnic the oldest polytechnical school outside of Paris and the only school of higher technical education within the Austrian monarchy. Intended to "raise the commerce of the Fatherland through scientific instruction,"[14] its curriculum was divided into four areas: elementary mathematics and practical geometry, mechanics and hydraulics, agricultural and hydraulic architectural engineering (including general architecture and drawing), and general and specialized chemistry.[15] By 1812 enrollment became obligatory for government architects, and master builder designation required a diploma from the school. Additional subjects related to national industries were offered in 1817, and by 1822, drawing was required for all disciplines. When the Vienna Polytechnical Institute opened in 1815, Gerstner responded by making plans to expand the Prague institution by incorporating a two-year secondary school that would feed students into a specialized three-year program. This was accomplished 1833-34, one year after he retired and died.[16] In 1839, the architecture and architectural engineering program was reorganized into a two-year course to address innovations in technology such as chain bridges and railway engineering.[17] In 1843, the entire school was reorganized again,[18] and in 1863, instruction became available in Czech as well as German.[19]

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[14] Pfammatter, p. 214.

[15] Jelinek, p. 31-37 cited in Pfammatter, p. 214.

[16] Jelinek, p. 56-71 cited in Pfammatter, p. 215.

[17] A 435-foot chain bridge built in Prague in 1842 crossed the Vltava River and linked Malá Strana with Staré Město. It was demolished in 1899.

[18] Jelinek, p. 76-85 cited in Pfammatter, p. 215.

[19] Johann Georg Ritter von Schoen, *Die Technischen Hochschulen und deren Organisation in Oesterreich* (Leipzig: E. L. Morgenstein, 1882), p. 15, cited in Pfammatter, p. 215.

Many biographical accounts claim that Eidlitz left Prague because he had outgrown the educational opportunities available there.[20] Apparently, this was situation was fairly common in Bohemia as over half of those who attended Prague technical schools between 1806 and 1856 departed for other Hapsburg territories when their training was finished.[21] For potential architects, aside from the profound religious and political differences among Bohemians, Prussians, and Austrians that might have affected such decisions, architectural leadership was contested among several locales and, compared to Paris, no Central European city assumed dominance over architectural culture. The German architect Albert Rosengarten, a contemporary of Eidlitz, neatly summarized the situation:

> Speaking generally, during the last few decades [i.e., before the late 1850s] a very remarkable uncertainty and vacillation are noticeable in the application of all the styles that have been hitherto in use. In contradistinction to France, where all architects come from one and the same training-school, and embark on the same course of to acquire a thorough knowledge of their profession, in Germany the various architectural schools render a uniform education impossible, and, as is natural to suppose, promote the most varied views: for the method of instruction and the subject-matter taught themselves differ, and so do the degrees of artistic knowledge possessed by the teachers who influence by their words; and the same differences exist among the architects who are summoned to carry out the most important buildings, and so to exert influence by their example. These things determine the course and direction of the whole German school.[22]

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[20] "Leopold Eidlitz" in *The Public Service of the State of New York. Historical, Statistical, Descriptive, and Biographical. Illustrated with Views and Portraits*, Paul A. Chadbourne, editor-in-chief, (Boston: James R. Osgood and Company, 1882), vol. 2, p. 77; *The American Architect and Building News*, vol. 93, (1 April 1908), Part 2 ("Current News Section"), p. 17; "Leopold Eidlitz Dead," *New York Times*, 23 March 1908, p. 1.

[21] Cohen, p. 15.

[22] Albert Rosengarten, *A Handbook of Architectural Styles*, W. Collett-Sanders, trans. (Boston: Longwood Press, 1977), reissue of translation (London: Chatto and Windus, 1878) of *Die architektonischen Stylarten: eine kurze, allgemeinfassliche darstellung der charakteristischen verschiedenheiten der architektonischen stylarten* (Braunschweig: F. Vieweg, 1857), pp. 471-72.

Mitchell Schwarzer added that while Viennese taste predominated in Hapsburg lands such as Bohemia, Galacia, and Hungary, its authority was actively challenged in other German-speaking states.[23] In Karlsruhe, Munich, and Berlin, for example, architecture developed a distinctive character related to the instruction given by charismatic teachers in the academies and polytechnical schools of those cities. Rosengarten claimed to see a Berlin approach founded by Schinkel and reflective of French thought in its attempt to adapt classical architecture to modern requirements. In Stuttgart, preferences for Renaissance models also reflected the French education of the leading architects and their subsequent study of Italian buildings. In Munich, however, a "Romantic-Byzantine" mode advocated by Gärtner superseded Klenze's classicism and extended Gärtner's influence within southern Germany and Austria. A concern for clear relationships between construction and ornament implicit in the Munich approach was advocated in Karlsruhe by Hübsch, Eisenlohr, and Thierry[24] as an alternative to Weinbrenner's notions of classicism, and the approach was also said to be preferred in Baden although Rosengarten also saw a tendency toward the use of richer, more elegant, and more colorful details and materials and a movement toward the Gothic.[25] Dresden on the other hand, was said to favor Renaissance modes of design due to the influence of Pöppelmann's work at the Zwinger (1705/1708-22;

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[23] Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity* (Cambridge, UK and New York: Cambridge University Press, 1995), pp. 25-26.

[24] Friedrich Eisenlohr (1805-1854) studied at the Karlsruhe Polytechnic from 1824 to 1826 under Friedrich Weinbrenner. After returning from Italy, he was appointed a teacher at the school in 1832 by Weinbrenner's successor, Heinrich Hübsch, became a professor in 1839, and remained there during the 1840's. His main work involved planning and constructing buildings for the Baden State railway. In 1850-51, he designed the case that came to be used for Black Forest "cuckoo" clocks based on the gatekeeper lodges he designed for railroad. In 1853, he became director of the Bauschule in Karlsruhe. Dietrich Neumann, "Jakob Friedrich Eisenlohr" in *Grove Dictionary of Art*, Jane Turner, ed., 34 vols. (London: Macmillan Publishers Limited; New York: Grove's Dictionaries, Inc., 1996), vol. 10, pp. 119-20. Carl Ludwig Thierry, who was once an associate of Weinbrenner, taught at the Karlsruhe Polytechnic at the same time; Micahel J. Lewis, *The Politics of the German Gothic Revival: August Reichensperger* (Cambridge, MA and London: The MIT Press, 1993), p. 274 note 2.

[25] Rosengarten, p. 477.

portions demolished)[26] and the Semper's Königliche Hoftheater (1838-41, burned 1869). In Hamburg, the private realm controlled most architectural activity and rigid stylistic canons did not develop. In Vienna, the location of the only fully comprehensive university of importance in the Alpine and Bohemian regions of Austria between 1815 and 1848,[27] the outcome was similar with no single school achieving dominance because the court rather than individuals dominated the schools.[28]

*The Polytechnic in Austria*

The range of intellectual opportunities available in Vienna and its relatively non-doctrinaire educational environment may have attracted Eidlitz more than relative rigidities of non-Hapsburg Europe since his interests went far beyond the technical aspects of his profession. Architecture was first taught in Hapsburg lands in art and military academies during the late eighteenth and early nineteenth centuries, but establishment of technical universities during the first half of the nineteenth century effectively replaced the older system. Despite regressive measures taken in many areas of governance after the defeat of Napoleon, the Hapsburg monarchy initiated a program to modernize and improve education within its territories. Although technical schools established as a result of that initiative frequently suffered from poor facilities and inadequate

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[26] The Zwinger is an incomplete fragment of an extensive scheme for the replacement of the official residence of the Prince-Elector of Saxony and King of Poland, Frederick Augustus II ("The Strong," 1670-1733), that burned on 25 March 1701. Matthäus Daniel Pöppelmann (1662-1736), state trained and employed, incorporated a diverse assemblage of elements extracted from seventeenth century Roman *palazzi*, Parisian *hôtels*, and Perrault's design for east façade of the Louvre. Designed an orangerie, its scope was substantially expanded to accommodate a royal wedding and it became an enclosed garden bounded by pavillioned exedrae and long flanking wings. Its richly ornamented pavilions and wings enclosed a theatre and ballroom within a setting of gardens and fountains, all of which could be observed from terraces, arcades, passageways, and free-standing staircases that lead to viewing platforms located within and on the roofs of the pavilions. Christian F. Otto, "Matthäus Daniel Pöppelmann," *Macmillan Encyclopedia of Architects*, vol. 3, pp. 453-5; Anna Teut, "Dresden/Pillnits – Fragments of a Baroque Myth," *Diadalos*, no. 20 (15 June 1986), pp. 66-75.

[27] Cohen, p. 12.

[28] Lewis, *The Politics of the German Gothic Revival*, p. 59; Schwarzer, p. 26; Rosengarten, pp. 475-78, 479.

funding, their standards were higher and enrollments greater as a percentage of total population than similar institutions in many German-speaking states. Hapsburg technical schools also tended to be civil, rather than military, in orientation and, except in Vienna, they provided standardized curricula. Evens so, Austria had no state certification program for non-military engineers in the early nineteenth century and technical institutes did not award diplomas or certificates or administer comprehensive examinations. Consequently, most students enrolled for only one or two semesters.[29]

The first technical schools in Austria were established in Jáchymov (1716) and Banská Štiavnica (1725). They were concerned with mining, and emphasized empirical and traditional, rather than systematic and scientific, knowledge. However, members of the business community and several imperial commissions believed that education could also advance technology, craft, and commerce and Prague and Vienna became some of the first cities to establish educational institutions directed toward such ends. Austria, in particular, possessed an educational tradition and system that was conducive to Enlightenment and, specifically, French models of institutionalized and systematic scientific and technical instruction. The Austrian government and business community also desired to improve commerce and industry by making its products more useful and increasingly available to its population. While some subjects not geared to specific professions were taught, the Austrian educational system encouraged specialized vocational education that was responsive to regional concerns rather than the broad French polytechnical model. In the first Austro-Hungarian technical schools established in Prague (1806) Vienna (1815), Cracow (1833-34), and Lemberg (1844) this view resulted in the development of comprehensive educational programs situated within independent academic departments. Pfammatter claimed that this situation represented an "organizational transition" in

[29] Cohen, pp. 14-15; Christopher Long, "East Central Europe: National Identity and International Perspective," *Journal of the Society of Architectural Historians*, vol. 61, no. 4 (December 2002), p. 528, n.

the history of education, a process subsequently emulated by other schools. He also suggested that, for this reason, comprehensive subjects such as architecture, building design, and construction were only taught at these schools until 1875 because provincial schools, such as those established in Brno (1849) and Graz (1864), maintained their specialized orientations.[30]

*The Polytechnical Institute in Vienna*[31]

Although he did not include a history of the Vienna Polytechnical Institute in his articles on Eidlitz, Schuyler could reasonably claim "There is and long has been a specially close connection in Vienna between the science and the art of building, elsewhere so harshly divorced to their mutual disadvantage."[32] Although Gerstner's Prague polytechnical curriculum model of 1797 can be regarded as the starting point for the Vienna Polytechnical Institute, two widely held local views influenced the newer institution from its inception. These included a belief that the model of the École Polytechnique was unworthy of being adapted to Viennese conditions, and a desire to retain a level of academic freedom not present in existing technical schools, particularly those that taught architecture.[33] Both notions reflected a lack of sympathy for a curriculum in which students were required to attend a proscribed series of courses. The Viennese preferred their schools to be open to all "artistically eager" attendees, with each deciding on an appropriate course of study that need not result in a diploma. This approach was maintained at the Vienna Polytechnical Institute until 1863 when "obligatory instruction" was introduced and unlimited freedom to determine the course of study was abandoned as part of a comprehensive

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[30] Pfammatter, pp. 210, 212.

[31] For the early history of the Vienna Polytechnical Institute, Pfammatter relies on Joseph Neuwirth, ed., *Die k.k. Technische Hochschule in Wien 1815-1915. Gedankschrift Hrsg. vom Professorenkollegium* (Vienna: in Kommission bei Gerold, 1915).

[32] Leopold Eidlitz I, p. 164.

[33] Pfammatter, p. 216.

reorganization.[34] Similarly, until 1869, reports of course completion rather than diplomas were accepted in the public sector as proof of competency in specialized professions. Attendees of other polytechnical schools used reports of this kind to obtain jobs.[35]

Planning for the Viennese school began in 1805 when Emperor Franz I asked the imperial commission on education to prepare a feasibility study for the creation of a technical university in Vienna by funding a report on the Prague technical school. Conflicts between commercial and educational interests in the school's founding organization created a ten-year deadlock that Johann Joseph Prechtl (1778-1854), son of the manager of an iron works, scientist, academic, and educator entered at midpoint. His involvement began while teaching physics, chemistry, and natural history at the Realakademie St. Anna in Vienna, and a year after establishing a naval academy in Trieste for the Austrian government where he served as a professor of mathematics. A twentieth century account of Prechtl's view of the purpose of the school noted

> The polytechnical institute is to accomplish the transition from pure theory to practice and is to teach the application of theoretical principles to individual branches of activity so that the processes upon which they are based can be introduced into the working place.[36]

Prechtl envisioned the school as a particularly Viennese institution in the sense that it would attempt to consolidate remaining national resources diminished by the Napoleonic wars and the associated loss of territory. Other issues, such as the introduction of scientific and technical education as an Enlightenment replacement for workshop empiricism and ignorance were

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[34] Neuwirth emphasized that the Viennese model was based on academic freedom and government funding. In this way, "it was at least to allow each individual the possibility of freely taking advantage of this institute of instruction [i.e., the Vienna Polytechnical Institute] according to his respective talents and inclinations and according to his individual career choice; its admirable reasoning that 'school discipline and order can indeed exist without school compulsion' deserves a place of honor among the educational principles exhibited by any government at that time." Neuwirth, p. 58, translated and cited in Pfammatter, pp. 218-19.

[35] Neuwirth, p. 82, cited in Pfammatter, p. 219.

[36] Cited in Neuwirth, p. 14; translated and quoted in Pfammatter, p. 217.

adjusted to recognize the political and social environment in which the school would operate. This allowed for a unique approach that simultaneously accommodated academic freedom, specialized training, and systematic, yet practical, education in aesthetics. This approach did not replicate French practice, and the school was initially divided into three areas: chemical-technical, mathematical-technical, and empirical-technical. All were expected to combine theory, practice, testing, experimentation, and demonstration through appropriate models. Aesthetic education was to include art history, history of commerce, geometrical and model drawing, pattern and architectural design, and theory of forms. Although the Akademie der bildenden Künste opposed the scheme,[37] the school was authorized in 1814 and Prechtl was appointed director. During the following year, he traveled to Paris on the invitation of the French government to observe French technical schools and purchase equipment, materials, and books for the new institution.

The Vienna Polytechnical Institute opened on 6 November 1815 in temporary quarters with three professors and forty-seven students. It was divided into a technical and a commercial school. Remarks made by Prechtl on that day suggested that he believed that the Institute and the Akademie were deserving of comparable support.[38] This notion of equivalence and difference is essential to understanding his view of the school's relationship to the universities. In an 1816 statement of its position, a spokesman for the school wrote

> The polytechnical institute will be for the commercially industrious bourgeois estates with respect to the practical arts and to the technical and civil services that which the universities

[37] Neuwirth, pp. 20-50, cited in Pfammatter, p. 218.

[38] The new building (1816-18) shared the Karlsplatz with Johann Bernard Fischer von Erlach's Karlskirche (Parish Church of St. Charles Boromeo, 1715- 22, completed by Joseph Emanuel Fischer von Erlach, 1722-29). Designed by the Court Building Administrator and built under the supervision of Josef Schemmerl Ritter von Leytenbach, the Institute was extended in 1838 and its ceremonial hall decorated 1835-42 by Peter von Nobile. Nevertheless, it was situated on the east bank of the Wien River, outside the city walls while the Academy remained within the old city. *Architecture in Vienna* (Vienna: Georg Prachner Verlag, 1992), pp. 56, 59. Leytenbach (1752-1844) was the Director of the Imperial Building Yards and worked on the national road and river conservancy board for 67 years.

> initially are for educating civil servants and for the sciences as such.[39]

In reinforcement of this view and in common with its French predecessors, the Vienna Polytechnical Institute housed a museum intended to function as a "conservatory of the arts and commerce."[40] Travel by teaching staff was encouraged, a school journal was begun, and the staff was provided with requirements for producing textbooks. During the following year, the Emperor approved statutes for an Imperial-Royal Polytechnical Institute to be located in Vienna that incorporated many of Prechtl's goals such as establishment of academically free commercial and technical divisions, creation of a preparatory school with emphasis on science, creation of a technology museum, and creation of an association for the advancement of Austrian industry.

The position and nature of architectural education within the Vienna polytechnical school changed frequently. In 1827, the school of manufacturing and engraving design, the training site for architectural illustration, was moved from the Akademie to the Institute, but in 1842, it was moved back and the Institute established its own design school. Three years earlier, Prechtl had created a two-year course in building science and construction within an existing program for agricultural and waterworks building construction, a course that Eidlitz could have attended and whose subject matter appears to be relatively consistent with accounts of his training. The new course was intended to provide "knowledge of building materials, the properties of which the architect must base his structures and joining elements on." The approach would not involve "copying but as much as much as developing one's own design as far as possible" so that "in manifesting the theories in individual objects the students would be given the opportunity to ponder and think upon them."[41] Building design and construction was established as a separate

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[39] Cited in Neuwirth, p. 58; translated and quoted in Pfammatter, p. 219.

[40] Neuwirth, p. 82f, cited Pfammatter, p. 219.

[41] Cited in Neuwirth, p. 129; translated and quoted in Pfammatter, p. 220.

discipline in 1866 after a far-reaching reorganization of the school in 1863 that resulted in a differentiated system of specialized schools.

Eidlitz was said to have studied Landwirtschaft (land stewardship), most likely at the Vienna Polytechnical Institute[42] since is unlikely that courses in the subject would have been offered at the Akademie der bildenden Künste (Academy of Fine Arts) where architecture studios were divided between Classical and Gothic instructors.[43] Attempting to explain how he transcended this seemingly limited educational experience, Schuyler wrote that Eidlitz's instruction in "the erection of sundry humble and utilitarian classes of buildings called for in the administration of an estate" caused his imagination to "[take] fire at the possibility of doing worthier and larger things."[44] While the statement may be correct, this view of his training does not accurately reflect its true extent because the intent and form of architectural education in the early nineteenth century in German-speaking Europe was vastly different from what Schuyler knew in America.

During the eighteenth century, three kinds of providers had offered architectural services in German-speaking lands: the Baumeister (artisan builder) who was trained as a carpenter or mason and usually worked on private commissions; the court architect who was better trained and could engage in military and civil engineering as well as architecture; and the Baubeamte (state building official) whose role emerged with the growth of the bureaucracy during the eighteenth century. During the next century, the system began to change, primarily in response to industrialization,

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[42] Montgomery Schuyler, "A Great American Architect: Leopold Eidlitz I. Ecclesiastical and Domestic Work, [hereafter, "Leopold Eidlitz I,']" *Architectural Record*, vol. 24, no. 3 (September 1908), p. 164.

[43] Richard Phene Spiers, "Professional Education Abroad," *The American Architect and Building News*, vol. 16 (5 July 1884), p. 5.

[44] "The late Leopold Eidlitz," *Journal of the Royal Institute Of British Architects*, vol. 15, (November 1907-October 1908), pp. 654; Leopold Eidlitz I, p. 164. Kisch claimed that Eidlitz also studied in Bologna; Kisch, pp. 157-58. Only *The Western Architect* suggested that Eidlitz had anything that approached a formal architectural education and wrote "after spending several years of his youth studying architecture in Vienna, and elsewhere in Europe, he came to this country." "Obituary. Leopold Eidlitz," *The Western Architect*, vol. 11 (June 1908), p. 74.

but also because of the demise of royal patronage. In particular, former court architects began to work in state or municipal building departments and their work became increasingly concerned with the effects of urbanization, transportation, and commerce. At the same time, contractors and architects began to replace Baumeisteren. Both groups removed themselves from the physical work of construction as contractors became employers and architects concentrated on client consultation, design, and construction administration. These processes accompanied an increase in private practice among architects with the amount rising from 15 percent in 1840 to more than 40 percent by 1880, nearly all of which was directly related to the demand for factories, warehouses, department stores, and private residences.[45]

*The Polytechnic in Germany*

Technical schooling in Germany developed relatively late compared to France and Great Britain due to the slow pace of political unification and removal of customs barriers. The effects of this situation can be seen in the lingering importance of an agreement made in January 1834 among the members of the Deutscher Bund (German Federation) to establish a Deutscher Zollverein (German free trade area). While a Prussian constitution was established in January 1850, the Bund, a group of thirty-five sovereign monarchs and four independent cities, remained intact, albeit under Prussian leadership, until full German unification came in May 1871. The absence of a central governmental body able to develop and implement a correlated approach to commerce, technology, and education during that period slowed the development of technical schools and, in response, the government became involved in the active promotion of commerce, thereby strengthening (and blurring) the relationship of business to politics. This relationship manifested itself in creation of governmental associations for commercial progress, expenditures

[45] Clark, pp. 143-45. His statistics are based on analysis of 268 architects whose biographies appear in *Bibliographie zur Architektur im 19. Jarhundert*, Stephan Waetzold, ed. (Lichtenstein: Nedndlen, 1978).

for museums, exploration and educational travel, hosting of national and international exhibitions, and an increased commitment to technical and scientific education.[46]

*The Berlin Bauakademie*[47]

Although Eidlitz did not study at the Berlin Bauakademie, it provided the training for most of his German-American architectural contemporaries and set the standard for architectural education in German-speaking Europe. The Königliche Berliner Bauakademie (Royal Berlin Architectural Academy), Germany's first state-run school devoted entirely to architecture and the most well-known of the German-speaking schools of architecture, can be said to have begun in 1765 when Fredrick II founded a Bergakademie (School of Mining) in Freiberg. The school was in full operation by 1770, and a short-lived, Enlightenment-oriented École de génie d'architecture (School of the spirit of architecture) was established in his court in 1776 while efforts were made to expand existing institutions such as the Akademie der bildenden Künst. Nevertheless, civil service demands for well-trained engineers could not be met, and in 1799, the Royal Prussian Oberbaudepartement (Office of Works) established a Bauakademie modeled after the École Polytechnique in Paris as an affiliate of the Akademie der bildenden Künst. The new school was managed by the director of the art school or by the Oberbaudepartement and, until 1824, craft apprentices and journeymen educated at the art school were permitted to attend lectures at the building school.

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[46] Pfammatter, pp. 222-23.

[47] This material is based on Pfammatter, pp. 223-28; Hanno-Walter Kruft, *A History of Architectural Theory from Vitruvius to the Present*, Ronald Taylor, Elsie Callander and Anthony Wood, trans. (London and Princeton, NJ: Zwemmer and Princeton Architectural Press, 1994), translation of *Geschichte der Architekturtheorie: Von der Antike bis zur Gegenwart* (Munich: C. H. Beck'sche Verlagsbuchhandlung [Oscar Beck], 1985), p. 294; Neumann, p. 379 n. 6; Watkin and Mellinghoff, pp. 110-11, and Anna Wesenber, "Art and Industry," in *Karl Friedrich Schinkel: A Universal Man*, Michael Snodin, ed. (New Haven, CT and London: Yale University Press, 1991), pp. 57-63. Pfammatter relied on F. Schnabel, *Die Anfängen des technischen Hochschulwesens. Festschrift anläßlich des 100jährigen Bestehens der Technischen Hochschule Fredericiana zu Karlsruhe* (Karlsruhe, 1925) and K. Schwarz, ed., *Von der Bauakademie zur Technischen Universität. 200 Jahre Forschung und Lehre* (Berlin, 1999).

In 1821, Peter Christian Wilhelm Beuth (1781-1853), director of the Prussian Technischen Deputation für Gewerbe (State Agency for Trade) since 1819 and one of the governmental functionaries most responsible for post-1815 improvements in Prussian economic conditions, founded a Gewerbe Schule (College of Trade) in Berlin. Based on the Paris Conservatoire des arts et métiers (1799), it was intended to educate public-school graduates in theory and science for careers in the chemical industry, building technology, and mechanical engineering, and as teachers for provincial trade schools.[48] With his friend Schinkel serving as aesthetic advisor, Beuth professed an interest in developing skills and abilities among his students that would encourage "refining commerce through art," and his curriculum required them to take the same classes irrespective of their discipline. However, in 1824, under his the direction, the Bauakademie curriculum was changed: while practical and technical courses remained at that institution, theory courses moved to the Akademie der bildenen Künst. Enrollment remained high in engineering, but it fell so low in architecture that the department closed for three years.[49] Beuth's separation of disciplines was not maintained consistently, however, and it was strongly attacked by Schinkel in his teaching and in his design for a new building for the Bauakademie (1831-36, demolished 1961) that was commissioned by Beuth.[50]

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[48] A similar school was started in Vienna in 1825; Schwarzer, p. 101.

[49] Schinkel opposed a similar move in 1819 when the Prussian Ministry of Culture wanted to convert the Düsseldorf Akademie der bildenden Künst into a polytechnical school. Weinbrenner also opposed attempts to attract architecture students to engineering and mathematics lectures and contended that his students already had too much to learn. Clark, p. 147-48.

[50] In Schinkel's *Sammlung Architektonischer Entwürfe*, the building is called "Die allgemeine Bau-Schule in Berlin" (The general building school of Berlin). In addition to classrooms, it incorporated the offices of the Oberbaudeputation (Building Authority) and the Schinkel family apartment. Schinkel wrote that the new facility was required because "The limited space and facilities of the Royal Building Academy in Berlin [housed in the New Mint designed by Johann Heinrich Gentz, 1798-1800]... did not allow for proper display and public use of the designs, maps, and models within...." He also wrote "Another reason for the construction was the intended reorganization of the academy." Karl Freidrich Schinkel, *Collection of Architectural Designs including designs which have been executed and objects whose execution was intended* (Chicago: Exedra Books Incorporated, 1982), reprint of *Sammlung architektonischer Entwürfe enthaltend theils wereke welche ausgeführt sind theils gegestände deren ausführung beabsichtigt wurde* (Berlin: Ernst and Korn, 1866), translation of notes to Plates 115-22, pp. 48-49.

Beuth continued to advance his positivistic view of education and in 1827, he merged the Gewerbe Schule and the re-opened Bauakademie into the Allgemeine Bauschule (General School of Architecture) that emphasized engineering. He became director of the facility in 1831 and from 1830 to 1845 also served as Leiter der Abteilung für Handel, Gewerbe und Bauwesen (Director of Commerce, Industry, and Construction Affairs) for the Prussian interior and finance ministries. The Gewerbe Schule and the Bauakademie separated again after Beuth resigned in 1845 and two years later, a series of complaints from faculty, students, and professionals about inadequate artistic offerings and an over-emphasis on science at the Bauakademie created reforms that allowed students to specialize in Land- und Schöenbau (rural and "fine" architecture) or Wege- und Wasserbau (road construction and hydraulic engineering).[51] These events were probably known to Eidlitz, and they appear to have influenced his unsuccessful attempt in 1867 to establish a school of architecture based on the polytechnical model and operated by the American Institute of Architects.[52]

In 1869, the Gewerbe Schule became the Gewerbeakakademie and during the following year, the Prussian government made plans to merge it with the Bauakademie. Little happened until 1876 when a decision was made to establish the Königliche Technische Hochschule (Royal Technical College). By this time, Beuth's vision of flexible and direct technical training was gone. The Gewerbeakademie had become a technical school with stiff admission requirements and the provincial trade schools operated as nine-year Oberrealschulen (higher secondary institutions) that taught Latin.[53] At the Bauakadmie, the curriculum became increasingly fragmented when a

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[51] Clark, p. 147.

[52] Leopold Eidlitz, Richard Griffith Hatfield, Emlen T. Littell, William Robert Ware, and Samuel Adams Warner, "Report of the Committee on Education" in American Institute of Architects, *Proceedings of the Annual Convention Held at the Rooms of the New York Chapter, October 22d and 23d, 1867* (New York: Raymond and Caulon, Publishers, 1867), pp. 13-16. Warner was Eidlitz's brother-in-law.

[53] Kees Gispen, "Engineers in Wilhelmian Germany: Professionalization, Deprofessionalization, and the Development of Nonacademic Technical Education," in *German Professions, 1800-1950*, p. 106.

special course for Baumeisteren was initiated in 1875 and architecture was separated from civil and hydraulic engineering during the following year. Nevertheless, the government initially refused to consider separate departments for the new school. The issue was resolved in 1879 when the Bauakademie merged with the Privatgesellschaft junger Architekten, a small discussion group established by Friedrich Gilly and Johann Heinrich Gentz more than one hundred years earlier, to form the architecture department of the new Tehnische Hochschule that opened on 1 April of the following year. The new institution also absorbed the Gewerbeakakademie and established four additional independent departments: civil engineering, mechanical engineering (including shipbuilding), chemistry and metallurgy, and the general sciences.

# 3. FROM GILLY TO GÄRTNER:

# ARCHITECTURAL THEORY IN GERMAN-SPEAKING EUROPE

Although his training had emphasized the pragmatic over the intellectual, a body of architectural theory specific to German-speaking Europe was available to Leopold Eidlitz while he was in Europe. The earliest examples of this material consisted of construction manuals written for government-sponsored schools located in Berlin but used throughout German-speaking Europe. French treatises supplanted this material, at first concerned with classical architecture, and later, with increasingly instrumental approaches. The quest for a specifically German architecture that paralleled political developments during the early nineteenth century culminated in a rejection of classical forms that developed in Prussia spread throughout German-speaking Europe. Adherents of this approach, which had several parallels in northern Europe, frequently quarreled over the relative merits of the various architectural styles they supported and thereby trivialized many of their arguments, a point that was not lost on Eidlitz.

## *The French-German Connection*

Although Hanno-Walter Kruft has claimed that no systematic account of nineteenth-century German architectural theory had been published,[1] Nikolaus Pevsner made an early contribution to that project in a paper on Karl Friedrich Schinkel presented by to the Royal Institute of British Architects on 11 December 1951. In his opening statement, Pevsner suggested that the most significant and, then, recent architectural developments in Europe took place within a relatively small temporal, geographic, and cultural arena.

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[1] Hanno-Walter Kruft, *A History of Architectural Theory from Vitruvius to the Present*, Ronald Taylor, Elsie Callander and Anthony Wood, trans. (London and Princeton, NJ: Zwemmer and Princeton Architectural Press, 1994), translation of *Geschichte der Architekturtheorie: Von der Antike bis zur Gegenwart* (Munich: C. H. Beck'sche Verlagsbuchhandlung [Oscar Beck], 1985), p. 290.

> It is doubtful whether the history of architecture can at any period be treated in exclusively national terms. For no period however would such treatment be less possible than the last two hundred years. From about 1760 onwards, the history of architecture in the West develops as a Franco-Anglo-German alliance – or in an Anglo-Franco-German, or a Germano-Anglo-Franco alliance. Any neglect of this fact would seriously impair the results of national scholarship.[2]

This is an important point because it signified Pevsner's wish to establish a clear and convincing lineage for certain participants in the recent history of architecture. He attempted to demonstrate the validity of his notion for Germany by emphasizing a shift in preference among the architectural avant-garde from local versions of the late Baroque and Rococo to local versions of French neoclassicism. That earlier work was embodied in the ca. 1700 designs of Andreas Schlüter (c. 1660-1714) in Berlin, Matthäus Daniel Pöppelmann (1662-1736), Zacharias Longuelune (1669-1748) in Dresden, and Johann Bernard Fischer von Erlach (1656-1723) and Johann Lukas von Hildebrandt (1668-1745) in Vienna, and in the mid-century Rococo work of Balthasar Neumann (1687-1753), Johann Michael Fischer (1692-1766), Dominikus Zimmermann (1685-1766), and the brothers Cosmas Damian (1686-1739) and Egrid Quirin Assam (1692-1750) in central and southern Germany. Nevertheless, these extraordinary talents were unable to create a specifically German architecture during their lifetime and Watkin and Mellinghoff concluded, "There is no unity because there is no cultural or political center, no guidance or national identification with a particular style."[3]

Pevsner saw the French influence as a positive factor and was concerned with a specific approach to design and a limited number of personalities. He described the architects in who he was interested, all of them born between 1730 and 1740, as "men of varying achievements, but all of them

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[2] Nikolaus Pevsner, "Schinkel," *Journal of the Royal Institute of British Architects*, vol. 59, no. 3 (January 1952), p. 89.

[3] David Watkin and Tilman Mellinghoff, *German Architecture and the Classical Ideal* (Cambridge, MA: The MIT Press, 1987), pp. 17, 57.

revolutionaries of pure form" and practitioners of what he referred to as "the [George] Dance style.[4] The group consisted of Étienne-Louis Boullée (1728-99), Charles de Wailly (1730-98) and Marie-Joseph Peyer (1730-88), Jacques-Denis Antoine (1733-1801), Claude-Nicolas Ledoux (1736-1806), Jacques Gondoin (1737-1818), Alexandre-Théodore Brongniart (1739-1813), and Jean-François-Thérèse Chalgrin (1739-1811). Pevsner ascribed their inspiration to a Piranesian view of Roman antiquity[5] tempered by the classicising influence of the Burlingtonian-Palladian "achievement of England."[6] While he also admitted Charles Percier (1764-1838), Pierre-François-Léonard Fontaine (1762-1853), and John Soane (1753-1837), architects of the next generation, to this group of "revolutionaries," he dismissed the French and English architects born in the 1780s and concluded "to find genius we have to go to Berlin."[7] This is because Friedrich Gilly (1772-1800) and Karl Friedrich Schinkel (1781-1841) lived and worked in that city. For Pevsner, Gilly and Schinkel personified the opposing but complementary views necessary for the development of modern architecture, with the former embodying Schiller's notion of building as a manifestation of the active role that beauty would assume to bring about a stable and free society in a future age, and the latter associated with the Industrial Revolution, its products, and its buildings.[8] For Eidlitz, although he

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[4] Pevsner, p. 89.

[5] Giuseppe Vasi, *Delle magnificenze di Roma antica e moderna... dedicate alla sacra Real Maestà di Carlo: infante di Spagna rè delle Due Sicilie / da Giuseppe Vasi da Corleone... e dal medesimo fedelissimante disegnate ed incise in rame* (Rome: Stamperia del Chracas, 1747-1761). For Piranesi's theoretical views, see Rudolf Wittkower, "Piranesi's 'Parerre su l'architettura'," *Journal of the Warburg and Courtauld Institutes*, vol. 2, (1938-39), pp. 147-58.

[6] Pevsner, p. 89.

[7] Pevsner, p. 89.

[8] Schiller (1759-1805) believed that society must transcend the physical to achieve rationality and morality. For him, Art allowed society to restore itself to a condition that enabled it to reach this end. When individuals are parts of a larger order, they are unable to develop fully. Personal freedom can occur only through education, and the key to education, for Schiller, is the experience of beauty. Therefore, sensuality tempered by aesthetic education is necessary not only for the proper balance of the individual soul, but also for the development of society. Such development comes from aesthetic judgments that allow beauty to guide reason. The problem is that humanity occupies two conflicting realms: Nature (complexity, content, phenomena, feeling) and Reason (unity, form, morality, consciousness). Only Art can resolve this duality through a uniting of the material instict [Sofftreib] with the formal instinct [Formtreib], and sensuousness with reason. When this unity is achieved through a kind of play impulse [Speiltreib], beauty will result, Art will endow humanity with

acknowledged Schinkel's increasingly tectonic concerns, he seemed more drawn to Gilly's view of architecture as a social practice.

*David Gilly*

It is significant that David Gilly (1748-1808), Friedrich's father, trained his son, Friedrich, and Karl Friedrich Schinkel.[9] The elder Gilly descended from a French Huguenot family that settled in the Pomeranian region of Prussia in 1689, an area won by Prussia from Sweden in the Northern War (1720). The Edict of Potsdam, issued in 1685, had encouraged the Huguenots to settle in Prussia and escape the religious persecution that followed revocation of the Edict of Nantes earlier that year.[10]

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physical and spiritual well-being, and the State will vanish. See Israel Knox, *The Aesthetic Theories of Kant, Hegel, and Schopenhauer* (New York: The Humanities Press, 1958), pp. 70-74.

Eidlitz believed that Schiller's notion of duality did not go far enough, and he likened the situation to a pendulum in which Nature and Reason could not be kept in check solely by Art. For Eidlitz, Art is a powerful and independent force that is based on humanity's inherent need for "re-creation, a desire to do, to work, [and] to explain and illustrate nature's laws." Leopold Eidlitz, *The Nature and Function of Art, More Especially of Architecture* (New York: A. C. Armstrong & Son; London: Sampson Low, Marston, Searle & Rivington, 1881), pp. 147-49.

[9] Biographical information is based on Barry Bergdoll, "Friedrich Gilly" in *Macmillan Encyclopedia of Architects*, 4 vols., Adolf K., Placzek, ed. (New York: Free Press; London: Collier Macmillan, 1982), vol. 2, pp. 205-08; Robert Williams, "David Gilly" in *Grove Dictionary of Art*, Jane Turner, ed., 34 vols. (London: Macmillan Publishers Limited; New York: Grove's Dictionaries, Inc., 1996), vol. 12, pp. 641-42; Watkin and Mellinghoff, pp. 64-74; Hitchcock, pp. 42-43; Fritz Neumeyer, "Introduction," Friedrich Gilly, *Friedrich Gilly: Essays on Architecture, 1796-1799*, David Britt, trans. (Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1994),pp. 1-10.

[10] Gilly, *Friedrich Gilly: Essays on Architecture, 1796-1799*, p. 137, n. 4.

The Edict of Nantes, issued by Henri IV on 13 April 1598, granted French Protestants rights equivalent to those of Roman Catholics. The Edict was intended to end the Wars of Religion fought among the Catholic League and the Huguenots from 1562 to 1598, and it restored peace and internal unity to France for many years. Henri had been a Protestant until assuming the throne, and he remained sympathetic to their concerns despite converting to Roman Catholicism to become king ("Paris is worth a Mass"). On 18 October 1685, Louis XIV renounced the Edict and declared Protestantism illegal. Although the Wars of Religion did not resume, the action increased hostility among the Protestant nations that surrounded France. Many Protestants left France, with most going to England and Germany, thereby aiding her enemies, and depriving her of many of her most skilled and industrious citizens.

Potsdam was the capitol of Brandenburg, a Prussian state and Germany's largest electorate. In 1640, the Hohenzollern elector Frederick Wilhelm assumed power there. He issued the Edict of Potsdam on 29 October 1685 to encourage the Huguenots (as well as colonists from Holland and Switzerland) to settle in Brandenburg to stimulate development of commerce and trade. In 1701, Elector Frederick III of Brandenburg crowned himself Frederick I, King in Prussia, and under the reign of his son, Frederick II ("The Great," reg. 1787-89), Prussia emerged as a European power.

Born in the port city of Schwedt, David was the first to pass the state architectural examination in 1770 and rose to the rank of Baudirektor (Director of Building) in Pomerania in 1799. In that position, he led harbor construction at Swinemuende and Colberg, designed and erected bridges, churches, and public buildings, and was involved in town planning. In 1783, he opened a private school of architecture in the Pomeranian city of Stettin, which emphasized French rationalist theory within the context of rural commissions, and it was at this school that his son, Friedrich, received his initial training. In 1788, on the orders of Frederick Wilhelm II, David moved to Berlin to become the Geheimen Oberbaurat (Superintending Architect) in the Oberhofbaumt (Construction Supervision Bureau). Also called to Berlin at that time were Carl Gotthard Langhans (1733-1808)[11] and Friedrich Wilhelm Freiherr von Erdmannsdorff (1736-1800),[12] the leading practitioners of neoclassicism in Germany. Their arrival marked the beginning of a significant break with Baroque architectural taste.

David Gilly maintained his involvement in architectural education by directing the private Lehranstalt zum Untrerricht junger Leute in der Baukunst (Institute for the Education of Young People in the Art of Building) from 1793 to 1796. He was also the founder of the Bauakademie, established in Berlin in 1799 by the Royal Prussian Oberbaudepartement (Office of Works) as an

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[11] Langhans was born in Silesia and trained in Breslau before becoming the Oberburaut in Silesia. When he arrived in Berlin in 1778, he became director of the Royal Office of Buildings. He was active in Berlin and Potsdam, and his work reflected the transition in German architecture from a local version of French Rococo to Prussian neoclassicism. He is best known for his design for the Brandenburg Gate (1789-94), the "frontispiece to Romantic Classicism in Germany"; Hitchcock, p. 42. Located at the west entrance to Berlin, its Greek propylaea model was suggested by King Wilhelm Frederic III. Andrzej Rottermund, "Carl Gotthard Langhans" in *Grove Dictionary of Art*, vol. 18, p. 741; Robin Middleton and David Watkin, *Neoclassical and 19th Century Architecture* (NY: Electa/Rizzoli, 1987), p. 407; Barry Bergdoll, "Carl Gotthard Langhans" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 606-07.

[12] Although Erdmannsdorff was not trained as an architect, he introduced mid-eighteenth-century English modes of architecture, decoration, and landscape design to Germany after seeing Palladian-inspired work while visiting England in 1763. He also studied in Italy 1761-63, 1765-66, and 1770-71with Giambattista Piranesi (1720-78), Charles-Louis Clérisseau (1721-1820), and Johan Joachim Winckelmann (1717-68). Erdmannsdorff was an honorary member of the Berlin Academie der bildenden Künst and his house in Dessau often served as a school, one of his pupils being Friedrich Gilly. Andreas Kreul, "Friedrich Wilhelm von Erdmannsdorff" in *Grove Dictionary of Art*, vol 10, pp. 447-48; Middleton and Watkin, p. 399; Eberhard Drüeke, "Friedrich Wilhelm von Erdmannsdorff," Beverley R. Placzek, trans., in *Macmillan Encyclopedia of Architects*, vol. 2, p. 28

affiliate of the Akademie der bildenden Künst (Academy of Fine Art) and modeled after the École Polytechnique in Paris. He taught bridge and hydraulic engineering, and port, reservoir, dam, irrigation canal, and other hydraulic construction until 1804. He also wrote several books on the practical application of these and other topics.[13] Pupils at the Bauakademie included Schinkel, Leo von Klenze, Johann Jakob Friedrich Weinbrenner (1776-1826),[14] Johann Carl Ludwig Engel (1778-

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[13] These include *Anleitung zur Anwendung der Bohlen-Dächer bey ökonomischen Gebäuden und insonderheit bey den Scheunen; Mit 6 illumin. Kupfern* (Berlin: Decker, 1801); *Beschreibung der Feuer abhaltenden Lehmschindeldächer, nebst gesammelten Nachrichten und Erfahrungen über die Bauart mit getrockneten Lehmziegeln* (Berlin: Friedrich Maurer, 1796); *Praktische Anleitung zur Anwendung des Nivellirens oder Wasserwägens in den bey der Landeskultur vorkommenden* (Berlin: Gedruckt bey G. Decker, 1800); *Über die Gründung der Gebäude auf ausgemauerte Brunnen* (Berlin: Im Verlage der Realschulbuchhandlung, 1804); *Ueber Erfindung, Construction und Vortheile der Bohlen-Dächer, mit besonderer Rücksicht auf die* [Urschrift "ihres"] *Erfinders* (Berlin: bei F. Vieweg dem Aeltere, 1797); with Johann Albert Eytelwein and Baptista Baria, *Kurze Anleitung auf welche Art Blitzableiter an den Gebäuden anzubringen sind...* (Berlin: In der Buchhandlung der Realschule, 1802); with Johann Albert Eytelwein, *Praktische Anweisung zur Wasserbaukunst: welche eine Anleitung zum Entwerfen, Veranschlagen, und Ausführen der am gewöhnlichsten vorkommenden Wasserbaue enthält* (Berlin: Auf kosten der berfasser, 1802-1808). Publication dates given are for first editions; many were reprinted several times.

Gilly was also the author of a widely-reprinted textbook, *Handbuch der Land-Bau-Kunst, vorzüglich in Rücksicht auf die Construction der Wohn- und Wirthschafts-Gebäude für angehende Cameral-Baumeister und Oekonomen*, 2 vols. (Berlin: bei Friedrich Bieweg dem alteren, 1797-98). After his death, the book was revised by D. G. Friderici (a nom de plume? His son as "little Friedrich"), and published in several editions, the last in 1828. The book's importance and endurance can be seen in a request made by the publisher Viewig to Gottfried Semper in 1843 for a revised version; Caroline Van Eck, *Organicism in nineteenth-century architecture: An inquiry into its theoretical and philosophical background* (Amsterdam: Architectura & Natura Press, 1994), p. 26.

[14] Weinbrenner was an architect, urban planner, writer, and teacher. As city architect of Karlsruhe, he shaped the image of that city and his ideas came to influence most public architecture in Baden. However, the persistence with which he clung to the neoclassical ideas that he advocated tended to make his work increasingly irrelevant to younger practitioners and critics. Initially trained as a builder, he studied architecture in Switzerland (1788-90), Vienna (1790-01), Dresden (1791), and Berlin (1791-02). However, his contact in Berlin with Langhans and Friedrich Gilly and a five-year stay in Rome (1792-97) where he met archeologist and theorist Aloys Ludwig Hirt (1759-1837) and several Prix de Rome winners from the Paris Académie Royale d'Architecture had the greatest influence on his work. After he returned from Rome, Weinbrenner went to Baden to work for the Building Administration in 1800, and in 1809, became Chief Director. Through his involvement in urban planning, he had great influence on building activity in the region and soon took over all important projects while creating a decentralized administration that could supervise building activities throughout Baden. His first plan for Karlsruhe (prepared as a student in 1790) and a revised version made in Karslruhe in 1797 formed the basis of the town's design. Both emphasized axiality, serial development, and sequences of squares and Weinbrenner's overlay of these neoclassical forms on the existing Baroque radial city plan. Weinbrenner also taught architecture in a private Bauschule that he established in Karlsruhe. It drew many students from outside of Baden and his pupils included Georg Moller, Friedrich von Gärtner, and his own successor, Heinrich Hübsch. His school was incorporated into the Karlsruhe Polytechnikum founded in 1825. Although he published a book on theatre construction, *Über Theater in architektonischer Hinsicht; mit Beziehung auf Plan und Ausführung des neuen Hoftheaters zu Carlsruhe*, Tübingen: J. G. Cotta, 1809), most of his writing remained incomplete and he was mainly involved with business affairs at the end of his life. Wulf Schirmer, "Johann Jakob Friedrich Weinbrenner" in *Grove Dictionary of Art*, vol 33, pp. 38-40; Eberhard

1840),[15] and Carl Haller von Hallerstein (1774-1817).[16] In this sense, David Gilly can be said to have metaphorically and literally founded a Franco-Prussian school of architecture.

Gilly also edited an illustrated architectural journal, *Sammlung nützlicher Aufsätze und Nachrichten die Baukunst betreffend. Für angebende Baumeister und Freunde der Architektur* that addressed issues ranging from construction methods and costs to architectural history and book reviews. Gilly and members of the Königlich Preußich Ober-Bau-Departements (Royal Prussian Building Authority) founded the journal in January 1797 and jointly edited it through 1804; Gilly edited it alone until 1806.[17] Despite irregular publication, it became a prototype for similar journals.

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Drüeke, "Freidrich Weinbrenner," Beverley R. Placzek, trans., in *Macmillan Encyclopedia of Architects*, vol. 4, pp. 385-86; David Brownlee, "Freidrich Weinbrenner and Karslruhe: An Introduction" in *Friedrich Weinbrenner, Architect of Karlsruhe: A Catalogue of the Drawings in the Architectural Archives of the University of Pennsylvania,* David B. Brownlee, ed., (Philadelphia: University of Pennsylvania Press, 1986), p. 3-11; Hitchcock, pp. 43-44; Pfammatter, pp. 229-30.

[15] Engel was born in Berlin. After briefly working in Tallinn, Estonia and Petersburg, Russia, he moved to Helsinki in 1816 where he practiced city planning and architecture in that city and throughout Finland. He was extremely prolific and his neoclassical influence remained strong throughout that country through the end of the nineteenth-century. Middleton and Watkin, pp. 398-99; J. M. Richards, "Carl Ludwig Engel" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 26-27.

[16] Hallerstein was an archeologist who specialized in Greek sculpture. He and Italian architect Giacomo Quarenghi (1744-1817) received the original commission from Ludwig I for the Glyptothek, a project that was subsequently given to Klenze (Munich, 1816-30); Watkin and Mellinghoff, p. 143.

[17] Only one German language architectural publication, *Allgemeines Magazine für die bürgerliche Baunkunst*, published 1789-96 in Weimar, preceded Gilly's. Not specifically directed toward architects and builders, it contained book reviews, extracts, and translations, and was directed toward appreciation of architecture rather than providing technical information. Neumeyer, pp. 57.

Despite the inclusion of some technical material in Gilly's publication, Schwarzer claimed that periodicals of the period "lacked a comprehensive approach to architecture" that reflected their genesis in aristocratic and bourgeois dilettantism. He also claimed that specialized architectural journalism did not develop in Germany until the nineteenth-century when new programmatic, technical, intellectual, and social concerns impacted practitioners, and new methods of printing and distribution enhanced the ability of publications to address such concerns. He particularly cited *Allgemeine Bauzeitung mit Abbildungen für Architekten, Ingenieurs, Dekorateurs, Bauprofessionisten, Oekonomen, Bauunternehmer und alle, die an den Fortschritten und Leistungen der neuesten Zeit in der Baukunst und den dahin einschlagenden Fächern Antheil nehmen*, founded in Vienna in 1836 by architect Christian Freidrich Ludwig von Förster (1797-1863) and published weekly 1836-38, monthly 1839-95, and quarterly 1896-1918, as the most important example of the new Central European architectural publications. Geographically- and organizationally-oriented periodicals such as *Zeitschift für praktische Baukunst* (Leipzig, 1841-65), *Deutsche Bauzeitung* (Berlin, 1868-1942), *Centralblatt der Bauverwaltung* (Berlin, 1881-1944), and *Die Architekt* (Vienna, 1895-1922) emulated its comprehensive coverage of technical, aesthetic, and political topics. Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity* (Cambridge, UK and New York: Cambridge University Press, 1995), pp. 29-30.

*The Rise of a "German" Architecture*

This view of the beginnings of a distinctive German architecture that was deeply rooted in eighteenth-century French practice is held by many historians, but subsequent developments were complex and cannot be understood without taking into account the birth of a unified German state, the political ties between the new state and the rest of Europe, and relationships between German architects and their other European counterparts. Micahel Lewis emphasized this complexity when he referred to the 1790s as

> a decisive decade for German architecture. One cannot speak of a German architecture before that time in the same sense that one speaks of a characteristic French or English form of that art. In part, this was the consequence of Germany's political division into a multitude of sovereign states. While notable architects worked in Berlin, Munich, Stuttgart, Kassell, and other cities, none of these possessed the national cultural primacy of London or Paris. Until the founding of the Berlin Bauakademie in 1799, there was no truly national architectural school, and a comprehensive architectural education could only be had abroad or in the office of one of the French émigré architects occasionally summoned to German cities. What distinction German architecture had at this time was the result of regional vernacular patrimony, not the product of an indigenous intellectual or professional tradition.[18]

Watkin and Mellinghoff expressed a similar view and documented its manifestation in a confluence of personalities, projects, and buildings.[19] In their view, this Franco-Prussian school, its members all German and born between 1733 and 1772 and of which Schinkel was said to be the heir, were united

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[18] Michael J. Lewis, "The Birth of a German Academic Tradition" in *Friedrich Weinbrenner*, p. 35.

[19] Watkin and Mellinghoff included Johann Gottfried Schadow (1764-1850), sculptor, draftsman, printmaker, and theorist, in David Gilly's circle. Schadow's work combined a restrained and somewhat sentimental version of neoclassicism and a strong and detailed realism. He advocated the close study of nature and is considered the first exponent of the nineteenth-century Berlin sculptural tradition. Born in Berlin, he traveled to Rome in 1785 and was appointed director of sculptural works at the Ministry of Architecture the year after he returned in 1787. He subsequently became head of the court sculpture workshop, beating Canova for the post, and in 1788-89, produced several reliefs for the new royal chambers in the Berlin Residenz designed by Erdmannsdorff and Langhans. The sculptural ornamentation for Langhans' Brandenburg Gate in Berlin (1791) is among the best known of his designs. Schadow became the secretary of the Berlin Akademie der Künste in 1787, and was its director from 1815 until he died. He simultaneously directed the Akademie der bildenden Künste and the Bauakademie from 1816 to 1824. Götz Eckardt, "Johann Gottfried Schadow" in *Grove*

by a positive response to Ledoux and service to Friedrich Wilhelm II's attempt to make Berlin a cultural center dominated by German artists.[20] However, the situation changed dramatically, as French influence began to decline after the rediscovery of Greek architecture and the subsequent dismissal of Roman and Renaissance modes of design by the avant-garde in Rome and, eventually, Berlin. These changes allowed German architects to become increasingly self-reliant and less obligated to French influence because they could obtain information from English publications and visits to Greek archeological sites in southern Italy and Sicily for themselves.[21] The results of these transformations in taste and practice were especially apparent in the career of David Gilly's son, Friedrich.[22] Although his fame is associated with less than ten years of productive work and his few built designs were modest, he was an extremely important member of this group. His sudden death in Karlsbad in 1800 from a pulmonary disorder prematurely ended a career of great significance and potential and made him an unwitting avatar for ideas and causes that were largely anachronistic and irrelevant to the time in which he lived.[23]

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*Dictionary of Art*, vol. 28, pp. 42-25; Ulrich Pfammatter, *The Making of the Modern Architect and Engineer*, Madeline Ferretti-Theilig, trans. (Basel, Boston, Berlin: Birkhäuser, 2000), p. 224.

[20] Watkin and Mellinghoff, pp. 59, 61-64.

[21] Lewis, "The Birth of a German Academic Tradition," pp. 35-36. For example, while Le Roy's *Les ruines des plus beaux monuments de la Grèce; Ouvrage divisé en deux parties, ou l'on considère, dans la première, ces monuments du côté de l'histoire, et dans la seconde, du côte de l'architecture* (Paris: H. L. Guérin & L. F. Delatour1758) was perhaps the first serious attempt to accurately document classical Greek architecture, James Stuart and Nicholas Revett's *The Antiquities of Athens* (London: J. Haberkorn, 1762) was considered by many to be a superior effort.

[22] Many of Gilly's original drawings were destroyed during World War II. A catalog of this material appears in the Appendix to Alste Oncken, *Friedrich Gilly, 1772-1800* (Berlin: Gebr. Mann Verlag, 1981), reprint of first ed. (Berlin: Deutscher Verein für Kunstwissenschaft, 1935).

[23] Hitchcock had little interest in him; Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth, Middlesex, UK and New York: Penguin Books, 1977), p. 42. However, Pevsner wrote that with Gilly and Soane, "...we are close to a new style of the new century," although several pages later he added, "Even with regard to Soane and Gilly, we have to be careful not to over-estimate their originality and 'modernity'." Nikolaus Pevsner, *An Outline of European Architecture*, sixth ed. (Harmondsworth, Middlesex, UK: Penguin Books, 1963), pp. 375, 377. Within the German-speaking world, notions of Gilly's ever-changing posthumous significance ranged from that of Schinkel's source to the personification of politically-suspect neoclassicism; Neumeyer, pp. 10-21.

*Fredrich Gilly*

When he arrived in Berlin with his father, Freidrich Gilly began studies at the Akademie der bildenden Künste where his teachers included the architects Langhans and Erdmannsdorff as well as the artists Schadow, Rode,[24] and Chodowiecki.[25] After working for Langhans, Gilly was appointed a Kondukteur (Supplementary Inspector) in the Königliche Baubehörde (Royal Building Corps) in 1790.[26] He received his first private commission in 1792 and began to teach architectural drawing in his father's school the next year. Watkin and Mellinghoff stated that Gilly was influenced at this time by his reading of Goethe and Winckelmann, and that his association with playwright Johan Ludwig Tieck (1773-1853) and poet Wilhelm Heinrich Wackenroder (1773-98), both in their early twenties, contributed to his self-perception as "...a romantic artist in lonely pursuit of eternal truths."[27]

Gilly first came to public attention with a group of ten pen and pencil and wash drawings of the ruins of a late thirteenth-century castle, Schloss Marienburg that was located near Danzig and built by the Prussian Knights of the Teutonic Order.[28] He inspected the site in 1794 during an official tour of

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[24] Christian Bernhard Rhode (1725-97) was a painter, draftsman, and etcher who studied in Paris, Rome, and Venice. He became a member of the Akademie der bildenden Künste in 1756, Director in 1783, and an exhibitor 1786-97. His depictions of Enlightenment themes as depicted in scenes of ancient and recent history constitute his most significant work.

[25] Daniel Nikolaus Chodowiecki (1726-1801) was a self-taught painter, draftsman, and engraver who initially specialized in miniatures. He became a member of the Berlin Kunstakademie in 1764 and began painting for the court. He concentrated on illustration after 1768, became director of the Kunstakademie in 1797, and never left Berlin except for trips to Danzig and Dresden. Although he illustrated Werther, Goethe seems to have considered him no more than technically adept. Irene Haberland, "Daniel Nikolaus Chodowiecki" in *Grove Dictionary of Art*, vol. 7, pp. 183-84; Johann Wolfgang von Goethe, "Ancient versus Modern," translation of "Antik und Modern" in *Über Kunst und Altertum*, vol. 2 (1818) in *Essays on Art and Literature*, John Geary, ed., Ellen von Nardoff and Ernst H. von Nardoff, trans., (New York: Suhrkamp Publishers, 1986), p. 91.

[26] Neumeyer, p. 5.

[27] Watkin and Mellinghoff, p. 66.

[28] He also included a technical drawing of a millrace built by the Knights of the Teutonic Order intended to demonstrate "evidence of the care that the knights took for the good of the land." Friedrich Gilly: *Essays on Architecture*, p. 111.

Pomerania with his father.[29] The drawings were exhibited at the Akademie der bildenden Künst in 1795 and published in as a series of engravings between 1799 and 1803.[30] Gilly also published an essay about the castle in 1796 that re-ignited an interest in Gothic art among German artists and intellectuals.[31] Enthusiasm for the Gothic, initiated more than twenty years earlier by Goethe's anonymously published paean to Strasbourg Cathedral and its architect, Erwin von Steinbach,[32] had

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[29] When they arrived, the castle was used as an infantry barracks. David had organized the trip to prepare plans for demolition of a portion of it to accommodate a new storage facility. The work would have continued a process of alterations begun by Freidrich a year after the building was captured by Prussian troops in 1772.

[30] Copper engraver Johann Friedrich Frick (1774-1850) made the plates and published the first as a frontispiece in *Sammlung nützlicher Aufsätze und Nachrichten die Baukunst betreffend 1*, no. 2 (1797). After Gilly died, Frick and architect Martin Friedrich Rabe (1775-1856), a member of Gilly's circle, returned to the castle to re-measure it to depict it more accurately. Engravings published after that visit incorporated changes to Gilly's original drawings as well as additional plans, architectural details, and an expanded version of one of Gilly's drawings. Although the title page to the plates was dated 1799, the new engravings and the introduction written by Frick were published under his name with German and French texts as *Schloss Marienburg in Preußen / Le château de Marienbourg en Prusse* (Mareinberg Castle in Prussia, Berlin: 1803). Neumeyer, pp. 37, and "Notes on the Marienburg Illustrations" in Friedrich Gilly: Essays on Architecture, p. 117.

[31] "On the Views of Marienburg, Castle of the Teutonic Order in West Prussia, Drawn in the Year 1794 by Mr. Gilly, Supervisor at the Royal Building Administration," *Friedrich Gilly, Essays on Architecture*, pp. 105-11, translation of "Über die vom Hern Oberhof-Bauamts-Kondukteur Gilly im Jahr 1794 aufgenommenen Ansichten des Schlosses der deutschen Ritter zu Marienburg in Westpreußen" in J. W. A. Kosmann and Th. Heinsius, eds., *Denkwürdigkeiten und Tagesgeschichte der Mark Bamburg*, pp. 667-76. His introduction is similar to those that accompanied collections of measured drawings of Greek antiquities: "In addition to the plan of the whole, the drawings I made of these buildings on my travels in the year 1794 include a series of views of the most interesting parts of the castle, together with a survey of all the individual parts, connections, and dimensions, which will serve as an elucidation for the architect"; "On the Views of Marienburg..."; *Friedrich Gilly: Essays on Architecture*, p. 108.

[32] Johann Wolfgang von Goethe, "Von deutscher Baukunst", written 1772, dated 1773. While his essay is ostensibly about the Cathedral, its real purpose is an attack on classicism, particularly the French version advocated by Marc-Antoine Laugier in *Essai sur l'architecture* (Paris: Chez Duchesne, 1753. After admitting the usual prejudices ("for me, everything was Gothic that did not fit my system"), Goethe described how he experienced something akin to a religious conversion when he visited the building. Writing of the emotion that it elicited ("I could relish and enjoy, but by no means identify and explain"), he surrendered to the building's "thousand harmonizing details" and understood that "German architecture, [is] our architecture." However, the distinction between classical and Gothic may not have been absolute for Goethe and, as if echoing Vitruvius (or Laugier), he acknowledged that the "countless parts" of the church made up "whole masses" whose overall effect was "simple and great." Johann Wolfgang von Goethe, "Von deutscher Baukunst" (1772) in Johann Wolfgang von Goethe, *Goethe's Collected Works*, John Geary, ed., Ellen von Nardoff and Ernst H. von Nardoff, trans., (New York: Suhrkamp Publishers, 1986), pp. 3-10. Laugier claimed Gothic architecture as a French innovation and, in a similarly ambivalent manner, revealed that his admiration for the classical was not exclusive: "Our Gothic churches are still the most acceptable [style in which to build]. A mass of grotesque ornaments spoils them, and yet, we are awed by a certain air of greatness and majesty. Here we find ease and gracefulness, they only lack majesty. We have rightly measured the follies of the Gothic (l'architecture moderne) and we have returned to the antique, but it seems we have lost good taste on the way." Marc-Antoine Laugier, *An Essay on Architecture*, Wolfgang and Anni Herrmann, trans. (Los Angeles: Hennessey & Ingalls, 1977), p. 100.

supplanted admiration for classicism by the time Gilly's drawings were exhibited.[33] However, in the first paragraph of his essay, Gilly introduced a significant distinction between his view of the Gothic and that which preceded it, and in one carefully worded sentence, the physical qualities of the castle were given equal standing with its cultural associations.

> The castle of Marienburg in West Prussia presents a variety of interest. Architecturally remarkable for its colossal and audacious construction and for its truly grand simplicity of style, the castle is also a monument of great antiquarian and patriotic significance.[34]

Gilly was not concerned with the contrived responses elicited by ersatz monasteries and mock castles, and he mixed descriptive prose with metaphorical fancy to reveal authentic reactions induced by authentic Gothic ruins.

"Gothick" architecture had reached Germany around 1760 with the taste for English landscaping and gardens. However, Gilly changed its significance from a garden entertainment intended to evoke a limited range of carefully defined emotions to the design of objects responsive to intense physical and emotional encounter. This notion of an emotionally reciprocal architecture revealed itself in accounts that animated physicality and structure. He wrote of the castle, "...indeed, it was once said in praise

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[33] Neumeyer, p. 25. Goethe's writings appear to reflect this change in taste, although they can also be read as a continued personal appreciation of both. In an essay published *in Über Kunst und Altertun am Rhein und Main*, vol. 4, no. 2 (Weimar, 1823) that was also titled "Von deutscher Baukunst," he wrote about Cologne Cathedral but was more direct about his advocacy of classical principals than in the earlier piece on Strasbourg. As if to legitimatize his opinion by quoting "the testimony of a Frenchman, who in his own style was opposed to the one we are celebrating here," he began with a quotation from François Blondel's *Cours d'Architecture* (Paris, 1675), vol. 5, sect 5, chap. 17: "...we look with pleasure on those Gothic buildings whose beauty seems to derive form and is seen in symmetry and the relationship of the whole to the parts among themselves, without taking into account the ugly ornaments with which they are covered." Goethe confirmed this judgement through his own observations: "Even the interior of the Cathedral, although impressive, frankly strikes us as inharmonious. Only when we enter the completed choir do we encounter a surprising harmony. Then we are happily amazed, then we are joyously startled and experience a great sense of complete fulfillment." Of the 1773 version of "Von deutscher Baukunst," he noted "On re-reading it, I was pleased to discover that I had no cause to be ashamed, for I had been intuitively aware of the inner proportions of the whole, had grasped the natural evolvement of the ornamentations of the whole... All this corresponded well with my friends' recent views as well as with my own." Johann Wolfgang von Goethe, "Von deutscher Baukunst" (1823) in *Essays on Art and Literature*, pp. 12, 14.

[34] "On the Views of Marienburg...," *Friedrich Gilly: Essays on Architecture*, p. 106.

of this building that it stands as deeply embedded in the earth as it rises above it",[35] and in a similar manner, he described vaulting that "...seems to shoot aloft like a rocket from each pier and converges at the crown in alternating points..." and concluded "... the effect of the whole, as in every part of the castle, is one of grandeur and exhilaration."[36] It would be a mistake, however, to suggest that Gilly's admiration for Gothic ruins set him totally at odds with more conventional modes of design, and he made this point in a comment directed towards those who blindly advocated the English garden manner over the French: "There is, without doubt, such a thing as an artistic treatment of ordered plans; and it is an exaggeration to say of them, flatly: 'Symmetry is surely born of indolence and vanity.'"[37] Gilly's interest in Marienburg contributed to a renewed interest in the brick construction that was common throughout Northern Germany and Poland, and influenced public and governmental opinion that eventually led to restoration of the castle.[38]

Using funds made available when Friedrich II bought one of his Marienburg drawings, Gilly traveled to Paris, Dessau, Weimar, Strasbourg, London, Hamburg, Vienna, Prague, and Dresden in 1797-99. Visits to Italy were impossible at this time because of the French occupation of Rome after

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[35] "On the Views of Marienburg...," *Friedrich Gilly: Essays on Architecture*, p. 108.

[36] "On the Views of Marienburg...," *Friedrich Gilly: Essays on Architecture*, pp. 109-10.

[37] "A description of the Villa Bagatelle, near Paris," *Friedrich Gilly: Essays on Architecture*, p. 142, translation of "Beschreiung des Landhauses Bagatelle bey Paris," *Sammlung nützlicher Aufsätze und Nachrichten die Baukunst betreffend 3, no. 3* (1799), pp. 106-15. The quotation is from René-Louis, marquis de Girardin, *De la composition des paysages sur le terrain, ou Des moyens d'embelleir la nature autour des habitations champêtres* (Geneva: 1777; fourth rev. ed., Paris: Debray, 1805), ch. 1: 30: "La symétrie est née sans doute de la paresse et de la vanité." Gilly felt that because the new English style was in its infancy, its value was frequently obscured by a quest for novelty and lack of technical ability among its proponents and practitioners. As a source of reliable information, he recommended *Über den guten Geschmack bei länlichen Künst- und Garten-Anlagen* (Leipzig: 1798), a German translation of Uvedale Price's *An Essay on the Picturesque, as compared with the Sublime and the Beautiful, and, on the Use of Studying Pictures, for the Purpose of Improving Real Landscape* (London: J. Robinson, 1794).

[38] In 1804, the Prussian government classified Marienburg Castle worthy of preservation and made plans to rebuild it immediately after Napoleon's troops retreated. In 1815, state chancellor Prince Charles August von Hardenberg ordered Theodor von Schön (1773-1856), Oberpräsident (Regional President) of West and East Prussia, to start the rebuilding program. Schön envisioned the project as a national monument to the Wars of Liberation and Prussian reforms of that period, and in 1816, the Schloß bauverwaltung Marienburg (Marienburg Castle Reconstruction Committee) was formed. Work started a year later and continued as late as 1931.

Napoleon's Lombardy campaign of 1796.[39] Surprisingly, while he saw the work of architects such as Legrand and Molinos,[40] Poyet,[41] and Ledoux in Paris, he did not discuss them in the accounts of his travels his father's journal.[42] Instead, he described François-Joseph Bélanger's Château de Bagatelle,[43] a small residence built in the Bois de Boulogne near Paris in 1777 that would serve as a

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[39] Neumeyer, p. 6

[40] Primarily a holder of administrative posts, Jacques Molinos (1743-1831), city architect of Paris during the Empire, pursued a general practice that included residential and institutional work as well as gardens and decorations for public festivals. He is best known for the Orangerie du Muséum near the Louvre and the original timber dome that covered the Halle aux Blé (Paris, 1782-83, with Jacques-Guillaume Legrand) designed by Camus de Mezière; Middleton and Watkin, p. 413; Gérard Rousset-Charny, "Jacques Molinos," Richard Cleary, trans., in *Macmillan Encyclopedia of Architects*, vol. 3, p. 224.

[41] Bernard Poyet (1742-1824) studied with de Wailly and became the city architect of Paris. A design for a hospital prepared by him in 1788 appeared in Jacques Tenon, *Mémoire sur les hôpitaux de Paris* (Memoirs of the hospitals of Paris, Paris: 1791?), the standard work on the subject at the time. It became the accepted model for similar projects and a version of it appeared in vol. 3, pl. 18 of Durand's *Preçis*. Poyet also prepared a design for the Hôpital Ste.-Anne (Paris, 1785-88), a giant radial structure intended for 5,000 patients. It was admired by Durand and Legrand but never built because of impracticality and cost. Middleton and Watkin, p. 420; Kauffman, p. 159; Richard Cleary, "Bernard Poyet" in *Macmillan Encyclopedia of Architects*, vol. 3, p. 469; Claude Mignot, *Architecture of the Nineteenth Century in Europe*, D. Q. Stephenson, trans. (New York: Rizzoli International Publications, Inc., 1984), translation of *L'Architecture au XIX^e siècle* (Fribourg: Office du Livre, 1983), pp. 225, 232-33.

[42] Pevsner claimed that Gilly was receptive to the work of the more radical French architects because his sensibilities had been prepared through his knowledge of Piranesi, and he found proof for his argument in the strongly geometric projects that Gilly created before he visited Paris in 1798. These include a 1794 sketch of a small room with a screen of Doric columns, coffered ceiling, and semi-circular window recess, and a 1796 design for a national monument to Fredrick the Great; Pevsner, p. 90. Nevertheless, Gilly associated Bélanger's work with, and reserved his highest compliments for, the more conservative, archeologically correct, and luxurious French variety of neoclassicism advocated by Charles Percier and Pierre-François-Léonard Fontaine in the "the remarkable preface, written in the true language of art" of their *Palais, maisons, et autres édifices modernes, desinés à Rome*, Paris, 1798) and in an announcement for the book, presumably written by them, in the *Magasin encyclopédique, ou Journal des sciences, des lettres, des arts*. "A description of the Villa Bagatelle, near Paris," Friedrich Gilly: Essays on Architecture, p.147 n.**.

[43] "A description of the Villa Bagatelle, near Paris," *Friedrich Gilly: Essays on Architecture*, pp. 139-48.

Bélanger (1744-1818) was a French architect and landscape designer with a distinguished career as a royal architect in the courts of Louis XV and Louis XVI. He attended the Académie Royale d'Architecture in Paris 1764-66 under Julien-David Le Roy and Pierre Contant d'Ivry (1698-1777). Although an accomplished landscape architect, he also designed interior decoration and court festivals. He excelled in business dealings (his pseudonym was "Bellangé"), and he bought the position of principal architect to the comte d'Artois, the brother of Louis XVI who became the reactionary Charles X (reg. 1824-30). The house was commissioned, designed, and built in six weeks (21 September – 26 November 1777) in response to a challenge from Marie-Antoinette.

Although most of Bélanger's work was residential, he also replaced the wood dome of the Halle aux Blé (1763-67, Paris) that burned in 1802 with one of iron. That structure, added to the building designed by Nicolas Camus de Mézières (1721- ca. 1793) was itself designed and built 1782-83 by Jacques-Guillaume Legrand and Jacques Molinos using methods devised by Philibert de l'Orme (ca. 1510-70). Bélanger's replacement, the first of its kind, was built 1806-11 and featured cast iron ribs and wrought iron tie rings. Giedion noted that

model for a house intended for his own use and a picturesque park built 1786-93 for the Duc d'Orléans in La Raincy, near Paris.[44]

Gilly's most significant work was a competition entry for a monument to Fredrick the Great, King of Prussia. The brief called for a monumental setting for a statue of the king intended to foster morality and patriotism and it attracted entries from Langhans, Erdmannsdorff, Johann Heinrich Gentz, and Aloys Hirt. Gilly placed his scheme in the Leipziger Platz, an area situated immediately inside the Brandenburg Gate, which marked the start of the Potsdam road to Sans Souci, Frederick's summer estate. Although his preliminary designs were based on Roman models, Gilly gradually developed an approach based on a Romantic vision of fifth-century BC Greek antiquity. The presentation drawings showed a sacred precinct in the shape of an elongated octagon, "unconfined but – as it were – defined by subsidiary structures of very fresh and varied design."[45] These "subsidiary structures" consisted of dark obelisks and sphinxes and the precinct was entered though a propylaea consisting of a triumphal arch capped by a quadriga and flanked by Doric colonnades. Within the precinct, a bronze-roofed Doric temple made of a light-colored stone contained a large seated statue of Frederick II. It rested on a high podium of a dark stone, penetrated by vaulted passages and was surrounded by low staircases, Doric colonnades, and battered walls, all of which were made of the same dark masonry. A field of stars was painted on the ceiling of a crypt located below the temple at the

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Bélanger was assisted by an engineer, Frédéric Brunet (b. 1768), and claimed that although iron was merely used as a replacement for the wood, the enterprise was significant because "To our knowledge this marks the first time that architect and engineer were no longer combined in one person." The project was published in F. Brunet and M. Bélanger, *Dimensions des fers qui doivent former la coupole de la Halle aux Grains, calculées d'après la composition de M. Bélanger, Architecte des Monuments Publics*, Paris: 1809. Susan B. Taylor, "François-Joseph Bélanger" in *Grove Dictionary of Art*, vol. 3, pp. 523-24; Middleton and Watkin, p. 386; Marc Dilet, "François-Joseph Bélanger" in *Macmillan Encyclopedia of Architects*, vol. 1, pp. 169-70; Sigfried Giedion, *Building in France – Building in Iron – Building in Ferro-Concrete*, J. Duncan Berry, trans. (Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1995), reprint of *Bauen in Frankenreich, Bauen in Eisen, Bauen in Eisenbeton* (Leipzig: Klinghardt & Bierman, 1928), p. 104.

[44] "A Description of Rincy [sic], a Country Seat near Paris," *Friedrich Gilly: Essays on Architecture*, pp. 155-62, translation of "Beschreibung des Landhauses Rincy [sic] unweit Paris," *Sammlung nützlicher Aufsätze und Nachrichten die Baukunst betreffend 3, no. 2* (1799), pp. 116-24. Only the first portion of a projected longer article was published before Gilly died.

intersection of the podium vaults; the temple was illuminated by top lighting. Gilly's explanatory notes stated that the ensemble was intended to stir the emotions and spiritually elevate those viewing it.[46]

Although Gilly did not win the competition,[47] his design astonished the public when it was exhibited at the Akademie der bildenden Künst in 1797. In its use of unusual classical forms and in the pathetic qualities of its imagery, the project recalled such contemporary French architecture as Boullée's project for a cenotaph for Isaac Newton (1784). However, Gilly's design was much more site-specific and, while it lacked Boullée's abstract qualities and huge scale, its influence continued into the 1830s, culminating in Leo von Klenze's Walhalla, built high above the banks of the Danube near Regensburg (1830–42) for Ludwig I of Bavaria.[48] Many accounts claim that Schinkel decided to become an architect when he saw the drawings. Tieck and Wackenroder, who collaborated earlier that year on *Herzensergeißungen eines kunstliebenden Klosterbruders*, an anonymously published novel that celebrated the sacred mission of art,[49] declared Gilly a genius as worthy of admiration and emulation as Frederick the Great, the national genius.

Gilly's unexecuted c. 1798 competition design for the Schauspielhaus in the Gendarmenmarkt district of Berlin, based on his study of contemporary French theatres in Paris, was of similar importance.[50]

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[45] Hitchcock, p. 42.

[46] See the two versions of "Note on the Frierichsdenkmal" in *Friedrich Gilly: Essays on Architecture*, pp. 129-33. They are similar in content: the first is a letter to Frederick from Gilly dated 21 April 1797; the second is a transcript from a lost Gilly sketchbook.

[47] Langhans won, but his relatively modest project was not built because Frederick died the same year.

[48] Watkin and Mellinghoff, p. 69; Middleton and Watkin, p. 401.

[49] Berlin: Johan Friedrich Uger, 1797. The book depicted the artist as an eccentric who was particularly alienated from society; Gilly owned a copy. Barry Bergdoll, Karl Friedrich *Schinkel, An Architect for Prussia* (New York: Rizzoli International Publications, Inc., 1994), p. 12. For a discussion of the alienated and eccentric artist, see Rudolf and Margot Wittkower, *Born under Saturn, The Character and Conduct of Artists: A Documented History from Antiquity to the French Revolution* (London: Weidenfeld and Nicolson, 1963), Chapter IV, "Eccentric Behavior and Noble Manners" and Chapter V, "Genius, Madness, and Melancholy."

[50] A theatre was built 1800-02 based on Langhans' winning entry. Gilly supervised its construction and, after a fire in 1818, it was replaced with a building designed by Schinkel (1818-26).

Its auditorium, akin to the preliminary designs of Peyre and de Wailly for the Théâtre de l'Odéon (Paris, 1767-70), the Théâtre Faydeau by Legrand and Molinos (Paris, 1789), and Ledoux's theatre at Besançon (1775-84),[51] was separated from the stage by a coffered proscenium arch and featured "democratic" seating in a semicircular amphitheater. Although it contained a royal box, this product of the French Revolution mixed the social classes and was reflected in the building's volumetric qualities. The entrance was marked by a Doric portico without pediment, and the arcaded passages that curved back from it enclosed the seating area and intersected the cubic block of the stagehouse. The same motifs, although significantly less related to their function, were repeated at the rear. The bold massing and delicate Greek ornament of the stagehouse contrasted strongly with the curved passages, and the overall design recalled the geometric rigor of Boullée and Ledoux. Gilly also designed a theatre built in Königsberg (1799-1800; destroyed 1838). However, it was heavily altered by the client during construction and disowned by Gilly; it is relatively conventional in comparison. His 1796 proposal for rebuilding the fire-damaged Nikolaikirche in Potsdam recalled the Schauspielhaus scheme in its use of a cube with a Doric portico, this time surmounted by a cupola. It, too, was not built, but it influenced the Nikolaikirche ultimately designed by Schinkel (1826–49).

Gilly produced many designs for country houses and for pavilions in the parks and gardens of those designed by his father. Of designs intended for his own use, only the Villa Mölter in the Tiergarten (Berlin, 1799-1801; destroyed nineteenth-century) was built. Based on Bélanger's Château de Bagatelle, he published an illustrated description of the French house in his father's magazine while the villa was in construction.

When he returned to Berlin, Gilly was appointed Senior Court Building Inspector in 1798 and became a professor of optics, perspective, and architectural and mechanical drawing at the newly

[51] Watkin and Mellinghoff, p. 71. In keeping with his tri-national view of late eighteenth-century European architecture, Pevsner claimed that "A building like this cannot be properly appreciated without knowing

established Bauakademie the following year.[52] In 1798, he and Johann Heinrich Gentz established the Privatgesellschaft junger Architekten (Private Society of Young Architects), a group of seven architects that included Schinkel, von Klenze, von Hallestein, and Langhans, who met weekly to discuss readings, critique their own work, and participate in impromptu competitions.

*The Significance of Jean-Nicolas-Louis Durand*

In his amplification of Pevsner's characterization of German architecture, Emil Kaufmann noted, "It is a well-known fact that Durand's textbooks were used all over Europe through many decades."[53] Jean-Nicolas-Louis Durand (1760-1834), French architect, teacher, and writer, was among the most

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England" and he compared its semi-circular apse and columnar screen to motifs used by Robert Adam; Pevsner, p. 89.

[52] Freidrich expressed substantially divergent views from those of his father concerning the aims of the Bauakademie in an unsigned essay, "Einige Gedanken über die Notwendigkeit, die verschiedenen Theile der Baukunst, in wissenschaftlicher und praktischer Hinsicht, möglichst zu vererinigen"; *Friedrich Gilly: Essays on Architecture*, pp. 165-75, originally published in *Sammlung nützlicher Aufsätze und Nachrichten die Baukunst betreffend 3, no. 2* (1799), pp. 3-12. In the piece, he opposed what he considered positivist course of instruction and emphasis on employment with the Prussian government as well as an increasing estrangement of art, science, and craft within architecture.

An account of the Bauakademie curriculum, "Nachricht von der Errichtung der Könglichen Bauakademie" written by the Johann Albrecht Eytelwein (1764-1849), the school's first director and a teacher of mechanical engineering (he wrote several books with David Gilly), appeared on pages 28-40 of the same issue. In the article, Eytelwein argued for a pragmatic emphasis on engineering over "great architecture" as a response to the needs of the state. However, another article written by him described the purpose of the Bauakademie in a more general manner, calling it "...an institute that would transport in its instruction all branches of the art of building in their proper inter-relationship, and where theory and praxis go hand in hand in educating the prospective master builder." In this context, the influence of the Prussian government was said to be justifiable because "...in comparison so very much is built at royal expense and such great sums are spent on buildings of every kind." Kruft, p. 294; Johann Albrecht Eytelwein "The Bauakademie – A Kind of Polytechnical School," reprinted and cited in K. Schwarz, ed. *Von der Bauakademie zur Technischen Universität. 200 Jahre Forschung und Lehere* (Berlin: 1999) and translated in Pfammatter, p. 223.

[53] Emil Kaufmann, *Architecture in the Age of Reason, Baroque and Post-Baroque Architecture in England, Italy, France* (New York: Dover Publications, 1968), reprint of first ed. (Harvard, MA: Harvard University Press, 1955), p. 117. Neumann makes a similar comment within a discussion of the teaching tools used in the architectural education of German-speaking students, noting that "It is not surpassing that with its roots in the art academies, the teaching of architecture in its historical forms was centered for a long time on drawing from models and, occasionally, local architecture. The schematic drawings of building types and architectural elements that Jean-Nicolas-Louis Durand and others introduced at the beginning of the nineteenth-century in France had a clear influence in Germany as well (on architects such as von Klenze and Freidrich Gärtner)," Dietrich Neumann, "Teaching the History of Architecture in Germany, Austria, and Switzerland: Achiteckturgeschichte vs. Bauforschung," *Journal of the Society of Architectural Historians*, vol. 61, no. 3 (September 2002), p. 376.

influential teachers of his time. His belief in function and economy of means as the basis of architecture was advanced in publications that remained in use into the twentieth-century. However, its is difficult to reconcile his announced intentions with his influence and Werner Szambien notes

> Durand is usually thought to have broken the continuity of the classical tradition in architecture. I am not here to isolate any such break. Breaks of this sort tend to be discerned when a more gradual process of transformation cannot be recognized, either because the true facts are not yet established, or because the subject is not closely enough studied...
>
> The complexity of his activity – and of his life – explains in part why Durand has been classified in so many different ways. He has been called a builder, a functionalist, a rationalist, a revolutionary, a utilitarian, and an architect of the rising bourgeoisie. He has been seen as the last exponent of classical architecture, as the begetter of modern functionalism; he has been set in the decline of the baroque tradition, and in the history of the rise of the engineer.
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> Each of these descriptions has a modicum of truth, but their multiplicity points to a certain confusion.[54]

Durand initially studied with Pierre Panseron (*fl.* 1736) and then worked in the office of Etienne-Louis Boullée after 1776. He also took courses with Julien-David Le Roy at the Académie d'Architecture and participated in competitions under the guidance of Jean-Rodolphe Perronet. He came in second twice in the *Prix de Rome* competition: in 1779 for a museum, and in 1780 for a school. During the 1780s, he worked as a draftsman for Boullée and for the engraver Jean-François Janinet. Few of his designs were constructed and a rare example is the Maison Lathuille (1788), a building with Greek ornament and an extremely simple plan. About 1790 he executed a series of drawings, *Rudimenta Operis Magni et Disciplinae*, that are probably a pictorial representation of Boullée's theories centered on the notion of expressive forms and "character" in architecture. In 1794, Durand joined Louis-Michel Thibault, another student of Boullée, to carry out the decoration

[54] Szambien attributed that confusion to the meager state of research on Durand's ideas. He claimed that "almost all information on him comes from his own publications" and acerbically concluded "Most historians accept that Durand's influence was 'important.'" Werner Szambien, "Durand and the continuity of tradition" in

for the Fête de Bara et Viala in the Panthéon, Paris. The event did not take place, however, and nothing was built. They also won several other competitions for public buildings in 1794 but none of these was built, either.

Durand's competition successes led to an appointment at the new École Polytechnique, beginning in 1795 as a draftsman, and from 1797 to 1833 as professor of architecture. During this period, the school provided only basic education for engineers who went on to more specialized work. Consequently, Durand's architectural course was limited to a few sessions and it took second place to subjects such as Gaspard Monge's descriptive geometry. Durand produced two major publications in response to the situation: *Recueil et parallèle des édifices de tout genre, anciens et modernes, remarquables par leur beauté, par leur grandeur, ou par leur singularité, et dessinés sur une même échelle*[55] and *Précis des leçons d'architecture données à l'École polytechnique depuis sa réorganisation; précédée d'un sommaire des leçons relatives à ce nouveau travail.*[56] These are commonly known as the "Grand Durand" and the "Petit Durand," respectively.

The origins of the *Recueil* were in the collection of six prints that Durand exhibited at the Salon of Year VII (1798/1799). The remainder was assembled in two groups over the next two years, and the completed work depicted more than thirty building types in plan and elevation, dating from the Egyptian period to the eighteenth-century. Although Durand's preference was for extant structures, he included several reconstructions. The overall approach was similar to that used by Julien-David Le Roy (1724-1803) in *Les ruines des plus beaux monuments de la Grèce; Ouvrage divisé en deux parties, ou l'on considère, dans la première, ces monuments du côté de l'histoire, et dans la seconde,*

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*The Beaux-Arts and nineteenth-century French architecture*, Robin Middleton, ed., (Cambridge, MA: The MIT Press, 1982), p. 19.

[55] Paris: Gillé, 1799.

[56] Paris, Chez l'Auteur, 1802-25. Durand revised the 1802-05 edition of the *Précis* and published it as the *Nouveau précis des leçons d'architecture données à l'Ecole impériale polytechnique* (Paris: Chez l'Auteur, 1809-13).

*du côte de l'architecture*.[57] However, Durand's work was unique for several reasons: he organized buildings by type, he simplified his models by redrawing and amending them to suit his purposes (especially those selected from Piranesi's work), and he presented all of the buildings at a common scale in plan, section, and elevation.[58] The 1801 and 1833 editions of the *Recueil* were supplemented by a fifty-two page text consisting of a substantial extract from architect Jacques-Guillaume Legrand's "Essai sur l'histoire générale de l'architecture."[59] The "Essai" was published separately in 1809 on the advice of Charles Paul Landon (1760-1826) with Durand listed as co-author.[60] Durand concurred with Legrand when he suggested using Legrand's text because teaching responsibilities made preparation of his own text impossible. The work was aimed at a wide public although it remained in use at the École des Beaux-Arts into the twentieth-century. The *Précis* contained Durand's lectures given at the École Polytechnique and came in two volumes. The first focused on architectural composition, while the second was concerned with the design of public buildings. Durand declared himself an opponent of a long line of architectural thinking stretching from Vitruvius to Marc-Antoine Laugier. In his view, economy, and fitness for purpose was the basis of architecture, and his course proposed a standard, simplified vocabulary of neoclassical forms and proportions.

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[57] Paris: H. L. Guérin & L. F. Delatour, 1758. Le Roy added plans to the second corrected, augmented, and re-titled edition; *Les ruines des plus beaux monuments de la Grèce: considérées du côté de l'histoire et du côté de l'architecture*, 2 vols., Paris: Imprimerie de Louis-François Delatour, 1770.

[58] Kruft refers to the Recueil as a "typological atlas"; Kruft, p. 273.

[59] Legrand (1743-1807) was well established within the French architectural community, having studied with Jean Rodolphe Perronet and François Blondel and married the daughter of Charles Louis Clérisseau. His practice concentrated on public works projects and he published several books, written alone and with others. He wrote the first biography of Piranesi, although it was not published until the twentieth-century; Jacques-Guillaume [Legrand], "Notice historique sur la vie et sur les ouvrages de J. B. Piranesi" in Marina Miraglia, ed., *Grafica, Mostra della Calcografia dedicata a Giovanni Battista Piranesi*, exhibition catalogue (Rome: Edizioni dell'elefante, 1976), p. 5).

[60] Jacques-Guillaume Legrand and Jean-Nicolas-Louis Durand, *Essai sur l'histoire générale de l'architecture* (Essay on the General History of Architecture, Paris: Soyer, 1809). Landon was a prominent art historian, a student of the École de Beaux-Arts in Rome, and later a curator of paintings at the Musée in Paris, the precursor of the Louvre. He translated and published the first French edition of Stuart and Revett's *Antiquities of Athens*;

Durand's course underwent few modifications. His *Partie graphique des cours d'architecture données à l'École polytechnique depuis sa réorganisation*[61] amounted to a simplification of his published teachings of 1802. The Choix des projets d'édifices publics composés par MM. les élèves de l'École polytechnique[62] written by Durand in collaboration with François-Tranquille Gaucher (1766–1846) contained various projects by students at the École Polytechnique.

Durand did not participate in the great projects of the French Empire. He designed many projects but his few built works consisted of the Hôtel Lathuille in Paris, (1788), Maison Lermina a house for an administrator at the École Polytechnique at Chessy, Seine-er Marne (ca. 1802), a house at Thiais (ca. 1811), his own house (1820) and country house (1825) in Thiais, and a portable panorama with Charles O. Barbaroux (1828).[63] His buildings illustrate the principles taught in his course and his importance reflects his teaching and the extent of its influence. For more than thirty years, all students at the École Polytechnique were trained by Durand, whose influence is evident in public architecture in France from the beginning of the nineteenth-century. His rationalism corresponded to the economic and ideological needs of Napoleonic France by affirming the role of economy and function through standardization of structural elements. Despite the radical views expressed in his writings, he did not contest the usefulness of antique forms and contributed to their continued presence in French architecture.

Durand's influence in Germany was also considerable and his writings ultimately came to occupy an important place in a country where architectural training was still not systematically organized. His

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James Stuart, Nicholas Revett, Laurent François Feuillet, C. P. Landon, *Les antiquites d'Athènes, mesurées et dessinées*, Paris: Firmin Didot, 1808-1822.

[61] Paris, Chez l'Auteur, 1821.

[62] Paris, 1816.

[63] Jean-Nicolas-Louis Durand, *Précis of the Lectures on Architecture*, David Britt, trans. (Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 2000); translation of *Précis des leçons d'architecture données à l'École polytechnique, par J. N. L. Durand* (Paris, Chez l'Auteur, 1802-05) and *Partie*

ideas were first made known to German architects during their visits to Paris, an activity that traditionally occurred at the end of their training and was intended to "perfect" their knowledge. During the early nineteenth-century, these excursions allowed for study, studio visits, and observation of construction activity that increasingly included such iron structures as the Pont des Arts (1803). These trips gradually began to replace the visits to Italy that were typical of earlier generations, and increased diffusion of knowledge of French architecture. Friedrich Gilly was in Paris 1797-98, and other Germans such as Johann Heinrich Gentz,[64] Caspar Frederick Harsdorff,[65] Christian Traugott Weinlig,[66] Carl Ludwig Wimmel,[67] Leo von Klenze,[68] Karl von Fischer,[69] Friedrich von Gärtner,

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*graphique des cours d'architecture données à l'École polytechnique depuis sa réorganisation; précédée d'un sommaire des leçons relatives à ce nouveau travail* (Paris, Chez l'Auteur, 1821), "Works by Durand," p. 320.

[64] Gentz (1766-1811), the brother-in-law of Friedrich Gilly, and Carl Gotthard Longhans were the most prominent neoclassical architects in Prussia before Schinkel. Gentz was born in Breslau and studied drawing and architecture in Berlin He returned there after visiting Italy, England, and France 1790-95 and became Professor of Civic Design at the newly founded Bauakademie in 1799 and was appointed Hofbaumeister (Building Supervisor) in 1810. His competition entry for a memorial to Frederick the Great was well received, but the New Mint (1798-1800, destroyed 1886, Berlin) was his most important work. It featured a bronzed sandstone frieze deigned by Gilly and housed the city building department as well as the Bauakademie where both taught. Barry Bergdoll, "Heinrich Gentz" in *Macmillan Encyclopedia of Architects*, vol. 2, p. 185; Adrian von Buttlar, "Johann Heinrich Gentz" in *Grove Dictionary of Art*, vol. 12, pp. 310-11.

[65] Harsdorff (1735-99), the leading figure in Danish architecture in the late eighteenth-century, was also an interior designer and teacher. Born in Copenhagen, then a part of Prussia, he trained at the Kongelige Danske Kunstakademi (Royal Danish Art Academy) located in that city. He won a gold medal in 1756 and received a travel scholarship that allowed him to spend six years in Paris and Rome where he observed the rise of neoclassicism. He returned to Copenhagen and began a successful career as a teacher, civil servant, and practicing architect. Hanne Raabyemagle, "Caspar Frederik Harsdorff" in *Grove Dictionary of Art*, vol. 14, p. 201.

[66] Weinlig (1739-99) was born in Dresden and studied in Rome. Primarily a theorist and writer, he was a follower of Winckelmann and completed only one building: a riding hall based on Bramante's Tempieto located behind the Zwinger in Dresden (1776). Nevertheless, in 1799 he was promoted to master builder of the Oberland in Saxony and, ultimately, to the head of the Saxon main civil building department. "Christian Traugott Wenlig" in *Allgemeines lexikon der bildenden künstler von der antike bis zur gegenwart; unter mitwirkung von 300 fachgelehrten des in- und auslandes*, Ulrich Thieme and Felix Becker, eds. (Leipzig, W. Engelmann, 1907-50), vol. 35, pp. 298-99.

[67] Wimmel (1786-1845) was a born in Berlin where his father was a master mason who worked with Carl Gotthard Langhans and David Gilly. He trained as a carpenter with his father but later studied architecture under Langhans in Hamburg 1807-09. Wimmel subsequently spent four years traveling during which he studied in Karlsruhe under Friedrich Weinbrenner and visited Paris and Italy. He returned to Hamburg in 1814 and joined the city building department where he prepared his first city plan in 1816 and became Director of Building in 1818. He visited Great Britain in 1841 as a member of a Prussian delegation studying prisons and asylums. "Carl Ludwig Wimmel" in *Grove Dictionary of Art*, vol. 33, p 228.

Friedrich Weinbrenner,[70] Jacques-Ignace Hittorff,[71] and Franz Christian Gau[72] also visited before

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[68] Klenze (1784-1864) studied with Percier and Fontaine in Paris between 1812 and 1814; Oswald Herder, Friedrich von Gärtner (Munich, 1976), pp. 38-39 cited in Kathleen A. Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," *Journal of the Society of Architectural Historians*, vol. 47 (December 1988), p. 357 n. 23. Curran does not accept Herder's claim that Klenze also studied with Durand.

[69] Fischer (1782-1820) was born in Mannheim, studied in Vienna, and traveled in France and Italy from 1806 to 1809 before settling in Munich where he was appointed a professor at the Akademie der bildenden Künste. Friedrich von Gärtner was one of his pupils. He was appointed Königlicher Oberbaurat the following year by Ludwig, Crown Prince of Bavaria in his effort to make Munich a suitable capital for the new kingdom of Bavaria created in 1806. Fischer prepared a comprehensive urban plan (1808–12) that influenced the city's development throughout the nineteenth-century and designed the Hof- und Nationaltheater (Munich, 1811-18, burned 1823), at the time the largest public opera house in Western Europe. It was based on the Théâtre de l'Odéon (Peyre and de Wailly, 1767-70, 1779-82, Paris) and employed classical, rather than Baroque, motifs. He prepared unsuccessful schemes for the Glyptotek and Walhalla, both of which were built by Klenze who also rebuilt Fischer's theatre. Egon Verheyen, "Karl von Fischer" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 71-72; Claudia Bölling, "Karl von Fischer" in *Grove Dictionary of Art*, vol. 11, pp. 128-29.

[70] Albert Rosengarten (1809-93), a German architect, considered Weinbrenner responsible for the collapse of classicism in Germany. "Classical architecture was diffused in Germany... with a deficiency of spirit by the School of Weinbrenner. The method of this school consisted of indiscriminately introducing columnar porticos, and especially in forcibly combining modern architectural requirements with the temple forms of antiquity, after the manner of Palladio; with this difference, however, that in the Italian productions of this description a certain skill was associated with taste and a feeling for fine proportions, whilst Weinbrenner's German school and those architects who followed in his footsteps, cannot boast an equal share of these merits." Rosengarten, *A Handbook of Architectural Styles*, W. Collett-Sanders, trans. Boston: Longwood Press, 1977), reissue of translation (London: Chatto and Windus, 1878) of *Die architektonischen Stylarten: eine kurze, allgemeinfassliche darstellung der charakteristischen verschiedenheiten der architektonischen stylarten*, Braunschweig: F. Vieweg, 1857), p. 461.

[71] Hittorff (1792-1867) was born in Cologne, the only son of a family of prosperous artisans from the Rhineland who became a French citizen after France annexed Cologne in 1794. In that status, Hittorff was able to study in Paris and he entered the École des Beaux-Arts in 1811 where he worked in the atelier of Charles Percier. After the return of the Rhineland provinces to Prussia in 1814, he could neither continue his French education nor compete for the Prix de Rome. Consequently, he and another young architect, Joseph Lecointe (1783–1858), were taken on by François-Joseph Bélanger, who had been reappointed Architecte des Fêtes et Cérémonies Royales after the restoration of the Bourbons. While in Bélanger's office, Hittorff worked on the iron replacement dome for the Halle aux Blé. When Bélanger died, Hittorff and Lecointe assumed Bélanger's commissions, thereby developing a successful practice based on social and governmental connections. His success allowed him to travel briefly to England (1820) and Germany (he met Schinkel in Berlin in 1821), and to take an extended trip to Italy (1822-24) during which he and Karl Ludwig Zanth (1796-1857), a German architect and a member of Hittorff's atelier, observed traces of painted polychromatic decoration on Greek temples in Sicily. These experiences led to book, co-authored with Zanth, that advocated use of such decoration in restorations; *Architecture antique de la Sicile; ou, Recueil des plus intéressants monuments [sic] d'architecture des villes et des lieux les plus remarquables de la Sicile ancienne*, Paris: Imprimé chez P. Renouard, 1827?). Hittorff presented the results of his research and his theory of the polychromy of ancient buildings to the Académie des Beaux-Arts. Similar evidence and recommendations appeared as early as 1811, but the notion that ancient Greek architecture could employ intense color broke with the aesthetic norms of neoclassicism. Radical students took up the idea at the end of the 1820s in support of Henri Labrouste's (1801-75) proposals for restoration of the Greek temples at Paestum, and by the 1830s, the approach spread throughout northern Europe. While many of its adherents saw it as proof that the Greek architectural decoration was accumulative and, therefore, free of academic constraints, Hittorff saw polychromy as evidence of the orderly nature of the underlying architecture. Despite the controversy (and because of his government service), Hittorff received a sizeable number of commissions in which he was able to demonstrate theoretical

1810. Szambien attributes the presence of German artists and architects in Paris during that period to their ability to obtain passports relatively easily because Prussia was allied with France. In contrast, architects from London and Vienna were less commonly seen because their homelands had a more contentious relationship with that country. Similarly, during the Napoleonic Wars, there was little building activity in Berlin, in contrast to the southern principalities allied to Napoleon. However, the situation became substantially different after 1850 when political relations changed and the interests of German architects who visited Paris became more closely allied with those of the École des Beaux-Arts than with the École Polytechnique.[73]

Although reprinted frequently in France, Durand's works were not easily obtained elsewhere. Pierson notes that translations of the *Précis* circulated in Germany as early as 1806, probably referring to excerpts made available by Carl Friedrich Anton von Conta (1778-1850), a diplomat in the Weimar court.[74] Szambien and Valleri also mention unauthorized editions published in Venice

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and practical aspects of his view of polychromy. Among the most important of these is St. Vincent-de-Paul (1833-48, Paris), a church whose square plan contrasted strongly with the eclectic assemblage of architectural elements in its façades and interiors. Hittorff published a program that described its sculpture, monumental painting, cabinet making, and stained glass, and positing the building as a link between antiquity and modernity. His last work, the Gare du Nord (1858-66, Paris) was similarly unconventional in that its masonry skin wrapped, but did not internally conceal, an iron-framed train shed. David Van Zanten, "Jacques-Ignace Hittorff" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 391-95; Thomas von Joest, "Jacques-Ignace Hittorff" in *Grove Dictionary of Art*, vol. 14, pp. 592-93.

[72] Gau (1790-1854), an architect, writer and archeologist, was born in Cologne and began studies in Paris at the École de Beaux-Arts in 1811. He was as much a scholar as a practicing architect and traveled in Egypt on a scholarship from the Prussian government and then in Italy (1815-21) gathering material for several books. During the 1820s, he operated a private school of architecture attended by Gottfried Semper, and during the late 1820s and the 1830s, he obtained several official posts in Paris. In 1839, Gau received a commission to build a Gothic cathedral in Paris intended to be comparable to that in Cologne. Work began in 1846 but he died before it was completed. The building, Ste. Clothilde, became a symbol of the official recognition of the Gothic Revival in France and contributed to Viollet-le-Duc's rejection of the style. David Van Zanten, "Franz Christian Gau" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 170-01; Barry Bergdoll, "Franz Christian Gau" in *Grove Dictionary of Art*, vol. 12, p. 178.

[73] Werner Szambien, *Jean-Nicolas-Louis Durand, 1760-1834: de l'imitation à la norme* (Paris: Picard, 1984), pp. 111-12.

[74] *Grundlinien der bürgerlichen Baukunst nach Herrn Durand, Prof. Der Baukunst an der École Polytechnique zu Paris für Deutsche Bau-und Werkschulen*, Halle: 1806). Conta studied briefly at the École Polytechnique and the book is a condensation of several lectures given by Durand that he attended. Curran noted that in his introduction, Conta claimed that Durand's *Recueil*, published in Paris in 1806, was well known to German

and Brussels before the 1820s as well as a trip that Durand took to Naples in 1822 to arrange for the sale and publication of his writings. However, the first relatively complete German version of Durand's work, *Abriss der Vorlesungen über Baukunst* did not appear until 1831. It was translated by Clemens Wenzeslaus Coudray (1775-1845), a teacher of Conta, twice a winner of the Grand-Prix of the Académie national d'architecture, practicing architect, and the designer of the copper etchings contained in the second volume of the *Précis*. Coudray met Durand when, after completing his architectural training in Leipzig, Dresden, and Berlin, he came to Paris in 1800 from Frankfurt, intending to purchase a copy of the *Précis* for an acquaintance. While in Paris, he received permission to assist Durand with his courses and work in his atelier. Despite that close professional relationship and a successful architectural practice, Coudray left Paris for Italy in 1804 and remained there until 1805 when he returned to Germany. He subsequently worked in Frankfort and Fulda, however, most of his life was spent in Weimar, where he was appointed Oberbaudirektor (1816) to the Grand Duchy of Saxe-Weimar-Eisenach, one of the smaller and poorer of the German states and the location of most of his work. Although Coudray's translation of Durand, begun in 1803 and based on notes for courses he taught in Fulda, was presented to Goethe, Weimar's most eminent citizen, the ceremony took place in Karlsruhe, a city with its own polytechnical school founded in 1825.

Coudray introduced several German students to Durand who studied with him before returning home. Among them were Gottlob Georg Barth (1777-1848) and Johann Friedrich Christian Hess (1785-1845). Barth, previously trained in Karlsruhe, Stuttgart, and Berlin, studied at the École Polytechnique 1801-03 and, after traveling to Rome, returned to Stuttgart in 1805 where he established a practice and became the city architect. Hess studied at the École Polytechnique 1802-

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architects. Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," p. 352 n. 5.

03 and, after traveling in Italy with Coudray and Gärtner, returned to Frankfurt where he practiced and became the city architect, a position previously held by his father.[75]

Albert Rosengarten summarized Durand's role in Germany during the nineteenth-century and a somewhat unexpected side effect of his teachings.

> In France and Germany the influence of the schools has become very considerable, and within the last ten years has given rise to several different and coexistent subdivisions of the art.
>
> The French school of Durand was the most general and widely extended of these. It endeavored to lead architecture back again to the Italian Renaissance, and the study of ancient Roman monuments, which were employed as models, were its foundation. A certain rational treatment is peculiar to this school: its tendency is rather to work out new designs and form new systems than to promote the expression of the imagination and aesthetic conceptions.[76]

This situation is reflected in Hitchcock and Villari's linkage of the influence of Durand's methods to Romantic Classicism, a loosely defined blend of post-Enlightenment sentiment and reverence for Greek and Roman antiquity, in early nineteenth-century European architecture in general, and to architecture in the German states in particular.[77] The term was introduced in 1922 by Sigfried Giedion as "Romantischer Klassizismus" and substantially expanded in 1944 by Fiske Kimball.[78]

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[75] Pfammatter, pp. 74, 76; Szambien, *Jean-Nicolas-Louis Durand, 1760-1834: de l'imitation à la norme*, pp. 122-32; Szambien, "Clemens Wenzeslaus Coudray" in *Grove Dictionary of Art*, vol. 8, pp. 40-41; Sergio Villari, *J.N.L. Durand (1760-1834): Art and Science of Architecture* (New York: Rizzoli, 1990), p. 58; Watkins and Mellinghoff, pp. 130-01; Kruft, p. 292.

[76] Rosengarten, *A Handbook of Architectural Styles*, W. Collett-Sanders, trans. (Boston: Longwood Press, 1977), reissue of translation (London: Chatto and Windus, 1878) of *Die architektonischen Stylarten: eine kurze, allgemeinfassliche darstellung der charakteristischen verschiedenheiten der architektonischen stylarten* (Braunschweig: F. Vieweg, 1857), p. 461.

[77] Henry-Russell Hitchcock, "The Doctrine of J.-N.-L. Durand and its application in Northern Europe" in *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth, Middlesex, UK and New York: Penguin Books, 1977), pp. 23-73; Villari, p. 58; Kruft, pp. 274-75.

[78] Sigfried Giedion, *Spätbarocker und romantischer Klassizismus*, Munich: F. Bruckmann, 1922); Fiske Kimball, "Romantic Classicism in Architecture," *Gazette des Beaux-Arts*, vol. 86 (February 1944), pp. 95–112. Kimball believed that Giedion's post-1800 dating for the origins of Romantic Classicism was too late and suggested that its beginnings were in eighteenth-century English garden design.

While Romantic Classicism was neither a unified movement nor style, its affect on Neoclassical art from the mid-eighteenth through mid-nineteenth-century revealed a need for and provided a way of mitigating some of its proscriptive qualities while retaining many of its universalistic aspirations.

Not all German architects approved of Durand, however. In the Preface to his "Preliminary Remarks on Polychrome Architecture and Sculpture in Antiquity" (1834), Semper disparagingly referred to him as "this chancellor of the exchequer of failed ideas" and castigated him as a participant in "an almost bankrupt architecture [that] seeks relief and recovery by introducing two kinds of paper currencies," one of which was the square-ruled sheets used by Durand in his method of analysis and composition (the other tracing paper). Semper called Durand's sheets "assignats," a form of worthless paper money issued by the French revolutionary government during the 1790s, and compared them to "a knitting pattern or chessboard, on which the plans of the buildings arrange themselves quite mechanically." He went on to complain,

> Who still doubts their sterling value? – since without a second thought we can gather the most heterogeneous things under one umbrella, everything the ancients threw together so higgledy-piggledy. With them, the first-year polytechnical student in Paris becomes a complete architect within six months: riding schools, baths, theatres, dance salons, and concert halls almost spontaneously assemble themselves on his grids into one plan and carry off the great academic prize. Following such rigid principles, entire cities like Mannheim and Karlsruhe are laid out.

Although still disapproving, Semper relaxed his position somewhat in comments made in a Prospectus written in 1852 for his never-completed *Comparative Theory of Building*:

> ...but under the influence of his assignment to invent for the students of the polytechnical school a *compendium artis* [Durand] often loses himself in lifeless schematicism. He combines, lines things up superficially, and brings about a sort of unity of parts in a mechanical way, instead of showing their organic working together around the primary, animating idea. Notwithstanding these shortcomings, his books [i.e., the Précis and the *Recueil*] are

> remarkable and important for the principle of comparison they contain."[79]

*Friedrich von Gärtner*

Although not a theoretician, Friedrich von Gärtner (1792-1847) had great success in popularizing Durand's ideas in Germany during the 1830s and 1840s through his built work, teaching, and publication of his Durand-inspired designs. Gärtner was born in Koblenz, the son of Andreas (Johann) Gärtner (1774-1826), building director in Koblenz, court architect of Würzburg, and director of the royal works in Munich. Friedrich studied at the Munich Akademie der bildenden Künst from 1808 to 1812 under Karl von Fischer (1782-1820), and after spending a year in Karlsruhe, a center of neoclassical architecture, he spent two years in Paris studying with Charles Percier (1764-1838), Pierre-François-Leonard Fontaine (1762-1853), and Durand. In 1814, he traveled to Italy and subsequently published *Ansichten der am meisten erhalten griechischen Monumente Siciliens: nach der Natur und auf Stein gezeichnet von Friedrich Gärtner, Architekt*[80] and *Römische Bauverzierungen nach der Antike*,[81] both being accounts of his observations.

Gärtner worked for Léo von Klenze (1784-1864) when returned to Munich in 1817, but received no private commissions. Consequently, he accepted an invitation in 1819 from Charles Robert Cockerell (1788-1863) to go to London and help with the publication of Cockerell's account of his own journey through Greece and Italy (1810-17), *Antiquities of Athens and other Places of Greece, Sicily, etc.: Supplementary to the Antiquities of Athens by James Stuart and Nicolas Revett, delineated and illustrated by C. R. Cockerell, W. Kinnard, T. L. Donaldson, W. Jenkins, W. Railton* (London: Priestley and Weale, 1830). Cockerell's book was the fifth and final volume of *The*

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[79] Gottfried Semper, *The Four Elements of Architecture and Other Writings*, Harry Francis Malgrave and Wolfgang Herrmann, trans. (Cambridge, UK, New York, Sydney: Cambridge University Press, 1989), pp. 46, 168-69.

[80] Munich: Gedruckt und verlegt in I. G. Zeller's Kunst und Commissions Magazin, 1819.

[81] Munich, 1824.

*Antiquities of Athens, Measured and Delineated by James Stuart and Nicholas Revett, painters and architects* (London: Printed by John Haberkorn, 1762-1830). While in England, Gärtner became increasingly aware of the effects of industrialization on society and architecture, however, he returned to Munich less than a year later to assume the architecture chair at the Akademie, a position he obtained through his father's influence after the death of Fischer.

Gärtner was appointed artistic director of the Nymphenburg Porcelain Factory in 1822, but his only architectural work involved its rebuilding (1823-25). In 1827, his situation improved substantially when, two years after assuming the throne, the former Crown Prince, now Ludwig I, King of Bavaria, received him in Rome. Ludwig was ready to build and he wanted a new architect as a foil to Fischer and Klenze. Consequently, in 1828, Gärtner received the commission that lead to his first great work, the Ludwigskirche. It was to be located on the Ludwigstrasse, the centerpiece of the king's grand project intended to establish Munich as a city of architectural and cultural prominence. Because Klenze had created the design for the Ludwigstrasse in 1816 and most of the southern part was already complete, Gärtner received the northern portion of the project in 1830.

The Ludwigskirche (Church of St. Louis, 1828-44) reflected Gärtner's search for a style based on architectural qualities he believed were inherent in early medieval architecture, a quest also undertaken by contemporary architect and writer, Heinrich Hübsch (1795-1863). Hübsch's book, *In welchem Style sollen wir bauen?*[82] advocated a local version of the Romanesque, the Rundbogenstil (round-arch style), that reflected variety of sources, including Byzantine and classical, and employed artist-designed ornament. Gärtner's final design consisted of a gabled basilica with transept and rectangular choir. The street façade was dominated by a triple-arched portico set above a low, wide flight of stairs and a pair of tall, pointed, towers. The parsonage and Gärtner's own house flanked and were connected to the towers by round-arched screen walls. The building featured planar

[82] Karlsruhe: Chr. Fr. Müller, 1828.

surfaces and infill panel framing characteristic of German and Italian Romanesque churches, and its extended, linear form reinforced its position on Munich's major street. In contrast to the severity of the geometric forms used on the exterior, its interior displayed a surprising richness due to the plasticity of its architectural detail and ornament and its extensive polychromatic decoration and frescoes.

While Gärtner was planning the Ludwigskirche, he also worked on the Staatsbibliothek, a project desired by Ludwig I since 1827. The chosen site was on the Konigsplatz, across from Klenze's Glyptothek (1816-30). However, Gärtner moved it to the Ludwigstrasse, behind and at a right angle to the Glyptothek and next to the Ludwigskirche. Financial problems delayed construction until 1832 and completion until 1843. Consisting of a three-story, 25 bay structure, its extreme horizontality emphasized and reinforced the urban quality of the Ludwigstrasse. Its severe exterior featured red and yellow brick above a cut stone base, an unusual approach that Gärtner probably learned about during an 1835 visit to Berlin where he saw the late work of Karl Friedrich Schinkel (1781-1841), especially the Bauakademie (1831-35). Because Gärtner's library and Klenze's adjoining Kriegsministerium (1827-30) were both based on 15th-century Italian palazzo models, there was some similarity, although Gärtner's far exceeded the later in scale and monumentality. Other public buildings in Munich quickly followed. They were located within a complex at the north end of the Ludwigstrasse that included, in addition to the Ludwigskirche, the Ludwig-Maximillians-Universität (1827-40), the Landesblindenantalt (1833-37), the Damenstiftsgebäude (1835-39), the Herzgolichs Priesterseminar Georgianum and Max-Joseph-Stift (1835-40), and the General-Bergwerks- and Salinen-Administration (1840-43). In his design for the latter, Gärtner also used red glazed brick and yellow terracotta.

In 1835, Gärtner and Klenze accompanied Ludwig's younger son, Otto von Wittelsbach, King of Greece (reg. 1832-62), to Athens, where he was commissioned to build a new royal residence, the

Könglisches Schloß (1836-43; now the Parliament. Klenze had created an urban plan for Athens in 1834, and Schinkel intended to reconstruct the Acropolis to provide a site for a new palace. However, Gärtner rejected both ideas and maintained the approach he used in his Ludwigstrasse buildings and designed an extended three-story flat-roofed composition (the Residenz) that featured a pedimented central pavilion preceded by a heavy Doric portico. On his second visit to Athens in 1840-41, he designed and supervised the interior decoration of the new building, the first neoclassical structure in the city.

Gärtner completed the Ludwigstrasse with two monuments: the Feldherrnhalle (1841-44) at the south end, and the Siegestor (1843-52) at the north. At the request of the King, they were closely based on the Loggia dei Lanzi (Florence, 1376-82) and the Arch of Constantine (Rome, c.312-15), respectively. The Siegestor stood in the middle of the Ludwigstrasse in an environment of Renaissance-, Romanesque-, and Gothic-Revival neighbors while the Feldherrnhalle was situated between and at right angles to the Italian baroque Theatinerkirche St. Kajetan (Agostino Barelli, 1663-69; Enrico Zucalli, 1669-88; François Cuvillée, 1765-68), the adjoining classical Palais Moy (Klenze, 1819), and the Renaissance-inspired west façade (1611-19) of the Residenz (various architects, 1569-1842). The relationship between Gärtner's work and its neighbors suggests some of the unresolved problems inherent in the use of historical forms at that time.

In addition to designing other buildings for the King including an Italianate villa, the Pompejanum (Aschaffenburg, 1839-50), the third Wittelsbach Palace (Munich, 1843-80), his only Gothic Revival design, and the Befreiungshalle (Kelheim, begun 1863), Gärtner was appointed curator of historical monuments in 1836, succeeding the influential art critic and collector Sulpiz Boisserée (1783-1854). He participated in restorations of several medieval buildings including cathedrals in Bamberg (1834-37), Regensburg (1836-39), and Speier (1840-58), and the Benedictine church and cloister at

Scheyern (1837). Although typical for their time, the restorations are now considered misdirected nineteenth-century "improvements."

Gärtner became director of the Akademie der bildenden Künst in Munich in 1841 and published a collection of his work, *Sammlung der Entwürfe ausgeführter Gebäude*, 2 vols. (Munich: J. G. Cotta, 1844-45). After his sudden death, uncompleted projects in Munich (the Wittelsbach Palace, the Siegestor, and the Campo Santo in the Südfreihof Cemetery) were finished to his designs, however, Klenze substantially altered the Befreiungshalle by deleting the intended dome.

By the start of the 1840s, Gärtner's version of the Rundbogenstil was in taught in most Germany schools of architecture. His influence spread throughout Germany as the "Gärtnerstil" replaced the neoclassical style of Klenze. Within a few years, however, the style came under attack. Semper's huge Rundbogenstil project for the Nikolaikirche in Hamburg won a competition held in 1845, but was later rejected in favor of a Gothic Revival design by George Gilbert Scott. After that, the Gothic Revival and Renaissance Revival began to threaten the dominance of the Rundbogenstil because it was seen to lack the strong symbolic associations of those styles. While generally suitable for all functions, it was well suited for none and, by the end of the 1860s, its use was relegated to factories or barracks.[83]

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[83] Susanne Kronbichler-Skacha, "Friedrich von Gärtner" in *Grove Dictionary of Art*, vol. 12, pp. 167-68; Eberhard Drüeke, "Friedrich von Gärtner," Beverly R. Placzek, trans., in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 169-70; Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," pp. 351-73; "Friedrich von Gärtner – Lebensdaten" and Birgit-Verna Karnapp, "Werkverziechnis" in *Friedrich von Gärtner, Ein Architektenleben, 1791-1847*, pp. 219, 221-61; Oswald Herder, *Friedrich von Gärtner 1727-1847, Leben · Werk · Schüler* (Munich: Prestel-Verlag, 1976); Katharina Blohm et al, *Architecturfürher München – Architectural Guide to Munich*, Charles Warren Offerman, trans. (Berlin: Dietrich Reimer Verlag, 1994); Oswald Herder, ed., *Bauten und Plätze in München, Ein Architekturfürher* (Munich: Georg D. W. Callwey, 1972); Micheel J. Lewis, "Rundbogenstil" in *Grove Dictionary of Art*, vol. 27, pp. 334-36.

# 4. EARLY WORK: 1843-51

The first portion of Leopold Eidlitz's professional career extended from his arrival in America and ended with the founding of a practice in New York City and the cultivation of a roster of clients located there and throughout lower New England. During this period, his work involved residential and religious commissions with the latter designed for Episcopal, Congregational, and Jewish congregations. Nearly all of it reflected the preference of contemporary German-speaking architects for Romanesque forms. However, the period concluded with Eidlitz firmly established as a church architect and beginning to investigate the Gothic.

## *The Influence of Richard Upjohn*

Very close to the beginning of the first article in his memorial series on Eidlitz, Montgomery Schuyler wrote

> Mr. Eidlitz was born in Prague, March 29, 1823. He never forgot his birthplace. Reminiscences of the Moldau kept recurring in his work by the Hudson. As the towers of the Dry Dock Savings Bank[1] and of the Clergy House of St. George's[2] and such lesser erections as the "institutional" top of a commercial building survive to attest,[3] he remembered, "super flumina Babylonis,"[4] the picturesque "Pulverthurm" and the picturesque bridge head of his native city, even though combined with reminiscences of the Nassauerhaus in Nuremberg.[5] These

[1] 337-43 Bowery, New York City, 1873-75; demolished.

[2] 207 East 16th Street, New York City, 1886-88; altered.

[3] Possibly the Harris Building, 165 Sate Street, New London, CT, 1884; altered.

[4] The reference is to Psalm 137: "By the rivers of Babylon, there we sat down, yea, we wept when we remembered Zion." Schuyler seemed to suggest that despite leaving (involuntarily?), Eidlitz retained an emotional as well as visual attachment to his birthplace.

[5] The "Pulverthurm," a tower built in 1364 by Matthias Rejsek (altered 1875-76) is part of the Old Town Hall complex that was built in stages from the twelfth though nineteenth century. The "bridge head" refers to the tower located on the Old Town side of the bridge (1357-1402) that crosses the Vltava/Moldau River. Built in the last quarter of the fourteenth century, it was designed by Peter Parler (1330-99) for Charles IV. The Nassauerhaus was an early thirteenth century residence.

> things came back to him as admissible motives in far different erections.[6]

Nevertheless, during the earliest years of his practice, the influence of Richard Upjohn was far more immediate and obvious for Eidlitz than his Central European upbringing. Upjohn (1802-78), "the father and pioneer of architecture in New York,"[7] was born in Shaftesbury, Dorset, England, and died in Garrison, New York. His father was a builder and estate agent who taught at Christ's Hospital, London; his mother was the daughter of a clergyman. Despite family objections, he apprenticed to a cabinetmaker in 1819, although some accounts claim that Upjohn taught drawing. In 1829, following financial reverses, marriage, and the birth of his first son, his family immigrated to America, and by 1830, he was working for his brother in New Bedford, Massachusetts, and designing his first buildings. He moved to Boston in 1834 where he worked with Alexander Parris (1780-1852) and began to acquire the first of his national contacts.[8]

Five years later, Upjohn moved to New York City to work on the project that launched his career. The Building Committee of Trinity Church, New York City, hired local architect Isaiah Rogers, a Unitarian, to inspect the roof of the congregation's building, their second, during the fall of 1838. Rogers installed some shoring, but additional damage occurred during the following winter.[9] Upjohn, an Episcopalian, had previously designed alterations and an organ case for Trinity

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[6] Montgomery Schuyler, "A Great American Architect: Leopold Eidlitz, I: Ecclesiastical and Domestic Work" [hereafter "Leopold Eidlitz I"], *Architectural Record*, vol. 24, no. 3 (September 1908), p. 164.

[7] Montgomery Schuyler, "The Churches of New York," *New York World*, 22 October 1871, p. 2.

[8] The standard biography of Upjohn is Everard M. Upjohn, *Richard Upjohn, Architect and Churchman* (New York: Columbia University Press, 1939). Also see Phoebe B. Stanton, "Richard Upjohn" in *Macmillan Encyclopedia of Architects*, 4 vols., Adolf K., Placzek, ed. (New York: Free Press; London: Collier Macmillan, 1982), vol. 4, pp. 236-44; Thomas U. Walter, "Memorial," *Proceedings of the Eleventh Annual Convention of the American Institute of Architects, at the Rooms of the Massachusetts Instate of Technology, October 17, 1877*, pp. 52-55; William H. Pierson, *American Buildings and their Architects: Technology and the Picturesque, the Corporate and the Early Gothic Styles* (Garden City, NY: Doubleday & Company, Inc., 1978), pp. 159–205; Judith S. Hull, "Richard Upjohn," *Grove Dictionary of Art*, Jane Turner, ed., 34 vols. (London: Macmillan Publishers Limited; New York: Grove's Dictionaries, Inc., 1996), vol. 31, pp. 688-92.

Church, Boston (George Brimmer, 1829) and had become a friend of its rector. He was summoned from Boston in February 1839 to inspect the New York church and recommended extensive repairs. After the roof was removed, however, his review of conditions persuaded the Building Committee that the building could not be saved, let alone enlarged, and they voted for demolition on 5 August 1839. Upjohn submitted plans for a new church on 9 September and was immediately authorized to proceed with the $90,000 project. He quickly moved to New York City and the old structure was gone by mid-September.

The new Gothic Revival church was completed in 1846 and well received.[10] Unusually large and complex for its time, its success among the Episcopal clergymen who supported the reformed liturgy embodied in its design provided the basis for much of Upjohn's future patronage. His practice was so closely tied to his religious beliefs that he was said to have refused to build for a Unitarian congregation in Boston because the denomination denied the existence of the Trinity.[11] When Upjohn did build for non-Episcopalian clients, he nearly always used styles other than Gothic, particularly the Romanesque.

Upjohn's office was one of the largest of its time, and in addition to his eldest son, Richard Michell Upjohn (1828-1903),[12] he employed as many as five draftsmen and assistants, depending

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[9] The story is corroborated in Upjohn, p. 48, where the shoring was said to be made of iron although Rogers' name was not mentioned.

[10] Upjohn, pp. 47-67.

[11] Upjohn, pp. 81-87.

[12] Richard Michell Upjohn came to America from London with his parents when he was two years old and attended St. Paul's College, a preparatory school, in Flushing, New York. He did not receive a conventional college or university education although he visited England and Italy from 1851 to 1852. Richard Michell appeared in New York City directories from 1851 to 1899, working in his father's office as early as 1846 and briefly opening his own around 1854. He returned to his father's employ in 1858 and did not open his own office until his father retired in 1872. Atwood (1849-95) worked for Daniel Burnham (1846-1912) in Chicago before coming to New York City in 1875 to work for the Herter Brothers, the well-known decorators. He returned to Chicago in 1891 to work on with Burnham on the Colombian Exposition. Mix (1831-90) was born and educated in New Haven and moved to Milwaukee in 1856. He worked there, as well as in Chicago and Minneapolis, on commercial and institutional projects. "Richard M. Upjohn" in *Biographical Dictionary of American Architects (Deceased)*, pp. 612-13; Hull, "The

on the amount of work. In 1851, he formed a partnership with Richard and made Charles Babcock (1829–1913) a junior partner in 1853. Babcock had joined the office between 1847 and 1850 and married Upjohn's daughter three months before receiving the partnership, however, he left in 1858, one year after arguing for the creation of professional training schools at a meeting of the American Institute of Architects,[13] an organization of which Upjohn was a founding member and its first president. Many of the organizations' members worked in his office or were closely associated with him in some way. Babcock subsequently became an Episcopal priest and then the first head of the of architecture department at Cornell University. While Upjohn wanted to distinguish professional architects from builders, and hoped to establish a library and a

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'School of Upjohn': Richard Upjohn's Office," p. 285; "Charles B. Atwood" in *Biographical Dictionary of American Architects (Deceased)*, pp. 24-25; "Edward T. Mix" in *Biographical Dictionary of American Architects (Deceased)*, pp. 423-24; Dennis Steadman Francis, *Architects in Practice, New York City 1840-1900* (New York: Committee for the Preservation of Architectural Records, n.d. 1980?), pp. 12, 77.

[13] A summary of "The Ways and Means of accomplishing the Elevation of the Architect's Profession," a paper read by Babcock at the 20 October 1857 meeting of the American Institute of Architects, appeared in *The Crayon*, vol. 4 (December 1857), pp. 371-72.

*The Crayon: A Journal Devoted to the Graphic Arts and the Literature Related to Them* (3 January 3 1855-July 1861) was an advocate of Ruskinian ideas and the first American journal devoted to the serious consideration of painting, sculpture, and architecture. It was published in New York City by William J. Stillman (1828-1901) and John Durand (1822-1908). Stillman had met Ruskin in 1850 and the impact of the encounter and his subsequent friendship with the Rosetti brothers lead to the creation of the magazine. Issued weekly during its first year, it became a monthly as it began its second. Durand, the son of painter Asher B. Durand, assumed operations after Stillman left in December 1856 and continued to acknowledged Ruskin's role in developing an enthusiasm for art in America; however, he gradually shifted his allegiance to the deterministic ideas of Hippolyte Taine (1828-93). The title of the journal was shortened to *The Crayon* in January 1857, and on 15 April of that year The American Institute of Architects agreed to provide minutes and announcements of its meetings for publication. A similar agreement with the *Architects and Mechanic's Journal* (New York City: October 1859-April 1861) was approved on 17 January 1860. The AIA withdrew from this arrangement for a time; however, at a meeting held on 6 March 1860, both journals received permission to send reporters to Institute meetings, although Richard Upjohn, the president of the AIA, insisted on reviewing the accounts before publication. David Howard Dickason, *The Daring Young Men, The Story of the American Pre-Raphaelites* (New York: Benjamin Blom, Inc., 1953), pp. 33-70; Mary Norman Woods, *The "American Architect and Building News" 1876-1907*, Thesis (Ph.D.) Columbia University, 1983 (Ann Arbor, MI: UMI Dissertation Services, 1989), pp. 31-32; Roger B. Stein, *John Ruskin and Aesthetic Thought in America, 1840-1900* (Cambridge, MA: Harvard University Press, 1967), pp. 101-23.

collection of architectural and engineering models in the Institute's offices for the use of young architects, he was not interested in changing the tradition of office training.[14]

Richard Upjohn's approach was representative of architectural training in America at the time, when no professional schools existed. Before 1850, American architectural training paralleled British traditions and could only be acquired through self-instruction, from a self-taught or immigrant architect, or, most likely, through apprenticeship to a practicing architect. Although courses in architecture and drawing were given at the Franklin Institute in Philadelphia in 1825, at New York University in 1832, and in Washington DC in the late 1830s,[15] systematic training was limited to civil engineering programs offered at such institutions as West Point (1802), the Rensselaer Institute (1825), and the Lawrence Scientific School of Harvard University (1847).[16] This situation began to change in 1858 when Richard Morris Hunt (1827-95) opened a private atelier in New York City in a building of his own design (The Studio Building, 1857-58, 15 West 10th Street; demolished). Hunt, who had spent twelve years in Europe was "almost, if not quite, the first American who went Paris to study architecture"[17] at the École des Beaux-Arts. Although instruction offered in Hunt's atelier did not include the courses in history, science, and

[14] Hull, "The 'School of Upjohn': Richard Upjohn's Office," pp. 299, 302; "Richard Michell Upjohn," *Grove Dictionary of Art*, vol. 26, p. 691; William H. Pierson, *American Buildings and Their Architects, Technology and the Picturesque, The Corporate and Early Gothic Styles*, pp. 159–205; Phoebe Stanton, "Richard Upjohn" in *Macmillan Encyclopedia of Architects*, vol. 4, pp. 236-44; "Richard Upjohn, Architect," *New York Times*, 18 August 1878, p. 7; Lois Severini, *The Architecture of Finance, Early Wall Street* (Ann Arbor, MI: UMI Research Press, 1983), pp. 50-51.

[15] Paul R. Baker, *Richard Morris Hunt* (Cambridge, MA and London: The MIT Press, 1980), p. 99.

[16] William Robert Ware, "Architecture and Architectural Education in the United States," *The Civil Engineer and Architect's Journal*, vol. 30 (1 April 1867), pp. 108-9.

[17] Montgomery Schuyler (unsigned), "Richard Morris Hunt," *New York World*, 1 August 1895, p. 4. Also see Peter B. Wight, "Richard Morris Hunt," *Inland Architect*, vol. 26 (August 1895), pp. 2-4 and "Press and Personal Tributes to the Late Richard M. Hunt," *Inland Architect*, vol. 26 (August 1895), pp. 4-5. While in Paris, Hunt worked in the atelier of Hector Martin Lefuel (1810-80), architect of the Louvre from 1854 to 1880.

construction he received in Paris,[18] the approach reflected his French training and became widely emulated.

> When Mr. Hunt returned home, current Continental ideals and traditions had scarcely more force in American architecture than they received from the work of men who came to the United States from the other side, and whose hereditary instincts, if not their training, were European, men such as Leopold Eidlitz... the late Henry Fernbach, the late Detlef Lienau and others. We speak here of Mr. Hunt's example merely for its chronological significance. Many years elapsed before his influence was powerfully felt in his profession, and then the example was reinforced by one greater than he, for it was in 1862 that H. H. Richardson made his first return from Paris, starting his active professional career afterwards in New York in 1865.[19]

Seven years after Hunt returned from Paris, the Massachusetts Institute of Technology opened the first American school of architecture, using Beaux-Arts methods, and it was followed by Cornell (1871), Syracuse (1873), Michigan (1876), Columbia (1881), Pennsylvania (1890), Armor Institute (1895), and Harvard (1895). Only the University of Illinois remained aloof from Beaux-Arts influence and adopted the "German," i.e., polytechnical, approach (1868).[20]

While it is difficult to overestimate Upjohn's influence on Eidlitz, it is equally difficult to say exactly when and how the influence began. A brief biographical note published late in Eidlitz's career stated that he arrived in America in 1843 but did not become "a practicing architect and resident of the city of New York" until 1844,[21] while an earlier account noted that he was "employed as a draughtsman in the production of the designs for Trinity Church" which was

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[18] Ware, "Architecture and Architectural Education in the United States," p. 109.

[19] "A Review of Architecture. History of work done in New York during the last quarter of a century," in *A History of Real Estate, Building and Architecture in New York City During the Last Quarter of a Century* (New York: Arno Press, 1967), reprint of first edition (New York: The Real Estate Record Association, 1898), p. 570. Richardson was the second American to attend the École.

[20] Richard Guy Wilson, "Architecture, Landscape, and City Planning" in *The American Renaissance 1876-1917* (Brooklyn, New York: Brooklyn Institute of Arts and Sciences, 1979), p. 76.

completed in 1846.[22] Kathleen Curran stated that Eidlitz was in Upjohn's office around 1843[23] while Judith Hull wrote that he was hired immediately by Upjohn and remained with him for three years.[24] Both views appear to be consistent with Schuyler's contention that Eidlitz obtained "some work" with Upjohn, "his first and only American 'patron'," soon after arriving in America.[25] In one instance, however, Schuyler claimed that Eidlitz was "employed as a draughtsman in the production of the designs for Trinity Church,"[26] while in another, he stated that Eidlitz arrived after the drawings were complete and the work was well underway.[27] In any case, Eidlitz did not appear before 1850 in the biography of Upjohn written by his great-grandson.[28]

It is likely that Eidlitz obtained a paid position with Upjohn rather than an indenture because he had worked for an architect in Prague or Vienna for at least one year in fulfillment of a requirement for all beginning architecture students.[29] His time in Upjohn's office supplemented

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[21] "Leopold Eidlitz" in *The Public Service of the State of New York. Historical, Statistical, Descriptive, and Biographical. Illustrated with Views and Portraits*, Paul A. Chadbourne, editor-in-chief, Walter Burritt Moore, associate ed. (Boston: James R. Osgood and Company, 1882), vol. 2, p. 77.

[22] Nelson B. Mead, "The Fifty Years from 1856 to 1901" in The Old Church Tells Her Story, Being the Pageant, the Anniversary Addresses, and the Historical Papers of the 225th Anniversary, the Rev. Oliver Huckel, ed. (Greenwich, CT: Second Congregational Church in Greenwich, Connecticut: 1930), p. 139.

[23] Kathleen A. Curran, "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," *Art Bulletin*, vol. 81, no. 4 (December 1999), pp. 694-97; *The Romanesque Revival: Religion, Politics, and Transnational Exchange* (University Park, PA: The Pennsylvania State University Press, 2003) p. 268.

[24] Judith S. Hull, "The 'School of Upjohn': Richard Upjohn's Office," *Journal of the Society of Architectural Historians*, vol. 41, no. 3 (September 1993), p. 283.

[25] Leopold Eidlitz I, p. 166.

[26] Leopold Eidlitz I, p. 166; Montgomery Schuyler, "Cyrus L. W. Eidlitz," *Architectural Record*, vol. 5, no. 4 (August 1895), p. 413.

[27] Leopold Eidlitz I, p. 166.

[28] Upjohn, pp. 104, 159, 168. The biography mentioned Eidlitz in three contexts: as a possible contributor to the itinerary of Upjohn's 1850 trip to Europe, as a founding member of the American Institute of Architects in 1857, and as a provider of space for American Institute of Architects meetings after 1861. For a discussion of the Eidlitz's influence on Upjohn, see William H. Pierson, Jr., "Richard Upjohn and the American Rundbogenstil," *Winterthur Portfolio*, vol. 21, no. 4 (Winter 1986), p. 231.

[29] For a description of nineteenth-century architectural education in German-speaking lands, see Richard Phené Spiers, "Professional Education Abroad," *The American Architect and Building News*, vol. 16 (5

his European training, provided him with his most sustained period of professional employment thus far, and gave him first-hand knowledge of American (and British) architectural practice. Schuyler claimed that Eidlitz "could not in any sense be described as Upjohn's pupil" because "he never assimilated the 'Anglican' architectural tradition."[30] Nevertheless, and despite professional competition, Eidlitz continued to associate with and spoke well of Upjohn, and more than ten years after the end of their business relationship, Upjohn invited Eidlitz to become a founding member of the American Institute of Architects.[31]

*St. George's Church: Introduction*

Three years after he arrived in America, Eidlitz left Upjohn's office to join Karl Otto ("Charles") Blesch (1819-53), a student of Friedrich von Gärtner and a winner of the Grand Prix of Munich.[32] Blesch was born in Bingen and began his studies in 1839 at the nearby Munich Akademie der bildenden Künst.[33] The Munich course typically lasted four years, suggesting that Blesch's arrival in America was roughly contemporary with that of Eidlitz. The circumstances of their meeting are unknown and, although he provided no details, H. Allan Brooks wrote that Eidlitz

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July 1884), pp. 5-6. Spiers (1838-1916) was one of the few English architects who studied at the Paris École des Beaux-Arts. He became Master of the Royal Academy Architecture School in 1870 and was an advocate of the French educational approach. His advocacy of classicism contributed to its resurgence in England during the 1890s. "Richard Phené Spiers," *Directory of British Architects 1834-1914*, Antonia Brodie, Alsion Felstead, Jonathan Franklin, Leslie Pinfield, Jane Oldfield, eds. (London and New York: Continuum, 2001), vol. 2, p. 674; Richard Longstreth, *On the Edge of the World: Four Architects in San Francisco at the Turn of the Century* (New York: The Architectural History Foundation; Cambridge, MA and London: The MIT Press, 1983), pp. 45-46.

[30] Leopold Eidlitz I, p. 166.

[31] Charles D. Elliot, *The American Architect from Colonial Times to the Present* (Jefferson, NC and London: McFarland & Company, Inc., Publishers, 2003), p. 58.

[32] Montgomery Schuyler, "Leopold Eidlitz," *Dictionary of American Biography*, vol. 6, p. 61.

[33] Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 326 n. 26. Curran confirmed Blesch's relationship to Gärtner but did not comment on the Munich Prize. The school was established in 1808, although a polytechnical school had also opened in that city in 1827.

worked "in one or two other offices" after he left Upjohn and before he joined Blesch.[34] Schuyler claimed that Blesch possessed the "regular architectural training" that Eidlitz lacked.[35] The partnership, listed as "Blesch & Eidlitz" in 1846 New York City directories, was probably established to fulfill a commission for a new building for the congregation of St. George's Episcopal Church (1846-48, 209 East 16th Street).[36]

St. George's Church in the City of New York, founded in 1748 as St. George's Chapel, was a "chapel of Ease to Trinity Church" and the city's second oldest Episcopal congregation after Trinity (founded 1697).[37] The congregation's first building, known as the "Swamp Church," was consecrated on the northwest corner of Cliff and Beekman Street on 1 July 1752. The 5-bay, stone-faced, Gibbs-inspired structure was designed by Robert Crommelin, a member of the vestry from 150 to 1784. Begun in 1749 and completed three years later, it was 104 feet long by 72 feet wide and featured a 175-foot wood steeple supported on a stone base. The nave could seat 1,000 and contained three chandeliers hung from a paneled ceiling and galleries on either side of a semicircular chancel that held the choir and organ.[38] St. George's become an independent parish

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[34] H. Allen Brooks, Jr., *Leopold Eidlitz (1823-1908)* unpublished Thesis (M.A.) Yale University, 1955, p. 6 n. 17

[35] Leopold Eidlitz I, p. 167.

[36] Biruta Erdmann dated the relationship to 1845 and Dennis Steadman Francis gave its duration as 1846-52. Biruta Erdmann, *Leopold Eidlitz's Architectural Theories and American Transcendentalism*, Thesis (Ph.D.), University of Wisconsin-Madison, 1977 (Ann Arbor, MI: UMI Dissertation Services, 1989), p. 46 n. 6; Dennis Steadman Francis, *Architects in Practice, New York City 1840-1900* (New York: Committee for the Preservation of Architectural Records, n.d. 1980?), pp. 16, 28.

[37] For a brief history of the parish, see "Historic St. George's Is One Hundred Years Old," *New York Times*, 11 November 1912, p. SM11.

[38] Jonathan Greenleaf, *A History of the Churches, of all Denominations, in the City of New York, from the First Settlement to the Year 1850*, second ed. (New York: E. French, 1850), pp. 63-64; Elizabeth Moulton, *St. George's Church, New York* (New York: St. George's Church in the City of New York, 1964), p. 2. Ca. 1803 elevations and a plan are reproduced in Phelps, vol. 3, Addenda Plate 11-C; the frontispiece of The Rev. Henry Anstice, *History of St. George's Church in the City of New York, 1752-1811-1911* (New York: Harper & Brothers, 1911) shows a perspective view. A watercolor of the fire (John Rubens Smith, "St. George's Church after fire of January 5th. 1814," Museum of the City of New York) is reproduced in John A. Kouwenhoven, *The Columbia Historical Portrait of New York, An essay in graphic history in honor of the Tricentennial of New York City and the Bicentennial of Columbia University* (New York: Doubleday & Company, Inc., 1953), p. 116.

on 20 November 1811 and although a fire engine company was located on its property, its church burned on 5 January 1814. The loss was estimated at $100,000 and the structure was rebuilt on the surviving walls and tower. It was re-consecrated on 7 November 1815.[39]

In 1846, Petrus Gerard Stuyvesant (1778-1847), the great-great-grandson of the last Director-General of the Dutch colony of New Netherlands, gave the parish a 175- by 75-foot plot of land located on Rutherford Place, across from the west side of Stuyvesant Square. The site was enlarged when two adjoining properties were acquired by the congregation through a gift of a 15- by 104-foot lot and the purchase of an additional 90- by 92-foot lot from Stuyvesant.[40] Stuyvesant had deeded Rutherford Place to the City of New York for $5 ten years earlier. It was part of a four-acre property named after his second wife, Helen Sarah Rutherford, and located within a farm situated between what are now First and Third Avenues and East Twelfth and East Twentieth Streets. He intended that it would become a park fenced in the manner of Union Square and planted like Washington Square. Bounded by Eighteenth Street, First Avenue, Fourteenth Street, and Third Avenue but bisected by Second Avenue, it would be closed to the public and made available only to those who lived along its perimeter. Nevertheless, it to be built, paid for, and maintained by the City, and the land that surrounded it would remain under his control.

The area had once been one of the more fashionable neighborhoods in the City after Second Avenue was graded and opened in 1816 and as expensive houses advanced north from Houston Street; however, it was in decline by the time Stuyvesant made his gift. European immigrants moving into new brownstones and row houses located on surrounding streets were displacing

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[39] Moulton, pp. 16-17. A drawing of the rebuilt church and the fire engine company appears in Moulton, p. 13.

[40] Charles Rockland Tyng, *Record of the Life and Work of the Rev. Stephen Higginson Tyng, DD. and History of St. George's Church, New York to the Close of His Rectorship* (New York: E. P. Dutton, 1890), p. 199.

older and wealthier residents. Additionally, although a cast iron perimeter fence had been installed in 1846, fourteen years of litigation ensued before the city agreed to honor all of Stuyvesant's terms. During that period, the site deteriorated as Hamilton Fish, his nephew and lawyer, sued for damages, filed appeals, and demanded various remedies. Stuyvesant did not live to see the outcome as he drowned at Niagara Falls on 16 August 1847. The issue was not resolved until 1849 when the City was ordered to finish the work; the fountains and landscaping were completed two years later.[41]

The congregation had agreed to move to the new site and build a new church a year before Stuyvesant's gift, but only after several years of contentious debate. The decision was strongly supported by the congregation's third rector, Stephen Higginson Tyng, D.D. (1800-85), an avowed evangelical, and one of the foremost preachers of his time. He came to New York from Philadelphia in 1845[42] and Schuyler wrote that he wanted a low church setting, "primarily a meeting house, a place in which to preach and be preached to, or even at."[43] William H. Milnor, the second rector, had introduced the low church approach to St. George's in 1816. Emphasizing evangelism and re-establishment of connections between contemporary religious practice and early Christianity, low church congregations emphasized philanthropic activity, a personal approach to religion, and preaching. Only a minority of Episcopalians held such views (they were more common among Congregationalists), and they posed a vivid contrast and perceived threat to the importance of ritual and authority in the High Church Episcopal, Catholic, and Presbyterian congregations.[44]

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[41] James Bradley, "Stuyvesant Square" in *The Encyclopedia of New York City*, Kenneth T. Jackson, ed., (New Haven, CT and London: Yale University Press; New York: New York Historical Society, 1995), p. 1134.

[42] Charles Rockland Tyng, pp. 90-148.

[43] Leopold Eidlitz I, pp. 167-68.

[44] Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 266.

Despite their association with Catholicism in Germany and use in German-funded Benedictine monasteries in the Unites States during the early 1850s, buildings designed for low church clients often employed Romanesque architectural forms and, despite the association of such forms with German Catholicism, they were intended to provide an architectural and liturgical alternative to their Gothic counterparts.[45] Curran claimed that Protestant patronage for such buildings could be traced to a small number of structures designed by America's best architects for four evangelical Congregational and Low Church Episcopal clients. These included Richard Upjohn's Church of the Pilgrims (113 Remsen Street, Brooklyn, 1844-46), Bowdoin College Chapel (Brunswick, Maine, 1844-55), an unrealized project for a Harvard College Chapel (Cambridge, Massachusetts, 1846), James Renwick, Jr.'s Church of the Puritans (southwest corner of Broadway and 15th Street at Union Square, New York City, 1846; demolished), and Eidlitz and Blesch's St. George's Episcopal Church (Rutherford Place at 16th Street, New York City, 1846-49).[46]

*The German Romanesque*

In contrast to the Gothic design of Trinity Church, St. George's was overtly Romanesque. William H. Pierson has speculated that Eidlitz could have introduced Upjohn to the German manifestation of that style called the Rundbogenstil (round-arch style), noting that work on the Church of the Pilgrims, the first of Upjohn's Romanesque designs, began in April 1844, the year after Eidlitz arrived in America.[47] Curran noted that the Rundbogenstil is now uncritically regarded as a mode of building popular in Germany from the late 1820s to the 1860s used by architects such as Leo von Klenze, Freidrich von Gärtner, Karl Friedrich Schinkel, Heinrich

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[45] Gwen W. Steege, "The *Book of Plans* and the Early Romanesque Revival in the United States: A Study In Patronage," *Journal of the Society of Architectural Historians*, vol. 46, no. 3 (September 1987), p. 218.

[46] Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 260.

[47] William H. Pierson, "Richard Upjohn and the American Rundbogenstil," pp. 228-29 and "Richardson's Trinity Church and the New England Meetinghouse" in *American Public Architecture, European Roots and Native Expressions*, Craig Zabel and Susan Scott Munshower, eds. (University Park, PA: The Pennsylvania State University, 1989), pp. 16, 18.

Hübsch, and their students. Claiming that this view is excessively broad, she attributed the situation to Hitchcock's imprecise use of the term in a discussion of Durand's influence in northern Europe[48] and described how the approach developed in nineteenth-century Germany in at least three different manifestations. The first of these, the Neuromanik (neo-Romanesque) appeared in the Rhineland ca. 1815-20 in conjunction with attempts to preserve historic monuments. While initially accommodating a certain amount of latitude by permitting the use of fragments from existing buildings in new construction and the use of period models for additions to existing buildings, by the middle of the century, advances in scholarship lead to an increasing emphasis on archeological correctness and revival of specific periods (dogmatischer Historismus). A second manifestation occurred in the Renaissance Revival designs of architects uch as Leo von Klenze and Georg Moller. Although their buildings frequently employed round arches, the use of Italianate forms in conscious extension of Greek and Roman models was fundamentally opposed to Neuromanik notions of stylistic consistency. A third use of the term is associated with the writing and work of Heinrich Hübsch (1795-1863) who studied philosophy and mathematics at the University of Heidelberg before turning to architecture. Hübsch traveled to Greece and Constantinople (1817-20), and he gradually came to reject the accepted notion advanced by Aloys Hirt (1759-1837) in *Baukunst nach den Grundsätzen der Alten*[49] that Greek temples originated as wood structures. In his first book, *Uber griechische Architektur*,[50] Hübsch attempted to demonstrate a correspondence between ancient architecture and stone construction.

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[48] Henry-Russell Hitchcock, "The Doctrine of J.-N.-L. Durand and its application in Northern Europe" in *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth, Middlesex, UK and New York: Penguin Books, 1977), pp. 23-73.

[49] Berlin: In der realschulbuchandlung, 1809.

[50] Karlsruhe: Chr. Fr. Müller, 1822.

Six years later, his investigations lead him to publish *In welchem Style sollen wir bauen?*[51] in which he suggested the Rundbogenstil as rational basis for a contemporary German architecture.

Hübsch found ancient Greek architecture inappropriate use in Germany because of the harshness of the German climate and the unavailability of certain building materials, and he rejected Roman architecture because of its "deceitful" mixture of trabeated and arched construction. Instead, he advocated a local version of the Romanesque in which the round sandstone arch that it employed was said to be as appropriate to the climate and character of Germany as the marble lintel was to Greece. Hübsch was supported in this view by a view of architectural history that saw the roots of Romanesque architecture in the Byzantine, then called "neo-Greek." In this way, he could regard the church of the Benedictine abbey of Maria Laach near Koblenz (1093-1230, damaged 1802, repairs begun 1815) as the German equivalent of the Greek works of the Periclean age. Hübsch advocated following the principles rather than copying the forms of Romanesque architecture and his writing reflected hostility toward the emphasis on archaeological correctness he felt was implicit in neoclassicism. Instead, he advocated a style that could be appreciated without archaeological knowledge, that came from a mix of sources including Byzantine, Romanesque, and classical, and whose ornament could be left to the artist.[52] Berlin initially resisted the Rundbogenstil, primarily in deference to the presence of Schinkel's extensive body of classical work rather than the abilities of his successors, but Friedrich Wilhelm IV made it the official style of the Prussian Kultusministerium during the first quarter of the nineteenth century,

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[51] Karlsruhe: Chr. Fr. Müller, 1828.

[52] Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," p. 351-53; Wolfgang Herrmann, "Introduction," *In What Style Shall We Build?*, pp. 1-22; "The German Rundbogenstil and Reflections on the American Round-Arched Style," pp. 367-68; Dietrich Neumann, "Teaching the History of Architecture in Germany, Austria, and Switzerland: *Achiteckturgeschichte* vs. *Bauforschung*," *Journal of the Society of Architectural Historians*, vol. 61, no. 3 (September 2002), p. 379 n. 6; Ulrich Pfammatter, *The Making of the Modern Architect and Engineer*, Madeline Ferretti-Theilig, trans. (Basel, Boston, Berlin: Birkhäuser, 2000), p. 222; Michael J. Lewis, *The Politics of the German Gothic Revival: August Reichensperger* (Cambridge, MA and London: The MIT Press, 1993), pp. 59-60; Montgomery

the agency that oversaw the construction of schools and churches.[53] Only in central Europe, where classicism continued to be favored by the Hapsburg court and the bourgeoisie, was the Rundbogenstil (and the Gothic) uncommon.[54]

During the 1830s and 1840s, Munich became the showplace of the Rundbogenstil, primarily due to Gärtner and his followers, and buildings in the style lined the Ludwigstrasse, the city's main avenue.[55] Schuyler referred to such work as "the South German phase of the Gothic or more properly, the Romanesque revival"[56] and claimed "Gaertner's [*sic*] Bavarian revival of the Romanesque was, in some ways, the starting point of Eidlitz's architecture."[57] The Rev. Henry Anstice made a similar comment, referring to the building as "an example of the South German phase of the Gothic, or, more properly, the Romanesque style."[58] Curran noted that the term "Byzantine" was commonly used in America to describe Rundbogenstil buildings designed by German émigré architects. She also claimed that because the theoretical concerns for structure and ornament inherent in the approach in Europe were of little concern to American architects and builders, the Rundbogenstil was primarily a way to achieve a kind of low cost medievalism

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Schuyler, "The Romanesque Revival in New York," *Architectural Record*, vol. 1, no. 1 (July-September 1891), p. 12.

[53] Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 226.

[54] Ákos Moravánszky, *Competing Visions: Aesthetic Invention and Social Imagination in Central European Architecture, 1867-1918* (Cambridge, MA and London: The MIT Press, 1998), p. 86.

[55] Michael J. Lewis, "Rundbogenstil" in *Grove Dictionary of Art*, vol. 27, p. 336

[56] Leopold Eidlitz I, p. 167. Others also associated Eidlitz with the Rundbogenstil. Landau's biographical essay in her catalogue for a 1981 exhibition on the work of Peter B. Wight described one of Wight's competition entries as being in "the Germanic round-arched style, the Rundbogenstil of Eidlitz." Wight may have developed an interest in or knowledge of Eidlitz's work through his association with Russell Sturgis, with whom he practiced 1863-68. Sturgis spent a year in Eidlitz's office. Sarah Bradford Landau, *P. B. Wight: Architect, Contractor, and Critic, 1838-1925*, exhibition catalog (Chicago: Art Institute of Chicago, 1981), pp. 10, 13, 15.

[57] Montgomery Schuyler, "The Work of Leopold Eidlitz, II: Commercial and Public" (hereafter, "Leopold Eidlitz II"), *Architectural Record*, vol. 24, no. 4 (October 1908), p. 282.

[58] The Rev. Henry Anstice, *History of St. George's Church in the City of New York, 1752-1811-1911* (New York: Harper & Brothers, 1911), p. 207.

and German associationism in this country.[59] Upjohn's Trinity Building (1851-52, New York City; demolished), a five story office building that displayed "huge size, relative plainness, and ranges of individually arcaded stories – more suggestive of Rundbogenstil than of the [then fashionable] English-inspired palazzo mode"[60] seemed to fit this view.

*The German Gothic*

Upjohn could also have learned about another German approach to non-classical architecture in *Moller's Memorials of German-Gothic architecture*, a book that he owned.[61] Containing only a single illustration, it included an introduction, an "Essay on German-Gothic Architecture," a translation of the plate captions in Georg Moller and Ernst Gladbach's *Denkmäler der deutschen Baukunst*,[62] a short essay on Freiburg Cathedral[63] from Christian Ludwig Stieglitz's *Von altdeutscher baukunst*,[64] and charts that depicted differences among localized European systems of lineal measurement.[65] It is also likely that Upjohn became aware of German architecture

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[59] Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," p. 366; Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, pp. 225-26. Curran pointed out that German educational institutions provided the training for many mid-nineteenth-century American educators as well as the models for their buildings.

[60] Sarah Bradford Landau and Carl W. Condit, *Rise of the New York Skyscraper, 1865-1913* (New Haven CT and London: Yale University Press, 1966), pp. 13-14; Upjohn, p. 130.

[61] *Moller's Memorials of German-Gothic architecture; with additional notes, and illustrations from Stieglitz, etc.; by W. H. Leeds, author of several literary works on architecture. To which are added, tables of continental lineal measures, by W. S .B. Woolhouse, of the Nautical Almanac Office* (London: John Weale, 1836). Upjohn owned a copy of the book; Hull, "The 'School of Upjohn': Richard Upjohn's Office," pp. 305-6.

[62] 3 vols., Leipzig and Darmstadt: Heyer und Leske, 1815-44.

[63] Clad in red sandstone, the Romanesque church with Gothic additions was built between 1200 and 1513. It is especially notable for a 380-foot tower that featured the first open stonework steeple.

[64] Leipzig: G. Fleischer, 1820.

[65] Moller (1784-1852) trained under Friedrich Weinbrenner, helped shape the neoclassical town center of Darmstadt after 1810, and became director of architecture in Hesse. Although enthusiastic about the Gothic Revival at first, he moved away from it and toward classicism in his own work. Barry Bergdoll, "Georg Moller" in *Macmillan Encyclopedia of Architecture*, vol. 3, p. 225. Gladbach (1812-1896), Moller's nephew, was initially trained by him. He taught in Zurich and specialized in Swiss traditional. "Ernst Georg Gladbach," *Allgemeines lexikon der bildenden künstler von der antike bis zur gegenwart; unter mitwirkung von 300 fachgelehrten des in- und auslandes*, Ulrich Thieme and Felix Becker, eds.

through the widespread coverage of the completion of Cologne Cathedral. Eidlitz, too, was aware of the building and wrote a lengthy and positive comparison of it to Milan Cathedral.[66] Built to house relics of the Three Magi brought to the city in 1146 and based on the Gothic cathedrals of northern France, especially Amiens, Cologne Cathedral replaced a much smaller ninth-century building that was damaged by fire. The new building's cornerstone was laid in 1248 and its completed choir was dedicated by 1322. Construction stopped in 1560, and, although largely incomplete, the nave and part of the transept were roofed over, thereby making nearly the entire interior useable. For over 300 years, the city was dominated by the unfinished church and the huge, wood, sixteenth-century construction crane that loomed over the south tower.

In 1814, Georg Moller reported that he found the top half of an original drawing of the west façade of the Cathedral in a barn in Darmstadt. Shortly thereafter, his friend, art collector, and critic, Sulpiz Boisserée[67] claimed to have found the bottom half of the same drawing at a Paris art

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(Leipzig, W. Engelmann, 1907-50), vol. 14, pp. 228-29. Stieglitz (1756-1836) trained as a historian and initially followed Winckelmann's emphasis on the normative qualities of Greek architecture. Later, he found the "Byzantine" (architecture Romanesque) and "Old German" (Gothic) styles to be the equals of classicism and recommended the use of appropriate historical styles for new work. Annette Faber, "Christian Ludwig Stieglitz" in *Grove Dictionary of Art*, vol. 29, pp. 657-58.

[66] Leopold Eidlitz, *The Nature and Function of Art, More Especially of Architecture* (New York: A. C. Armstrong & Son; London: Sampson Low, Marston, Searle & Rivington, 1881), pp. 353, 424-54. Milan was designed approximately 100 years after Cologne by Heinrich Arlez Gemunden/Gamnuden, a German architect, and was intended to surpass it. Eidlitz's comparison included passages translated from Franz Kugler, G*eschichte der baukunst* (Stuttgart: Ebner, 1859) and transcribed from James Fergusson, *A history of architecture in all countries, from the earliest times to the present day*, 3 vols. (London: J. Murray, 1865-67).

[67] Boisserée (1783-1854) devoted his life to the study and revival of interest in German medieval art, especially Gothic architecture. A collection of early German and Flemish pictures assembled by him and his younger brothers, Bertram and Melchior, was purchased by Ludwig I of Bavaria in 1827 as the core of the Alte Pinakothek in Munich. He met Goethe in 1810 and their developing friendship contributed to Goethe's increasingly sympathetic view of Gothic art. Boisserée began to study Cologne Cathedral in 1808 and published *Histoire et description de la cathédrale de Cologne, accompagné de recherches sur l'architecture des anciennes cathédrales*, 2 vols. (Stuttgart: Cotta, 1821-23), an illustrated review of the development of Early Christian architecture from the late Roman period though the sixteenth century and theoretical writings on medieval architecture. Narciso G. Menocal, "Frank Lloyd Wright as the Anti-Victor Hugo" in *American Public Architecture, European Roots and Native Expressions*, p. 145.

dealer. Both published speculative designs for completion of the building, Moller in *Bemerkungen über die aufgefundene Originalzeichnung des Domes zu Koeln*[68] and Boisserée in *Ansichcten: Risse und einzelne Theile des Doms von Köln, mit Ergänzungen nach dem Entwurf des Meisters, nebst Untersuchungen über die alte kirchen-Baukunst und Vergleichenden tafeln der vorzüglichsten denkmale..*[69] and *Geschichte und Beschreibung des Domes von Köln, nebst Untersuchungen über die alte Kirchenbaukunst, als Text zu den Ansichten, Rissen und einzelnen Theilen des Doms von Köln.*[70] Goethe's essay about the cathedral, "Von deutscher Baukunst," published in 1772, contributed to an intellectual climate that promoted receptivity to the completion of the building. In response to increasing pan-German and Protestant enthusiasm for the project, Schinkel was appointed architect the same year and quickly initiated a twenty-year repair campaign. Work on unbuilt and incomplete portions of the building resumed in 1842 under his pupil Ernst Friedrich Zwirner (1802-61) who became known as the Kölner Dombaumeister (Cologne Cathedral building master). Construction ended in 1880 when the church was dedicated.[71]

*The Church of the Pilgrims (Richard Upjohn)*

Upjohn's first attempt at a German-inspired church may be reflected in the Church of the Pilgrims (Brooklyn, 1844-46). During the early 1840s, Brooklyn became a center for a theological revival of Congregationalism. The founders of the Church of the Pilgrims, impatient to found a new group of believers, hired Richard Upjohn, chose a site for a new building, and

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[68] Darmstadt, 1818.

[69] Issued in four fascicles, Stuttgart: Cotta, 1823-31.

[70] Stuttgart: Boisseréee & Cotta, 1823. This was a German edition of his *Histoire et description de la cathédrale de Cologne, accompagné de recherches sur l'architecture des anciennes cathédrales.*

[71] Lewis, *The Politics of the German Gothic Revival*, pp. 25-56; *In What Style Shall We Build?*, p. 101 n. 10; Johann Wolfgang von Goethe, *Essays on Art and Literature*, John Geary, ed., Ellen von Nardoff and Ernst H. von Nardoff, trans. (New York: Suhrkamp Publishers, 1986), p. 243, n. 7.

raised funding for it before their congregation was officially organized.[72] The cornerstone was laid on 2 July 1844 and the completed structure was dedicated on 12 May 1846 after considerable delay caused by construction problems.[73] Initially estimated to cost $25,000, $65,000 was spent by the time it was finished. Nearly twenty-five years later in a sermon given in celebration of its enlargement and refurbishment by Eidlitz, its pastor recounted its origins.

> It was built... in imitation of the first meeting-house of New England. Its exterior was understood to be a reproduction of the outline of that primitive structure, and, to perfect that relationship, a bit of the blarney-stone of Plymouth was incorporated in its wall, as an architectural charm against the dangers of false doctrine and all vain and worldly peril. The interior was of like homely fashion....[74]

In this sense, the "seminal church of the Romanesque Revival movement in this country"[75] and "the first major building in America to show a direct high-style German influence,"[76] was typical, in some ways, of most American churches: it was a gable-roofed box enriched with supplementary features. Nevertheless, a contemporary description of the building called it "... a very singular one, and altogether different from any other in this region."[77]

> It is a very large building, being in extreme length 135 feet, and its breadth 80 feet. The height of the walls is 38 feet. It is built of granite, hewn, but not hammered.[78] The front of the edifice, on Henry Street, presents us with two towers, one at each corner; that on the north corner being small, not over twelve feet square, and being built to about the height of the roof of the church, and

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[72] H. H. McFarland, "The Church of the Pilgrims, In Brooklyn, New York," *Congregational Quarterly*, vol. 13 (second series, vol. 3, no. 1, 1871), pp. 54-70.

[73] Pierson, "Richard Upjohn and the American Rundbogenstil," p. 223.

[74] Untitled Article, *Brooklyn Eagle*, 17 June 1870, p. 2.

[75] Steege, "The *Book of Plans* and the Early Romanesque Revival in the United States," p. 217.

[76] Pierson, "Richardson's Trinity Church and the New England Meeting House," p. 16.

[77] *A Picture of New-York in 1846; with a short account of places in it vicinity; designed as a guide to citizens and strangers: with numerous engravings and a map of the city* (New York: C. S. Francis & Co., 1846), p. 172. A drawing of the church appeared in McFarland, opposite p. 54.

[78] Upjohn chose a bluish-gray rubble stone; Pierson, "Richard Upjohn and the American Rundbogenstil," p. 227. It has weathered to a mellow tan.

> there terminating in a small pointed wooden roof. The tower on the west corner [on Remsen Street] is 20 feet square, and built up of stone 100 feet from the ground, and thence ascends a gradually tapering spire 70 feet further, where it terminates in a large gilded ball. There is one large door in front, between the towers, having over it a large window; and a profusion of small, narrow windows are scattered about in the towers... In each side of the house there are three large arched windows, that being the style in which all the windows are made. The lecture room is cut off from the rear of the building, and is a very large and commodious room. The rear of the building presents four short windows below, and one large one above, and a small window in the gable, near the apex.[79]

The author of this description attributed the building's singularity to the presence of architectural forms considered relatively "unchurchly," and an account published more than 90 years later noted

> Architecturally it belongs to neither the Gothic nor the Classic revivals current when it was built; yet the bold and simple exterior, of good fieldstone masonry, marks the original work of a master, Richard Upjohn, whose reputation rests on more elaborate and conventional churches in traditional Gothic, like Trinity Church in Manhattan.[80]

The most important of its features were the planar wall surfaces and round-headed Romanesque window and door openings. Gwen Steege and Curran suggested that church's founders associated Romanesque forms with simplicity, plainness, economy, brightness, and round arches, flat walls, and restrained use of ornament seemed compatible with Congregationalist notions of worship and did not carry associations of Catholicism or Episcopaliansim.[81] However, rather than seeing Romanesque forms as the antithesis of "high style architecture," Pierson saw their use

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[79] *A Picture of New-York in 1846*, p. 172.

[80] *The WPA Guide to New York City, A Comprehensive Guide to the Five Boroughs of the Metropolis – Manhattan, Brooklyn, the Bronx, Queens, and Richmond – Prepared by the Federal Writers' Project of the Works Progress Administration in New York City* (New York: Random House, 1939), pp. 446-47.

[81] Steege, "The *Book of Plans* and the Early Romanesque Revival in the United States," p. 219; Curran, "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," p. 693.

as a brilliant demonstration of how Upjohn could remain true to his religious convictions while accommodating Congregationalist liturgy as well as the latest architectural fashion.

> Originally,[82] it was an auditorium church, with the pulpit in the center of one end, in the best tradition of the Congregational meetinghouse. At the same time, its asymmetrical towers and Romanesque forms conceded to romantic taste, by then firmly established in this country. Although the taller of the two towers, with its curious pagodalike spire, was basically Gothic in its configuration, the round-arch openings are clearly Romanesque, and the large tower, on the left, is in the form of an Italian campanile. Elsewhere, round arches dominate the design, and as originally built the ceiling on the interior was a round-arch segmental curve from wall to wall, and the paneling behind the pulpit, as well as other important elements of the interior, was authentically Romanesque in detail.[83]

While Upjohn's choice of Romanesque forms probably reflected his well-known aversion to using Gothic forms for non-Episcopal clients, he was not consistent in practice and built at least one Gothic church for a non-Episcopal congregation: Dr. Pott's Presbyterian Church (1844, University Place and Tenth Street, New York City; demolished).[84] He also acknowledged that many of the most important Christian monuments were not Gothic and that the Lombard and other Romanesque styles were used in some of the best examples.[85] Upjohn advocated the study of all styles of architecture "for the purpose of adapting the beauty contained in them."[86] However, for his great-grandson and biographer, the results of such study were not visible in the Church of the Pilgrims and he did not discuss it and its unusual pagoda-like spire ("this rather

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[82] Eidlitz altered and enlarged the building between 1868 and 1870.

[83] Pierson, Jr., "Richard Upjohn and the American Rundbogenstil," p. 226.

[84] See Upjohn, pp. 72 and figs. 21 and 22 opposite p. 72. In contrast to his designs for Episcopal churches, the building did not have a chancel and the pulpit was located on the central axis of the nave. Additionally, the side aisle end walls employed curved parapets whose shape was reminiscent of the pagoda-like towers at the Church of the Pilgrims.

[85] Comments made by Richard Upjohn in response to "Unity in Architecture," a paper read by J. Coleman Hart at the 15 February 1859 meeting of the American Institute of Architects; "Architecture," *The Crayon*, vol. 6 (March 1859), p. 89. The paper also drew comments from Eidlitz and Henry Van Brunt.

[86] "Architecture," *The Crayon*, vol. 6 (March 1859), p. 89.

ugly solution," no longer extant) at length, writing only that the building was intended to stand apart from "legitimate churches of the Episcopal communion."[87] Eidlitz seemed to agree when he quipped, "[Upjohn] did it conscientiously, upon the ground that Presbyterians were not entitled to architecture."[88]

*Bowdoin College Chapel (Richard Upjohn)*

Although drawings for the Bowdoin College Chapel were in progress in April 1844 and its cornerstone was laid on 16 July 1845, financial problems precluded its completion until 1855.[89] Pierson considered Bowdoin College Chapel to be the second example of Romanesque Revival architecture in the United States, coming after the Church of the Pilgrims.[90] His suggestion that Eidlitz could have introduced Upjohn to the Rundbogenstil is easier to demonstrate for Bowdoin chapel than for St. George's because the sources of its architectural forms are more obvious and include elements of German Romanesque cathedrals such as Speyer, and Worms, and St. Gereon and the Church of the Apostles, the latter two located in Cologne. For example, Pierson pointed out the similarity of the apse of the Bowdoin College Chapel to that of the fourth-century Aula Palatina at Trier,[91] a resemblance also noted by Schuyler.[92] He also speculated that the Upjohn's

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[87] Upjohn, p. 72. He noted that the spire inspired a similar feature at the Berkley Street Congregational Church (Boston, 1860-61; demolished) designed by John D. Towe, a view confirmed in "Berkley Street Congregational Church," *Congregational Quarterly*, vol. 6 (1864), p. 37, cited and illustrated in Steege, "The *Book of Plans* and the Early Romanesque Revival in the United States," p. 223. The building was said to embody "a transition from the Romanesque to the Lombardy styles of architecture"; "Berkley Street Church, Boston," *Architects' and Mechanics Journal*, 21 March 1861, p. 216.

[88] Leopold Eidlitz I, p. 173. Before the two denominations separated, the Presbytery oversaw the Congregational Church.

[89] Upjohn, p. 80; Pierson, "Richard Upjohn and the American Rundbogenstil," p. 223.

[90] Pierson, "Richard Upjohn and the American Rundbogenstil," p. 223.

[91] Pierson, "Richard Upjohn and the American Rundbogenstil," pp. 227-29. Augusta Treverorum (Trier) became the capital of Gaul during the reign of the Diocletian (284-305) and Maximian (286-305). The red brick Romanesque basilica was begun in 310 AD as a hall (220 feet long, 90 feet wide, 107 feet high) in which the emperor received and entertained his guests. During the seventeenth century, its east and south walls were demolished and the remainder was incorporated within a Renaissance palace. The second largest surviving Roman structure after the Pantheon, it was restored 1846-56.

design could have reflected his familiarity with the illustrations in the second volume of Thomas Hope's *Historical Essay on Architecture* that supplemented the written descriptions of Romanesque buildings located in northern Italy and southern Germany contained in the first volume.[93] While Trier was not illustrated in the book, the similarly configured apse of the eleventh-century Speyer Cathedral was.[94] Eidlitz's references to Hope's book in his own writing[95] seems to strengthen Pierson's contention that he might have brought it to Upjohn's attention, since Upjohn did not return to Europe before 1850.[96] Upjohn's great-grandson suggested that Eidlitz might have provided the itinerary for the trip during which Upjohn spent most of his time in the Romanesque lands of Germany, the Alps, and Italy.[97]

It is also possible that Upjohn knew of the Entwürfe zu Kirchen-, Pfarr-, u. Schulhäusern zum amtlichen Gebrauche bearb. und hrsg. von der Königlich Preussischen Ober-Bau-Deputation.[98] The series, begun by Freidrich Wilhelm IV and three of Schinkel's best students (Freidrich

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[92] Leopold Eidlitz I, p. 167.

[93] Thomas Hope, *An Historical Essay on Architecture by the late Thomas Hope. Illustrated from drawings made by him in Italy and Germany*, 2 vols., second ed. (London: John Murray, 1835). Upjohn owned the 1840 edition of the book.

[94] Hope, vol. 2, Plate 17. Speyer Cathedral, a Romanesque basilica, was founded by Konrad II in 1030. It was the burial place of the German emperors for almost 300 years. Its original flat timber roof was replaced between 1082 and 1125 with stone groin vaults, the first in Germany. The building was badly damaged by French troops in 1689 and two thirds of the nave was destroyed. In 1755, the west end was severely shortened. Restorations were begun in 1772 and completed by 1728 in conjunction with reconstruction of the nave in its Romanesque form. King Ludwig I commissioned painting the interior and Johannes Schraudolph (1808-79) completed the work in the Nazarene style from 1846 to 1853. Heinrich Hübsch rebuilt the west-facing front section of the cathedral from 1854-58 and a second phase of restoration from 1884 to 1910 attempted to return the building to its medieval appearance. From 1957 to 1961, most of the nineteenth century painting was removed and two towers were reconstructed on the east elevation. The building was restored again between 1960 and 1974 to stabilize it and adapt its interior to new liturgical requirements.

[95] Eidlitz, *The Nature and Function of Art*, p. 219.

[96] Upjohn, p. 81; Montgomery Schuyler, "Architecture of American Colleges VII. Brown, Bowdoin, Trinity and Wesleyan," *Architectural Record*, vol. 29, no. 2 (February 1911), pp. 151-52.

[97] Upjohn, p. 104.

[98] Berlin: 1844-62.

August Stüller, August Soller, and Ludwig Persius)[99] was intended to extend their teacher's work and influence after his death in 1841 and was the primary American source for Rundbogenstil churches, especially those built between 1846 and 1855.[100] One of its plates showed a ca. 1844 design by Soller[101] whose general configuration is similar to that used by Upjohn for the Harvard project in its use of an early Christian basilican plan with semi-circular apse and freestanding bell tower joined to the building by an arcade.[102] However, despite similarities in fenestration, Upjohn's hip-roofed bell tower is Italianate in contrast to Soller's northern European version.[103]

*The Church of the Puritans (James Renwick)*

Renwick's second building, the Church of the Puritans was a theological and architectural exception to his Gothic churches of the 1840s[104] and was completed shortly after Grace Church (1846-47) was consecrated. Designed for a Congregationalist client, the congregation was formally organized on 11 April 1846. Ground was broken on the southwest corner of Union Square at Fifteenth Street on 7 September 1846; the cornerstone was laid on 22 September. The completed structure was 142 feet long by 75 feet wide and featured two towers that measured 104 feet and 84 feet in height. The shorter tower was to have been 100 feet tall, but funding problems

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[99] In October 1842, Friedrich Wilhelm gave Stüler and Persius positions in the Prussian Oberbaudeputation (Office of the Works) with Stüler directing all official building in Berlin and the Prussian provinces and Persius in charge of Potsdam. Stüler took over the Oberbaudeputation when Persius died three years later. Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 130.

[100] Kathleen A. Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," pp. 362, 364.

[101] August Soller, "Catholic Church for 750-800 People," *Entwürfe zu Kirchen* (Sketches for churches), Berlin: Königlich Technische Bau-Deputation, 1862), pl. 7, reproduced in Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," p. 362, fig. 13.

[102] Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," pp. 363-64, 372-73.

[103] Hull, p. "The 'School of Upjohn': Richard Upjohn's Office," 283; Kathleen A. Curran, "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," pp. 694-97; Upjohn, pp. 80-81.

[104]They include Calvary Church (1846-47), South Dutch Church (1848-49), all in New York City; Second Presbyterian Church (1849?-51, Chicago) and Trinity Church (1850-51, Washington, DC).

limited its final height and it was capped with a pyramidal roof and finial. The two visible elevations were faced with white Hudson River marble while the others were of plastered brick.

Renwick based the front elevation of his building on the Abbey Church of St. Denis, a French structure that employed round-headed openings on its west elevation yet used pointed arches within its interior.[105] Although St. Denis was a hybrid that it contained Romanesque and Gothic elements, Renwick and his contemporaries would not have used the term in such a manner. For them, the word signified opprobrium and referred to the simultaneous use of trabeated and arcuated construction.[106] Interest in French models was growing in English-speaking countries at

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[105] Selma Rattner, "James Renwick" in *Macmillan Encyclopedia of Architects*, vol. 3, p. 542; Morrison H. Heckscher, "Building the Empire City: Architects and Architecture" in *Art and the Empire City: New York 1825-1861*, Catherine Hoover Voorsanger and John H. Kowat, eds. (New York: The Metropolitan Museum of Art; New Haven, CT and London: Yale University Press, 2000), p. 183; Effingham P. Humphrey, Jr., "The Churches of James Renwick, Jr.," unpublished Thesis (MA) New York University, 1942, p. 25. An oil on canvas rendering of the front façade made in 1858 by Ferdinand Joachim Richardt and James Renwick, Jr., is reproduced in *Art and the Empire City*, catalogue no. 95, pp. 436, 581. Richardt (1819-95) was a Danish artist active in New York City 1856-59.

The Abbey Church of St. Denis is located in a small town near Paris. It was named after St. Denis, the first bishop of Paris, who was martyred and buried there in 270. A small chapel built over his grave became a pilgrimage site during the fifth and sixth centuries, and in 630, King Dagobert founded a Benedictine abbey and replaced the chapel with a large basilica. The abbey became one of the richest and most important in France, and in 750, Charlemagne began a new church. The wealth and importance of the abbey continued to increase under a succession of powerful abbots. Among the most important of them was Suger (1081-1155), the thirty-sixth of the series. He was a great political and religious leader, and he acted as Regent of France when Louis VII went on Crusade. He also began the present church of St. Denis (1137-48), a project that marked the start of the transition from Romanesque to Gothic architecture. Although it remained powerful for many centuries, the abbey was dissolved and extensively damaged during the Revolution. Napoleon initiated restoration programs of varying quality undertaken by Jacques Legrand (1806-07), Jacques Cellier (1808-13), François Debret (1813-47), and Viollet-le-Duc (1847-79). They were the first of their kind in France and increased public and academic awareness of the building. See Caroline Astrid Bruzelius, *The Thirteenth-century Church at St-Denis* (New Haven, CT and London: Yale University Press, 1985), pp. 1-32.

[106] See Robert Dale Owen, *Hints on Public Architecture, containing, among other illustrations, views and plans of the Smithsonian Institution: Together with an appendix relative to building materials. Prepared, on behalf of the Building Committee of the Smithsonian Institution* (New York: Da Capo Press, 1978), reprint of first ed. (New York and London: George P. Putnam, 1849), "Chapter V. Of Hybrid Architecture," pp. 47-62.

Robert Dale Owen (1801-77) was the son of Robert Owen, a utopian socialist reformer born in New Lanark, Scotland. Both came to the United States in 1825 and the father established a successful community in New Harmony, Indiana. From 1827 to 1833, Robert Dale Owen edited a newspaper in New Harmony and a public speaker there and in New York. His advocacy of progressive causes contribute to his election to the Indiana State House in 1836, and in 1842, he went to Washington where he began the

this time and Renwick's selection of such a building as the basis for his design may reflect his recognition of Upjohn's control over the market for Gothic churches.[107] As Schuyler observed, "In 1850 and for years afterwards, to be a Gothic architect was to be a church architect."[108] However, this view was not reflected, however, in Robert Dale Owen's description of the diversity of architectural tastes in New York City, written shortly after the Church of the Puritans was completed.

> We have already among us (and the number is increasing daily) examples more or less pure of the Norman and of the several periods of Gothic. New York, in this, seems to have taken the lead. In that city, the Church of St. George [by Eidlitz] and that of the Puritans are examples of the later Norman; Calvary and the Church of the Annunciation [both by Renwick], of the Early English, or Lancet; the Church of the Holy Communion [by Upjohn] and the South Dutch Church [by Renwick], of the Decorated; Trinity [by Upjohn], of the Perpendicular; and Grace Church [by Renwick], of the early Flamboyant.[109]

Owen, who wrote a book in support of Renwick's Romanesque design for the secular Smithsonian Institution, called the Church of the Puritans "an example, without much embellishment, of the Later Norman or Lombard."[110] He also claimed that the trend toward stylistic diversity and specialization was spreading and noted, "Other cities are gradually

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first of his two terms as New Harmony's congressional representative. Robert Dale Owen's interest in education led him to involvement him in the initial planning for the Smithsonian Institution. His book, *Hints on Public Architecture*, was written to address controversies related to the selection of the building's style and architect. Cynthia R. Field, "About This Book and Its Author," introduction to Da Capo Press reprint of Owen, n.p.

[107] Humphrey, p. 26.

[108] Leopold Eidlitz I, p. 168.

[109] Owen, p. 71.

[110] Owen, p. 96. *The Architects' and Builders Journal* called the building "the first non-ecclesiastical one in the style of the twelfth-century ever erected in this country"; "Smithsonian Institution," *The Architects' and Builders Journal*, vol. 3 (3 November 1860), p. 46.

following the lead."[111] The *New York Times*, however, had a much simpler explanation for the building's origins.

> The story is told, that, after Dr. Cheever's[112] congregation had decided to build a new church for him, some of its members traveling in Europe had been struck by an ecclesiastical structure there, and had determined to reproduce it in New-York. They had made a plan, and the plan was faithfully followed. They never knew or even suspected until, after the erection of the edifice, that the European church was unfinished, and that this fact explained the short tower.[113]

Like its model, the façade of Renwick's building was based on a square divided into nine roughly equal sections, surmounted by a low central gable, and flanked by two towers. Renwick's version, however, was lower and, because the nave end wall and gable aligned with the towers rather than being recessed, it was more planar that the original.[114] It contained a nave and two aisles and was 110 feet long. The interior was finished with columns, capitals, and groined vaults, all plastered.[115] No description of the decoration has been found and it is likely that it had little relation to the façade. Humphrey suggested that it would have been "plain, bleak, and ugly, everything finished with plaster, with dreary casement windows, and little to suggest the glories of medieval art."[116] Considering the extremely high level of interior finishes at Grace Church

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[111] Owen, p. 71.

[112] Rev. Dr. George Barrell Cheever (1807-90) attended Bowdoin College where he developed conflicts in his beliefs concerning Unitarianism and Congregationalism. In 1830, he graduated from Andover Theological Seminary, a stronghold of orthodox Congregationalism, and became increasingly involved with the temperance and anti-slavery movements. He came to New York City in 1839 and assumed his post at the Church of the Puritans, one of the nation's wealthiest and most fashionable congregations six years later. Beginning in 1857, his strong anti-slavery sentiments increasingly isolated him from some of his congregants and many public figures, but he maintained his progressive beliefs and activities in support of social causes for the remainder of his life. "George Barrell Cheever" in *Dictionary of American Biography*, vol. 4, pp. 48-49.

[113] Article 5 – No Tile, *New York Times*, 6 November 1878, p. 4.

[114] Humphrey, p. 25.

[115] Humphrey, p. 25; Owen, p. 96.

[116] Humphrey, p. 26.

(also made of plaster), it seems likely that this was necessitated by the building's low cost ($40,000),[117] the leaning its Congregational clients, or both.

The building was demolished in 1869 to make way for the Tiffany & Co. Building (John Kellum, 1869, 11-15 Union Square West).[118] Cheever gave the proceeds of the sale to the Second Presbyterian Church of Harlem who built a new structure at 15 West 130th Street (1873-78, attributed to Hubert, Pirsson & Co.) and changed its name to the Church of the Puritans.[119] Some of that money may have come from the Mount Olivet Baptist Church that purchased the main façade of the Church of the Puritans for $17,500 and re-erected it at 161 West 53rd Street. It has since been demolished.[120]

*A Book of Plans for Churches and Parsonages*

Although the mixture of Romanesque and Gothic details used by Renwick was regarded as incorrect by some, the approach was explained and justified in a description of one of his designs that was published several years after the Church of the Pilgrims was completed. It appeared in *A Book of Plans for Churches and Parsonages*,[121] a publication intended to promote "convenience,

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[117] Owen, p. 96. Owen calculated that the building cost 7.5 cents per cubic foot while Trinity Church cost 41 cents and Grace Church 16 cents. He used these figures to justify Renwick's 17.25 cents per cubic foot Romanesque design for the Smithsonian Institution; Owen, pp. 95-97.

[118] Kelllum won the commission in a competition beating George B. Post and several others; Robert A. M. Stern, Thomas Mellins, and David Fishman, *New York 1880: Architecture and Urbanism in the Gilded Age* (New York: The Monacelli Press, Inc., 1999), p. 710.

[119] Stern *et al*, *New York 1880*, p. 806. It is now occupied by St. Ambrose [Episcopal] Church.

[120] "Laying the Corner-stone of the Fifty-third Street Baptist Church," *New York Times*, 16 September 1869, p. 8

[121] *A Book of Plans for Churches and Parsonages Published Under the Direction of the Central Committee Appointed by the General Congregational Convention, October 1852. Comprising Designs by Upjohn, Downing, Renwick, Wheeler, Wells, Austin, Stone, Cleaveland, Backus, and Reeve* (New York: Daniel Burgess & Company, 1853). For a contemporary review, see "Churches and Parsonages," *New Englander and Yale Review*, vol. 12, no. 46 (May 1854), pp. 276-303. Richard Upjohn had previously published a similar book directed toward Episcopal parishes of similar circumstance: *Upjohn's Rural Architecture. Designs, Working Drawings and Specifications for a Wooden Church and Other Rural Structures* (New York: George P. Putnam, 1852).

economy and good taste, in the design and execution of the work."[122] Containing thirty pages of text and illustrations of eighteen designs contributed by some of the most notable architects of the period,[123] it was published by the General Congregational Convention in 1853 in response to decisions made at a convention of the Congregational Church held in Albany, NY, the previous year. At that meeting, which was itself a unique departure from historic Congregationalist distrust of central organization, attendees discussed ways to return the Church to the intent of its Pilgrim founders and to provide aid to new communities in the American west. To achieve the second goal, a committee was appointed to raise, receive, and disburse funds to build new churches. The Convention adopted twelve articles intended to guide the committee's work, the last of which directed its members to obtain designs for appropriate buildings.[124]

While the book took no strong stand on the issue of architectural style ("the architectural features of the house of worship") and recommended only that "the edifice designed for religious worship, ought, if possible, to indicate its purpose in its outward forms and materials,"[125] it argued that neither of the two prevailing "architectural orders," i.e., Gothic and Greek, was suitable for American buildings because "a true Gothic structure would be inappropriate on a wide level prairie, as a Greecian [*sic*] Doric would be in the wildest and most abrupt regions on New England."[126] Instead, the book suggested a conciliatory approach.

> The modifications of these styles, however, known as the Rural English, and the Norman or Romanesque, are adapted to a great diversity of situations, and they are, almost any of them, a great

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[122] *A Book of Plans*, p. 3. The phrase replicated the direction given in the Proceedings of the General Convention of the Congregational Ministers and Delegates in the United states held at Albany, New York, October 1852 (New York: 1852), p. 18, quoted in Steege, "The *Book of Plans* and the Early Romanesque Revival in the United States," p. 215.

[123] They were: Henry Austin and David R. Brown, William Backus, Henry W. Cleaveland, T. Reeve, James Renwick, Sidney M. Stone, Richard Upjohn, Joseph C. Wells, and Gervase Wheeler.

[124] Steege, "The *Book of Plans* and the Early Romanesque Revival in the United States," p. 215.

[125] *A Book of Plans*, p. 11.

[126] *A Book of Plans*, p. 12.

> improvement upon the miniature temples and cathedrals which have been much in vogue in our country for years past.[127]

This opinion largely reflected the views of the Rev. Oliver Ellsworth Daggett, D.D., then a minister at a Congregational Church in Canandaigua, NY, whose ideas on the subject were presented in an excerpt from a magazine article (reprinted in the book) that he wrote on church design several years earlier.[128] Daggett claimed that public appreciation for Gothic and Greek architecture had shifted over time, and that Gothic was now in the ascendancy. However, he noted, as did Richard Upjohn, that Gothic had never constituted "the prevailing style of architecture in Christendom at large"[129] and claimed that its presence was mostly confined to England and portions of France and Germany. He also claimed that even within these areas, many Gothic buildings were actually Roman or Greek structures "variously modified" or were "Norman, distinguished, in common with what is called on the continent the Byzantine or Romanesque style, by the prevalence of the semicircular instead of the pointed arch."[130] After pointing out the relative youth of Gothic buildings compared to the duration of Christianity, Daggett concluded, again in a manner similar to Upjohn, "Every kind of [good architecture] has its own predominant character and expression, and is felt to be accordingly congenial with some chief idea or class of ideas in Christian revelation, as also in the nature of man."[131] Furthermore,

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[127] *A Book of Plans*, pp. 12-13.

[128] "Church Building," *New Englander*, vol. 6, no. 21 (January 1848), pp. 1-24. The *New Englander*, published in New Haven, CT, began as the *Congregational Review* in 1843 and changed its name to the *Yale Review* before ceasing publication in 1892. Daggett (1810-80) attended Yale College and, after studying law and being admitted to the bar, Yale Divinity School. He served as a Congregational minister in Connecticut and New York State from 1837 to 1877 and as the Crittenden Professor of Divinity and college pastor at Yale from 1867 to 1870. He published many sermons and magazine articles, assisted in compiling a book of psalms and hymns, and wrote a small volume of poems that were published after his death. "Oliver Ellsworth Daggett" in *Appleton's Cyclopedia of American Biography,* James Grant Wilson and John Fiske, eds., 6 vols. (New York: D. Appleton and Company, 1887-1889), vol. 2, p. 53.

[129] *A Book of Plans*, p. 13.

[130] *A Book of Plans*, p. 14. Eidlitz made a similar point when he called St. Peter's Basilica in Rome "a poor Gothic church shrouded in caricatures of Greek forms"; *The Nature and Function of Art*, p. 350.

[131] *A Book of Plans*, pp. 14-15.

modification and mixture of styles was probably inevitable since few architectural styles were pure, and none was inherently better when considered from a historical, aesthetic, or moral viewpoint.

> The imitations of the old Norman churches, and those that are called Romanesque, are at least akin to the proper Gothic, while churches such as St. Peter's and St. Paul's, though on the whole very unlike any Greek temple, are yet modifications of Greek and Roman forms, and derive from them their predominant effect.[132]

Despite an implied equality of Greek, Gothic, and Romanesque styles, the *Book of Plans* contained none of the first, few of the second, and an abundance of the third. Of the eighteen churches that it depicted (stylistic distinctions were apparently unnecessary for the four parsonages it showed), one called itself Gothic[133] and another used pointed arches.[134] Of the remainder, three claimed to be Romanesque[135] and seven others contained round-headed windows or chancel arches.[136]

Despite their stylistic attributions, Renwick's Gothic and "Modernized Romanesque" designs had much in common. They were essentially meetinghouses to which wall buttresses, stepped end gables, gabled roofs with shed extensions, and bell towers were grafted. They all lacked chancels and transepts and the main difference between them was the presence of pointed-arched or round-arched windows. Steege confirmed these underlying similarities, noting that after the buildings were painted white "to satisfy subsequent classical revival tastes," their stylistic qualities became

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[132] *A Book of Plans*, p. 15.

[133] Design XVII by James Renwick.

[134] Design XV by Gervase Wheeler. Wheeler, an English architect, had designed the interior and polychromatic ceiling decorations for Upjohn's Bowdoin College Chapel shortly after he arrived in America ca. 1846; *Biographical Dictionary of Philadelphia Architects: 1700-1930*, Roger W. Moss and Sandra L. Tatman, eds. (Boston, MA: G. K. Hall & Co., 1985), p. 849.

[135] Designs IV and V by Sidney M. Stone and Design XVIII by Renwick.

[136] Design I by Sidney M. Stone, Designs III, XII, and XIII by Henry Austin and David R. Brown, Design VIII by Joseph C. Wells, Design XIV by T. Reeve, and Design XVI by Richard Upjohn & Co.

obscured and they appeared little different from their traditional New England predecessors.[137] In this sense, Renwick's notion of a Modernized Romanesque neither required nor provided a rigid distinction between styles, and after1848 he began to use multiple modes of design simultaneously at St. Stephen's Roman Catholic Church (1855, 1865, 128 East 28th Street, New York City) and the Clinton Avenue Congregational Church (1854-5, Brooklyn Heights, demolished). Thus, when describing a Renwick church in the *Book of Plans*, the anonymous author could accurately conclude

> This design is in the Modernized Romanesque or Round style, so called because the arches of its openings being semi-circular, and to distinguish it from the Pointed style. The *modernized* Romanesque is based on upon the supposition that the Romanesque has progressed, as such, instead of changing into Gothic; therefore traceries which are rarely found, except in circular windows, in the old buildings, are introduced in the present plan.[138]

The comment contained another rationale for Renwick's mix of styles: the belief that Romanesque architecture retained potential for future development because it had been "interrupted" by the Gothic, while Gothic architecture had gone about as far as it could. This notion was common during the nineteenth-century, and in his comments on the "Arch Architecture," Robert Dale Owen wrote

> The two centuries above referred to [i.e., the twelfth and thirteenth] embrace, as we have seen, a portion of the two great divisions of Arch Architecture; to wit, of the Lombard or Norman, and the Gothic proper; the former (in its later and lighter styles, however) occupying the greater part of the twelfth century; while through the remainder of that century and the whole of the thirteenth, the Gothic gradually developed itself; passing through the Early English, and, before the commencement of the fourteenth century, reaching the

[137] Steege, "The *Book of Plans* and the Early Romanesque Revival in the United States," pp. 224-25.

[138] *A Book of Plans*, "Design XVIII." The other, Design XVII, was described as being "in the Lancet or early Gothic Style."

> Decorated; this last exhibiting, to their full extent, its powers and capabilities.[139]

*St. George's Church: Design and Construction*

The Blesch-Eidlitz design for St. George's Church was said to be in the "Byzantine or Early Christian style of architecture"[140] and it is likely that the building demonstrated awareness on the part of its architects of restoration and contemporary work in southern Germany, i.e., the Rundbogenstil, rather than a thorough knowledge of historical architecture. The parish history notes that the scheme was selected by a building committee from drawings submitted by architects from New York and Philadelphia,[141] but only the Blesch-Eidlitz scheme and two submitted by Thomas Ustick Walter are known. Tyng had served for eleven years in the Walter-designed Church of the Epiphany (15th and Chestnut Street, Philadelphia, 1833-34; demolished 1901) built during the first years of his tenure and had been pleased with the building ("The gentlemen engaged in the enterprise were men of ability, and with a deep, personal interest in their work").[142] On 12 March 1846, Walter wrote to Tyng [143] and while the subject of the letter is unknown, he began to work on drawings for a neoclassical "chapel" for Tyng's congregation on 14 April.[144]

Despite the cordial relationship that seems to have existed between Walter and Tyng, the parish history noted "After due examination of the proposed plans the vestry unanimously adopted that

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[139] Owen, p. 72.

[140] Anstice, p. 168.

[141] Charles Rockland Tyng, p. 200.

[142] Charles Rockland Tyng, p. 111.

[143] Thomas Ustick Walter, *Diary*, 25 November 1845 – 31 December 1848; on file at the Athenaeum of Philadelphia.

[144] See "Project for St. George's Chapel, N.Y.," *Handlist: Thomas Ustick Walter, Architect*, exhibition catalogue (Philadelphia: The Athenaeum of Philadelphia, 1979), n.p.; Thomas Ustick Walter, "Design for St. George's Chapel, New York," four ink and watercolor wash drawings dated 21-25 April 1846 on file at

of Blesch and Eidlitz, and the work was at once undertaken and diligently prosecuted."[145] Tyng's biography recalled

> Mr. Eidlitz was then a very young man, who had but recently arrived in this country, this being his first work of such a character, but from that time on, no other architect was ever employed in the construction of any building erected by St. George's corporation.[146]

Blesch and Eidlitz designed the new church were in March 1846 and the cornerstone was laid on 23 June.[147] The building opened for services on 19 November 1848 and was consecrated on 4 December of the following year. Schuyler quoted Eidlitz to the effect that Blesch designed the exterior and he the interior of the building. He also wrote that Eidlitz supervised construction because Blesch became ill and Anstice confirmed the division of responsibility.[148] Schuyler also claimed that Eidlitz was the "official" architect recognized by the congregation.[149] This may be reflected in Anstice's comment "The successful realization of these plans [for St. George's Church] gave Mr. Eidlitz at once an enviable position among his fellow-craftsmen, and he lived to enjoy a distinguished architectural career."[150]

Eidlitz got on well with the congregation and wrote, "When, under the pressure of 1848 and 1849, [work on] the building was discontinued, the committee paid their architect in full for his

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the Athenaeum of Philadelphia; WTU*042*001-004. Walter's diary indicates that he also prepared a "perspective view," but its location is unknown; Thomas Ustick Walter, *Diary* [1845-48], 25 April 1846.

[145] Anstice, p. 168.

[146] Charles Rockland Tyng, p. 198.

[147] Moulton, p. 39; Wayne Andrews, *Trinity Parish Herald*, June 1946, p. 3, cited in Carroll L. V. Meeks, "Romanesque Before Richardson in the United States," *Art Bulletin*, vol. 35, no. 1 (March 1953), p. 23 n. 28. The chronology given here generally follows Anstice and Hodges and Reichert.

[148] Leopold Eidlitz I, pp. 166-68; Anstice, p. 207.

[149] Leopold Eidlitz I, pp. 166-67.

[150] Anstice, p. 207.

services, as though the whole edifice had been completed...."[151] The pressure to which he referred involved the congregation's decision to move to the new site and the concurrent refusal of Trinity Church to release the affected members from their obligation to continue operations at the old. The Beekman Street building remained in use as a chapel for a while, but it reverted to Trinity Church in 1850 and was later used by the Church of the Holy Evangelists. Connections between Trinity and St. George's were not severed until 1868, when the Beekman Street building was sold to the Phelps Dodge Corporation and quickly replaced with a commercial structure.[152]

The new St. George's was similar to its predecessor in plan and consisted of a 5-bay nave with semi-circular chancel extension. Overall dimensions were 172 feet long by 72 feet wide; interior dimensions, exclusive of the chancel, were 113 feet by 70 feet. Exterior walls were 65 feet high and 5 feet thick in some places and the towers were 100 feet high with another 25 feet assigned to the uncompleted spires.[153] The nave was covered by a gabled roof and the chancel by a semi-dome. The front elevation was preceded a shallow arcaded porch flanked by square corner towers. The main entrance was located within the porch, at the top of a low flight of steps. The central gable was capped by a large anthemion. A large rose window was situated below an arcuated corbel table and above a blind arcade. The nave sidewalls were braced by stepped buttresses located between tall windows, [the] unbuttressed apse was windowless, but sky lit. The building was sheathed in smooth brownstone relieved only by sidewall continuations of the

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[151] Leopold Eidlitz, "The Church of All Souls," *The Crayon*, vol. 5 (January 1858), p. 22. Eidlitz remained the sole parish architect until his death.

[152] Phelps, vol. 3, p. 774; Anstice, pp. 166-78; Hodges and Reichert, xix; Moulton, pp. 43-44; "Another Old Church Going," John W. Kennion, *Architects' and Builder's Guide. An elaborate description of all the public, commercial, philanthropic, literary & ecclesiastical buildings already constructed, and about to be erected next spring in New York and its environs, with their cost respectively, and the names of the architects and builders.* (New York: Fitzpatrick & Hunter, 1868), Part III, p. 68. A photograph of the St. George Building that replaced the Beekman Street church in 1870 appeared in Danny Lyon, *The Destruction of Lower New York City* (New York: The Macmillan Company, 1969), no. 6.

[153] Greenleaf, p. 389.

corbel tables. Window openings were round-headed and the apse contained a round-headed blind triforium. The nave floor was supported on brick arches.

Schuyler believed that the rear elevation was derived from the semicircular apses of "twelfth-century churches of the Rhine,"[154] Meeks observed similarities with Schinkel's Johanniskirche Kirche (Moabit, Berlin; 1832-38),[155] and Curran suggested the central section of the front elevation of Gärtner's limestone-clad Ludwigskirche (1828-44) as the inspiration for the main façade. She also claimed, however, that the corner towers were based on those of Bernardo Rossellino's cathedral at Pienza (1459-64).[156] St. George's may also reflect Eidlitz's knowledge of St. Stephen's in Vienna (1147-1562), a large Hallenkirche, and the Kostel svatý Jiři (Church of St. George) in Prague. The latter building, erected ca. 920, was altered several times, and its present Romanesque form as a triple-nave basilica with semi-circular apse and twin rear towers dates from a reconstruction carried out after a fire that occurred in 1142. However, Eidlitz would also have seen its 1657-80 Baroque façade. Blesch may also have incorporated ideas from the twin-towered Munich Cathedral (the Frauenkirche, Jörg von Halsbach, 1466-88). Nevertheless, the absence of interior columns, the Low Church configuration, and the presence of cantilevered galleries and exposed wood roof trusses distinguished St. George's as an American work and distanced it from European models

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[154] Montgomery Schuyler, "The Romanesque Revival in New York," p. 12. An engraving showing the apse appeared in "New-York Church Architecture," *Putnam's Monthly Magazine of American Literature, Science and Art*, vol. 2, no. 9 (September 1853), p. 245.

[155] Meeks, "Romanesque Before Richardson in the United States," p. 23. Karl Freidrich Schinkel, *Collection of Architectural Designs including designs which have been executed and objects whose execution was intended* (Chicago: Exedra Books Incorporated, 1982), reprint of *Sammlung architektonischer Entwürfe enthaltend theils wereke welche ausgeführt sind theils gegestände deren ausführung beabsichtigt wurde* (Berlin: Ernst and Korn, 1866), Plates 159-60. August Stüler's arcaded addition (1841-56) to the front of Schinkel's building increased the resemblance; see Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, pp. 130-35.

[156] Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," pp. 362-64; "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," pp. 696-97, and *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 268. Brooks concurred for "façade composition"; Brooks, p. 9.

Curran cited a contemporary Rundbogenstil church in New York City: the Fifth Avenue Baptist Church designed in 1841 by Henry Engelbert (demolished), and Hitchcock called the Appleton Chapel (1856-58, Harvard College, Cambridge, MA, demolished 1931) "a very reduced version [of the Ludwigskirche] with only one tower." While the outward appearance of Englebert's church was similar to St. George's, its skylit and vaulted interior was based on the Michaeliskirche (Berlin, 1845-61) designed by August Soller, a pupil of Schinkel.[157] The Appleton Chapel was designed by Paul Schulze (1827-97), a German émigré architect who won the commission in a competition in 1856.[158]

The Ludwigskirche also inspired several projects by the American-born architect Thomas Alexander Tefft (1826-59). While the Indiana Cotton Mill (1849-50, Cannelton, IN; demolished) and the Richmond Female Institute (1853, Richmond, VA; demolished) employed the primary motifs of Gärtner's church, i.e., a pair of centrally placed towers with a gabled central block and side wings, they were used most skillfully and dramatically at the Union Depot (1847-48, Exchange Place, Providence, RI; demolished 1886). Said to have been designed when Tefft was a 21-year-old student of philosophy at Brown University, the 750-foot long brick railroad station was the largest in America when it was competed and Hitchcock called it "...a triumph of

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[157] Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," pp. 368-69.

[158] Despite beginning his career in New York City and moving to Boston, much of Schulze's time was spent in a Washington DC partnership with German-born and -trained Adolph Cluss (1825-1905) where they did a large quantity of work for the federal government. They rebuilt Renwick's Smithsonian Institution (1846-55) after it burned in 1858 and designed the Institution's Art and Industries Building (1881). Schulze returned to New York City in 1857 and maintained a practice alone and with various partners as late as 1879. He had worked on the New York Crystal Palace designed by Danish architect Georg J. B. Cartensen and German architect Karl (Charles) Gildemeister, sharing a New York City office with both in 1854, and with Gildemeister from 1859 to 1860. Hitchcock, *Architecture: Nineteenth and Twentieth Centuries*, p. 127; Meeks, "Romanesque Before Richardson in the United States," p. 30 n. 70; "Adolph Cluss" in *Biographical Dictionary of American Architects (Deceased)*, p. 128; "Paul Schulz" *The American Architect and Building News*, vol. 55, no. 1102, (6 February 1897) p. 42; "The Exhibition of the Industry of All Nations," *New York Times*, 16 August 1852, p. 2.

picturesque design, rivaling the contemporary Romanesque work of Von Gärtner and Hübsch."[159] With its gabled central block flanked by slender towers and angled two-story wings attached one-story arcades and octagonal end bays, it is likely that the building was inspired by Tefft's reading and contemporary trends in American architecture rather than personal contact with German-trained architects. Curran noted that Tefft owned a large library that included Gärtner's *Sammlung der Entwürfe ausgeführter Gebäude*[160] in which the Ludwigskirche appeared.[161] Anger noted that Tefft "had not yet enjoyed direct exposure to German architecture in the hands of its émigrés, much less intentionally studied the theories behind the Rundbogenstil in Germany" although he was "sympathetic to the period's growing interest in round-arched styles, both aesthetically and functionally, aided by the plates in his books and the buildings at Brown University."[162]

While it is surprising that the Ludwigskirche remained a source of inspiration nearly a generation after Eidlitz arrived in America, this situation may reflect the attitudes of mid-nineteenth-century architects toward Germany. Writing in 1939, Richard Upjohn's great-grandson noted

> In the study of Gothic architecture, Germany claimed much more attention in England, and perhaps America, at that time than it does now. The presence of the Prince Consort in England had a

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[159] Henry-Russell Hitchcock, *Rhode Island Architecture* (New York: Da Capo Press, 1968), reprint of first ed. (Providence, RI: Rhode Island Museum Press, 1939), p. 50. Also see Ruth Little Stokes, "Thomas Alexander Tefft, Union Depot, Exchange PL., Providence, 1847-48" in William Jordy and Christopher P. Monkhouse, *Buildings on Paper, Rhode Island Architectural Drawings 1825-1945*, exhibition catalogue (Providence, RI: David Winton Bell Gallery, List Art Center, Brown University, 1982), pp. 159-60; Barbara Wriston, "Thomas Alexander Tefft," in *Macmillan Encyclopedia of Architects*, vol. 4, p. 189; Anger, p. 21; Arabella Berkenbilt, "European Influences on Thomas A. Tefft: Theory and Practice in *Thomas Alexander Tefft: American Architect in Transition, 1845-1860*, p. 36; I. Edwards Clark, "Thomas A. Tefft and American Brick Architecture," *The American Architect and Building News*, vol. 19 (12 June 1886), p. 283;

[160] 2 vols. (Munich: J. G. Cotta, 1844-45).

[161] Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," pp. 370-72.

[162] Jenny Anger, "The Rise of the Professional Architect" in *Thomas Alexander Tefft: American Architect in Transition, 1845-1860*, Kathleen A. Curran, ed., exhibition catalogue (Providence, RI: David Winton Bell Gallery, List Art Center, Brown University, 1988), p. 21.

> great deal to do with this, particularly in view of his active patronage of the arts which culminated in the great exposition of 1851.[163]

*St. George's Church: Critical Response*

The diarist George Templeton Strong visited St. George's when it opened and described it as

> fatally short and squat, but the front towers are among the finest things in the city, and it is consoling after [James] Renwick [Jr.]'s pasteboard abominations [the Church of the Puritans, 1846, Union Square; Grace Church, 10th Street and Broadway, 1843-46 and Calvary Church, 21st Street and Park Avenue, 1846-47], to see the massiveness and solidarity of the whole structure. The church stands in a howling wilderness at present, but the streets around Stuyvesant Square will soon fill up.[164]

Schuyler also though it too short, although he allowed, "the parts are more valuable than the whole."[165] *Putnam's Magazine* was considerably more enthusiastic and called it "the most chastely designed and most sincerely built church in New York City – we are not afraid to say in the United States."[166]

While the exterior was vigorously, if simply, modeled, the interior was exceptionally plain, as noted by a reviewer for *The Literary World*:

> The plan of the building is like that of the old Roman Basilicas, after which the first Christian churches were modeled. It consists of a huge hall, undivided by pillars, with galleries on three sides, supported by trusses from with a second, or choir, gallery over the entrance front, and a semicircular apsis, or sanctarium, projecting from the west end, with low engaged

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[163] Upjohn, p. 104.

[164] George Templeton Strong, *The Diary of George Templeton Strong*, Allan Nevins and Milton Halsey Thomas, eds. (New York: The Macmillan Company, 1952), 20 November 1848, vol. 1, p. 335. Strong (1820-75) was a wealthy New York City lawyer. During the Civil War, he was a member of the United States Sanitary Commission and helped found the Union League Club. He was also a trustee of Columbia University and a member of the vestry of Trinity Church. His diary discussed music, politics, and daily life in the city. James E. Mooney, George Templeton Strong" in *The Encyclopedia of New York*, p. 1132.

[165] Montgomery Schuyler, "The Romanesque Revival in New York," p. 12.

[166] "New-York Church Architecture," pp. 247-48.

> vestry rooms connected therewith. The entrance front, which is towards the east, has an arcaded vestibule, or loggia, with engaged towers at the angles. These are completed only as high as the roof.[167]

For many years, the church contained the city's largest interior space. It could hold 1,575 people, and its interior height was exceeded only in 1893 by the Cathedral of St. John the Divine (Heins and La Farge; Ralph Adams Cram after 1911).[168] Although relatively austere compared to its Gothic Revival contemporaries, the nave's flat, plastered walls were intensely decorated[169] with "several bands of handsome foliated ornament."[170] The work, done by Louis H. Cohn to Eidlitz's designs, incorporated stenciled patterns that originated at the springing point of the window and chancel arches. Below the patterns, walls surfaces were embellished with a small checkerboard or diapered ground; a similar but larger diaper pattern was used above the chancel opening.[171] Except for the braced hammer beam roof trusses, nearly all of the building's modeled surfaces were located within the apse, a semi-circular extension that contained a ribbed half-dome lit by a small semi-circular skylight. Below the dome, a tall blind arcade and a short triforium rested on a heavily profiled dado that contained several tablets inscribed with the names of the

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[167] Robert Cary Long, Jr. (writing as "An Architect"), "Architectonics. No. II. St. George's Church, Stuyvesant Square," *The Literary World, A Journal of American and Foreign Literature, Science, and Art.*, vol. 3, no. 95 (25 November 1848), p. 853. Stanton attributed the article to Long based on a memoir written by George A. Frederick (1842-1924), a prominent Baltimore architect. Long (1810-49) was the son of a master carpenter. He studied in New York with Martin Euclid Thompson but returned to Baltimore when his father died in 1833 to assume his practice. He built more than a dozen churches and public buildings and several country houses in Maryland and published six articles in *The Literary World* between November 1847 and March 1849. In 1847, he made plans to return to New York but died of cholera two years later. Wilbur H. Hunter, "Robert Cary Long, Jr., and the Battle of Styles," *Journal of the Society of Architectural Historians*, vol. 16, no. 1 (March 1957), pp. 28-30; Stanton, *The Gothic Revival and American Church Architecture*, p. 244 n. 37.

[168] Montgomery Schuyler, *American Architecture and other Writings by Montgomery Schuyler*, William Jordy and Ralph Coe, eds., 2 vols. (Cambridge, MA: Belknap Press of Harvard University Press, 1961), vol. 1, p. 140 n. 9; Hodges and Reichert, p. 14.

[169] Anstice, "Interior of St. George's Church, 1869," photograph opposite p. 242.

[170] "Burning of Dr. Tyng's Church," *Harper's Weekly*, vol. 9 (2 December 1865), p. 758.

[171] Anstice, p. 242. Cohn had also done decorative painting for Renwick and Sand at St. Ann's Episcopal Church (1867-69, Brooklyn); Christopher Gray, "An 1869 Work With a Shaky Future," *New York Times*, 23 June 1991, p. R6; "St. Ann's Church in Brooklyn," *New York Times*, 21 October 1869, p. 2.

congregation's founders.[172] A roundel and a pair of round-headed arches were located within each of the arcade arches. The chancel held a wide seating area enclosed by a low partition. Just beyond the chancel opening, a freestanding communion table stood behind a pulpit flanked by two ambos in conformance with Tyng's request for a table that would not mistaken for an altar could be walked around.[173] Within the nave, seating was provided on the ground floor and on unusual cantilevered galleries. A pseudo-transept was created where the front portion of the ground floor seating turned to face the center of the building. Moulton claimed that Tyng was responsible for the decision to use the galleries and she quoted an unnamed critic who called them "an interior feature as novel and startling in its way as the exterior feature of the [planned] open spire."[174]

While *The Crayon* agreed with Templeton and Schuyler that the building was too short, it still found the exterior successful, especially the front and rear elevations. The interior, however, while large and endowed with a well-designed chancel, was considered less successful due to poor quality stained glass, exposed roof trusses and, worst of all, the cantilevered galleries.

> The galleries certainly deserve some credit as a mechanical construction, and we will admit that the construction is more artistically treated than many imitations we have seen lately. But why not have them supported, in the most natural way, by piers or columns on the floor? We suppose the exceeding popularity of the present incumbent of that pulpit will pass an apology for the absence of the columns, in order to avoid all obstructions to the view; but we doubt whether it can be reconciled with good taste to allow the practical advantages to carry the day against that liberality of space for all necessary appointments, which is eminently due to the house of God.[175]

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[172] Charles Rockland Tyng, p. 255. The tablets were destroyed when the church burned and never replaced.

[173] Anstice, "Chancel of the Church, 1848-1856," photograph opposite p. 200; engraving of interior view looking toward the chancel in "New-York Church Architecture," p. 246; Leopold Eidlitz I, pp. 166.

[174] Moulton, p. 41.

[175] "St. George's Church," *The Crayon*, vol. 4 (December 1857), pp. 372-73.

Nevertheless, *The Crayon* complemented the building committee for giving Eidlitz "a full and liberal scope for the exercise of his talents, a fact which must place these gentlemen deservedly high as patrons of art."[176]

The column-free galleries would have emphasized the building's hall church (Schuyler uses "hallenartige," Curran uses "Saalkirche"[177]) qualities. Present in some German Gothic churches and generally seen as a Germanic characteristic, hall churches were similar to secular Hallenbauen (hall buildings) and although they often contained two or more rows of columns that carried roof support arches, the overall effect was that of a single space rather than the tripartite low-aisle/high-nave arrangement of the English Gothic churches more commonly emulated by Episcopal congregations of the 1840s.[178]Side aisles, when present, were equal in height, or nearly so, to the nave. Buildings of the type also relied on tall windows for interior light and they often lacked transepts and a distinct chancel.[179] An overtly low church interior of this kind would not have received the approval of the New York Ecclesiological Society that recommended early English parish churches as the most suitable model for religious buildings for Episcopal congregations. Nevertheless, Schuyler claimed that hall churches, with their obvious contrast to Upjohn's Trinity Church, would have appealed to Tyng.[180]

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[176] "St. George's Church," *The Crayon*, vol. 4 (December 1857), p. 373.

[177] Leopold Eidlitz I, p. 167; Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," p. 368.

[178] Brooks noted that the absence of horizontal ties made possible by Eidlitz's use of modified hammer beam roof trusses, a Gothic structural device, contributed to the unity of the nave by de-emphasizing the effect of its structural bays; Brooks, p. 9.

[179] "Hall church" in Nikolaus Pevsner, John Flemming, and Hugh Honour, *A Dictionary of Architecture* (Woodstock, NY: The Overlook Press, 1976), pp. 221-22; "Aisle," "Hall church," "Hallenbau" in Russell Sturgis, *A Dictionary of Architecture and Building, Biographical, Historical, and Descriptive* (New York and London: The Macmillan Company 1901), vol. 1, p. 33, vol. 2, p. 355.

[180] Leopold Eidlitz I, pp. 167-68.

Most of the other critics were more positive about the interior. *Putnam's* claimed, "the absence of pillars, the need of which has been obviated by a hanging gallery, gives it a very roomy and majestic appearance"[181] and the *New York Times* noted

> No pillars broke the area. The gallery that surrounded the church was supported on brackets let into the wall. The chaste simplicity and vast proportions of the interior have awakened the admiration of all who were interested in architecture.[182]

The parish history similarly remarked

> This unique achievement of the architect was effected by anchoring brackets of great strength through the walls into the interior buttresses, and the resulting freedom from obstruction of the whole floor area added materially to the church's beauty and impressiveness."[183]

Schuyler expressed a wish that the nave windows would have been divided in some way to reflect the presence of the galleries and wrote, "Such a division would have removed the chief architectural blemish on what is and would be even with worse faults, one of our most seemly and dignified New York churches, inside and out."[184]

Despite its admiration for "the chaste simplicity and vast proportions of the interior," the *New York Times* was less sure of the outcome. While it complimented features such as the method by

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[181] Leopold Eidlitz I, p. 167; "New-York Church Architecture," p. 248.

[182] "The Destruction of Dr. Tyng's Church," p. 8.

[183] Anstice, p. 207, *The 1866 Guide to New York City* (New York: Schoken Books, 1975), reprint of *Miller's New York As It Is; or stranger's guide to the cities of New York, Brooklyn, and adjacent places; comprising notices of every object of interest to strangers; including public buildings, churches, hotels, places of amusement, literary institutions, etc.* (New York: J. Miller, 1866) shared this opinion, p. 73. Curran noted that the approach was also used by John Notman (1810-65) in the Holy Trinity Church (Philadelphia, PA, 1856-59), and a contemporary account described the galleries as "supported on massive brackets of grained wood." It also noted that "The galleries upon the Northern and Southern sides of the church are supported on powerful truss brackets, which rest on stone corbels in each buttress. The supports are firmly anchored into the walls." Curran, "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," p. 719 n. 28; [Philadelphia] Daily Evening Bulletin, 28 March 1859, p.1 quoted in Constance M. Greiff, John Notman, Architect, 1810-1865 (Philadelphia: The Athenaeum of Philadelphia, 1979), p. 214.

[184] Leopold Eidlitz I, p. 168.

which the chancel was illuminated and the "magnificent round [chancel] arch of really colossal proportions," it concluded, "The interior of the church was peculiarly grand and impressive, though too dark to be pleasant.[185] Eidlitz never repeated the approach in any of his churches and in *The Nature and Function of Art,* he sarcastically referred to Milan Cathedral as a building whose primary quality was that it provided "the interesting appearance of a hall (Halle), a colonnaded space."

> This fact may redeem the monument as a structure, but it cannot redeem it as a church, the purpose of which must always be to serve a congregation of persons as a place of worship, not as a temporary transitory passage to another part of a structure where they finally intend to abide.[186]

*Shaaray Tefila*

Blesch also assisted Eidlitz with the Shaaray Tefila (Gates of Prayer) Synagogue (1846-47, 112 Wooster Street; demolished), a commission that came to them concurrently with that for St. George's, although the congregational history claims their "modest edifice" was designed by an architect named "Brady."[187]

On 6 May 1845, several members of B'nai Jeshurun, one of the oldest synagogues in New York City, left the congregation in response to a political dispute. The dissenters organized as a religious association ten days later and, during the next month, rented rooms above a stable located at 67 Franklin Street near Broadway. On 11 January 1846, they purchased a burial ground located on 46th Street, between Ninth and Tenth Avenue and on 22 February, adopted a set of by-laws, naming their new congregation Shaaray Tefila. At the same time, the group purchased two lots at 110 and 112 Wooster Street, then in the center of the New York City Jewish

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[185] "The Destruction of Dr. Tyng's Church," *New York Times*, 16 November 1865, p. 8.

[186] Eidlitz, *The Nature and Function of Art*, p. 452.

community, and resolved to spend approximately $20,000 for a new building.[188] The congregation remained in their Wooster Street building designed by Blesch and Eidlitz until 1864, when it leased the Armory Building, 36th and Broadway, and fitted it out as a synagogue until it could find a suitable uptown location for a new structure.[189] Schuyler's account of Eidlitz's career des not mention the Wooster Street building although in 1850, Greenleaf wrote that "The Franklin Association," presumably a mortgage provider, had erected a "fine building of freestone for a Synagogue, on Wooster street, between Spring and Prince streets, in the year 1847."[190]

The synagogue was a small basilcan structure, 55 feet wide by 85 feet deep, exclusive of an east-facing semicircular apse and contained individual seats rather than pews as well as galleries.[191] An elevation showed the details of the central bay of the front elevation to be similar to St. George's, albeit at a much smaller scale, with a corbelled nave gable and anthemion cap, half-gabled aisles, and rose window. [192] Wischnitzer suggested that aside from its obvious affinity to Gärtner's Ludwigskirche, the building may also have reflected Eidlitz's (or Blesch's) knowledge of the Kassel synagogue (1836-39, August Schuchardt and Albert Rosengarten; demolished), a four-bay, galleried and vaulted Rundbogenstil basilica with semicircular apse flanked by service

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[187] Simon Cohen, *Shaaray Tefila. A History of Its Hundred Years, 1845-1945* (New York: Greenburg, 1945), p. 9. Francis makes no mention of an architect of that name.

[188] Cohen, pp. 5-9.

[189] Cohen, pp. 19-20.

[190] Greenleaf, pp. 395-96.

[191] Cohen, p. 11.

[192] Wischnitzer, fig. 24, p. 44.

rooms.[193] Its tri-partite front elevation featured circular and round-headed widows and a gabled central bay flanked by flat-roofed stairtowers.[194]

An account of Shaaray Tefila published before its completion attempted to emphasize those aspects of its design deemed appropriate for a synagogue. However, its "churchly" qualities were inescapable, an issue that Eidlitz would face again in his design for Temple Emanu-el.

> The style chosen is the Byzantic, which flourished some centuries back, and was especially used by the Portuguese and other Jews when persecuted in the middle ages; On looking at the front of the pile, the spectator will at once receive the impression that the building is intended for a place of worship, not of the poetical deities of the Greeks, nor the pompous trinity of the Christians, but of the mighty God of the Jews. The deep front door, with its heavy arches and simple but boldly-ornamented columns projecting out from the wall about four feet, encircling the front stoop with their bases, will, with awe, invite the stranger into the sanctum of the interior, and there the mind will be most deeply impressed with the feelings it has been prepared for by the exterior. After passing through a vestibule [located below a choir and orchestra balcony illuminated by a rose window] and entering the inside, the holy ark will attract the greatest attention: five steps leading to it, and a platform six feet wide, will be covered with Italian marble; the doors will be of mahogany, enriched with tracery, and slide back into the wall; two columns and two antes will support an arch crowned with a gable, reaching up to the center of a large window, the top of which is to have stained glass, representing the so-called David's Shield. The interior will be divided into three aisles; the center aisle twenty-four feet wide, between the columns which support the semicircular arches, that carry the walls of the clear story; the side aisles will be about twenty-eight feet high, containing the galleries for the ladies; the center aisle will be forty-two feet high, and will be vaulted by a wooden ceiling, supported by spandrels; the ribs are to meet in the center, ending with flowers;[195] ...the principal light will be falling down from the

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[193] Wischnitzer, p. 43. Schuchardt (1820-99) was Rosengarten's supervisor in the government building service; Krinsky p. 314.

[194] See Krinsky, pp. 313-16. She claimed that Rosengarten's illustrated account of the synagogue was the first of its kind published by a Jew; "Die neue Synagoge in Kassel," *Allgemeine Bauzeitung*, vol. 5 (1840), pp. 205-7, Plates 349-53.

[195] An account of the consecration described it as a "groined oak ceiling." Most of the other woodwork was also made of oak; A. Abraham, "Consecration of the New Synagogue Shaaray Tefila" *The Occident, and*

> upper part of the building intended to produce a solemn effect; and the whole will be calculated to turn the mind to the sublime, and to spiritualize the feeling; ...the building and ground will cost near $30,000... The architects are Messrs. Eidlitz and Blesch.[196]

The building was consecrated on 25 June 1847, and while response was generally enthusiastic, several faults were noted.

> As it is, we may safely say, that it is by far the finest Synagogue in America, though this does not say that that it is the best adapted for the purpose for which it is designed. We should judge that ordinarily it will require much exertion in the minister to be distinctly heard all over the building, owing to the great height in the center, and the declivity of the galleries, together with the many angles in the ceiling.[197]

However, the most significant comment addressed the unmistakably church-like appearance of the building.

> In fact, the style of building is so new to us, and so little idea had we of the interior arrangements, that we have not as yet been able to make up our mind, whether to approve it for a Synagogue or not. But there can be no question that it is a beautiful structure, and highly creditable to the architect who designed it, and equally so to the members of the congregation, who, though few in number, had a sufficient strong sense of what is due to the sanctity of religion to erect so expensive and well-appointed a

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*American Jewish Advocate, A Monthly Periodical Devoted to the Diffusion of Knowledge on Jewish Literature and Religion,* vol. 4, no. 5 (August 1847), p. 222-29.

*The Occident*, the first successful Jewish newspaper in America and an essential conduit between America's growing Jewish communities, was published monthly in Philadelphia from April 1843 to March 1864 by Rabbi Isaac Lesser (1806-88). Its motto was "To learn and to teach, to observe and to do." Leeser was one of the most prominent and influential figures in American Jewish history. During a 40-year period, he was arguably the most prolific and creative American Jewish writer. He became the spiritual leader of Congregation Mikveh Israel in Philadelphia in 1829 where he was the first to introduce a regular English sermon into the synagogue service. He also founded the American Jewish Publication Society and published *The Law of God,* the first translation of the Hebrew Bible into American English (1845).

[196] "Descriptive View of the New Synagogue, Now Building at New York, for the Congregation Under the Pastoral Charge Of The Rev. S. M. Isaacs," *The Occident,* vol. 4, no. 5 (August 1846), pp. 239-40. The cornerstone was laid on 7 July 1846.

[197] "Consecration of New Synagogue Shaaray Tefila, New York [June 25, 1847]," *The Occident*, vol. 5, no. 5 (August 1847), p. 222.

> house of prayer, as now greets the devout traveler in the far-famed commercial metropolis of the western world.[198]

*Iranistan*

Schuyler claimed that Eidlitz designed the P. T. Barnum residence, "Iranistan" (1848, Bridgeport, Connecticut, burned 1857; Barnum claimed that the name meant "Oriental villa"). Said to have cost $150,000 and taken two years to build, it sat on a seventeen-acre site less than a mile west of the city of Bridgeport, overlooking Long Island Sound. Barnum had selected the site because of its ready rail and water access to New York City, the hub of his activities, and its visual prominence.

Barnum wrote consistently of the house's origins in each of the seven versions of his autobiography published between 1855 and 1891.

> In visiting Brighton, in England, I had been greatly pleased with the Pavilion erected by George IV [1815-21, John Nash]. It was the only specimen of Oriental architecture in England and the style had not been introduced into America. I concluded to adopt it, and engaged a London architect to furnish me a set of drawings after the general plan of the Pavilion, differing sufficiently to be adopted to the ground selected for my homestead. On my second return visit to the United States, I brought these drawings and engaged a competent architect and builder, giving him instructions to proceed with the work, not "by the job" but "by the day," and to spare neither time nor expense in erecting a comfortable, convenient, and tasteful residence... The building progressed slowly, but surely and substantially... The whole was completed to my satisfaction.[199]

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[198] "Consecration of New Synagogue Shaaray Tefila, New York [June 25, 1847]," *The Occident*, vol. 5, no. 5 (August 1847), p. 222.

[199] Waldo R. Browne, *Barnum's Own Story, The Autobiography of P. T. Barnum – Combined & condensed from the various editions published during his lifetime* (New York: Dover Publications, Inc., 1961) reprint of first ed. (New York: The Viking Press, Inc., 1927), pp. 187-88. A view of the house and several of its outbuildings taken from a letterhead appears opposite p. 296. A hand-colored lithograph issued by Sarony and Major ca. 1852-54, "Iranistan, an oriental ville (near Bridgeport, Connecticut) / Lith. of Sarony & Major, N.Y." in the collection of the Library of Congress is reproduced in W. Barksdale Maynard, *Architecture in the United States, 1800-1850* (New Haven, CT and London: Yale University Press, 2002), p. 175, Figure 4.7.

The completed building was 124 feet wide on its entrance façade and one of Barnum's biographers described it as follows:

> There were three stories, with broad piazzas, and large arched window-ways. Minarets and spires stood up all over the building in logical but profuse style [the 60-foot wide center dome rose 90 feet above ground level and was fitted out as an astronomical observatory],[200] and domed conservatories bulged at either end. A large iron fence enclosed the extensive grounds, and fountains were scattered about. Reindeer and elk pranced through the park.
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> The interior was correspondingly ornate. A large winding staircase... led up from the main hall, and along its luxurious way marble statuary abounded. The panels of the drawing-room wall represented the four seasons, and the ceiling was white and gold. Pier glasses and mirrored folding doors added to the drawing-room's glamor [*sic*]. The dining-room walls were richly paneled with figures representing Music, Painting, and Poetry. A Chinese library with Chinese landscapes in oils and Chinese furniture, where there was a tortoise-shell table with brass trimmings, adjoined the dining-room. The walls in Barnum's private study were brocaded with rich orange satin, and adjoining the study was a bathroom, with a shower of hot and cold water. An enthusiastic New York visitor to "Iranistan" said that inside it was "as elegant as a steamboat."[201]

The biographer speculated that Barnum's goal was to live in a house that had affinities with his Museum as well as convenience, comfort, uniqueness, and style. He quoted Barnum's delight that the house would be seen from passing trains and that his "pile of buildings of a novel order might indirectly serve as an advertisement of my various enterprises."[202] Although the full extent of Eidlitz's participation in the project is unknown, Schuyler agreed with the general outline of Barnum's story (he called the house "the architectural expression of Humbug") and described an

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[200] Irving Wallace, *The Fabulous Showman, The Life and Times of P. T. Barnum* (New York: Alfred A. Knopf, 1959), p. 150.

[201] M. R. Werner, *Barnum* (NY: Harcourt, Brace and Company, 1923), pp. 106-7. Werner's book is a synthesis of the different versions of Barnum's autobiography.

[202] Werner, p. 106.

incident in which Barnum met the unannounced and unrecognized Eidlitz.[203] After the house burned on 18 December 1857,[204] Elias Howe, Jr., the inventor of the sewing machine, acquired the property for $50,000. He intended to build a new $250,000 residence designed by Cincinnati architect A. C. Nash and improve the grounds but died before he could accomplish his goals.[205]

*Eidlitz Residence*

Writing about the increasing influence of German domestic architecture on American practice in the mid-1850s, Sarah Bradford Landau has noted that he "provided America with examples of the real thing, or close to it."[206] Nearly all of his houses from this period, including his own, are examples of "Swiss Cottage" architecture,[207] a style advocated by Andrew Jackson Downing for "bold and mountainous country, on the side, or at the bottom of a wooded hill, or in a wild and picturesque valley."[208] Of his residential commissions, only Eidlitz's house truly met Downing's siting requirements, and some of his work with similar attributes is not residential. Houses in the style were generally three stories high, built of wood on a stone base that projected from a slope, and were capped with gabled roofs supported on exposed trusses and brackets. Most rooms had direct access to the exterior or to covered porches, galleries, or balconies. These extensions

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[203] Leopold Eidlitz I, pp. 169-70.

[204] "Destruction of 'Iranistan'," *New York Times*, 19 December 1857, p. 4. Its 60-foot high domed brick tower survived for another thirty years until it was blown up with dynamite; "Last of 'Iranistan'," *New York Times*, 10 November 1887, p. 3.

[205] "Barnum's 'Iranistan," *The Architects' and Mechanics Journal*, vol. 1, no. 2 (November 1859), p. 44; "Design for the Residence of Elias Howe, Jr., Bridgeport, Ct.," *Horticulturalist and Journal of Rural Art and Rural Taste*, no. 25 (October 1870), p. 292.

[206] Sarah Bradford Landau, "Richard Morris Hunt, the Continental Picturesque, and the 'Stick Style,'" *Journal of the Society of Architectural Historians*, vol. 42, no. 3 (October 1983), pp. 274-75.

[207] Antoinette F. Downing and Vincent J. Scully, Jr., *The Architectural Heritage of Newport, Rhode Island, 1640-1915*, second ed. (New York: Bramhall House, 1967), p. 139.

[208] Andrew Jackson Downing, *The Architecture of Country Houses; Including designs for cottages, farm houses, and villas, with remarks on interiors, furniture, and the best modes of warming and ventilating* (New York and Philadelphia: D. Appleton & Company, 1850), p. 124. The book went through nine editions by 1866 and Upjohn owned a copy; Hull, "The 'School of Upjohn': Richard Upjohn's Office," pp. 305-6.

rested on exposed structural supports and were protected by decorative balustrades that masked the underlying volumetric simplicity of the buildings to which they were attached. In a paper read to the Royal Institute of British Architects in 1867, William Robert Ware noted that such "shingle palaces" (he used Washington Irving's term[209]) were a conscious and necessary attempt at something new:

> They also show how we are trying to introduce, remotely influenced by German or Swiss example, a form of building and a kind of finish, more suited to the material in the hand than the classical details employed by our ancestors."[210]

Vincent Scully has noted that the approach was popularized in pattern books during the 1850s and discussed an example of a house designed by Henry William Cleaveland who considered himself a partisan of "the admirable publications of the much lamented Downing."[211] "Design No. XIII" is one of two that appeared within a chapter devoted to "hill-side cottages" in a book co-authored by Cleaveland.[212] It is for "a situation higher than the road on which it fronts."[213] The other, "Design No. XIV," sits in "a position below the road" although it is of board and

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[209] Washington Irving, "The Legend of Sleepy Hollow," in Washington Irving, *Selected Prose*, Stanley T. Williams, ed. (New York: Rinehart, 1950), p. 173. The reference is to the houses of the Dutch settlers of the Hudson River Valley in New York State. The story was written while he was living in England and published there in *The Sketch Book of Geoffrey Crayon, Gent.* (London: John Miller, 1820). *The Sketch Book* was published in seven installments in the United States beginning in 1819 (New-York: C.S. Van Winkle, 1819-20), but the section that included the story was not issued until 1820.

[210] William Robert Ware, "Architecture and Architectural Education in the United States," *The Civil Engineer and Architect's Journal*, vol. 30 (1 April 1867), p. 108.

[211] Henry William Cleaveland, William Backus, and Samuel D. Backus, *Village and Farm Cottages: The requirements of American village homes considered and suggested; with designs for such houses of moderate cost* (New York: D. Appleton and Company, 1856. Cleaveland and the Backus brothers maintained an architectural practice in New York City and appeared in city directories individually and as partners from 1854 through 1862; Francis, pp. 13, 21. Cleaveland was a founding member of the AIA. He left New York City after the Civil War and worked in California and Oregon. Cleaveland and William Backus also contributed designs for churches (Designs VI and X-XIII, respectively) to *A Book of Plans for Churches and Parsonages*; Backus also contributed a design for a parsonage (Design I).

[212] Cleaveland *et al*, pp. 90-94.

[213] Cleaveland *et al*, p. 90.

batten construction and considerably less ornamented.[214] While it seems likely that Eidlitz could have known the Downing and Cleaveland publications, it is equally likely that his work reflected his own knowledge of the vernacular Tirolerhäuschen of German-speaking Alpine Europe, possibly obtained by personal acquaintance but almost certainly through publications. Upjohn's small wooden churches of the mid-1840s also employed similar vertical sheathing.[215]

Agreeing with Hitchcock that American "Swiss Cottage" architecture came directly from German sources rather than English intermediaries, Landau ascribed American interest in and knowledge of "contemporary German rustic architecture" to the influence of the German émigré architects who began to arrive during the 1840s and to the German-language architectural periodicals that accompanied them. She assigned particularly high importance to *Architektonisches Skizzen-buch*.[216] Known to American architects in New York City before the Civil War, the publication was begun by several of Schinkel's students, and many of its illustrations depict buildings that recalled his interest in vernacular residential prototypes. Its plates, initially published in folios, were reissued in bound volumes, and its depiction of construction details was both graphically striking and technically useful. *Architektonische Skizzen-buch* was preceded by two similar publications, *Architektonisches Album*[217] and *Architektonische Entwürfe*,[218] the latter a periodical

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[214] Cleaveland *et al*, pp. 94-97.

[215] Upjohn, pp. 117-20. See Richard Upjohn, *Upjohn's Rural Architecture: Designs, Working Drawings and Specifications for a Wooden Church and Other Rural Structures* (New York: G. P. Putnam, 1852). The book included drawings for a small mission church, a chapel, a parsonage, and a schoolhouse.

[216] *Architektonisches Skizzen-buch. Eine Sammlung von Landhäusern, Villen, ländlichen Gebäuden, Gartenhäusern, Gartenverzierungen, Gittern, Erkern, Balkons, Blumenfenstern, Brunnen, Springbrunnen, Hofgebäuden, Einfassungsmauren, Candelabern, Grabmonumenten un andern kleinen Bualichkeiten, welche zur Verschönerung baulicher Anlagen dienen, und in Berlin, Potsdam und an andern Orten ausgeführt sind* (Berlin: Ernst & Korn, 1852-86). The journal was recommended for purchase in the *Catalogue of Books on Architecture* published by the Committee on Library and Publications of the American Institute of Architects in 1867.

[217] *Architektonisches Album. Eine Sammlung von Bau-entwürfen, mit besonderer berücksichtigung der Details und Constructionen. Redigirt vom Architekten-verein zu Berlin durch Stüler, Knoblauch, Salzenberg, Strack, Runge* (Potsdam: F. Riegel, 1837-42). The editors were Frederick Augustus Stüler (1800-65), Eduard Knoblauch (1801-65), Wilhelm Salzenberg (1803-87), Johann Heinrich Strack (1805-60), and Gustav Runge (1822-1900).

edited by the Architekten- und Ingenieur-Verein zu Berlin (Architectural and Engineering Society of Berlin). Landau referred to an illustration in *Architektonisches Album* (vol. 19, ca. 1859) of a ca. 1847 house by Ludwig Ferdinand Hesse (1795-1876) located in the Wildpark near Potsdam that employed a stone-faced ground floor similar to those used in Eidlitz's residential work of the 1850s.[219] Although they were designed well after he left Upjohn's office, Landau also suggested the possibility of Eidlitz's influence on Upjohn's Hamilton Hoppin and Alexander Van Rensselaer Houses (1856-57, Middletown, RI), adjoining structures that recalled rather than replicated "German bracketed" wood construction.[220]

Eidlitz's own "Swiss Cottage" (1850-51, Riverside Drive[221] and 86th Street; demolished) was one of several suburban villas built at the end of the nineteenth-century in Bloomingdale ("vale of flowers"), then a remote and wealthy area of Manhattan named for a town near Haarlem in the Netherlands. Bloomingdale extended along the upper West Side of Manhattan Island as far as the present Morningside Heights and consisted of several small villages. Because of its seclusion and picturesque qualities, it attracted large estates and summer homes, although an orphan asylum was located between 73rd and 74th Streets and a mental asylum between 115th and 120th Streets. Bloomingdale was served by a road that opened in 1703 between what is now 23rd and 114th Street. It linked the area to the remainder of the city and followed the present alignment of Broadway for most its run (it was called the "Bloomingdale Road" above 70th Street). The road was extended to 147th Street in 1795 and a stagecoach route opened in 1819 followed by a

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[218] *Architektonische Entwürfe aus der Sammlung des Architekten-Vereins zu Berlin* (Potsdam: F. Riegel, 1837-42).

[219] Landau, "Richard Morris Hunt, the Continental Picturesque, and the 'Stick Style,'" pp. 273-74; p. 273 n. 8; Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth, Middlesex, UK and New York: Penguin Books, 1977), p. 167

[220] Landau, "Richard Morris Hunt, the Continental Picturesque, and the 'Stick Style'," p. 275; Upjohn, pp. 124-26, fig. 77.

[221] The thoroughfare was begun in 1878 as "Riverside Avenue"; it was not called "Riverside Drive" until 1908.

streetcar line that ran on Eighth Avenue between 59th and 84th Street as late as 1879. On 9 June of that year, the Ninth Avenue elevated line operated by the Metropolitan Elevated Railroad opened from 53rd to 145th Street (it crossed over to Eighth Avenue at 110th Street), thereby providing the first rapid connection to the city's commercial core. The Metropolitan Elevated Railroad controlled the existing Sixth Avenue line that ended at 53rd Street as well as the new Ninth Avenue line.[222]

The section of Bloomingdale in which Eidlitz lived was known as Striker's Bay. Located at the heart of Bloomingdale and named after Jacob Striker, a magistrate of the Court of New Amsterdam who owned a house on what is now 96th Street. It comprised the area now bounded by 99th Street, Central Park West, 81st Street and the Hudson River and extended from 86th Street to the intersection of the present 99th Street and Amsterdam Avenue. Eidlitz's house occupied the top of a steep slope that faced the Hudson River and extended from West 86th and 87th Street to the present Riverside Drive. It might have been built on the charred foundations of the countryseat of Oliver De Lancey (1708-85), a Tory merchant, politician, and soldier, whose residence was burned in November 1777 by a group of rebels from Tarrytown.[223] Eidlitz's neighbors came to include Luke Welsh, a Tammany politician and judge who lived on 87th Street, and Egbert Ludovicus Viele, a surveyor and engineer who lived on 88th Street and prepared the

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[222] Stern *et al*, *New York 1800*, pp. 737-38; Lossing J. Benson, *The Hudson From the Wilderness to the Sea* (New York: Virtue & Yorston, 1866), p. 338; Michele Herman, "Bloomingdale"; Andrew Sparberg, "Bloomingdale Road" in *The Encyclopedia of New York City*, p. 119-20; "The Metropolitan Elevated Railroad station. Sixth Avenue and West 14th Street, ca. 1875; publisher unknown," *Nineteenth-Century New York in Rare Photographic Views*, No. 126; *Phelp's New York City Guide; Being a pocket directory for strangers and citizens to the prominent objects of interest in the great commercial metropolis, and conductor to its environs* (New York: T. C. Fanning, 1852), pp. 20, 22; "West Side Is Itself A Great City," *New York Times*, 10 March 1895, p. 20.

[223] James Bradley, "Striker's Bay," *The Encyclopedia of New York City*, p. 1132; Peter Salwen, *Upper West Side Story: a history and guide* (New York: Abbeville Press, 1989), pp. 19, 28-29; "Oliver De Lancey" in *Appleton's Cyclopedia of American Biography*, vol. 2, p. 132.

first design for Central Park.[224] Other members of Eidlitz family also held property in the area. His brother Marc owned a house located at 123 East 72nd Street, and his son Cyrus owned a residence at 347 West 86th Street. Leopold also owned four lots on the south side and seven lots on the north side of 87th Street between what is now West End Avenue and Riverside Drive; he sold them to two different housing developers in 1894.[225]

A photograph published in 1895 showed the dramatic site of the three-story house built in the "Swiss chalet" style, with a gabled roof and two rows of projecting balconies that faced the river.[226] A ca. 1876 stereograph showed a view taken from a garden located at the top of the hill.[227] The two lower stories of the main block were sheathed in panels of horizontal wood siding framed by vertical boards; the upper story was covered with vertical boards with decoratively profiled ends. The roof, pierced by a fluted brick chimney, extended past the sidewalls and the end gable featured an arcuated corbel table and was supported on an ornamented king post truss. A two-story wing projected from the main block. The second floor overhung the first and was supported on plain wood columns and scalloped diagonal braces. It was sheathed with horizontal siding on the ground floor and vertical siding at the second. Its roof was similar to that of the main block and contained a cross gable.

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[224] M. Christine Boyer, *Manhattan Manners, Architecture and Style 1850-1900* (New York: Rizzoli: 1985), p. 196. A photograph of Welsh's house reproduced in Boyer shows a chalet-inspired renovation of a two-story farmhouse; Fig. 237, p. 196.

[225] Salwen, p. 304; "The Real Estate Field," *New York Times*, 24 November 1894, p. 12. The American Exchange National Bank assigned a $20,000 mortgage to Eidlitz the following year that may have been connected with the sale; "The Building Department," *New York Times*, 12 February 1895, p. 15. Eidlitz took a one year $30,000 mortgage on a property located on the south side corner of 87th Street and Riverside Drive; "Recorded Real Estate Transfers," *New York Times*, 22 January 1895, p. 15. It was owned by the developer to whom Eidlitz sold the four lots located on the south side of 87th Street.

[226] Montgomery Schuyler, "Cyrus L. W. Eidlitz," *Architectural Record*, vol. 5, no. 4 (August 1895), p. 412.

[227] New York Historical Society, Item PR-065-0349 ("backyard of the Leopold Eidlitz house, child in hammock and neighbor's house, side of the house and precipitous slope, looking over the Hudson, stairway in foreground"), reproduced in Salwen, p. 30.

In 1854, during a period of scarce work, Eidlitz attempted to lease his newly completed house. His advertisement suggested that its isolation was passing quickly.

> COUNTRY HOUSE TO LET – To a private family, a large and commodious country house, just being finished on 86th St., North River. Two lines of stages pass every few minutes within a block of the building. Hudson River Railroad trains stop close by in the morning and evening. For a gentleman doing business in the City, this is a rare chance, it being one of the most beautiful locations on the North River. Rent moderate. For further particulars, inquire on the premises, or at the office of LEOPOLD EIDLITZ, Architect, No. 298 Broadway, where ground plans and a general view of the place may be seen.[228]

There were no takers, however, and he tried to sell it two years later.

> COTTAGE FOR SALE – A neat and convenient cottage house on 86th-st., near the Hudson River, with 2 lots of ground reaching from 86th to 85th-st., well laid out and stocked with fruit and ornamental trees and bushes, grape arbor &c., stable on 85th-st. For particulars, apply to LEOPOLD EIDLITZ, No. 208 Broadway. Fifty per cent. on bond and mortgage.[229]

The second attempt was equally unsuccessful, and he tried again the following year.[230] Work returned shortly thereafter and by 1880, the United States census noted that Eidlitz, his wife, and three daughters lived with three servants: a man born in China and two women born in Ireland.

*First Congregational Church, New London*

The full extent of Leopold Eidlitz's commissions is unknown as no office job book or similar record survives. He continued his involvement with churches after his partner Karl Otto Blesch returned to Munich in 1853,[231] and was said to have designed thirty more churches than houses.[232]

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[228] *New York Times*, 23 June 1854, p. 6.

[229] *New York Times*, 20 February 1856, p. 6.

[230] *New York Times*, 24 March 1857, p. 5; 26 March 1857, p. 5; 27 March 1857, p. 5; 9 April 1857, p. 5; 16 April 1857, p. 5; 17 April 1857, p. 5.

[231] Blesch died there on 17 November; Kathleen Curran, "Gärtners Farb- und Ornamentaufassung und sein Einfluß auf England und Amerika" in *Friedrich von Gärtner, Ein Architektenleben, 1791-1847*, Winfried

It is likely that Blesch assisted him on some of these early projects even after Eidlitz opened a separate office in 1852.[233]

Eidlitz's attempts to rent his house may have been related to the commission for the First Congregational Church, New London (1849-51),[234] the first of four Connecticut Congregational churches designed and built by him during the 1850s, each of which employed a Gothic Revival architectural vocabulary. The church was published as the work of Blesch and Eidlitz, although the illness Blesch contracted while working on St. George's could have left him unable to participate in the New London project.[235] Like James Renwick, Eidlitz quickly found himself in competition with Richard Upjohn for church commissions and the New London church was Eidlitz's first attempt at Upjohn's specialty: a Gothic building. However, it was neither English in spirit nor built for an Episcopal congregation.

The congregation that erected it is among the oldest in New London, having organized in Gloucester, Massachusetts, around 1642 and moved to New London in 1650.[236] All of its New

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Nerdinger, ed. (Munich: Klinkhardt und Biermann, 1992), pp. 207-8. Several years earlier, Blesch and Eidlitz donated a copy of G. A. Decker's folio *Der Friedhof: The Churchyard Sketches for Monuments. No. 1* (Mentz: 1847) to the New York State Library; New York State Library, *Catalogue of the New York State Library* (Albany, NY: C. Van Benthuysen, printer, 1850), p. 999. I have been unable to find any information about publication; it was probably destroyed when the New York State Library burned on 29 March 1911. No books were saved and the fire destroyed 450,000 volumes, 270,000 manuscripts, and the entire catalog of nearly 1,000,000 cards.

[232] "The late Leopold Eidlitz," *Journal of the Royal Institute Of British Architects*, vol. 15 (November 1907-October 1908), p. 654.

[233] Dennis Steadman Francis, *Architects in Practice, New York City 1840-1900* (New York: Committee for the Preservation of Architectural Records, n.d. 1980?), pp. 16, 28.

[234] 66 Union Street, New London, Connecticut

[235] H. Allen, Brooks, Jr., *Leopold Eidlitz (1823-1908)* unpublished Thesis (MA) Yale University, 1955, p. 10.

[236] *Picturesque New London and Its Environs; Groton, Mystic, Montville, Waterford, At the Commencement of the Twentieth Century* (New London, CT: American Book Exchange, 1901), pp. 41-42; *The First Church of Christ in New London* (New London, CT: New London Telegram Print, 1879), p. 6; see also *The First Church of Christ in New London; Three Hundredth Anniversary; 1642-1942* (New London, CT: First Church of Christ, New London, 1946, and "The First Congregational Church in New

London buildings have been located close to the site of the present church on Bolles (or Zion) Hill (now Bulkeley Square), "the highest elevation of a granite ledge, offering on its rounded summit a peerless platform for a church."[237] Eidlitz's appointment to design the new church followed a fire that partially damaged the congregation's fourth building (the Channing Meeting House, 1787) on 9 February 1849. Shortly thereafter, the parish voted to build a new stone church large enough to seat 800, exclusive of galleries, and decided to fund the cost by subscription rather that debt. An unspecified New London church was selected as a model for the new building but due to budget restraints, Eidlitz was instructed to revise his initial design by omitting one of the building's two corner towers, removing the spire from the other, lowering the sidewalls, simplifying the decoration and windows, and shortening the auditorium.

The contract cost came in at $21,500 and construction began in 28 May 1852.[238] The fire-damaged meetinghouse was moved to another location and the new church was dedicated on 6 July 1853. Accounts of its construction materials differ, some saying it was built of granite from the Berkshire County quarries and chestnut collected from wood lots in Pittsfield and Lanesboro while others claim it was made of Pittsfield gray limestone and Barrington bluestone, gray Berkshire limestone, or granite quarried on site. The women of the parish raised money to buy carpets and cushions, and when finished and furnished, a little over $28,000 had been spent, exclusive of costs for a bell, clock, and marble doorsteps.[239]

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London, United Church of Christ," information sheet issued by The First Congregational Church in New London.

[237] Frances Manwaring Caulkins, *History of New London, Connecticut. From the first survey of the coast in 1612, to 1860 (*New London, CT: H. D. Utley, 1895), p. 588.

[238] Joseph Edward Adams Smith, *The History of Pittsfield, (Berkshire County,) Massachusetts* (Boston: Lee and Shepard, 1869-76), pp. 428-30.

[239] Mrs. H. M. Plunkett, "The Old Pittsfield Church and its Three Meeting-Houses," *The New England Magazine*, vol.15, no. 4 (December 1893) p. 406. An information sheet issued by the church gives the amount as "about $43,000." The clock was installed after on an agreement made on 17 July 1852 between the city of New London and the church concerning the particulars of its operation.

Despite the request for a single tower, the main façade of the new church came to feature three: a tall central spire flanked by shorter gabled towers linked to the central tower by balustrade-capped walls in a variation of the Ludwigskirche theme. The exterior was clad in rough granite ashlar with arcuated corbel tables, a shallow architrave supported on heavy brackets, and stepped wall buttresses. The walls of the semi-octagonal apse that abutted the east end were blank except for shallow pilasters at the angles and small round windows located below the architrave. Round windows were present in the west end gable. Ground floor sidewall windows contained square-headed quarter-circle voussoirs while door openings and windows at the gallery level were pointed. As with St. George's, the building relied on a primal and massive presence rather than an archeologically correct assembly of details; however, the lightness of its interior woodwork owed much to Richard Upjohn's contemporary churches. Although lacking the detailed knowledge of an architectural historian, a late nineteenth-century New London writer seemed to recognize Eidlitz's intentions.

> The main features of the design belong to the most ancient Gothic style; the arches are semi-circular, the recesses for the pulpit, semi-octagonal, and the side windows double, with a broad column in the center. The architectural design and proportions of the building, with the open, airy appearance of the campanile or bell-tower, and the light and graceful spire, harmonize well with the elevated position and color of the stone.[240]

When completed, the church could seat eleven hundred. Finished in dark chestnut and smooth plaster, it contained ground-floor pews and a semi-octagonal raised chancel as well as side and rear galleries accessed from the narthex. The pulpit consisted of a reading desk situated in the chancel; the organ was situated behind the minister. In contrast to St. George's, however, the galleries were supported on slender wood piers embellished with half and three-quarter Romanesque columns and faced with a wood paneling containing chamfered X-bracing and

[240] Caulkins, p. 591.

trefoils. The nave and chancel ceilings were embellished with floral stenciling and similar, but lighter, bracing and supported on exposed wood rafters with collar ties and arched brackets that spanned between the columns both longitudinally and transversely; the ceiling above the galleries was also supported on ornamented king post trusses. Structural framing below the galleries was exposed.[241]

H. Allan Brooks accurately called the interior "an essay in monumental space conception" and described the contrast between the lightness of the building's interior and the heaviness of its exterior.

> As one walks though the narrow narthex and small door into the nave the effect is startling. An immense volume, carefully articulated and well proportioned, surrounds you. The thin, linear, structural wooden members contrast with the hard and heavy masonry and plaster wall, effortlessly conveying the function of various materials and constructions. The roof is supported on graceful columns and unobtrusive arches. A diagonal roof bracing system rationally serves as support, yet forms a decorative motif. One has the sensation of a weightless, spacious volume in which careful definition of all parts leads to a clarity and unity of the whole.[242]

Although clearly derived from Upjohn's churches, Brooks compared the "clear, monumental interior space" of Eidlitz's design with the "cluttered interior of excessive struts, cusps, etc." of Upjohn's work and concluded

> These contrasts exemplify traits of Leopold Eidlitz in distinction to his contemporaries. Monumentality of space, clear, careful articulation of structural members, and relatively abstract (as

[241] In 1857, unspecified problems with one of the towers became apparent and it was repaired rather than demolished and reconstructed as recommended. A new organ was installed in 1870 and the rear gallery was enlarged and connected to the side galleries. The chancel railings were removed in 1964 and a new pulpit, lectern, communion table, and memorial cross were installed. "The First Congregational Church in New London, United Church of Christ." Subsequent alterations to the building have been few and some of the original ceiling stenciling remains.

[242] Brooks, p. 10.

opposed to archeological) treatment of decorative and structural elements alike; all combine to show Eidlitz at his best.[243]

[243] Brooks, p. 10.

## 5. BUILDING A PRACTICE: 1852-1863

The period that extended from the early 1850s to the beginning of the Civil War was the busiest and most successful of Leopold Eidlitz's career. The success of his New York City churches lead to additional commissions in that city and in New England; however, with the exception of a large project in St. Louis, these were usually for non-liturgical rather than Episcopal congregations. While such clients did not have the social cachet of the latter, they were more numerous and offered Eidlitz opportunities he might not have otherwise received. The geographical range of his projects also continued to increase, and he began to pursue institutional and commercial work as well as religious and residential. Like Richard Upjohn, he was drawn to the Gothic for the former and tended Romanesque for the latter. By the time the Civil War began, however, most construction had stopped

*New York Crystal Palace Competition, New York City*

Eidlitz submitted an unsuccessful entry in the competition held in 1852 for the New York Crystal Palace (1853, Reservoir Square, Sixth Avenue between 40th and 42nd Streets; destroyed by fire 5 October 1858), a fully-glazed iron-framed exhibition hall that faced Sixth Avenue between 41st and 42nd Street (now, Bryant Park) next to the massive Croton distribution reservoir. The structure was intended to house the American response to the popular international commercial and cultural exhibition held in London in 1851. Much of the success of that event was attributed to the unique building in which it was held: a huge iron and glass enclosure designed by Joseph Paxton (1801-65). That relationship was acknowledged by the organizers of the New York event when they advised the competition entrants that the building was required to possess "the greatest possible area compatible with ground employable, perfect safety and eloquence of construction, a

well-calculated and pleasant admission of light, a variable coup d'oeil [glance] in the interior."[1] The structure, the first American building published in an English architectural journal,[2] cost approximately $750,000, but the exhibition that it commissioned it was not a financial success. Its backers went bankrupt in 1854, having received no interest on their investments, and the building passed through a series of owners that included P. T. Barnum. The end came on 5 October 1858 when it caught fire and collapsed in approximately fifteen minutes.[3]

The commission for the ill-fated building went to Danish architect Georg Johan Cartensen (1812-57), founder and designer of the Tivoli Gardens and Casino in Copenhagen, and his associate, Karl (Charles) Gildemeister (b. 1820), New York City architect, lithographer, and native of Bremen, Germany. It is not known how, when, or where the two met or worked on the project as they did not appear in New York City directories before 1854.[4] They were aided by eight "Assistants in the Architect's Department," none of whom appears in directories. The design was based on a Greek-cross arrangement of aisles and balconies enclosed by a glazed shell. Octagonal at the first floor and cross-shaped above, it was 365 feet 5 inches across, exclusive of projecting entrance halls, and surmounted by a 103-foot diameter central dome and eight 8-foot diameter octagonal corner towers situated at the end of the cross arms. In describing the building's structural system, Carl Condit wrote that its "Cast-iron columns supported an elaborate portal-braced system of wrought-iron arch ribs, trussed girders under flat and gable roofs, an

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[1] Theodore Sedgwick, "Draft of 1852 Statement of the American Association for the Exhibition of All Industry," quoted in Thomas Gordon Jayne, *The New York Crystal Palace: An International Exhibition of Goods and Services* Thesis (MA) University of Delaware, 1990 (Ann Arbor, MI: UMI Dissertation Services, 1991), p. 49.

[2] "Building for the New York Industrial Exhibition," *The Builder*, vol. 10 (23 October 1852), pp. 674-75. The next American work to appear in an English publication was an account of Gridley F. Bryant's alterations and additions to the Massachusetts State House, "The State House of Massachusetts, U.S.," *The Builder*, vol. 14 (5 April 1856), pp. 190-91; Robert Elwall, "Brother Jonathan Comes of Age," *Royal Institute of British Architects Transactions 8*, vol. 4, no. 2 (1985), p. 52.

[3] "Destruction of the Crystal Palace," *New York Times*, 6 October 1858, p. 4.

[4] Francis, pp. 20, 34.

arched trusses under the great central dome. The whole iron structure was sharply etched against the curtain walls of glass."[5] Exterior elements were painted a light bronze with gold ornamental features; the interior was painted in a buff or cream color, with red, blue, and yellow highlights. The colors were chosen by Henry Greenough, brother of the sculptor Horatio Greenough (1805-52).[6]

The winning scheme was selected from ten entries submitted to a committee of two engineers, Christian Edward Detmold and Horatio Allen, and an architect, Edmund Hurry.[7] Detmold (1810-87), born in Hanover, Germany, was a civil engineer who came to the United States when he was sixteen, intending to go on to Brazil to join the army. He was appointed superintending architect and engineer of the New York Crystal Palace Exhibit of Industry after working for several railroads and operating a successful iron furnace. Allen (1802-99), also a civil engineer, was an inventor and a president of the American Society of Civil Engineers. He went on to serve as a consulting engineer for the Brooklyn Bridge and the Panama Railroad. Aside from his 1848-67 appearance in New York City directories, little is known about Hurry who was the consulting architect to the Crystal Palace exhibition.[8]

During construction of the project, Detmold, Allen, and Hurry were joined by Julius B. Kroehl (d. 1867) who worked as an engineering and architectural assistant. Although personally selected by Cartensen and Gildemeister, little is known about him. He and his partner, Peter Husted, were

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[5] Carl W. Condit, *American Building, Materials and Techniques from the First Colonial Settlements to the Present* (Chicago and London: The University of Chicago Press, 1968), p. 85.

[6] "The American Crystal Palace," *The Illustrated Magazine of Art: Containing Selections from the Various Departments of Painting, Sculpture, Architecture, History, Biography, Art-Industry, Manufactures, Scientific Inventions and Discoveries, Local and Domestic Scenes, Ornamental Iron works, etc. etc.*, vol. 2 (1853), p. 251. The article contained an extremely detailed quantitative description of the building and its exhibits.

[7] *The World of Science, Art, and Industry, Illustrated with Examples in the New-York Exhibition, 1852-53 / edited by B. Sillman, Jr., and C. R. Goodrich, aided by several scientific and literary men* (New York: G. B. Putnam and Company, 1854), p. 6.

listed in New York City directories as machinists and "submarine engineers and contractors for removing rocks under water" and were part of a demi-monde of contractors and fabricators whose experience gave them knowledge that often exceeded their academically trained counterparts. In 1856, Kroehl beat John Bogardus in a competition for a cast iron fire watch tower (extant) located in Mount Morris (now Marcus Garvey) Park in Harlem. He also designed several submarines for the Union Navy during the Civil War. One of them, the *Explorer*, a privately funded commission built in New York harbor and launched during the summer of 1864, was so highly pressurized that its hull was open at the bottom. Although the Navy rejected it, Kroehl towed it to Panama where he found work as chief engineer of the Pacific Pearl Company. The submarine performed well for many years, and Kroehl, who died in Panama from yellow fever in 1867, claimed that divers working pearl beds from the *Explorer* suffered fewer injuries and gathered more pearls than those from competing companies.

Among the other entrants was Julius W. Adams (1825-1902), a New York City civil engineer and the former editor of *Appleton's Mechanic's Magazine*. His design employed vaults and an octagonal dome constructed from clusters of gas pipe. The scheme presented by James Bogardus (1800-74) and Hamilton Hoppin (1821-85), pioneers of cast iron construction in New York City, suspended a catenary curved sheet metal roof from rods attached to a 300-foot high cast iron observation tower located in the center of a 1,200-foot circumference building whose appearance "somewhat resembled the Coliseum of Rome."[9] Paxton, designer of the London Crystal Palace, entered a basilcan shed that was rejected because it was not thought to fit well on the site. New York City architects Charles Fred Anderson, George Platt, Alexander Saeltzer, Jacob Wray Mould, and Andrew Jackson Downing also submitted entries. Downing's scheme, entered by his

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[8] Francis, p. 42.

[9] Nevins confused Eidlitz's entry with that of Bogardus; David Gebhard and Deborah Nevins, *200 Years of American Architectural Drawing* (New York: Watson-Guptill Publications, 1977), p. 102.

partner Calvert Vaux after Downing died in a Hudson River steamboat fire, was rejected because it was capped by a colossal dome made of wood and canvas and, although supported on metal columns and bound by metal ties, was not made entirely of iron and glass as required by the competition brief.[10]

A fragment of Eidlitz's design survives as a colored exterior perspective.[11] It appears to have been a fully glazed basilica with one- and two storey side aisles and a three-story nave. For the most part, its exterior walls employed rectangular metal frames containing two rows of flat-headed glazing inserts separated by narrow mullions. The panels were located between iron columns and the columns were braced with diagonal buttresses and pierced rondels at the first floor. Arched panels were present at what appears to have been a transept extension; these panels contained arched as well as pointed glazing inserts. Cables were connected the upper ends of the columns but their function, if any, is unclear. The *Scientific American* wrote that Eidlitz's design used a suspension roof "intended to obviate the difficulty of spanning great widths by arches."[12] The cables sag, however, and the explanation seems unlikely because they cannot be in tension. Nevertheless, Eidlitz's scheme may reflect his knowledge of chain bridge and railway engineering concepts introduced in the architecture and architectural engineering program at the Prague Polytechnic in 1839, possibly in anticipation of the 435-foot chain railway bridge that was

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[10] Margot Gayle, "The New York Crystal Palace: America's Progress, Power, and Possibilities," *Nineteenth Century*, vol. 15, no. 1 (1995), pp. 10-15; Margot Gayle, "Georg Cartensen," *Macmillan Encyclopedia of Architects*, vol. 1, p. 389; Ivan D. Steen, "America's first World's Fair: The Exhibition of the Industry of All Nations at New York's Crystal Palace, 1853-1854," *New York Historical Society Quarterly*, v. 47, no. 3 (July 1963), p. 261; Charles Hirschfield, "American Exhibition: The New York Crystal Palace," *American Quarterly*, vol. 9, no. 2, Part 1 (Summer 1957), pp. 105-6; Jayne, p. 49; "The Crystal Palace," *Scientific American*, vol. 8 (6 August 1853), p. 370; "The Crystal Palace," *New York Times*, 15 July 1853, p.1. Illustrations of the Cartensen, Bogardus, Downing, and Paxton entries appeared in Sillman and Goodrich, pp. 1, 4.

[11] It is preserved in the Leopold Eidlitz Architectural Drawings and Papers collection at the Avery Library, Columbia University, New York City. A black-and-white photograph of it appears in Alison Sky and Michael Stone, *Unbuilt America, Forgotten Architecture in the United States from Thomas Jefferson to the Space Age* (New York: McGraw-Hill Book Company, 1976), Figure 108, "Entry by Leopold Eidlitz, Detail," p. 79.

built in Prague in 1842, or iron roof trusses used by Leo von Klenze at the Valhalla (Regensburg, 1842). Klenze had also employed iron components in a post-fire reconstruction of Karl von Fischer's Court and National Theatre in Munich (1823-25) and in the roof trusses and dome of the Befreiungshalle (Hall of Liberation) at Kelheim (1847-63).[13] Eidlitz may also have been aware of other German-speaking architects who used iron structural components. These included Georg Moller who used iron dome and spires at the Mainz Cathedral (1830) and recommended them in his writings,[14] Heinrich Hübsch who proposed an filigree iron roof reinforcement system in 1825,[15] and Rudolf Wiegmann who published a truss design in 1839 based on an 1837 patent obtained by the French engineer Camile Polonceau.[16]

While Brooks saw stylistic similarities in Eidlitz's Crystal Palace entry and his 1848 design for the P. T. Barnum house,[17] the latter represented a radical shift from a nearly exclusive reliance on masonry and wood in earlier projects that was rarely taken up in his later work. Eidlitz tended to limit the use of iron to concealed locations. He justified his approach by claiming that iron did not compare favorably with traditional materials on aesthetic or economic grounds.

> It would take a long time, also, before a respectable iron architecture could be developed, but as a cheap display is its sole object, and it has been demonstrated that there is no economy in

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[12] "The Crystal Palace, "*Scientific American*, p. 370.

[13] Werner Lorenz and Annegret Rohde, "Building with Iron in Nineteenth Century Bavaria – The Valhalla Roof Truss and its Architect, Leo von Klenze," *Construction History*, vol. 17 (2001), pp. 64-68.

[14] Georg Moller, *Beiträge zur Lehre von den Construction* (Contributions to the science of construction, Darmstadt: 1832).

[15] Heinrich Hübsch, *Entwurf zu einem Theatre mit eisener Dachrüstung* (Design for a theatre with iron roof structure, Frankfurt am Main: W. L. Wesche, 1825).

[16] Rudolf Wiegmann, *Über die Konstruction von Kettenbrücken nach dem Dreiecksystem und deren Anwendung auf Dachverbindungen* (On the construction of suspension bridges according to the triangular system and with application to roof connections, Düsseldorf: 1839); Lorenz and Rohde, p. 64. Although the Polonceau truss was used under its original name in France and England, in America, it was called the "Fink" truss after the Albert Fink, a German émigré who graduated from the Darmstadt Polytechnic in 1848; D. A. Gasparini and Caterina Provost, "Early Nineteenth Century Developments in Truss Design in Britain, France and the United States," *Construction History*, vol. 5 (1989), p. 23.

[17] Brooks, p. 19 n. 35.

> it, it has been widely abandoned. The legitimate and economical application of iron in architecture is to be found in the use of rolled iron as a substitute for wood in many constructions, such as roofs and floors.[18]

Schuyler expressed similar views.

> We do not count ourselves among those who, in aesthetic or artistic point of view, consider the introduction of iron fronts in our street architecture any improvement upon such time-honored materials as granite, stone, and marble; for the stately and solid beauty of such buildings as the Equitable Insurance and Masonic Temple here, or the Academy of Music in Brooklyn, will ever outshine the most brilliant piece of rococo ornamentation that can ever be turned out of the moulds of an iron-foundry.[19]

Brooks attributed such comments to shortsightedness and prejudice and concluded, "although [Eidlitz] could rationally accept iron construction, his romantic bias prevented him from considering iron as a material of artistic value."[20]

*Fifth Avenue Presbyterian Church, New York City*

In 1852, Eidlitz received a commission for a $112,000 church to be built on Fifth Avenue at 19th Street. It was his first Gothic building in New York City and was designed for a congregation founded in 1807 in the Wall Street area as "The Presbyterian Church in Cedar Street." Its first building, made of brick and designed by John McComb, Jr., was located on Cedar Street between Nassau and William and opened in 1808.[21] About twenty-five years later, when faced with a municipal plan to widen Cedar Street, the congregation sold the site and building for $75,000

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[18] Leopold Eidlitz, *The Nature and Function of Art, More Especially of Architecture* (New York: A. C. Armstrong & Son; London: Sampson Low, Marston, Searle & Rivington, 1881), p. 314.

[19] Montgomery Schuyler, "Polychromy in Street Architecture," *New York World*, 31 March 1872, p. 4.

[20] Brooks, p. 35-36.

[21] A drawing of the Cedar Street Church and a first floor plan appeared in Henry W. Jessup, *History of the Fifth Avenue Presbyterian Church of New York City, New York, from 1808 to 1908 together with an account of its Centennial Anniversary Celebration December 18-23, 1908* (New York: Fifth Avenue Presbyterian Church, 1909), opposite p. 10 and p. 12.

with the intention of moving north to the City Hall area. Four lots were purchased from Trinity Church on the southeast corner of Chambers and Chapel Streets; however, after finding out that Chapel Street was included in the City's street-widening plan, the congregation voided the sale and bought a lot at Duane and Church Streets. The marble-faced church built on that site (1835) cost $40,000 exclusive of land and was designed in the Greek Revival style by James Harrison Dakin (1806-52).[22] Although the congregation renamed itself "The Presbyterian Church in Duane Street," changes in the neighborhood and the northward growth of the city led them to consider moving again already in 1844. They finalized the decision in 1851 and Eidlitz received a commission the next year.

The single-towered New Jersey Belleville brownstone structure, complete with stepped wall buttresses, pinnacles, transepts, and exposed roof framing, was dedicated on 12 December 1852 as "The Presbyterian Church, corner of Fifth Avenue and Nineteenth Street" and completed the following year.[23] Jeanne Halgren Kilde noted that the organ was relocated to the front of the worship space two years later to improve congregational participation and singing.[24] Although located in the center of Merchants' Mile (Broadway from 14th to 23rd Streets) and able to seat

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[22] Born in Dutchess County, NY and trained as a carpenter, Dakin began his architectural career in 1829 in the New York City office of Ithiel Town (1784-1844) and Alexander Jackson Davis (1803-1892). He became a partner in 1832 but remained only for one year. Dakin left New York City in 1835 (city directories list him from 1831 to 1836) and went to New Orleans to work with his brother Charles Bingley Dakin (ca. 1810-39) and Irish émigré architect James Gallier, Sr. (1798-1868), both whom he had hired to work for Town and Davis. Gallier soon left, however, and Charles concentrated on work in Mobile, AL while James worked in New Orleans. He remained in Louisiana for the remainder of his career and designed a variety of religious, institutional, and governmental projects. James was highly regarded by his peers and Thomas U. Walter invited him to become a founding member of the short-lived American Institution of Architects in 1836. Arthur Scully, Jr., "James Dakin" in *Macmillan Dictionary of Architects*, vol. 1, pp. 489-91; Francis, p. 24.

[23] "Rev. Dr. Hall's Church," *New York Times*, 1 June 1874, p. 1. A drawing of the building appeared in Jessup opposite p. 42.

[24] W. H. H., "Congregational Singing in Dr. Alexander's Church, New York, *Presbyterian Magazine*, vol. 5 (October 1855), p. 475 quoted in Jeanne Halgren Kilde, *When Church Became Theatre: The Transformation of Evangelical Architecture and Worship in Nineteenth-Century America* (Oxford and New York: Oxford University Press, 2002), p. 81-82. The choir was dismissed when the organ was relocated and the choir system was abandoned altogether four years later; "Rev. Dr. Hall's Church," p. 1.

more than a thousand in two hundred pews,[25] the financial and physical growth of the congregation and the continued northward movement of the city reintroduced the need for a new facility within twenty years. Those desires were met by Carl Pfeiffer[26] whose Gothic Revival brownstone Fifth Avenue Presbyterian Church located on the northwest corner of Fifth Avenue and 55th Street (1873-76) could hold 2,500 and featured the latest advances in acoustics, mechanical heating and ventilation.[27] Eleven architects were considered for the commission, with the final choice made between Pfeiffer and George B. Post.[28] Eidlitz's building was purchased by

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[25] "Rev. Dr. Hall's Church," p. 1.

[26] Pfeiffer (1834-88) was born in Brunswick, Germany and trained in engineering and architecture before moving to the United States in 1863 when he was sixteen years old. After living in the West for several years, he established himself as an architect in New York City in 1864 and appeared in city directories until his death. He specialized in churches, institutional buildings, and apartment houses, and was active in the American Institute of Architects, serving as its secretary from 1871 to 1873. "Carl Pfeiffer" in *Biographical Dictionary of American Architects (Deceased)*, p. 470; Francis, p. 61.

[27] "Dr. Hall's New Church," 10 May 1875, p. 2. The congregation was one of the wealthiest in the city and its new site, purchased for $350,000, was said to be the most expensive acquired for religious purposes up to that time. The church building cost an additional $300,000; "New Churches in New-York," *New York Times*, 28 October 1872, p. 2.

[28] Richard Morris Hunt also entered the competition. Stern *et al*, *New York 1880*, p. 295; Jessup, pp. 51; "New Churches in New-York," p. 2; "The Fifth Avenue Presbyterian Church," *The American Architect and Building News*, vol. 13 (24 March 1883), pp. 139-40, plate; James D. McCabe, *New York by Sunlight and Gaslight. A work descriptive of the great metropolis. Its high and low life; its splendors and miseries; its virtues and vices; its gorgeous places and dark homes of poverty and crime; its public men, politicians, adventurers; its charities, frauds, mysteries, etc., etc.* (Philadelphia, PA: Douglass Brothers, Publishers, 1882), p. 625; Paul R. Baker, *Richard Morris Hunt* (Cambridge, MA and London: The MIT Press, 1980), p. 543.

George Browne Post (1837-1913) was born in New York City to a family of well-established merchants. He attended military school and studied at New York University where he received a degree in civil engineering 1858. He subsequently trained with Richard Morris Hunt for two years and formed a partnership in 1860 with fellow student Charles D. Gambrill (1832-80). Post's career developed during the transitional period between the decline of solid masonry and the rise of steel construction. He contributed to the development of tall buildings as a designer and as an engineer, and his ability to reconcile the growing need for such buildings with available technology contributed to his success. His most important early project, redesign of the original plans for the first Equitable Life Assurance Building (1868-70) involved the first building planned with elevator usage in mind. Much of his early work was in lower New York City, but his practice soon achieved national scope. His work includes the New York Cotton Exchange (New York City, 1883-85), New York Produce Exchange (New York City, 1881-85), New York Stock Exchange (New York City, 1904-07), College of the City of New York (New York City, 1897-1908), Pulitzer Building (New York City, 1889-90), Wisconsin State Capitol (Madison, 1904-07), Manufacturers and Liberal Arts Building (Chicago Exposition, 1893), and the residences of Cornelius Vanderbilt (New York City, 1882-93) and Collis P. Huntington (New York City, 1890-04). Post belonged to many local, state, and national civic and professional organizations and was an honorary member of the Royal Institute of British Architects. "George Browne Post" in *Biographical Dictionary of American*

several of the congregational trustees and given to the Central Presbyterian Church who disassembled and rebuilt it on 57th Street between Broadway and Seventh Avenue. The lot on which it stood was sold to Arnold Constable, a department store operator, and in 1876, Griffith Thomas designed a cast iron-faced 150-foot extension to Constable's building (1869, Broadway and 19th Street; enlarged 1872) to house wholesale operations.[29]

*City Hall, Springfield, Massachusetts*

The Gärtner-esque Springfield, Massachusetts, City Hall (1854-55, Court Square; burned 1905) was probably Eidlitz's first secular commission. The similarity of the main façade to that of Alexander Saeltzer's Astor Library (1853, Lafayette Place, New York City) is striking, and a local newspaper called it "the most important architectural structure ever erected in the western portion of the State."[30] Eidlitz's building replaced a much smaller town hall built in 1828.[31] Planning for the new City Hall began in 1852 and led to a competition the following year.[32] Eidlitz may have become aware of the opportunity from Solomon Merrick and William Gunn for whom he had built houses in Springfield a few years earlier.[33] His entry was selected on 7 July 1853 (the names of the other competitors are unknown) with a stipulation that costs for the new

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*Architects (Deceased)*, pp. 482-84; Winston Weisman, "George Browne Post" in *Macmillan Encyclopedia of Architects*, vol. 3, pp. 460-63 and "The Commercial Architecture of George B. Post," *Journal of the Society of Architectural Historians*, vol. 31, no. 3 (October 1972), pp. 176-203; Sarah Bradford Landau, *George B. Post, Architect: Picturesque Designer and Determined Realist* (New York: The Monacelli Press, 1998); Diana Balmori, "George B. Post: The Process of Design and the New American Architectural Office (1868-1913)," *Journal of the Society of Architectural Historians*, vol. 46, no. 4 (December 1987), p. 345.

[29] Stern *et al*, *New York 1880*, pp. 295, 714.

[30] *Springfield* [Massachusetts] *Republican*, "History and Description of the Building" in *Exercises at the Dedication of the New City Hall, Springfield, Mass, January 1st, 1856. Including the address by Dr. J. G. Holland, With a Full Description of the Building. Published by Order of the City Council* (Springfield, MA: Samuel Bowles & Company, Printers, 1856), p. 27.

[31] A sketch of the building appeared Ralph E. Burt, *Springfield 1852-1952* (Springfield, MA: 1952), p. 55. Residential in scale and detail as were the commercial buildings that adjoined it, it survived until sometime after 1934; Henry-Russell Hitchcock, *Springfield Architecture 1800-1900* (Springfield, MA: Springfield City Library, 1980), p. 4.

[32] "History and Description of the Building." pp. 27-30.

facility not exceed $35,000. On 13 August, a building committee accepted his proposal to provide design and construction documents for a fee of $1,000 and they increased the acceptable building cost to $40,000, exclusive of gas fixtures and furnishings. By the time contracts were let, the amount had risen to $47,000. Despite a new mayor's attempts to reduce expenses, however, the project went on as planned and construction began the following year. The cornerstone ceremony took place on 4 July 1854 and when the structure was finished, its price had reached $100,000, inclusive of $7,500 for land. A history of the building noted that the completed edifice was essentially unchanged from the competition entry and complimented Eidlitz "to whose taste and genius the people of [Springfield] will be indebted for the shape and shapeliness of the proudest monument of their public spirited munificence."[34]

The local newspaper described the architectural style of the new building as "Romanesque," but added "This is indefinite... it is that variety which has received the impress of the German taste."[35] Henry-Russell Hitchcock wrote that despite its "rather thin and papery design,"[36] he found it "distinctly superior to the general level of the Victorian Gothic which was soon to dominate"[37] and suggested that the approach "already provided Eidlitz with suggestions for a dignified Post-Greek Revival public building"[38] that would be reflected in the structure that replaced it: H. H. Richardson's Hampden County Courthouse (1871-74, substantially altered 1906), "the building where Richardson first found himself."[39] Caroll L. V. Meeks suggested that it may also have influenced three nearby buildings designed by Charles Edward Parker (1826-90)

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[33] Hitchcock, *Springfield Architecture 1800-1900*, pp. 20, 23.

[34] "History and Description of the Building," p. 27.

[35] "History and Description of the Building," p. 30.

[36] Hitchcock, *Springfield Architecture 1800-1900*, p. 27.

[37] Hitchcock, *Springfield Architecture 1800-1900*, p. 27.

[38] Hitchcock, *Springfield Architecture 1800-1900*, p. 27.

[39] Hitchcock, *Springfield Architecture 1800-1900*, p. 41.

of Boston: the Williston Gymnasium (1863) and the Town Hall and Memorial Tower (begun 1868), both in Easthampton, MA, and the City Hall (1871) in Chicopee, MA.[40]

Eidlitz's three-story building was 85 feet wide by 135 feet long. Made of brick and faced with local brownstone on its main façade, it was situated at the end of a row of commercial buildings and faced south onto Court Square.[41] More than twenty-five years after it was completed, a sketch and a brief description of it were published in *The American Architect and Building News* as a good example of arched brick construction.[42] Arranged in a modified basilican configuration (first floor entrances were present at the north and south facades), its shallow gabled roof was concealed behind parapets. The central portion of the main facade was located at the top of a sixteen-riser staircase bounded by projecting buttresses. It contained a triple round-arched porch situated below a tall Serliana surmounted by five small round-arched windows and an arcuated brick cornice. Flanking bays contained similar but less developed cornices, segmental arched openings at the basement and first floor, and semi-circular openings at the second. A similar arrangement was present at the eight sidewall bays. A five-stage, 130-foot clock and bell tower was located at the southeast corner of the building, facing the Square, adjacent to a neighboring building rather than at the corner of the block. Its round-headed arched openings were of various sizes. The newspaper called the tower "quite as unique in itself as it is harmonious with the style of the main structure" and wryly remarked

> The front [of the building] is impressive and imposing, and presents the most remarkable representation of one or two architectural ideas, with variations that give them all the effect of

[40] Caroll L. V. Meeks, "Romanesque Before Richardson in the United States," *Art Bulletin*, vol. 35, no. 1 (March 1953), p. 32.

[41] Hitchcock, *Springfield Architecture 1800-1900*, p. 28.

[42] Talcott Williams, "A Brief Object-Lesson in Springfield Architecture," *The American Architect and Building News*, vol. 10 (12 November 1881), pp. 229-30.

> separate and independent ideas, that we remember to have seen.[43]

Within the basement, rooms intended for minor municipal functions were located to either side of a 24-foot wide corridor that ran the length of the building. The ceiling height was 10 feet and finishes within the areas were said to be "plain and substantial." The first floor was similarly arranged with a ceiling height of 15 feet. It is likely that floor construction throughout the building relied on iron beams and brick arches because of the spans involved and an absence of partitions that aligned from floor to floor. Newspaper accounts noted that iron beams exposed in portions of the first floor ceilings spanned from the sidewalls to the corridor walls.

While the first floor contained the primary municipal offices, a library, and substantial examples of decorative painting, the second floor held the building's most expansive and impressive space: "the hall," a room said to be able to hold as many as 7,000 people.

> No description that we find ourselves able to give can do justice to the hall proper. In the first place, we are not sufficiently acquainted with the architectural terms to describe it in appropriate language, and the language would not be popularly understood if it were. In the second place, there is no hall in New England with which to compare it, and we can therefore convey no idea by comparison.[44]

With the exception of two full-width ante-rooms located at the north and south ends, the area contained no partitions, however, galleries located above the ante-rooms extended into the main space above raised seating areas, and a large raised platform adjoined the south gallery. Galleries also ran the length of the building along the sidewalls. They could seat 500 and were supported on wood columns and brackets whose appearance was said to "contribute essentially to the finish of the room." Perhaps most unusual of all was the use of clear-span iron trusses to support the roof.

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[43] "History and Description of the Building," p. 31.

> Rising to the ceiling, composed of a second or internal roof, the central part of which is 44 feet from the floor, the eye is greeted with a style of finish entirely without example in this part of the country. Iron girders extend entirely across the building, which have their offices in supporting this internal roof, and are united in a frame-work and pendants in so graceful a manner that they soon become familiar, and their slender lines cease to give offense to the eye, what ever may be their first effect.[45]

This rare use of exposed iron by Eidlitz may reflect a familiarity gained with the material in his contemporary entry in the New York Crystal Place competition. His aversion to it in subsequent projects may signal his response to the rapid destruction of both buildings by fire.

In addition to size and structural exhibitionism, the hall relied on painted decoration for effect. Its windows were painted a soft red said to exclude direct sunlight and fill the space with a soft, rose light. The ceiling was frescoed in rectangular panels and featured "a delicate cornice, fancifully colored" while the sidewalls contained painted arches and "columns of color" that extended to the ceiling. Behind the stage, large frescoed representations of George Washington and the Goddess of Liberty were present. The gallery woodwork and portions of the ceiling were painted in red and blue lines and the area was illuminated by 180 gas burners located within fourteen chandeliers and three rows of bracket fixtures. Thackeray was said to have pronounced the result "the most beautiful hall he had thus far been in America, and the equal of any, save one, that he had seen in England."[46] The building was destroyed by fire on 7 January 1905, an event said to have been caused by a monkey who overturned an oil lamp during a fair held in the hall.[47] It was replaced by the Springfield Municipal Group (1912-13, Harvey Wiley Corbett and Francis

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[44] "History and Description of the Building," p. 33.

[45] "History and Description of the Building," p. 34.

[46] "History and Description of the Building," p. 34.

[47] "$50,000 Fire in Springfield," *New York Times*, 7 January 1905, p. 5.

Livingston Pell[48]), an ensemble that consisted of a paired neoclassical city hall and municipal auditorium situated to either side of a freestanding campanile.

*St. Peter's, Westchester*

Although St. George's was an Episcopal church, its appearance was based on Romanesque forms rather then the Gothic. The notion of Eidlitz as a Gothic architect for an Episcopal congregation was first explored at St. Peter's, Westchester, (1853-55, 2500 Westchester Avenue, Bronx, NY). The circumstances of the construction and subsequent history of St. Peter's were unfortunate. The project was contested before it began when members of the congregation filed a lawsuit to prevent disturbance of existing graves. When work resumed in 1854, careless laborers burned down an existing church that was built in 1794 and the congregation was forced to worship elsewhere until the new building was completed.[49] During its design, Eidlitz was also working on the Fifth Avenue Presbyterian Church, the Eighty-fourth Street Presbyterian Church, and the Springfield, Massachusetts, City Hall. The workload may have caused him to place a classified advertisement for "three expert draughtsman" and "...two boys, 16 or 17 years old to learn the profession, one as a draughtsman the other as a clerk. Those who passed the examination at the Free Academy preferred."[50]

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[48] Corbett (1873-1954) studied at the University of California and the École des Beaux-Arts. Despite his earlier work, by the early 1930s, he became a modernist and advocate of high-rise buildings. Livingston (1873-1945) studied at Columbia University and in Europe. He worked for George P. Post before setting up his own practice and forming a partnership with Corbett. "Harvey Corbett, Architect, Dead," *New York Times*, 22 April 1954, p. 29; "Francis L. Pell, 71, Architect 50 Years," *New York Times*, 8 September 1945, p. 15.

[49] "St. Peter's (Episcopal) Church – It's History – Description of the new Building," *New York Times*, 23 July 1855, p. 1.

[50] Classified advertisement, *New York Times*, 14 February 1853, p. 5. The Free Academy was established in 1849 as a five-year school for poor boys that embraced "all the leading branches of collegiate discipline." It offered courses in civil engineering and drawing but none in architecture. "The Free Academy," *New York Times*, 13 February 1858, p. 4; Sarah Bradford Landau, *P. B. Wight: Architect, Contractor, and Critic, 1838-1925,* exhibition catalog (Chicago: Art Institute of Chicago, 1981), p. 13.

Despite his success at St. George's, Eidlitz's commitment to the Romanesque for churches seemed increasingly provisional, and in a paper read at the 16 March 1858 meeting of the American Institute of Architects, he referred to the style as "a gentle decoction of Greek and Gothic architecture, strongly seasoned with a semicircular arch."[51] Much later, in *The Nature and Function of Art, More Especially of Architecture,* he wrote

> In Romanesque architecture only here and there isolated efforts at such a complicated organism [i.e., Gothic architecture] are observable. In most cases all indication of a systematic modeling of masses is wanting... The modeling of masses in Romanesque architecture, although applied to all structural elements, may be without injustice be pronounced to express monumental vigor rather than refinement."[52]

For Eidlitz, modeling was a fundamental aspect of architecture, and its distinguishing role in Gothic made it inherently superior to other periods including Greek, Roman, and Renaissance.

> It [i.e., Gothic architecture] is a system which applies to every organic member of a monument, and directs that its mass shall be modeled in accordance with its function, by cutting away a part of the crude rectangular mass and leaving a sculptured form which accords with the true expression of a function. It leaves nothing untouched by the hand of art; it leaves no essential organic mass in its rude shape as it issues form the hands of the architect in his capacity as a scientific constructor; it leaves no functional meaning to be explained afterward by covering the face of a mask with a mask, which is merely the bas-relief representation of another structure.[53]

The *New York Times* called St. Peter's, Westchester, a "fine specimen of a country church" designed in the "constructive rural gothic style of architecture."[54] It was 96 feet long by 42 feet wide, excluding transepts that protruded an additional 14 feet on each side and a semi-octagonal

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[51] The paper was published as "On Style" in *The Crayon*, vol. 5 (May 1858), pp. 139-42. The comment appeared on the last page of the article.

[52] Eidlitz, *The Nature and Function of Art*, pp. 364, 367.

[53] The "mask" to which he referred was a reproduction of a Greek portico applied to a wall; Eidlitz, *The Nature and Function of Art*, pp. 365, 418.

[54] "St. Peter's (Episcopal) Church – It's History – Description of the new Building," p. 1.

chancel that extended 22 feet beyond the nave. The $35,000 sandstone structure featured a wood-framed steeple and a roof covered with blue and red slates supported on exposed wood roof trusses and wood columns. The nave windows were pointed in the Gothic manner; those in the octagonal chancel were similarly treated. Interior walls were plastered and painted to simulate stone. Wood trim was painted, and the pews grained to simulate oak, although not altogether successfully.[55]

Schuyler's criticism of the building began with an attack on its "excessive" height and the presence of transepts, things inappropriate to "a country parish church" and faults "commonly to be found in the work of the architect." Nevertheless, as his commentary proceeded, he revealed that his true concern was cultural rather than architectural. St. Peter's was bad, not because of architectural errors, but because its architect was an outsider. He was inherently unsympathetic to the tradition in which he had attempted to work and, therefore, incapable of producing a valid expression of that tradition.

> The impulse to the Gothic revival in this country came from the Protestant Episcopal Church, and was necessarily "Anglican." The Anglican tradition meant little to a German, for whom its associations did not exist, nor much, comparatively, to a logician, who naturally and necessarily rated its historical examples below that of France and the great German example [i.e., Cologne Cathedral] which carried the logic of Gothic to its uttermost development. Accordingly, I find the early churches of Eidlitz became, and I find remain, rather rocks of offense to the Anglicans.[56]

In an inversion of Upjohn's refusal to design Gothic buildings for non-Episcopal clients, Schuyler claimed that Eidlitz's "German-ness" would not allow him to design a building that required

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[55] "St. Peter's (Episcopal) Church – It's History – Description of the new Building," p. 1. The article attributed the design to "Mr. A. Eidlitz, Ross building, corner of Broadway and Fulton streets, New-York."

[56] Leopold Eidlitz I, p. 171-72. For a discussion of nineteenth-century notions of associationism, i.e., linkage of "Alisonian trains of imagery" to objects external to them, see George L. Hersey, *High Victorian Gothic, A Study in Associationism* (Baltimore, MD and London: The John Hopkins University Press, 1972).

"English-ness" because "the prevailing Anglican tradition did not govern him, and he neither inherited it nor really assimilated it."[57] Eidlitz rejected this idea many years later when he dismissed the notion that an architect should be a member of the creed or sect for which a building is designed.

> If we concern ourselves with the physical needs of the church only, and assume that the architect is not possessed of any information pertaining to religious ideas in general excepting those furnished by his church, it is fair to presume that the architect not familiar with the practical working of a special church would not be able to carry out the scheme without much cramming and preparation. But when we consider the art process of expressing an idea in matter, it will be found that a person without a philosophic knowledge of the religious idea would not answer the purpose at all, whether he subscribed to the creed under consideration or not... The true position of the architect – the position which it is desirable he should occupy for the good of the monument – is that of the intelligent commentator who is bent on ascertaining the true meaning of the author, without inquiring whether the author was right or wrong in what he said; when that true meaning of the author is ascertained, it becomes his duty to assume that the persons who occupy the structure accept that interpretation of the ideas as the true one.[58]

While Schuyler's xenophobic view of Eidlitz appeared in other pieces, he was not consistent in his critical stance and had previously suggested that an outsider's use of the Gothic might be acceptable in certain cases because it could be a socially progressive gesture and, therefore, applicable to building types for which cultural identity might not be an issue.

> But Leopold Eidlitz, though a German, and in so many respect a German of the Germans, was one of the most enthusiastic adherents and promoters of the Gothic revival, and found more aid and comfort from his fellow architects of British or American training and traditions than German. Cologne was to him the ultimate historical achievement of the art of architecture. But he was more than willing to join hands with those of the English

[57] Leopold Eidlitz II, p. 277.

[58] Eidlitz, *The Nature and Function of Art*, pp. 468-69.

> revivalists, who, whether inspired by Pugin[59] and ecclesiasticism or by Ruskin and Romanticism, were remaking in the [eighteen-] fifties and sixties, the architecture of Great Britain, primarily in church building, but extending their attempts to all other departments of secular work, endeavoring to show that Gothic was good for houses and public buildings, as well as for churches. This is what Ruskin was preaching in England and Viollet-le-Duc in France.[60]

The building burned in January 1877, and its exterior walls, wood roof, and interior finishes were destroyed.[61] It was rebuilt 1878-79 by Cyrus Lazelle Warner Eidlitz; the job was his first independent project. The new work included a 10-foot apse extension, a clerestory supported on granite columns with marble capitols and bases, and a brick facing applied to the inner face of the exterior walls. The roof pitch was also increased.[62] The *World* noted

> The new church is built out of a local stone of a warm gray color, rock faced, and scarcely any wrought stone is used. The plan is a vestibule, flanked by a porch and a tower, crowned with a slated spire, a nave of four bays with transepts and a seven-side apse, of which the ridge is on the same level with that of the nave. The material and its use, the simple disposition with the unmoulded arches and the low windows of the clerestory, give the outside of the church, which is set in an ample churchyard, an aspect of homely picturesqueness which is very pleasant but which hardly foretells the elaborate and finished beauty of the interior.[63]

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[59] Eidlitz Augustus Welby Northmore Pugin's *Floriated Ornament: A series of thirty-one designs* (London: Henry G. Bohn, 1849). His copy is in the Cooper Union Museum for the Arts of Decoration Library and is marked "Woman's Art School, Cooper Union. From the library of Mr. Leopold Eidlitz, October 1910." It is the only book that I have found that can be definitely attributed to his collection. Eidlitz may have seen copies of other books written by Pugin in Upjohn's library; Hull, p. 306.

[60] Montgomery Schuyler, "Russell Sturgis's Architecture," *Architectural Record*, vol. 25, no. 6 (June 1909), p. 405. While Hitchcock found "evidences of a quite prompt interest in his [i.e., Ruskin's] architectural writing in America," he also claimed to have observed a "surprisingly slight influence that writing seems to have had on actual buildings in the United States before the early seventies and after those years from the 1880s onwards." Henry-Russell Hitchcock, "Ruskin and American Architecture, or Regeneration Long Delayed" in *Concerning Architecture*, John Barr, ed. (London: Alan Lane The Penguin Press, 1968), p. 168.

[61] Montgomery Schuyler, "St. Peter's, Westchester," *New York World*, 13 June 1879, p. 5. The church burned again on 16 August 1899; "Notes of Insurance Interests," *New York Times*, 18 January 1900, p. 9.

[62] Montgomery Schuyler, "St. Peter's Westchester, p. 5.

[63] Montgomery Schuyler, "St. Peter's, Westchester," *New York World*, 13 June 1879, p. 5

A dramatic interior perspective published in *The American Architect and Building News* showed the rich scheme of painted decoration applied to the wall facing and the hammer-beam trusses that spanned the nave.[64] Schuyler concluded

> The whole church is conceived in color, and the design and the embellishment go so well together that it is impossible to tell where architecture leaves off and decoration begins. Such of the material of construction as is shown in its own color contributes to the total result.[65]

Despite Schuyler's recognition of Romanesque influences in Eidlitz's work, most critics considered Eidlitz to be a "Gothic" architect, a position that Schuyler presented in his 1908 memorial series.

> Richard Upjohn himself, the pioneer of Gothic, when he had a secular building to do... lapsed into some mild and discreet mode of the Renaissance. But nobody ever accused Leopold Eidlitz of lacking the courage of his convictions. "Gothic," he used to maintain, "is adequate to every expression," and he strove to "make it so."[66]

Perhaps this is because Schuyler's notion of Gothic architecture and, by implication, Eidlitz's, was based on construction rather than style. Five years earlier Schuyler wrote

> Gothic architecture is... exclusively the development, mechanical and artistic, of the vaulting system... it is quite certain that the characteristic forms of Gothic architecture, beginning with the pointed arch itself, arose from the requirements of vaulted building and loose much of their appropriateness, all of the "inevitability," and much of the charm which comes from their appropriateness, when they are employed in a building in which the interior is not vaulted.[67]

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[64] "Restoration of St. Peter's Church, Westchester, N.Y. by C. L. W. Eidlitz, Architect," *The American Architect and Building News*, vol. 2 (16 June 16 1877), p. 188. The original pen-and-ink illustration is in the Leopold Eidlitz Architectural Drawings and Papers collection at the Avery Library, Columbia University.

[65] Montgomery Schuyler, "St. Peter's Westchester, p. 5.

[66] Leopold Eidlitz I, p. 168-69.

[67] Montgomery Schuyler, "Recent Church Building in New York," *Architectural Record*, vol. 13, no. 6 (June 1903), p. 509.

However, he acknowledged that there were problems with taking a literal Gothic approach to contemporary work, and that another (and older) form of architecture might actually be more suitable.

> The logical inference would be that when we abandon vaulting, we should abandon the architecture that grew out of vaulting and depends upon it, and revert to the architecture to which vaulting is not essential, that is to say, to the Romanesque. For Gothic was not a completion of the Romanesque, but a transformation of it, an interruption. Romanesque was left unfinished by the interruption of its successor, and the development and completion of it on its own lines was a work that might well appeal to modern architects.[68]

Nevertheless, Gothic architecture had gone about as far as it could and despite his suggestion that Romanesque had more to say, Schuyler was also forced to admit that

> the Romanesque Revival has spent its force. There is hardly a parallel, even in our American way of treating Architecture as a mere matter of fashion, to this 'movement' so sudden, so swift and so sweeping, which subsided as swiftly as it arose.[69]

In 1905, Schuyler suggested that while the Gothic Revival was admirable because it viewed "the direct expression of mechanical facts" as an ethical issue, neither it nor its Romanesque double was capable of real success because both eventually succumbed to antiquarianism or ugliness.

> Their revival was a failure, and it deserved to fail for the reason that it was not a revival, and that it did not make the dry bones of the style live. To take medieval work as a point of departure for modern work was an excellent notion. But if, after twenty years, those who worked in it did not depart, but either copied the old work without adapting it to modern uses or made departures from it characterized only by crudity and unsightliness, there was nothing left to be said.[70]

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[68] Montgomery Schuyler, "Recent Church Building in New York," pp. 509-10.

[69] Montgomery Schuyler, "Recent Church Building in New York," p. 509.

[70] Montgomery Schuyler, "Victorian Gothic," *New York Times*, 28 August 1905, p. 6.

*St. George's Church: The Spires*

By the time St. George's Church opened in 1848, $192,510 had reportedly been spent; nearly all of it advanced by William Whitlock, Jr., the senior warden. *Harper's Weekly* wrote that the original plans were not strictly followed and the total cost was actually $250,000, including the cost of the land.[71] Meeks noted "for its time, St. George's was the most costly religious edifice in the country,"[72] and Curran concurred, calling the amount "exorbitant for the time" and compared it with Upjohn's $46,500 Bowdoin College Chapel "which was not inexpensive"[73] and his Church of the Pilgrims that cost about $50,000.[74] It appears that funding was not much of a concern to the congregation since only two years later, it spent an additional $10,000 on an unidentified chapel, possibly St. George's Chapel of Free Grace, a mission church built ca. 1851 at 19th Street and First Avenue.[75] It is likely that Eidlitz designed it although there is no documentation for the building.

Despite the cost, the members of St. George's considered their new building to be incomplete because it lacked a bell, a suitable organ (the Beekman Street instrument had been moved to the new building),[76] a perimeter fence, and the masonry spires intended to cap its twin towers.[77] A

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[71] Mouton, p. 40; "Burning of Dr. Tyng's Church," *Harper's Weekly*, vol. 9 (2 December 1865), p. 758.

[72] Meeks, "Romanesque Before Richardson in the United States," p. 30.

[73] Curran, "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," *Art Bulletin*, vol. 81, no. 4 (December 1999), p. 696.

[74] *The 1866 Guide to New York City* (New York: Schoken Books, 1975), reprint of *Miller's New York As It Is; or stranger's guide to the cities of New York, Brooklyn, and adjacent places; comprising notices of every object of interest to strangers; including public buildings, churches, hotels, places of amusement, literary institutions, etc.* (New York: J. Miller, 1866), p. 115. McFarland claimed the cost, including land and overruns, was $53,000 while Stiles put it at $65,000. H. H. McFarland, "The Church of the Pilgrims, In Brooklyn, New York," *Congregational Quarterly*, vol. 13 (second series, vol. 3, no. 1, 1871), pp. 54-70, reprinted as *Historical and Descriptive Sketch of the Church of the Pilgrims, Brooklyn, N.Y.* (Brooklyn: H. M. Gardner, Jr., Printer, 1871), p. 64; Henry R. Stiles, *A History of the City of Brooklyn. Including the Old Town and Village of Brooklyn, the Town of Brunswick, and the Village and City of Williamsburgh* (Albany, NY: Joel Munsell, 1870), vol. 3, p. 786.

[75] *The 1866 Guide to New York City*, p. 73; Moulton, p. 50.

[76] The organ cost approximately $10,000 when it was built in 1853; only the Trinity Church instrument was larger. Its light stained wood case, probably designed by Eidlitz, was 34 feet high, 36 feet wide, and 19 feet

view published in 1853 depicted them as slender octagonal pyramids supported on an arcade of round-headed arches and pierced by two rows of tiny dormers; Curran claimed they resembled those at St. Mary's (Marienkirche) at Gelnhausen.[78] An anonymous critic from *Putnam's Magazine* was not certain that the additions would improve the building because "the appearance of too great height, which the church now has, will be greatly increased by the addition of the slender spires."[79] Nevertheless, after several years of congregational discussion, they were completed on 8 October 1856;[80] the bell and clock followed the next year.[81]

The completed spires differed from the earlier illustration in that they were made of masonry and pierced in a net-like fashion. Eidlitz and Blesch likely knew of the fourteenth-century choir towers at Ulm and similar of similar spires added to that building (1844-90) and the cathedrals at Cologne (1842-80) and Regensberg (1859-64).[82] *King's Handbook of Notable Episcopal Churches In the United States* called them "a landmark in the eastern part of the city."[83] Meeks referred to them as "pierced, stone, Gothic spires on an otherwise Romanesque base and towers."[84] The parish history also referred to them as Gothic and described them as "an elegant expression of tracery in stone, at a time when a spire of any kind in solid masonry was rare in

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deep. The central front pipes were blue; the side pipes were silvered. The instrument was located in the rear gallery adjacent to a rose window and the case was designed to allow light from the window to enter the building. "Burning of Dr. Tyng's Church," p. 758.

[77] Anstice, p. 180.

[78] "New-York Church Architecture," *Putnam's Monthly Magazine of American Literature, Science and Art*, vol. 2, no. 9 (September 1853), p. 245; Curran, "The German Rundbogenstil and Reflections on the American Round-Arched Style," p. 368. The Gelnhausen church has five spires; Curran was referring to the two at the west end. The building appeared in Hope, *An Historical Essay on Architecture.*

[79] "New-York Church Architecture," p. 248.

[80] Charles Rockland Tyng, p. 255.

[81] Moulton, p. 51.

[82] Brooks, p. 9. See Ernst Ullmann, *Gotik: Deutsche Baukunst 1200-1550* (Leipzig: E. A. Seemann Kunstverlagsgesellschaft mbH, 1994).

[83] The Rev. George Wolfe Shinn, *King's Handbook of Notable Episcopal Churches In the United States* (Boston, MA: Moses King Corporation, 1889), p. 138.

New York, if, indeed, there were any other than the slender crocketed cone of [Richard Upjohn's] Trinity [Church]."[85] The clock was also unusual. Made in New York by H. Sperry & Co., it operated six dial faces, three on each tower, by means of a common shaft.[86] The spires cost $47,500, the clock $1,800, and the bell $1,250.[87] When the work was finished, Eidlitz received a check for $1,000 from the vestry "accompanied by resolutions expressing [the building committee's] satisfaction with, and appreciation of, his services."[88]

*Commercial, Governmental, and Institutional Work*

Schuyler seemed to be most at ease with Eidlitz's commercial, governmental, and institutional buildings,[89] and Heckscher described the environment in which they existed as one of rapid change, fast growth, and architectural opportunity.

> Trinity and Grace stood like magnificent Gothic bookends south and north on Broadway, but in between, all was business. What had been in the 1820s the most fashionable residential street in town became during the 1840s the center of retail commerce. Along its sidewalks stretched a great chain of department stores and hotels, a mix of new building types and old architectural styles, a whole new architecture of commerce.[90]

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[84] Meeks, "Romanesque Before Richardson in the United States," p. 23.

[85] Anstice, pp. 205.

[86] "Splendid Church Clock," *Scientific American*, vol. 12, no. 37 (23 May 1857), p. 296. The clock, said to rival that of the English Houses of Parliament, never functioned as well as expected and was connected to a "self-correcting International Business machines system" in 1946; Moulton, pp. 51, 165.

[87] Anstice, p. 207. *Harper's Weekly* gave the spire cost as $70,000; "Burning of Dr. Tyng's Church," p. 758.

[88] Eidlitz, "The Church of All Souls," p. 22.

[89] Leopold Eidlitz II, p. 277.

[90] Morrison H. Heckscher, "Building the Empire City: Architects and Architecture" in *Art and the Empire City: New York 1825-1861*, Catherine Hoover Voorsanger and John H. Kowat, eds. (New York: The Metropolitan Museum of Art; New Haven, CT and London: Yale University Press, 2000), p. 183. Upjohn's Trinity Episcopal Church and Renwick's Grace Church were completed in 1846. Trinity was located on Broadway facing Wall Street; Grace faced Broadway at 10th Street.

These changes came at no small cost to the houses and residential neighborhoods located on Broadway. Ellen W. Kramer and Dell Upton described a process that, beginning in the 1830s, involved conversion of houses for commercial use by replacing their raised entrance porches and Greek Revival porticoes with street-level plate glass fronts and granite piers modeled on Ithiel Town's enormously influential design for the Arthur Tappan Store (Pearl Street, 1826-29; demolished). Upton claimed the storefront design originated in Boston, and a period color rendering of it shows a three-bay, 4-story building adjoined by three- and four-story brick row houses. It was clad in a light colored stone, banded with narrow water tables, and surmounted by a shallow building cornice with block pediment and attic screen. At the ground level, three pairs of four-panel sliding outer doors were situated between four equally sized rectangular piers with Doric capitols below a flat lintel with shallow cornice. The outer doors preceded three corresponding pair of three-quarter glazed and paneled inner doors. Windows were double hung: 6/6 at the second and third floors, and 3/6 at the fourth.[91]

The conversion process accelerated in the lower New York City business district after the Great Fire of 16-17 December 1835 and was widely adopted in many cities throughout the United States, a situation documented by American and European writers and journalists.[92] The fire destroyed 674 buildings worth $26 million located near Wall, Broad, and South Streets. Although the financial panic of 1837 quelled the building boom interrupted by the fire, activity resumed even more furiously during the mid-1840s. By that time, Town's approach to rehabilitation of residential structures was no longer adequate to meet the demand for wholesale

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[91] Alexander Jackson Davis, artist, Ithiel Town, architect, *Arthur Tappan Store, 122 Pearl Street, New York*, ca. 1829. Watercolor. The Metropolitan Museum of Art, NY, 54.90.123, reproduced in Heckscher, p. 183; Dell Upton, "Inventing the Metropolis: Civilization and Urbanity in Antebellum New York" in *Art and the Empire City: New York 1825-1861*, pp. 20-21.

[92] Ellen W. Kramer, "Contemporary Descriptions of Manhattan and Its Public Architecture ca. 1850," *Journal of the Society of Architectural Historians*, vol. 27 no. 4 (December 1968), p. 269; Upton, pp. 20-21. Upton claimed the storefront design originated in Boston.

and retail space, and the desire for much larger buildings, many of which would be designed by émigré architects, reflected New York's rapidly increasingly financial orientation and prominence.[93] The situation was interrupted again on 19 July 1845 when another fire centered around Broad Street, Exchange Place, and William Street destroyed 300 buildings and killed 300.

*Continental Bank*

The Continental Bank (1856-57, 5-7 Nassau Street; demolished 1901) and the American Exchange Bank (1857, 126-28 Broadway; demolished 1899)[94] were stone structures with rusticated bases, arched windows, and rusticated voussoirs that implied, albeit at much reduced scale, features present in Rundbogenstil buildings.[95] The Produce Exchange (1860-61, Whitehall between Pearl and Water Street; demolished 1885), the much larger Brooklyn Academy of Music (1859-61, 176-94 Montague Street; destroyed by fire 1903), and the five-story *Brooklyn Union* Building (1868-69, 2 Front Street, Brooklyn; demolished) that came a few years later also maintained an allegiance to the style. The Dry Dock Savings Bank (1873-75, 337-43 Bowery; demolished), however, was said to flirt with Gothic. Nevertheless, Schuyler claimed that despite the presence of traditional forms in all of these buildings, all of them were, in some ways, transcendent because "they seemed to be not historical evocations, but solutions to the present

[93] For a description of these larger buildings, see Winston Weisman, "Commercial Palaces of New York: 1845-1875," *Art Bulletin*, vol. 36 (December 1954), pp. 285-302.

[94] The Continental Bank was actually a slightly earlier work than the American Exchange Bank; however, Schuyler misdated it and called it "a very great advance." The error was brought to Schuyler's attention by Russell Sturgis who may have written an article about the interior of the Continental Bank but I have not located it. Schuyler acknowledged and corrected the mistake in a note that appeared at the bottom of the last page of his series on Eidlitz; Montgomery Schuyler "The Work of Leopold Eidlitz, III: The Capitol at Albany, New York" (hereafter, "Leopold Eidlitz III"), *Architectural Record*, vol. 24, no. 5 (November 1908), p. 378. An exterior view of the bank appeared in Leopold Eidlitz II, p. 280.

[95] Although it is unknown if he contributed to their designs, both banks were built while Russell Sturgis was in Eidlitz's office. Schuyler credited Sturgis for supplying him with information about the buildings, and in a letter he wrote to Peter B. Wight, Sturgis called them among Eidlitz's best and regretted their destruction; Leopold Eidlitz II, p. 283; Peter B. Wight, "Reminiscences of Russell Sturgis," *Architectural Record*, vol. 26, no. 2 (August 1909), p. 129. Schuyler also mentioned an article about the banks (by Sturgis?) said to have appeared before his own but I have not located it.

building problems in terms of the present, things made out of their own elements and for their own purposes... works that were of no style and that yet had style." He supported his assertion with a quotation from Viollet-le-Duc: "A thing has style when it has the expression appropriate to its uses,"[96] and attempted to clarify his contention by distinguishing Eidlitz's work from Richard Upjohn's Trinity Church and Isaiah Rogers' New York Custom House (1833-40, altered 1909), buildings he deprecatingly referred to as mere "examples,"[97] perhaps because of their overtly archeological qualities or, less likely, in faint echo of the distinction between type and model made by Quatremère de Quincy (1755-1849).[98] The notion of style is a significant concern to Schuyler and most architectural critics whose ideas were formed during the nineteenth-century.

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[96] Leopold Eidlitz II, p. 277. The quotation is from *Discourses on Architecture, by Eugène Emmanuel Viollet-le-Duc... Translated with an introductory essay by Henry Van Brunt... Illustrated with plates and woodcuts* (Boston: James R. Osgood and Company, 1875), vol. 1, p. 182. It appears in the Sixth Discourse, within a discussion of the notion of style (pp. 175-87) and at the end of a description of the positive qualities of a railroad locomotive.

[97] Leopold Eidlitz II, p. 277.

[98] "The word *type* presents here less the image of a thing to copy or imitate completely than the idea of an element which must itself serve as a rule for the model. Thus, one will not say – or at least it would be wrong to say – that a statue, a composition of a finished painting [*rendu*], has served as a *type* for the copy that was made of it; but rather that one fragment, one esquisse, one thought of a master, one more or less vague description, gave birth to a work of art within an artist's imagination, whose *type* was supplied by such and such an idea, such and such a motif, or such and such an intention. The model, understood in the sense of practical execution, is an object that should be repeated such as it is; contrariwise, the *type* is an object after which each artist can conceive works that bear no resemblance to each other. All is precise and given when it comes to the model, while all is more or less vague when it comes to the *type*. Concomitantly, we see that there is nothing in the imitation of *types* that sensibility and the mind cannot recognize, and nothing that cannot be contested by prejudice and ignorance. This is what happened for example in architecture." Antoine-Chrysosthôme Quatremère de Quincy, "Type" in *Dictionnaire historique d'architecture, comprenant dans son plan les notions historiques, descriptives, archéologiques, biographiques, théoriques, didactiques et pratiques de cet art* (Historical Dictionary of Architecture, Including in its Plan the Historical, Descriptive, Archaeological, Biographical, Theoretical, Didactic and Practical Concepts of this Art), 2 vols. (Paris: Libraire Adrien le Clere, 1832), vol. 2. The translation is from Samir Younés, *The True, the Fictive, and the Real: The Historical Dictionary of Quatremère de Quincy* (London: Andreas Papadakis, 1999), pp. 254-55. Also see Anthony Vidler's introduction to and translation of de Quincy's discussion of "type" in *Encyclopédie méthodique: architecture,* vol. 3, pt. II (Paris: Panckoucke, 1825), *Oppositions*, vol. 8 (Spring 1977), pp. 147-50 and his article "The Idea of Type: The Transformation of the Academic Ideal, 1750-1830," *Oppositions*, vol. 8 (Spring 1977), pp. 95-115. Vidler sees de Quincy as a neo-Platonist who was opposed to stylistic eclecticism and whose ideas "embodied a vision of classic order based on 'typological' imitation" of the primitive hut and its perfect manifestation, the Greek temple. In contrast, Durand supported a different notion of "type" based on "the productive capacity of rules and elements according to programs inductively defined"; Anthony Vidler, "The Production of Types," *Oppositions*, vol. 8 (Spring 1977), p. 93.

The term was used within the context of literary criticism as early as the fourteenth-century. However, by the early eighteenth-century, it was applied to all of the arts and by the end of that century; a specific architectural connotation existed for the word.

Eidlitz was fiercely opposed to any role for taste in the judgment or creation of architecture.[99] Thus, for Schuyler, Eidlitz's most admirable quality was his reliance on reason rather than tradition, perhaps because personal circumstance seemed to allow no other approach.

> Reason was to him the guide of life, the guide in art. He knew no other. And the logical shortcomings of English Gothic, in comparison with "Continental," shortcomings which he took an unsparing pleasure in pointing out and analyzing, would have prevented him from taking that as a standard, especially from substituting for reason a traditional and hereditary "feeling" of which he himself did not partake.[100]

This notion of Eidlitz as an outsider, whose self-imposed or circumstantial displacement from the culture in which he found or placed himself is the source of his productivity and worth, is a complex and mutating theme that permeates Schuyler's writing. Whether Eidlitz held this view of himself is unclear, and it often seems as if Schuyler makes the point a bit too strongly.

> His whole life was devoted to what seemed to his mind the rationalization of architecture, and it was a remarkably clear and vigorous mind. He would have perfectly agreed with that bold literary reformer of architecture, Viollet-le-Duc, whom, characteristically, he found "too timid" that "we can bring the taste of this generation to perfection by making it reason."[101]

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[99] Eidlitz, *The Nature and Function of Art*, pp. 3-32, 44-50, 127, 134.

[100] Leopold Eidlitz II, pp. 277, 279.

[101] Leopold Eidlitz II, p. 280. The quotation is from *Discourses on Architecture*, Van Brunt's translation of Viollet-le-Duc's *Entretiens sur l'architecture*, p. 22. It appears in the First Discourse within a discussion of "the artistic instinct stifled by civilization" (pp. 21-23) as part of a description of taste as a function of reason and, to a lesser extent, feeling. Jordy and Coe cite passages positing reason as the historical basis of good design that appeared in Van Brunt (pp. 177-83; Sixth Discourse, a discussion of style) and in the Bucknall translation of the second volume of *Entretiens sur l'architecture* (Lecture XIII, "The Construction of Buildings," pp. 112-18, 127f; Lecture XV, "General Observations on the External and Internal Ornamentation of Buildings," p. 208; Lecture XVII, "Domestic Architecture," pp. 288-91; Lecture XIX, "Domestic Architecture – Country Houses," p. 380); vol. 1, p. 161 n. 67; Eugène Emmanuel Viollet-le-

The Continental Bank was established in New York City 1853.[102] Its $100,000 four-story structure was unusually large, its main portion extending 50 feet along Nassau Street and 60 feet into its lot. Rooms above the first floor as well as those located in a 30-foot rear extension were intended to be rented until needed by its owners. Schuyler called it "the first fireproof building erected for commercial purposes in New York, unless an exception be made of the then new and now doubly old and demolished Times Building."[103] The remark referred to the interior of the building in which a framework of iron supports carried the stone slab ceiling of the 60 by 38 foot first floor banking hall. The walls of the room were faced with light stone "resembling Caen stone, but harder,"[104] and the floor was made of dark-stained narrow pine boards. *Bankers' Magazine* did not approve of the contrast between the darkness of the floor and the richness of the painted ceiling and claimed that the light-colored, stone-clad interior walls produced "a cold and chilling effect,"[105] however; Schuyler deemed the interior "as satisfactory as it was novel and striking."[106] The ceiling of the Continental Bank was frescoed to harmonize with its "German-Byzantine" façade, while the ceiling of the American Exchange Bank was ornamented with

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Duc, *Lectures on Architecture*, Benjamin Bucknall, trans. (New York: Dover Publications, 1987), reprint of *Lectures on Architecture* (London: Samspson Low, Marston, Searle and Rivington, 1877, 1881).

Eidlitz mentioned Viollet-le-Duc (1814-79) only once in *The Nature and Function of Art*: a reference to student riots at the École des Beaux-Arts that he attributed to Viollet's overt antipathy toward Renaissance architecture; p. 79.

[102] William H. Dillistin, *Historical Directory of the Banks of the State of New York* (New York: New York State Bankers Association, 1946), p. 22.

[103] Leopold Eidlitz II, p. 280. The comment actually applied only to office buildings because the first *New York Times* Building (1857) used brick arches supported on rolled iron beams above its basement level printing presses to provided partial fireproofing. The second Harper & Bros. printing plant (1854-55) was another attempt at a fireproof structure. Sara E. Wermiel, *The Fireproof Building: Technology and Public Safety in the Nineteenth-Century American City* (Baltimore, MD and London: The Johns Hopkins University Press, 2000), p. 68.

[104] "New Bank Buildings in New York," *Bankers' Magazine and Statistical Register*, vol. 12, no. 2 (August 1857), p. 123.

[105] "New Bank Buildings in New York," p. 122.

[106] Leopold Eidlitz II, p. 282.

"simulated German Gothic tracery" to complement its Rundbogenstil façades,[107] and Winston Weisman claimed that the Continental Bank "introduced a Romanesque note derived from the works of Hübsch and von Gärtner in Germany."[108] Schuyler remarked that despite demolition of the building, "the effect" could be seen in Eidlitz's contemporary addition to the New York County ("Tweed") Courthouse (1871-76, 25 Chambers Street), "although here the supports and frames as well as the panels are of stonework."[109] Lois Severini also found a commonality in the buildings, noting that "the palazzo interpretation, modified by the *rundbogenstil*... was seminal for the later development of nineteenth-century commercial architecture."[110] She credited this notion to Hitchcock's description of Hodgson's Book Auction Rooms (J. T. Knowles, Fleet Street and Chancery Lane, London, 1855) in which he found similarities in the use of an "arcaded treatment of the principal stories" with that of

> the Rundbogenstil of von Gärtner and other German architects who were active in the 'thirties and 'forties... Like the German round-arched-style, this manner is not very 'pure' or 'correct,' but combines freely various suggestions from the Italian Romanesque, the Italian Gothic and the Italian Early Renaissance in an eclectic way."[111]

Alexander Turney Stewart's "Marble Palace," (John Kellum, 1864-69, northwest corner of Fifth Avenue and West 34th Street; demolished) is often considered the first "Palazzo style" building in New York City. Based on Charles Barry's Traveler's Club (1829-31) and Reform Club (1837-40), both of which were located on Pall Mall in London, buildings of the type were seen in

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[107] Landau and Condit, p. 54.

[108] Weisman, p. 295.

[109] Leopold Eidlitz II, p. 282.

[110] Lois Severini, *The Architecture of Finance, Early Wall Street* (Ann Arbor, MI: UMI Research Press, 1983), p. 73.

[111] Henry-Russell Hitchcock, "Victorian Monuments of Commerce," *Architectural Review*, vol. 105 (February 1949), p. 68.

England and America as being emblematic of the rising political power, urbanity, and wealth of the middle classes.[112]

This comment may be explained by Schuyler's view that the common origins of the Bank, the Courthouse, and Eidlitz's architecture in general lie in "Gaertner's Bavarian revival of the Romanesque."[113] Schuyler expanded on this idea in his discussion of the bank's façade. It was faced with stone quarried in New Brunswick, Nova Scotia said to impart a "warm, greenish tint, presenting an agreeable surface, one quite in contrast with the dull monotony of ordinary brownstone," and *The Crayon* commended the design for its "air of elegance."[114] Upjohn had used the same material for his nearby Trinity Building (1851-52), an office structure located next to Trinity Church. However, because Eidlitz employed the segmental and semicircular arched openings as well as bundled columns and tracery, assignment of a single style presented considerable difficulties. *The Crayon* called it "German-Byzantine," and *Bankers' Magazine* suggested "Gothic," noting that

> a very pleasing effect has been produced by the innumerable tiny pillars which are clustered about each window of the exterior; and were the material white marble, it would present almost as airy an appearance as the Leaning Tower of Pisa.[115]

Severini linked the particular pairing of styles to Ruskin's *Stones of Venice* (1853) in which the Byzantine and Gothic were associated with the greatest "aristocracy of commerce which the world had known before Manchester...."[116]

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[112] Heckscher, pp. 183-84.

[113] Leopold Eidlitz II, p. 282.

[114] "Our Building Stones," *The Crayon*, vol. 4 (March 1857), p. 88. Upjohn used the same stone for his Mechanic's Bank (31-33 Wall Street, 1855).

[115] "Our Building Stones," p. 88; "New Bank Buildings in New York," p. 123.

[116] Nicholas Taylor, *Monuments of Commerce*. RIBA Drawing Series (London: Royal Institute of British Architects, 1968), p. 53, quoted in Severini, p. 72. Ruskin delivered his first lectures on economic theory, *The Political Economy of Art*, on 10 and 13 July 1857 in Manchester, the center of laissez-faire capitalism;

Noting that it adjoined a contemporary building designed in the Renaissance style "with projecting bad carving" (the inevitable consequence of a culturally suspect attempt by its German émigré architect, Alexander Saeltzer), Schuyler complimented Eidlitz's "effect of massiveness and solidity" obtained "virtually by the employment and exploitation of one dimension, the dimension of thickness," an approach and result consistent with his German training and heritage.[117] A few paragraphs earlier, Schuyler had called Saeltzer's Gärtner-inspired and, therefore, culturally appropriate design for the original (now south) wing of the Astor Library "a tolerable specimen" of the style.[118] His $185,000 bank designed for Duncan & Sherman Company was given a mixed review by an anonymous critic, however.[119] The comments were similar to Schuyler's regarding the excessiveness of the decoration, but they also mentioned ill-conceived attempts to conceal the building's iron structure with cladding made from inflammable materials.

Schuyler claimed that that Eidlitz was warned by his client not to attempt to compete with Saeltzer's over-wrought façade, and Eidlitz was said to have made assurances that nothing would project beyond the plane of the wall. Schuyler described the result as powerful, economical, and, most of all, rational:

> ...the main vertical lines of the front were developed and ramified from bottom to top, until they were merged in the attic and cornice, which constituted a single feature. And all this in a front which, in mere elevation, was 'skeletonized' to the irreducible minimum of masonry.[120]

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J. Mordaunt Crook, *The Dilemma of Style: Architectural Ideas from the Picturesque to the Post-Modern* (London: John Murray, 1987), p. 80.

[117] Leopold Eidlitz II, p. 283.

[118] Leopold Eidlitz II, p. 282.

[119] "Duncan & Sherman's Banking-House," *The Crayon*, vol. 3 (March 1856), pp. 214-15.

[120] Leopold Eidlitz II, pp. 283-84.

Sarah Bradford Landau and Carl Condit suggested that façade's sculptural qualities also reflected Eidlitz's pragmatic use of deep reveals to allay a fire warden's concern for adequate support of the building's massive stone cornice.[121] An additional story was added to the building before it was demolished. Schuyler felt that its appearance was thereby ruined and caustically remarked that the "superadder" of the alteration undoubtedly considered it "pure Gothic."[122]

*The Brick Presbyterian Church*

Eidlitz's involvement with the project began sometime before November 1856 when the congregation of an existing church (1857-8, demolished)[123] decided to relocate. The building, located on the site of a villa at what was then the edge of settlement, quickly became surrounded by an area of intense development.[124] As the city grew, the area became increasingly commercial and, after a long and acrimonious fight with the municipal government over property development rights, the site was sold in 1856. It was quickly occupied by a new five-story building for the *New York Times* (41 Park Row, Thomas R. Jackson, 1857; altered). George B.

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[121] Landau and Condit, p. 54.

[122] Leopold Eidlitz II, p. 284.

[123] Fifth Avenue and 37th Street, New York City.

[124] The congregation began as the First Presbyterian Church in New York City in brick building located on Wall Street (Wall Street Presbyterian Church, Joseph François Mangin, 1710; demolished). A view of the first building appeared in "Burning of Zenger's 'Weekly Journal' in Wall Street, November 6, 1734," an illustration by Harry Fenn "based on original records and prints in [the] Lenox Library and [the] New York Historical Society" for Frederick Trevor Hill, "The Story of a Street, II.–Wall Street in Colonial Times," *Harpers Monthly Magazine,* vol. 116 (May 1908), p. 839. It was reproduced in Knapp opposite p. 10; an undated first floor plan also appeared in Knapp opposite p. 76. Although the Wall Street church was enlarged in 1750, congregational growth required a new facility that was located on the northeast corner of a triangular lot bounded by what are now Beekman and Nassau Streets and Park Row, across from The Green, the future site of City Hall (Joseph François Mangin [*fl* 1794-1818] and John McComb, Jr. [1763-1853]). Designed by John McComb, Jr. in 1767 and dedicated on 1 January 1768, the building was referred to as the "New Church" until 1799. Its south-facing facade of the gable-roofed structure opened onto Beekman Street and the north-facing endwall containing a large Palladian window visible from the intersection of Nassau Streets and Park Row and The Green. The church was made of brick and later received a wood steeple that was probably added in 1784 during repairs made to damage caused by the British when they used the building as a hospital and prison during their occupancy of New York City. Shepherd Knapp, A *History of the Brick Presbyterian Church in the City of New York* (New York: Trustees of the Brick Presbyterian Church, 1909), pp. 17-33, 73-78.

Post successfully incorporated Jackson's building within a new thirteen-story structure (1888-89; demolished) while allowing operations to continue during construction. The Potter Building (Norris Gibson Starkweather, 36 Park Row, 1883-85) also came to occupy a portion of the church's former property. Located on the east side of City Hall Park, the area became known as Printing House Square because it contained the headquarters of the *Sun* (located in the old Tammany Hall at Frankfort and Nassau Street), the *Tribune* (Richard Morris Hunt, 1873-75, Edward E. Raht, 1881-81; demolished), and the *World* (George B. Post, 35 Park Row, 1889-90, demolished.[125]

Although a specific site had not been chosen for a new building, the trustees commissioned tentative plans for a church and lecture room.[126] The church was to resemble the existing structure in shape and arrangement of pews, but while the pews might be made larger, the overall capacity was to remain the same. Other matters were less clear. A lecture room originally intended to be located in a basement was dropped in favor of a rear chapel although it might entail an additional $10,000. The location of an organ intended to replace a cello as the source of music was also unresolved. Perhaps the ambiguity of the demands and the rigidity of the architectural approach exceeded Eidlitz's patience and interest, but after February 1857, the project went to Thomas Thomas and Son. Griffith Thomas was designated "architect of the church" sometime after 18 May 1858 and the building was dedicated on 31 October of that year. It is also possible that Eidlitz's previous experiences with relatively non-hierarchical Congregational groups diminished his desire to accommodate the conservative views of the

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[125] Knapp, pp. 25-26; Stern *et al*, *New York 1800*, pp. 401, 414-15, 416, 429-30; *The 1866 Guide to New York City*, pp. 61, 77; Nathan Silver, *Lost New York* (Boston and New York: Houghton Mifflin Company, 2000), p. 146; "The Reconstruction of the 'Times' Building," *Harper's Weekly*, vol. 32 (27 October 1888), p. 818.

[126] Knapp, pp. 277-92. An engraving of the building appeared in "The New Brick Church in Fifth Avenue," *Harper's Weekly*, vol. 2 (13 November 1858), p. 1 and was reproduced as the first frontispiece in Knapp.

congregation's pastor.[127] In any case, Griffith Thomas was designated "architect of the church" sometime after 18 May 1858 and the building was dedicated on 31 October of that year.

*Second Congregational Church, Greenwich*

For Schuyler, a German Gothic building built for a non-Anglican congregation would be preferable to a German Gothic building built for an Anglican congregation. Eidlitz provided the latter for the Second Congregational Church, Greenwich, Connecticut (1856-59),[128] a church "to which the ecclesiological tradition does not apply."[129]

On 7 December 1852, a committee was appointed to consider a new church for the congregation. It initially intended to build a $15,000 wood addition to an 1802 structure but decided to proceed with a Gothic stone building, complete with slate roof and spire, whose cost was not to exceed $25,000. The decision was not approved by all members of the committee due to fears of ruinous

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[127] Kilde quoted an 1843 sermon in which Gardiner Springer expressed dissatisfaction with "the absurd doctrine of liberty and equality" and his fear that "the bold assumption of the power of law by an infuriated mob" could occur because "the bonds of authority hang loosely around the rising generation"; p. 25. The theologically liberal Charles G. Finney had preached to large audiences at Springer's church during July and August 1828; Kilde, p. 26. Samuel Cox, the minister at the time, was on vacation and had not been consulted. As a result, Arthur Tappan and some of his friends left Springer's church to organize a new one under Finney.

[128] Although services had been held in a 32-foot by 26-foot wood meetinghouse built in 1701, the Second Church of Greenwich, Connecticut was officially organized in May 1705 in response to township growth and needs that could not be filled by the First Church established in 1670. The Connecticut State Assembly authorized establishment a new church in West Greenwich in 1716, and new buildings were completed in 1719, 1799, and 1802. Rev. Oliver Huckel, "The Date of Our Beginnings" "Some Milestones in Our History"; Julia E. Bell, "Some High Lights In Our History" in *The Old Church Tells Her Story*, pp. 94, pp. 125-26, 133; "One Hundred and Fiftieth Anniversary of the Second Congregational Church, Greenwich, Conn.," *New York Times*, 8 November 1866, p. 1.

[129] A view of the church appeared in Leopold Eidlitz I, p. 171. An addition to east end was designed by William Bunker Tubby (date unknown), and the building was further enlarged and altered in 1901 by Wilbur S. Knowles. Tubby (1858-1944) was born in Des Moines and studied architecture at the Brooklyn Polytechnic Institute. He appeared in New York City directories in 1883 and worked with his brother beginning in 1900. His practice was centered in New York and New England and after dabbling with the Romanesque Revival, he came to favor Colonial Revival and Classical modes of design. "William B. Tubby" in *Biographical Dictionary of American Architects (Deceased)*, p. 608; Francis, p. 76; "W. B Tubby Architect Here for 61 Years," *New York Times*, 10 May 1944, p. 19. Knowles (1857-1944) was a New York City architect whose practice was mainly residential. Mead, "The Fifty Years from 1856 to

costs and architectural hubris, and several members of the church resigned over the decision. The congregation was probably acquainted with Eidlitz's First Congregational Church in New London, Connecticut (1849-51), and the crow-stepped gables of the Greenwich building show its influence. In a congregational history compiled in 1930, Eidlitz was referred to as "a young man of about thirty-five years of age, and at the beginning of his career."[130]

Final plans were accepted on 11 April 1856 and the building was erected on what was said to be "the highest ground between New-York and Boston." in deference to the Congregational custom of putting buildings on the highest available hill.[131] When bids came in, costs had increased to $32,500, however, the cornerstone was laid on 27 October 1856, and the 900-seat building was dedicated on 8 December 1858; the final cost was $46,300. A 212-foot pierced stone spire that could be seen from great distances on Long Island Sound was completed the following year. The old church had been relocated to accommodate the spire; it was moved again and remained in use until it burned on 4 July 1866. The congregational history noted that no comparable building existed at that time outside of the largest cities and, after mentioning the projects with which Eidlitz had been involved throughout his life, the author concluded "But if he had done nothing else, this spire would in itself be a lasting memorial to his thought and skill. For grace and symmetry in an ideal situation, where shall we find its equal?"[132]

Despite Schuyler's preference for the English variety of Gothic architecture, the German variety is of at least equal significance. Giorgio Vasari derisively used the term *maniera tedesca* (German style) to categorize all non-classical northern European architecture, i.e. German,

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1901" in *The Old Church Tells Her Story*, p. 134; "Wilbur S. Knowles," *New York Times*, 13 May 1944, p. 19.

[130] "Episode 6, Building in the Great Stone Church, 1856" in *The Old Church Tells Her Story*, p. 50.

[131] "One Hundred and Fiftieth Anniversary of the Second Congregational Church, Greenwich, Conn.," p. 1; Mead, "The Fifty Years from 1856 to 1901" in *The Old Church Tells Her Story*, p. 138.

[132] Nelson B. Mead, "The Fifty Years from 1856 to 1901" in *The Old Church Tells Her Story*, pp. 134-40.

French, and English. However, by the end of the eighteenth-century, primarily due of the work of Romantic writers and archeologically inclined architects, Gothic buildings came to be seen as a positive and unifying aspect of German culture. After Napoleon's occupation of German-speaking lands, political and architectural views merged and resulted in an explosion of Gothic designs that ranged from Schinkel's proposals for a mausoleum for Queen Louise (1801) and a huge church to commemorate Napoleon's defeat (1815) to calls for the reconstruction of Cologne Cathedral.[133] Nevertheless, despite his views on the origins of Gothic architecture, Schuyler's enthusiasm for the Greenwich church was obvious.

> In spite of the unmistakably academic, German academic, window traceries, the general treatment, even the treatment of the open spire was, and is, so unacademic. It seemed as if an inspired village mason, aided, or even possibly impeded, by a manual of German geometric Gothic, had piled up stone, in straightforward pursuance of "a refined building purpose."[134]

For Schuyler, the building was successful not only because of its designer's skill, but also because it unaffectedly revealed and expressed Eidlitz's cultural identity.

The validity of Schuyler's thesis could be tested because "a very typical and extremely pretty Episcopal church, contemporary with it, from the designs of one of the most accomplished of the Anglican revivalists, Mr. Frank Wills"[135] adjoined Eidlitz's building. Consistent with previous

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[133] Michael J. Lewis, *The Politics of the German Gothic Revival: August Reichensperger* (Cambridge, MA and London: The MIT Press, 1993), pp. 76-77.

[134] Leopold Eidlitz I, p. 172-73.

[135] The building, Christ Church (date unknown), was demolished and replaced by a larger structure 1909-10; Montgomery Schuyler, *American Architecture and other Writings by Montgomery Schuyler*, William Jordy and Ralph Coe, eds., 2 vols. (Cambridge, MA: Belknap Press of Harvard University Press, 1961), vol. 1, p. 147 n. 6. Wills (1822-56) was born in England, immigrated to Canada, and then to America. He appeared in New York City directories 1848-56 and was a member of the Ecclesiological Society of London and New York; his articles appeared frequently in the latter group's journal. Wills died in Montreal while working on Christ Church Cathedral (1857-60). His book, *Ancient English Ecclesiastical Architecture and Its Principles, Applied to The Wants of the Church At the Present Day* (New York: Stanford and Swords, 1850) repeated many of the arguments made in *The True Principles of Pointed or Christian architecture: set forth in two Lectures delivered at St. Marie's, Oscott, by A. Welby Pugin, Architect and Professor of Ecclesiastical Antiquities in that College* (London: John Weale, 1841). Wills'

comments, Schuyler acknowledged and embraced the architectural dissonance and cultural relativism inherent in the ensemble.

> ...the design shows no intention of conforming to its surroundings, [and] must, indeed have seemed more incongruous with the Greenwich of 1857 than it seems with the Greenwich of 1908 [when the criticism was written].... The contrast is instructive. The Anglican edifice nestles in the valley. The Teutonic presentation of Congregationalism domineers from the hill, with excellent effect in its own way, which is not at all the way of the other."[136]

The church apparently saw things in a different light, and its history referred to Eidlitz as "a young Gothic architect from Prague,"[137] in effect, a young Gothic architect from Germany.

While the details of the wood interior differ little from the First Congregational Church (1849-15, New London, Connecticut), the presence of transepts whose height was equal to that of the nave and whose width nearly so suggested to Brooks that Eidlitz had "introduced a specific technique to create a large volume"[138] in the Greenwich church. He noted that the arrangement had minimal impact on the rectangular shape of the nave while the cross-gable formed by the transept "increased the open space by taking the place of the bays."[139] He also noted that because the roof support columns were moved out of the crossing and engaged with adjacent walls and galleries, fewer roof framing members were needed.[140] This "transeptual scheme"[141] (Brook's term,

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book was well and widely received and it condemned much Gothic Revival church architecture for its vulgarity, ornateness, and inexpressivity of purpose. Phoebe B. Stanton, "Frank Wills" in *Macmillan Encyclopedia of Architects*, vol. 4, pp. 404-5; "Frank Wills" in *Biographical Dictionary of Philadelphia Architects: 1700-1930*, Roger W. Moss and Sandra L. Tatman, eds. (Boston, MA: G. K. Hall & Co., 1985), p. 861. Richard Upjohn owned a copy of Wills' book and Eidlitz adapted passages from it in *The Nature and Function of Art, Especially Architecture.*

[136] Leopold Eidlitz I, p. 173.

[137] "Episode 6, Building in the Great Stone Church, 1856" in *The Old Church Tells Her Story*, p. 50.

[138] Brooks, p. 11.

[139] Brooks, p. 12.

[140] Brooks, p. 12.

[141] Brooks, p. 17.

perhaps borrowed from Schuyler[142]) emphasized the unique structural, volumetric, and programmatic qualities and of columns and walls. Some of the original effect of the design was lost when the building was "restored and redecorated" ca. 1930 and its painted decoration covered up.[143]

Eidlitz may have gotten his approach to volumetric unification from Upjohn's Church of the Holy Communion (1844-45, Sixth Avenue and 20th Street, New York City, recently a discotheque), "a very costly and singular building"[144] that featured an entrance located in a prominent south transept and a chancel treated as an area distinct from the nave, although of equal height.[145] Although the First Congregational Church did not contain transepts, Eidlitz may also have been aware of Upjohn's St. James's Church (1847-50, New London, Connecticut). Its nave, chancel, and transepts were of a common height and its cruciform-shaped plan was adapted to the needs of its Low Church congregation by placing ground floor seats (no side galleries were present) in the transepts and facing them toward the crossing.[146]

Eidlitz may have developed this approach while working on the Second Congregational Church (Greenwich, 1856-58),

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[142] See Leopold Eidlitz I, p. 172.

[143] "Dr. Oliver Huckel, A Writer, Is Dead," *New York Times*, 4 February 1940, p. 43. The stone steeple was rebuilt at the same time.

[144] Jonathan Greenleaf, *A History of the Churches, of all Denominations, in the City of New York, from the First Settlement to the Year 1850*, second ed. (New York: E. French, 1850), p. 108.

[145] Phoebe Stanton, *The Gothic Revival and American Church Architecture: An Episode in Taste 1840-1856* (Baltimore, MD: The John Hopkins Press, 1968), p. 68-69.

[146] Upjohn, p. 77. Eidlitz may have been in Upjohn's office when the job came in on 21 October 1846; Upjohn, p. 76.

The "transeptual scheme" became a recurring motif in Eidlitz's religious and secular work and achieved its most ambitious (and unfortunate) implementation in the Assembly and Court of Appeals chambers of the New York State Capitol in Albany.

> Where an absolutely uninterrupted space becomes a necessity in the interior of a structure, or a single cell forming part of a structure, as for instance, in a deliberative assembly or courtroom, the transept is a form which permits of a large open area, the piers supporting the central vault being in fact, and of necessity, placed outside of the assembled audience.[147]

Despite Brook's delight in large spaces unencumbered by structural members, Eidlitz later wrote that he was uninterested in creating such spaces without adapting them to the needs of their users. Noting that interior piers or columns were a feature of medieval work because "the span of an arch is limited by considerations of economy, space, material, and labor,"[148] he dismissed the increasingly common desire for "a free and full view of any and all parts of the interior of a room"[149] on aesthetic grounds claiming that it produced an effect comparable to "plaster spread equally over an indefinite space," a "picture" without foreground, middle-ground, or background.[150] The dignity traditionally conferred by a foreground relationship to "some structural feature" for the occupants of such a space was lost, and he concluded

> The individual man is nowhere to be found; there is no index of what the mass before us is composed of. A structure with emptiness as its chief excellence cannot, by human contrivance, [or] be made to express any idea in matter.[151]

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[147] Eidlitz, *The Nature and Function of Art*, p. 402.

[148] Eidlitz, *The Nature and Function of Art*, p. 400.

[149] Eidlitz, *The Nature and Function of Art*, pp. 401-2.

[150] Eidlitz, *The Nature and Function of Art*, p. 402.

[151] Eidlitz, *The Nature and Function of Art*, p. 402.

*The Broadway Tabernacle Congregational Church*

In 1830, a new Congregational church,[152] the Union Presbyterian Church, funded by New York City merchant Arthur Tappan (1786-1865) moved into an existing church building located at Washington and Dey Street. Two years later, the congregation, now known as the Second Free Presbyterian Church, and its well-known revivalist preacher, Charles Grandison Finney, (1792-1875) needed more space and moved into the financially unsuccessful Chatham Garden Theatre, a structure erected in 1824 (designer unknown) at 100 Chatham Street in the heart of the Jewish residential and mercantile quarter. The first gas-lit theatre in New York City, it was situated near Five Points, a notoriously dangerous neighborhood located close to the commercial district in lower Manhattan. Use of a theatre, a building type more often associated with immorality than religion, was a radical gesture for a Protestant group, and by the time it was occupied by the congregation as the Chatham Street Chapel, it had become better known for its saloon, circus, equestrian acts, and prostitutes than its plays. Nevertheless, its semi-circular auditorium was about forty-five feet wide and about thirty feet deep, exclusive of the stage, and the building could seat about 2,000 on ground-floor benches and three galleries. It easily accommodated the large crowds that Finney attracted, thereby confirming and legitimizing its use for religious activities. Although it was altered to enhance seating and sight lines, the stage and proscenium were retained in recognition of how those architectural features enhanced the Finney's presence and presentation.

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[152] The first Congregational services were held in New York City in 1804 under the auspices of the Presbyterians, and a church was organized the following year. Although the group erected a building on Elizabeth Street in 1809, they disbanded under heavy debt and sold the property. In 1817, another Congregational church was established, but it reunited with the Presbyterians four years later. For a history of the Broadway Tabernacle Church's predecessors and contemporaries, see L. Nelson Nichols and Allan Knight Chalmers. *History of the Broadway Tabernacle of New York City* (New Haven, CT: The Tuttle, Moorehouse and Taylor Co., 1940), pp. 41-73; Kilde, pp. 22-55; "Dedications. Opening of the New Broadway Tabernacle," *New York Times*, 27 April 1859, p. 12; "Broadway Tabernacle Dedication Impressive," *New York Times*, 6 March 1905, p. 12.

The church supported itself by renting the auditorium to a variety of moral reform groups, and the space became increasingly associated with anti-slavery sentiment. That practice, and the success of its revival-based religious programs, created a desire for a larger facility, and within three years of opening, its members began to make plans for a new building to be designed by Finney and retain the theatrical configuration. In acknowledgement of its fashionable location at 340 Broadway, the new building was called the "Broadway Tabernacle." Erected by builder Joseph Ditts, a member of the congregation, it cost $66,500, including $45,000 for its 100-foot-by-100-foot lot. Although able to hold 3,000 and optimized for preaching, it opened in May 1836. By that time, however, the approach had lost much of its appeal. The era of revivalism had ended and the new location was not likely to attract the sort of patrons who would be responsive to such an approach. After the congregation moved out of the Chatham Street Chapel, it resumed operation as a theatre. [153]

In 1838, an unsuccessful attempt was made to merge the Broadway Tabernacle and the former Dey Street Presbyterian Church (by then Congregationalist) under the jurisdiction of the Third Presbytery. By the early 1850s, the neighborhood in which the building was located was becoming increasingly commercial and congregants were moving north to escape the congestion. In recognition of the situation, the property was sold and Finney's church was demolished in May 1857 to allow for construction of a dry goods warehouse for Carter, Kirtland & Co. The proceeds from the sale paid for a new structure designed by Eidlitz located nearly three miles uptown near the intersection Broadway, Sixth Avenue, and 34th Street. The site extended 100 feet on Broadway and 150 feet on 34th Street and consisted of most of ten lots purchased for $78,500.[154]

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[153] For a description of the presentations and their audience, see "Walks Among the New-York Poor," *New York Times*, 21 January 1853, p. 2. By 1880, it was named Blanchard's Amphitheatre and hosted circuses; "Manhattan Sites Used For Circuses," *New York Times*, 9 June 1929, p. RE2.

[154] "New-York City. The New Tabernacle Church – Laying the Corner-stone," *New York Times*, 26 December 1857, p. 8; Thompson, Joseph P. "Historical Sketch of the Broadway Tabernacle, New York

Eidlitz's design and estimate was approved on 17 July 1857: the cost was not to exceed $75,000.[155]

The new building was said to employ "perpendicular Gothic"[156] forms often, although not exclusively, associated with High Church ritual. This may reflect changes made after Finney's departure in 1837 in which congregational leadership increasingly changed its focus from revivalism and reform to worship and desired an architectural environment suitable for their new liturgical practices.[157] A newspaper account stated that the new building was to be 180 feet long by 88 feet wide and, although not as large as the old church, it was to contain rooms for the pastor, lectures, Sunday school, and a library. The cornerstone was laid on Christmas Day 1857 and the lecture room was to be ready by the following April and the building completed by Thanksgiving Day.[158] That event did not happen until 24 April 1859, however, and during the intervening period, the congregation moved into the new chapel after worshiping in a rented space located at 29th Street and Broadway.[159]

The completed Gothic Revival building was 30 feet shorter than originally planned and, because Broadway crossed the site at an angle, it faced Sixth Avenue. Nevertheless, it contained all of the features described in the newspaper article. A description published in *Congregational Quarterly* written by its pastor described the building in considerable detail. Affecting a modesty somewhat at odds with a building that Kilde called a "veritable cathedral of Congregationalism,"[160] the

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City," *Congregational Quarterly*, vol. 2, no. 5 (January 1860), p. 64. A portion of a lot located on Sixth Avenue was later sold for $33,000; Nichols and Chalmers, p. 110.

[155] Nichols and Chalmers, p. 111.

[156] Thompson, p. 65.

[157] Kilde, p. 64.

[158] "The Broadway Tabernacle," *New York Times*, 14 April 1857, p. 5; "New-York City. The New Tabernacle Church – Laying the Corner-stone," *New York Times*, 26 December 1857, p. 8.

[159] "Dedications. Opening of the New Broadway Tabernacle," *New York Times*, 27 April, 1859, p. 12.

[160] Kilde, p. 56.

author began by noting that its design was "...carried out with a chaste and almost severe simplicity, which imparts an air of grandeur and beauty to the whole structure."[161] A 135-foot buttressed and pinnacled corner tower sat to the right of the main entrance, and a two-story pastor's residence to the left.[162] In typical Eidlitz fashion, the transepts were as tall as the nearly 70-foot high nave and contained tall, pointed arch windows that aligned with similar, but shorter, openings below. The nave clerestory also contained tall windows, while the buttressed 34th Street side aisle elevation featured small trefoils above windows similar to those in the lower portion of the transepts.[163]

The gable-roofed central block contained a worship space ("audience room") that could seat 1,600 and was 76 feet wide by 90 feet deep, exclusive of a 28-foot deep pulpit recess. The ground floor contained three double-blocks of forward-facing pews flanked by tiers of wall pews. Full-length side galleries contained five rows of pews, and additional seating was present in a choir and organ gallery located above the front vestibule. A contemporary account noted "In the ground plan of the interior the building presents a parallelogram; but the roof is cruciform...."[164] Behind the worship space, a 28-foot by 85-foot lecture room could hold 500. A finished basement with a separate entrance from 34th Street[165] was located below the lecture room, and a suite of classrooms and parlors above. A connecting chapel was located at the rear of the complex.

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[161] Joseph P. Thompson, "Historical Sketch of the Broadway Tabernacle, New York City," *Congregational Quarterly*, vol. 2, no. 5 (January 1860),, pp. 65-66.

[162] See *The 1866 Guide to New York City*, pp. 76, 82; *Nineteenth-Century New York in Rare Photographic Views*, Frederick S. Lightfoot, ed. (New York: Dover Publications, Inc., 1981)No. 108, "West 34th Street from Fifth Avenue, ca. 1866; E. & H. T. Anthony & Co."; Greenleaf, pp. 401-2; Leopold Eidlitz I, p. 175.

[163] Elwall, "Brother Jonathan Comes of Age," p. 52, fig. 3.

[164] Thompson, p. 64.

[165] A drawing of a what may be the passageway leading to the entrance is described as a "rendered perspective study in color of a cloister" in the Leopold Eidlitz Architectural Drawings and Papers collection at the Avery Library, Columbia University. The drawing is reproduced in Gebhard and Nevins, p. 103.

> Entering from the Avenue, one sees before him a nave 90 feet in length, 34 feet wide, and nearly 70 feet high – a large church of itself... Through the rich oak-hued case of the organ, there are glimpses of the groined ceiling... and the mellow tints of the clere-story windows above the chapel. Standing at the door of the nave, one is struck with the perfect proportions of the house, the admirable simplicity and taste of its details, and the solidity of the whole structure...
>
> The windows are of colored glass, so happily toned as to subdue the light without making it somber [sic], and are free alike from grotesque figures and gaudy colors. The walls are colored uniformly in drab.[166]

With the exception of the ceiling and roof structure, the building was made of masonry and the ceiling rafters shown in construction photographs were exposed.

> On either side of the nave, supporting the pointed arches of the clere-story, are three finely-shaped pillars of cream-colored stone from the New Brunswick quarries...
>
> The Tabernacle is built of Little Falls ([New] Jersey) rubble-[stone]; the dimension-stone and the porches are of cream-colored New Brunswick stone. The front porch, of this stone, is a beautiful specimen of carved Gothic. The outer doors are of solid oak.[167]

Although the building's stone cladding and its external appearance distanced it substantially from its wooden New England ancestors, the Gothic forms that it employed were subtly adjusted to Low Church ritual. Rather than the cross-shaped plan of an Episcopal church or the quasi-amphitheater of earlier evangelical structures, Eidlitz provided something that was in many ways reminiscent of a very large nineteenth-century New England meetinghouse.[168] During the seventeenth and the eighteenth centuries, such buildings were intended to serve as religious and

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[166] Thompson, p. 66. L[ouis] H. Cohn was listed as the painter in Thompson' article. Eidlitz worked with Cohn on polychromatic decoration projects as early as 1868. Eidlitz's brother, Marc, was the contractor and Thomas Wilson was the carpenter. Wilson also worked on Eidlitz's contemporary Stratford Congregational Church (1858-59, Stratford, CT).

[167] Thompson, p. 66.

community centers and centrally located within settlements. In keeping with the beliefs of their Calvinist users, they were well built, devoid of excessive ornament, and not conducive to ritual. Many seventeenth-century meetinghouses were roughly square and hip-roofed. Doors were present on all exterior walls except that located behind a high pulpit, and seating was provided on benches or within box pews. During the eighteenth-century, residential details appeared on exteriors and were often based on classical models. Steeples or bell towers, if present, were located on the short side of the structure and doors located within them gave access to an interior whose high pulpit faced ground floor box pews and a gallery that extended around the remaining sides of the building. Window glazing was clear, and interior surfaces were white or whitewashed. After the Revolution, neoclassical details and conventional "church" plans became common. While Congregational groups tended to resist changes to the interior of their existing meetinghouses, the addition of front towers, porticos, and entrances was permitted.[169]

Nevertheless, the Broadway Tabernacle made accommodations for a type of preaching and congregational participation unknown to its forbearers but already worked out at Joseph Wells' Plymouth Church:

> ...behind the pulpit, at an elevation of 20 feet is the choir gallery, containing the small organ for choir accompaniments; and above and beyond this is the great organ, filling a large part of the space over the social rooms, which are above the lecture room, in the second story of the chapel.[170]

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[168] Pierson claimed that H. H. Richardson's Trinity Church in Boston had the same ancestry; see William H. Person, Jr., "Richardson's Trinity Church and the New England Meeting House," in *American Public Architecture, European Roots and Native Expressions*, pp. 12-56.

[169] Gretchen Townsend Buggeln, *Temples of Grace, The Material Transformation of Connecticut's Churches, 1790-1840* (Hanover, NH and London: University Press of New England, 2003), pp. 85-89.

[170] Thompson, p. 66.

Despite the height of the transepts, the presence of ground floor and gallery pews within them diminished their importance relative to the rear wall of the audience room and contributed to a unified space that was oriented toward preaching rather than side-chapel ritual.

> The transept [side] walls are carried up to a line with the ridge; these have a lower tier of three windows and a great triple window above. Directly in the rear of the transept wall, the wall of the chapel rises to the same elevation with that of the aisles, and above this is seen the clere-story; which here forms an apsis; in the rear of the pulpit, over the chapel. The interior effect of this is quite striking – presenting an arched ceiling 150 feet long, at an elevation of nearly 70 feet from the floor of the church.
>
> At a distance of 50 feet down the nave, the transepts intersect it with arches 70 feet high and 34 feet wide, and heighten the beauty of the building with their lofty triple windows. Both on the ground floor and the in the gallery these transepts furnish some of the most agreeable sittings in the house.[171]

Insight into the reasons for Eidlitz's use of Gothic forms for a Congregational client can be found in a paper titled "Christian Architecture" that he presented to the 15 January 1858 meeting of the American Institute of Architects[172] during his work on the Broadway Tabernacle Church. In that paper, he began by dismissing "the science of construction" as a necessary accessory to the "art" of architecture, and compared it to a painter's knowledge of the technical qualities of the animals, plants, and minerals that he depicts and of the oil and paint that he uses. Distinguishing between Greek and Roman architecture that he described as merely "monuments to the idea of the material presence of the Deity," he wrote

> The Deity, or in better terms, the God of Christianity, is comprehensible only to the inner man, and only to be rendered in the monuments of Christianity by loftiness of structure, the termination of which, in every direction, is to be comparatively removed from the eye.[173]

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[171] Thompson, p. 65.

[172] Leopold Eidlitz, "Christian Architecture," *The Crayon*, vol. 5 (February 1858), pp. 53-55.

[173] Eidlitz, "Christian Architecture," p. 53.

This could only be accomplished with buildings whose vertical and horizontal boundaries were de-emphasized to suggest the presence of God, "not only beyond the limits of the building, but beyond the limits of space applicable to the physical sense."[174]

> The Christian house of worship, or church, as we will now call it, contains the congregation within its walls, there collected for prayer; its interior must, in its architectural expression, elevate the mind above all earthly thoughts; its forms must be filled with a spirit which in its development leads the mind toward the high undefinable [sic] idea of that All-seeing and unseen God, whose presence there and everywhere, every member of the congregation has come to acknowledge and to worship. Christian architecture, therefore, must be an architecture of the interior, and also of the exterior (arising from its construction); it must form a harmonious whole, and it also excludes all definite terminations as a whole, or in its parts.[175]

The desire to avoid terminations is achieved in the horizontal plane by adding a suitable extension ("a circular, or better, polygonal connection of the north and south walls as a fitting termination for the eastern end") to a rectilinear structure. In the vertical plane, entablatures ("strongly marked as a horizontal conclusion") formerly required to support a roof are replaced with arches, a feature that he called "the most important source for the advancement of Christian Art." Eidlitz described the process by which the entablature nearly disappeared as it moved from visual presence and structural redundancy to metaphorical presence and structural purpose.

> The last step, the conversion of the circular into the pointed arch, is the most marvelous, inasmuch as this construction, though arising from at first a purely artistic motive, a desire of elevating and spiritualizing the masses, led at the same time to a form, which, scientifically considered, approaches nearer to that form of the arch (the hyperbola), which offers the least lateral pressure. The knowledge of this fact made the arch the groundwork of a system of construction which, in scientific as well as artistic excellence, surpasses anything that has been attempted before or since.[176]

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[174] Eidlitz, "Christian Architecture," p. 53.

[175] Eidlitz, "Christian Architecture," pp. 53-54.

[176] Eidlitz, "Christian Architecture," p. 54.

Thus, science and religion were reconciled in the Gothic forms of "the Christian church as we find it in its perfection," and Eidlitz concluded

> The question is daily asked, why should we imitate the architecture of the Middle Ages; why not strike out on a path of our own; why be satisfied with studying obsolete forms when we might invent others original, and perhaps superior? My answer is invariably this. Architecture is the art of expressing in monuments and in their organism, the idea which originated them. Through a space of twelve centuries, devoted men of deep religious feeling have in succession struggled to produce what we now see before us. The idea which animated their souls was Christianity, their means were the abundant contributions of Christendom, their time to accomplish the objectives fifty successive generations. With equal or superior incentives and support, human abilities may presume upon equal or superior success in a new direction; without it, the attempt shows a total absence of any appreciation of the magnitude of the object.[177]

Despite Eidlitz's attempts at reconciling traditional and modern forms of prayer and architecture, it was drastically altered in 1872. Thompson's favorable comments and Schuyler's attribution of "interest and character"[178] were not enough to persuade those who were unhappy with the building for more practical reasons.

> When this church was first constructed, the plans showed such an imposing effect that they were adopted, in spite of the objection that the massive pillars supporting the roof would seriously obstruct the view from very many pews. This mistake was observed too late, and for years past the eloquent preacher, Rev. Dr. Thompson, preached there without the inspiration of a cheerful and unhampered view of his hearers. His successor, Rev. Dr. Wm. M. Taylor, seems to have moved the church members to renovate the interior, and since the 1st of June the work has been progressing. The ugly pillars have been pulled down, an arched roof put in, and, in effect, an entirely new interior made, though the pews retain their position. To all intents, however, the church may be classed as a new one, so great is the change made in its interior. It is now beautifully

[177] Eidlitz, "Christian Architecture," pp. 54-55.

[178] Leopold Eidlitz I, p. 175.

> light and inviting. The cost of the alterations, which will be completed this month, is about $50,000.[179]

Such changes were probably inevitable as modes of worship changed, and even Richard Upjohn designed an Episcopal church whose octagonal crossing suggested an auditorium plan (Church of St. Thomas, 1868-70, Fifth Avenue and 53rd Street, New York City; demolished).[180] Eidlitz's building was taken down in 1903, two years before the congregation moved into Barney and Chapman's French Gothic ten-story "skyscraper" office building/church located on the northeast corner of Broadway and 56th Street.[181]

*The Plymouth Church Competition*

Plymouth Church was located on Orange Street between Henry and Hicks in Brooklyn Heights.[182] After an existing church burned on 13 January 1849, Joseph Collins Wells (1814-60), an English architect and a charter member of the American Institute of Architects, designed a

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[179] "New Churches in New-York," p. 2. Another account gave the cost as $70,000; "Rev. Dr. Taylor's Church," *New York Times*, 29 June 1874, p. 1. The alterations were preceded by the sale of the building and site for more than $100,000; "Church Market in New York," *Scientific American*, n.s., vol. 20, no. 22 (29 May 29 1869), p. 343.

[180] Schuyler claimed that the Upjohn used the fourteenth-century octagon-shaped addition to the eleventh-century Ely Cathedral as a prototype because it could accommodate the congregation better than a building with a long aisle; Leopold Eidlitz I, p. 175. Everard Upjohn was less enthusiastic about the design and found its relationship to Ely remote; Upjohn, pp. 178-79.

[181] Robert A. M. Stern, Gregory Gilmartin, and John Montague. *New York 1900: Architecture and Urbanism 1890-1915* (New York: Rizzoli International Publications, 1983), p. 15-116; Rev. James H. Ross, "The Broadway Tabernacle," *The American Architect and Building News*, vol. 87 (18 February 1905), pp. 59-60; Nichols and Chalmers, pp. 144-46.

[182] The site was purchased in 1822 for the erection of the First Presbyterian church, and by 1831, a lecture and Sunday school room had been added to the rear of that building. In June 1846, the property was sold for $20,000 to three members of the Church of the Pilgrims and one member of the Broadway Tabernacle, all of which were seeking more liberal doctrines. They founded a new congregation on 13 June 1847 presided over by Henry Ward Beecher who remained for forty years and made Plymouth Church a center for abolitionist activities during the Civil War and progressive social movements afterward. "Plymouth Church and Pilgrims Unite," *New York Times*, 24 March 1934, p. 17. For a history of the Plymouth Church, see Stiles, vol. 3, pp. 787-89.

replacement structure.[183] The cornerstone for the new church was laid on 29 May 1849 and it opened on the first Sunday of January 1850. Wells' $36,000, two-story, dark red brick meetinghouse featured a large bracketed cornice on its gabled front façade, but little decoration elsewhere. It contained a 100- by 80-foot auditorium that could seat 2,800. The nearly square, flat-ceilinged, 80-foot clear span room was painted white and bounded on three sides by galleries carried on slender cast iron columns. Within it, a small choir loft and a large organ overlooked a small platform that contained three chairs, a small reading desk, and a bouquet of flowers. The auditorium was adjoined at its rear by a 2-story 80- by 50-foot lecture and prayer-meeting room, ground floor parlors, a kitchen, a small meeting room, and second floor Sunday school rooms. These were separated from the lecture and prayer-meeting room by sliding doors and windows.

In May 1859, a competition was announced for a $125,000 building that was to contain a 6,000-seat auditorium and an 800-seat lecture room. The brief suggested that a curvilinear room might work best and that "Secular Architecture," rather than "church architecture" should provide the inspiration for the design, and the other requirements were similarly specific:[184]

the winning architect would receive $500 for his design and be expected to superintend the work without additional compensation,

no more than two balconies were permitted in the auditorium and none in the lecture room; columns that might block views within the auditorium were prohibited although "small iron columns" could be used for the balconies,

excellent acoustics, light and ventilation were required, and

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[183] Wells was a prolific and successful architect whose practice included residential, commercial, religious, and governmental work. He appeared in New York City directories from 1839, the year of his arrival in America, to 1860. "Joseph C. Wells," *The Crayon*, vol. 7 (September 1860), p. 270; Francis, p. 81.

the stage must accommodate Beecher, a 150-person choir, and a large organ.

Although Eidlitz had previously prepared a double-apsed clerestory scheme "such as the great Rhenish abbeys show,"[185] Eidlitz refused to enter the competition and attacked its requirements on practical and aesthetic grounds in a paper presented at a meeting of the American Institute of Architects on 19 April 1859.[186] By simple mathematical demonstration, he showed that the proposed 150- by 200-foot site was too small to contain the required building and, if it were built, it would be too large to provide good sound. Eidlitz also disagreed with the recommendation that all references to conventional religious architecture should be purged from the project and suggested drastic reconsideration of its physical requirements and ecclesiastical aims.

Several months later, an unsigned article in *The Crayon* carried a review of the twenty-two entries submitted. Probably written by John Durand, the editor of the magazine, it castigated the winning scheme ("And sure enough there it was, the adopted design by "Domus," the nom de plume of a certain Charles Duggin,[187] an architect who is thus unfortunately doomed to see the light of day."), extolled the submission made by Jacob Wray Mould ("in all the vigor of his best vein – truly a masterpiece of design, drawing, and coloring"), and dismissed the others (" the rest may

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[184] John Durand, "Henry Ward Beecher on Church Architecture," *The Crayon*, vol. 6, (May 1859), pp. 154-57. The competition brief was embedded within Durand's unfavorable comments and preceded by equally unfavorable comments about Beecher.

[185] When he saw the design, Beecher supposedly said, "What's the use? After me, you'll get nobody to fill it." Leopold Eidlitz I, p. 175. Eidlitz's reference is to 12th and 13th century German churches built with apses at the east and west ends of the nave. The configuration is present at Hildesheim, Worms, Trier, Mainz, Laach, and may have existed at one time at Speyer; Thomas Graham Jackson, *Byzantine and Romanesque Architecture*, vol. 2 (Cambridge, UK: Cambridge University Press and Chicago: University of Chicago Press, 1913), pp. 9-18.

[186] The paper was published in "The Architect," *The Crayon*, vol. 6 (May 1859), pp. 150-51.

[187] Duggin (1830-1916) was born and trained as an architect in London. He came to America in 1853 and specialized in residential work from 1864 to 1884, a period during which he was said to have designed more than two hundred and fifty city and country houses. He appeared in New York City directories from 1855 to 1888; "Charles Duggin" in *Biographical Dictionary of American Architects (Deceased)*, p. 183; Francis, p. 28. His winning entry was published in "The New Plymouth Church. The First Premium, Original Design," *Architects and Mechanic's Journal*, vol. 1, no. 10 (21 January 1860), p. 114.

be comprehended in the terse designation of 'trash'").[188] The American Institute of Architects expressed similar unhappiness with the results and called the winning design "impracticable." It also commended the entries of Mould and Richard Morris Hunt, and expressed regret that "the limited expense of the building precluded their adoption."[189] The *Architects' and Mechanics Journal* did not agree with either. It called Mould's entry "a masterpiece of artistic workmanship. But... altogether unfit for the purpose, either as to cost or arrangement" and rated Hunt's scheme inferior to Mould's.[190]

Because the winning scheme would have cost substantially more than expected,[191] the competition did not result in a new auditorium or lecture hall (it is not mentioned in histories of the church or biographies of Beecher), and only a small wood Italianate parish house by an unknown designer was built. A large brick and marble colonial revival building, paid for by Brooklyn coffee merchant John Arbuckle and designed by Woodruff Leeming, replaced the parish house in 1913.[192] It contained a gymnasium and recreational facilities and was connected to the Wells building by an arcade.

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[188] John Durand (unsigned), "The Competition Plans for the Plymouth Church," *The Crayon*, vol. 6 (December 1859), p. 375-76. Also see his comments on the competition in "Our Architectural Honesty," *The Crayon*, vol. 7 (February 1860), p. 55.

[189] "American Institute of Architects," *The Crayon*, vol. 6 (December 1859), p. 373; report of meeting held on 15 November 1859.

[190] "Plymouth Church Competition," *The Architects' and Mechanics Journal*, vol. 1, no. 3 (3 December 21859), p. 54. Also see "Plymouth Church Competition," *The Architects' and Mechanics Journal*, vol. 1, no. 3 (28 January 1860), pp. 120-23.

[191] See "The New Plymouth Church," *The Architects' and Mechanics Journal*, vol. 1, no. 15 (25 February 1860), p. 164.

[192] "62. Plymouth Church of the Pilgrims, Orange Street Near Hicks Street, ca. 1905" in William Lee Younger, *Old Brooklyn in Early Photographs, 1865-1920, 157 Prints from the Collection of the Long Island Historical Society* (New York: Dover Publications, Inc., 1978), p. 65; Leopold Eidlitz, "Remarks on the *Statement to Architects* issued by the trustees of the Plymouth Church," *The Crayon*, vol. 6 (May 1859), pp. 150-51; Elliot Willensky and Norval White. *New York Chapter, American Institute of Architects. AIA Guide to New York City* (San Diego, New York, and London: Harcourt Brace Jovanovich, Publishers, 1988), p. 596; "The New Plymouth Church. Amended Design.," *Architects and Mechanic's Journal*, vol. 1, no. 9 (14 January 1860), pp. 102-3; "The New Plymouth Church. The First Premium, Original Design.," pp. 114-15.

*American Exchange Bank*

The American Exchange Bank was founded in 1838 and occupied rented spaces before commissioning a building from Eidlitz in 1857.[193] During the same year, its president, William Agur Booth,[194] commissioned Eidlitz to design a summer house for him in Stratford, CT.[195] The new bank was located on a corner site, its front extending 45 feet along Broadway and its side elevation for 100 feet on Cedar Street. [196] One review noted that it was clad in New Brunswick freestone,[197] although Schuyler wrote, "the massive Gothic structure building was clad in "well-selected Ohio [sand]stone.[198]

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Leeming (1870-1919) graduated from MIT in 1891 and studied at the École des Beaux-Arts. After working with Heins & La Farge on the Cathedral of St. John the Divine, he opened an office in Brooklyn in 1894 where he maintained a general practice in the New York City area. "Woodruff Leeming" in *Biographical Dictionary of American Architects (Deceased)*, p. 368.

[193] Dillistin, p. 4; Severini, p. 72. In 1845, the bank was located at 34 Wall Street; by 1852 it moved to 50 Wall Street; *The Great Metropolis: or New York in 1845*, p. 74; *Phelp's New York City Guide; Being a pocket directory for strangers and citizens to the prominent objects of interest in the great commercial metropolis, and conductor to its environs* (New York: T. C. Fanning, 1852), p. 59.

[194] Booth (1805-95) was born in Stratford, CT, and moved to New York City in 1821. A successful businessman, he began as a sugar, coffee, and tea importer and achieved his greatest success as a sugar refiner. He was an organizer of the Chicago and Northwestern Railroad, a director of the Cincinnati, Lafayette, and Indianapolis Railroad, and a trustee of the Ohio and Mississippi Railroad and the New York Life Insurance Company. He also served as President of the Children's Aid Society and was active in the American Tract Society, Seamen's Friend Society, and other charitable organizations. "William Agur Booth" and "William A. Booth," undated obituaries on file at the Stratford, CT, Historical Society. William T. Booth, "Three Score and Ten Years of Active Life in New York. 1821-1892. The Reminiscences of William A. Booth, Born November 6, 1805. Died, December 28, 1895," undated photocopy on file at the Stratford, CT, Historical Society.

[195] The New York and New Haven Railroad, completed in 1848, passed through Stratford. In 1852, Booth had demolished an existing house and built a new one to his own design. In 1859, he leased the Eidlitz-designed, all-wood, two-storey, "Swiss Chalet" (956 Broad Street) to the First Congregational Church of Stratford, an institution to which he belonged, as a parsonage for $1 per year. He sold it to the church for $4,200 in 1868 when he moved to Englewood, NJ. Rev. F. Stanley Sellick, "The One Hundredth Anniversary of the Fifth Edifice of the First Congregational Church of Stratford, Connecticut" (1959, typescript on file at the Stratford, CT, Public Library), p.3; Charles W. Brilvitch, John Herzan, ed. *National Register of Historic Places Inventory – Nomination Form, Stratford [CT] Center Historic District*, 1978, Item Number 7, p. 4.

[196] An exterior view of the bank appeared in Leopold Eidlitz II, p. 278.

[197] "New Bank Buildings in New York," p. 124.

[198] Montgomery Schuyler, "Buildings on Broadway," *New York World*, 24 September 1871, p. 3.

The Broadway Tabernacle Congregational Church, (1858-59, Sixth Avenue and West 34th Street, renovated 1872 by J. Stewart; demolished 1905), a contemporary structure designed by Eidlitz, no longer survived when Schuyler wrote about both in 1908, and he called the bank "a far more important and pregnant work."[199] In contrast to Eidlitz's questionable performance in church design where Schuyler privileged cultural authenticity above all else, he saw commercial structures as expressions of reason that attempted to solve technical problems that were relatively simple to define. For the American Exchange Bank, these problems included providing adequate fireproofing and maximizing natural light. In a pre-completion review of Eidlitz's building, *Bankers' Magazine* noted, "the beams will be iron, arched with brick, and the building will be thoroughly fire-proof. The banking room will be of stone, and the roof of [corrugated] iron."[200] Schuyler called it "the first fireproof building erected for commercial purposes in New York, unless an exception be made of the then new and now doubly old and demolished Times Building."[201] Peter B. Wight[202] agreed, calling the Continental Bank and the American Exchange

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[199] Leopold Eidlitz II, p. 280. An exterior view of the building during construction appeared in Leopold Eidlitz 1, p. 172.

[200] "New Bank Buildings in New York," p. 124.

[201] Leopold Eidlitz II, p. 280. The comment actually applied only to office buildings because the first *New York Times* Building (1857) used brick arches supported on rolled iron beams above its basement level printing presses to provided partial fireproofing. The second Harper & Bros. printing plant (1854-55) was another attempt at a fireproof structure. Sara E. Wermiel, *The Fireproof Building: Technology and Public Safety in the Nineteenth-Century American City* (Baltimore, MD and London: The Johns Hopkins University Press, 2000), p. 68.

[202] Wight (1838-1925) was born in New York City and graduated from the Free Academy in 1855. He trained in New York City with Thomas R. Jackson, an English architect who came to New York in 1836 and was Richard Upjohn's chief draftsman. He also worked briefly for Isaac G. Perry but went to Chicago in 1858 after he was fired. Wight returned to New York City the following year and practiced there until 1871. He appeared in New York City directories 1858-60, 1862-69, 1871-73, and 1882. Aside from his winning entry in the façade competition for the National Academy of Design (1862-65), Wight was also successful in the competition for the Mercantile Library (1865-68, Brooklyn; demolished). His Yale School of Fine Arts Building (1864-66, now Street Hall, New Haven, CT) housed the first college art school in America. With Russell Sturgis, his school companion and partner in practice from 1863 to 1869, he helped found the Association for the Advancement of Truth in Art on 27 January 1863, a society based on the ideas of Ruskin, modeled on the Pre-Raphaelite Brotherhood, and dedicated to the reform of American art and architecture. Wight's articles in the Association's journal, *The New Path* (May 1863-December 1865), appeared with those written by Sturgis, Clarence Cook (1828-1900), the editor of *The New Path* and art critic for the *New York Tribune*, the painters Thomas Farrer (1838-91) and Charles

Bank "absolutely fire-proof" and claiming that "Nothing less than a bonfire of all the furniture, books and papers that could be collected in any one room of these buildings would engender its destruction."[203]

The building transcended mere problem solving ("Compared with anything then that stood on Broadway, the American Exchange Bank was a great advance.") because of the designer's skill in "architectural composition" as revealed in features such as the solid to void ratio of the facade, the arrangement and detail of its windows, and the "projection and vigor of modeling" of its cornice.[204] Nearly a quarter of a century after it was built, Schuyler wrote

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Herbert Moore (1840-1930), and the geologist Clarence King (1842-1901). Nevertheless, unable to obtain work in New York, Wight returned to Chicago where after the fire of 1871where he designed commercial buildings and houses in partnership with Asher Carter (1805-77) and William H. Drake (b. 1837) in whose office Daniel H. Burnham (1846-1912) and John Wellborn Root (1850-1892) worked as draftsmen. In 1874, Drake and Wight patented a fireproof iron column that received much use, and from 1881 to 1891, Wight operated his own fireproofing company. He subsequently edited *Fireproof Magazine* (1904-07) and was responsible for the fireproof construction of 200 Chicago buildings including William Le Baron Jenney's Home Insurance Building (1883-85). He wrote widely on architecture and fireproofing technology and frequently reviewed Chicago buildings. "Obituary Resolution Passed by the Chicago Chapter of the AIA," *Architectural Record*, vol. 58, no. 3 (November 1925), p. 513; Sarah Bradford Landau, "Peter Bonnett Wight" in *Grove Dictionary of Art*, Jane Turner, ed., 34 vols. (London: Macmillan Publishers Limited; Ned York: Grove's Dictionaries, Inc., 1996), vol 33, p. 174 and *Macmillan Encyclopedia of Architects*, vol. 4, pp. 397-98 and *P. B. Wight: Architect, Contractor, and Critic, 1838-1925*; "Peter Bonnett Wight" in *Biographical Dictionary of American Architects (Deceased)*, p. 657; Linda S. Ferber, "'Determined Realists': The American Pre-Raphaelites and the Association for the Advancement of Truth in Art" in Linda S. Ferber and William H. Gerdts, *The New Path: Ruskin and the American Pre-Raphaelites* (Brooklyn, NY: The Brooklyn Museum, 1985), p. 11; Roger B. Stein, *John Ruskin and Aesthetic Thought in America, 1840-1900* (Cambridge, MA: Harvard University Press, 1967), pp. 148-49; Dennis Steadman *Architects in Practice, New York City 1840-1900* (New York: Committee for the Preservation of Architectural Records, n.d. 1980?), p. 82; Montgomery Schuyler, "Architecture of American Colleges II. Yale," *Architectural Record*, vol. 26, no. 6 (December 1909), pp. 397, 404; David Howard Dickason, *The Daring Young Men, The Story of the American Pre-Raphaelites* (New York: Benjamin Blom, Inc., 1953)pp. 98-106.

[203] Wight, "Fire-Proof Construction," p. 60. Wight also included the Mutual Life Insurance Company Building (John Kellum, 140 Broadway, 1863-65; demolished), the National Park Bank Building (Griffith Thomas, 214-16 Broadway, 1866-68; demolished), and the remodeled City Bank Building (Isaiah Rogers, 38 [now 52] Wall Street, 1839; demolished) in his list of firetraps.

[204] Leopold Eidlitz II, pp. 281-82; *The 1866 Guide to New York City*, p. 86. Schuyler also mentioned, with no small amount of irony, the efforts of James Keys Wilson, "an ingenuous and sensitive pilgrim from Cincinnati" who, built a replica of the bank in 1858 as warehouse for Kuhn, Netter & Co., a wholesale clothier (demolished). Schuyler, noting that the replica "reproduced its essential qualities in that city, reproduced them with improvements" pointed out the differences between the structures and caustically remarked that this was possible because the architect of the copy was not bound by the programmatic

> The American Exchange Bank, which was at the time of its erection, and still is, one of the finest buildings in the city. It is a massive Gothic structure of well-selected Ohio stone, and most exquisitely designed and executed to the minutest ornament. The arrangement of the stoop, the stately and elegant prepositions of the openings with their ingeniously interlaced mouldings and cleverly-contrived capitals, angles, and recesses, are all perfectly charming to the eye of the true artist.[205]

Eidlitz seems to have maintained a personal connection with the American Exchange Bank throughout his life as a financial notice published in 1895 revealed that the institution assigned a $20,000 mortgage to him.[206]

Landau and Condit claimed that Eidlitz was aware of the latest construction techniques and was cognizant of the need for adequate fireproofing (he used iron for interior door jambs and concrete for architraves at the American Exchange, and presumably, the Continental and Bank). They also pointed out that the floors of both buildings were made of stone slabs carried on rolled iron beams and iron columns.[207] Although they cost more than brick arches, stone floors went up faster and were thinner. They were employed in Great Britain in small industrial buildings and warehouses where they rested on the top flange of their supporting beams. In America, however, they were attached to the bottom flange, thereby allowing direct application of plaster to create a smooth ceiling. Although used in Mullett's War and Navy Offices (1844, Washington, DC) and in a contemporary private library in Paterson, NJ, they became more common, although still rare,

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constraints of the original: "Indeed, at every point he seems to have bettered his instruction." An exterior view of the building appeared in Leopold Eidlitz II, p. 279. The RIBA received a photograph of it (LS 3325) from William Robert Ware along with images of work by other American architects in 1868; the image appears in Elwall, "Brother Jonathan Comes of Age," p. 48.

[205] Montgomery Schuyler, "Buildings on Broadway," p. 3.

[206] "The Building Department, *New York Times*, 12 February 1895, p. 15.

[207] Landau and Condit, p. 54.

during the1860s.[208] The reasons for this situation were described in an article that appeared in *Scientific American.*

> The stone slabs of Mr. Eidlitz, are the only rigid material thus far used successfully with iron beams, and could be used to better advantage if laid on the beams rather than resting upon their lower flanges, as is done in the American Exchange Bank. They are doubtless the handsomest material that can be used for this purpose, but are open to the objection of being heavy and expensive – where expense is a question, and utility only is sought – requiring heavy beams and calling for elaborate cutting on the under side.[209]

In fact, Wight confirmed that only the upper floors of the building employed "the stone slabs of Mr. Eidlitz," and he called them "the only rigid material thus far used successfully with iron beams." Wight also noted that "the experiment of stone floors in the American Exchange Bank" had been repeated "by another architect" in the Mutual Benefit Life Insurance Building in Newark, NJ.[210] John B. and William W. Cornell, an architectural iron fabrication firm located in New York City, manufactured the iron beams used by Eidlitz. The Cornell business started in 1847 when the brothers began to manufacturer iron safes. The scope and scale of their work expanded quickly and by 1859, they moved from lower Manhattan to a site located next to the Hudson River where they could produce cast iron building facades. The business continued into the next generation, although the product line changed from architectural to military and elevated railway components.[211]

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[208] Wermiel, pp. 75, 241 n. 8.

[209] Peter B. Wight, "American Institute of Architects. – Fire-proof Construction," *Scientific American*, n.s., vol. 21, no. 9 (28 August 1869), p. 130. The article was based on "Remarks on Fire-Proof Construction. A paper read before the New York Chapter of the American Institute of Architects, April 8th, 1869." American Institute of Architects, *Proceedings of the Second Annual Convention of the American Institute of Architects, Held in New York, December 8th, 1868* (Committee on Library and Publications, 1869), pp. 61-62.

[210] Wight, "Remarks on Fire-Proof Construction," pp. 61-62.

[211] Francis R. Kowsky, *Country, Park, & City, The Architecture and Life of Calvert Vaux* (New York and Oxford: Oxford University Press, 1998), p. 84; Gayle, *Cast-Iron Architecture in New York*, xiii-xiv.

An account of an explosion that ripped though the basement of the American Exchange Bank on 25 December 1876 confirmed that iron/stone construction was used only at the upper stories. Caused by a leaking gas pipe, the explosion demolished the building's furnace as well as its basement ceiling and floor. A newspaper description of the event said the building was made of brick with a facing of Ohio freestone and noted that basement ceiling/first floor construction consisted of oak planking laid on a concrete fill above a series of brick arches supported on wrought iron beams, a method of fireproof construction that became common in America during the 1850s. The description also noted "the walls of the building are very substantial, and were not injured by the explosion. The principal damage is in the basement and cellar of the structure, but a heavy of loss will result from breakage of the plate glass windows. The upper floors of the building are occupied as offices, but the tenants will not suffer any loss." Damage to the bank, erected by Leopold's brother Marc at a cost $100,000, was estimated at $5,000-$6,000.[212]

Condit attributed the development of American construction techniques involving the simultaneous use of iron and masonry to a post-Civil War demand for monumental governmental structures. Although the most pressing engineering problem, i.e., how to support the massive domes used by the designers of the buildings, was solved using iron construction, the approach was extended to other aspects of their construction. For example, the office floors of the east wing of the old St. Louis Courthouse (Robert S. Mitchell, 1852-62; replacement for earlier wing designed by Henry Singleton, 1839-45) consisted of parallel brick arches that spanned between cast iron beams supported on brick interior partitions and foundation walls (Condit claimed the beams were made in 1848). Wrought iron replaced cast iron for floor beams at the second printing Harper & Brothers plant (John B. Corlies and James Bogardus, 1854-55) and at the first Equitable Life Assurance Company Building (Arthur D. Gilman and George H. Kendall with

[212] "An Explosion of Gas," *New York Times*, 26 December 1876, p. 8.

George B. Post, 1868-70). Post, who competed with Eidlitz for commissions and knew a great deal about how buildings were made, lost the competition for the building to Gilman and Kendall. However, he was hired as a consulting architect and eventually became supervising architect. After reviewing a bid for masonry that he thought excessive, Post redesigned the building's internal iron frame, thereby cutting its cost in half.

Although Post used iron columns to support the walls of the building's inner court, he also kept nearly all of the exterior masonry of the original design and employed what Condit referred to as "far from novel construction" consisting of brick partitions, floor arches, and wrought iron beams. The major weakness of that approach, the potential for buckling or collapse during a fire because the iron beams were only partially embedded in and, therefore, only partially fire-protected by the brick arches, was greatly reduced when Balthasar Kreischer and George H. Johnson invented a new system in 1871. The Kreischer-Johnson system replaced the brick arches with factory-manufactured hollow terra cotta tiles that, in conjunction with a concrete cinder floor and plaster ceiling, completely encased the vulnerable iron beams. The hollow tiles also lightened floor loads substantially, thereby reducing the size of the structural components and construction costs. Johnson applied the method to all interior iron components, including columns, at the Kendall Building (1872-73, Chicago).

In an article he wrote many years later, Wight described the use of an early version of such tiles at the first story of the Cooper Union Building in New York City (brick arches were used elsewhere) by Frederick A. Petersen, the building's architect who patented them on 3 April 1855. Wight claimed that they were "the first hollow burned clay tiles for floor construction ever designed, made, and put into a building."[213] Wight patented a variation of the Kreischer- Johnson system in Chicago in 1874. Although Eidlitz may not have been aware of the Chicago

developments, he could have seen the Courthouse while working on St. Louis Cathedral. It is also certain that he would have known about the Cooper Union Building and likely that he would have seen the Equitable Building and the use of a Chicago-type fireproofing system at the United States General Post Office in New York City (Leonard Forbes Beckwith, 1872-73).[214]

*First Congregational Church, Stratford*

The First Congregational Church (1858-59, 2301 Main Street, Stratford, CT) can trace its origins to 1639. No drawings exist of the first building, but contemporary structures were square with hipped roofs and provisions for a bell and an "out-look against the approach of Indians."[215] A gallery was added in 1661 and the church was demolished in 1681 after forty years of use. The second building, erected in 1680, was similar to the first and galleries were added between 1701 and 1716. The third building was larger than its predecessors were and featured a 130-foot steeple. Construction was authorized in 1743 and it was destroyed by lightning two years later. Construction of the fourth building began on 17 May 1784 on the location of the present church. It was approximately the size of the third and finished in twenty-five weeks.

New York banker William A. Booth, the client for Eidlitz's American Exchange Bank, likely initiated planning for the fifth meetinghouse. When Booth returned to Stratford for a summer vacation in 1831, he found a desultory congregation and the infrequently used 1784 building. He

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[213] Peter B. Wight, "Remarks on Fire-Proof Construction," p. 61; "Origins and History of Hollow Tile Fire-Proof Floor Construction," *The Brickbuilder*, vol. 6 (March 1897), pp. 53-54.

[214] Condit, pp. 87-89, 115-16; Margot Gayle and Carol Gayle, *Cast-Iron Architecture in America: The Significance of James Bogardus* (New York and London: W. W. Norton & Company, 1998), pp. 144-45; Friedman, pp. 58-59; Sarah Bradford Landau, *George B. Post, Architect: Picturesque Designer and Determined Realist* (New York: The Monacelli Press, 1998), p. 13.

[215] "It was Founded in 1639," *New York Times*, 6 September 1889, p. 1. This account of pervious church buildings is based on Rev. Joel S. Ives, "Historical Address" in *The Quarto-Millennial Anniversary of the* [First] *Congregational Church of Stratford, Connecticut. The Historical Address by the Pastor, and a Full Report of All the Exercises, September 5, 1889* (Bridgeport, CT: The Standard Association, Printers, 1889), pp. 35-40; "The First Congregation Church of Stratford, Connecticut, 1639-1939" (typescript on file at the Stratford, CT, Public Library), pp. 61-62.

began a successful campaign to renew the congregation and by April 1857 a committee found the church too small to accommodate new families and otherwise inappropriate for use. Repairs would cost $3-4,000 while a new structure was estimated at about $15,000. The committee soon raised the $15,000 and the congregation voted unanimously to replace the 70-year old building. The old church was removed from the site and remained in use during construction. The new building was dedicated on 27 October 1859 by Dr. Richard S. Storrs of the Church of the Pilgrims in Brooklyn. In addition to an unspecified contribution to the general fund, Booth paid one-third of an additional $4,000 that was required to furnish the building (it cost $17,000) and pay off the debt.[216]

Although made entirely of wood, the Stratford church is similar in some ways to its masonry-enclosed predecessor in New London, particularly in the interior where the detailing reprises that of the earlier building. The presence of transepts, however, makes its spatial qualities closer to the contemporary and masonry-enclosed Second Congregational Church of Greenwich.

> The architecture of this Fifth Edifice was somewhat of an innovation in New England, for most of the churches were of Colonial style. Here was one which was Gothic and wooden. The spire, very highly admired, was considered as beautiful as the Wren steeples which adorned a few Colonial churches, for instance the one in Lebanon, Connecticut designed by John Trumbull, artist.[217]

The building was altered in 1868 when an organ gallery was installed above the pulpit and the pulpit was moved forward. The original tan and beige exterior color scheme was covered with white paint during the 1930s. The pulpit was replaced in 1942 and the altar was replaced in 1947.

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[216] "Three Score and ten Years of Active Life in New York. 1821-1892. The Reminiscences of William A. Booth, Born November 6, 1805. Died, December 28, 1895," undated biography on file at the Stratford, CT, Historical Society.

[217] Sellick, p.3. The reference is to the First Congregational Church of Lebanon, CT, designed by Trumbull in 1804 and his only architectural work. Trumbull (1756-1843) was an American painter and diplomat who is best known for historical paintings on American topics such as *Declaration of Independence* (begin

The original glass located in the tower and lower floor windows was replaced in 1908. An adjoining parish house was built in 1916. The organ was replaced in 1928 and again in 1958. The basement was excavated in 1953 and converted into Sunday school classrooms and a music room. The bell tower was repaired in 1881 and 1908. It was rebuilt in a Colonial Revival style and one of its entrance doors was removed in 1958.

*Hamilton Avenue Ferry House*

The Hamilton Avenue Ferry House (1861, Hamilton Avenue, Brooklyn; demolished)[218] was an extended residential-scale building. The ferry began operation in 1846 and ran from the foot of Hamilton Avenue in Brooklyn to the Battery in New York City, primarily "for the better accommodation of funerals and passengers to Greenwood [sic] Cemetery."[219] Its financial success is unclear: the *New York Times* called among the most profitable of the Union Ferry Company's operations, while Stiles claimed that it lost $25,000 during the five years it was run by the Union Ferry Company before being sold to the Atlantic Dock Company. In any case, by 1854, the Brooklyn terminus was described as a "miserable, dirty old shed."[220] The *Brooklyn Eagle* described its $140,000 replacement as being "of good size and somewhat peculiar appearance."

> It is a wooden building, and the work has been done by the company's own mechanics. The building presents a line 170 feet along the river on one side, and fronting towards Hamilton Avenue on the other; with a depth of 65 feet. Within this space are comprehended the various sitting rooms, lobbies, floating bridges, gangways, &c., that are needed for the accommodation of the ferry; over all being flung a light wooden roof, with its cross beams and supports, profusely filled underneath with what

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1786) that employed the methods of Benjamin West, his teacher, and John Singleton Copley. Helen A. Cooper, "John Trumbull," *Grove Dictionary of Art*, vol. 31, pp. 391-92.

[218] "Hamilton Ferry House (About 1858)," Leopold Eidlitz I, p. 170.

[219] Stiles, vol. 3, p. 558.

[220] "The Other Side of the Question," *New York Times*, 11 August 1854, p. 6; Stiles, vol. 3, p. 558.

> we night call openwork ornamentation, done in wood with the saw, and stuck in at all the corners and joints with a very liberal hand.[221]

The *Eagle* was especially concerned with the new building's decorative treatment and placed it within the context of Eidlitz's recent work.

> All this is painted in bright colors, red, white, yellow and blue, the effect being very pretty and cheerful, and something entirely new for a ferry-house, and after the fashion of the Academy of Music in Montague Street [1859-61]. The designer of the Hamilton avenue structure is the same as the first named edifice, Mr. Leopold Eidlitz, and the same idea is carried out in both – that of attempting to produce cheerful and pretty effects by combinations of gay color and much display of little fanciful forms. All this being a revolution from the until lately prevalent classical theory of architecture, which had hardly anything to do with strong colors, and put its forms, as far as possible, in masses, to produce grand effects. When the painting of the new house is finished, it will probably be quite a handsome show, and something of a curiosity.[222]

The article concluded by noting that the Union Ferry Company, operator of the Fulton Avenue Ferry, was contemplating construction of a new building in the spring of 1862.[223]

Accounts of the new Fulton Street Ferry House (Fulton Street, Brooklyn, 1871-72; demolished 1926) do not mention Eidlitz[224] and while Stern suggested that it may have been designed by him,[225] the *Manufacturer and Builder* attributed it to W. P. Olmsted.[226] The building served one of five lines operated by the Union Ferry Company and was erected to accommodate the

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[221] "Hamilton Ferry Improvements – The New Ferry House," *Brooklyn Eagle*, 31 October 1861, p. 2.

[222] "Hamilton Ferry Improvements – The New Ferry House," p. 2.

[223] "Hamilton Ferry Improvements – The New Ferry House," p. 2.

[224] "Fulton Ferry, *Brooklyn Eagle*, 29 March 1871, p. 2; "The New Fulton Ferry House," *Brooklyn Eagle*, 19 May 1871, p. 4.

[225] Stern *et al*, *New York 1880*, p. 851.

[226] "The New Brooklyn Ferry-House," *Manufacturer and Builder*, vol. 3, no. 10 (October 1871), p. 232. It is likely that W. P. Olmsted is William B. Olmsted, an architect who is listed in New York City directories as having practiced in Brooklyn from 1846 to 1853 and in New York City from 1861 to 1876; Francis, p.

increasing traffic that led to construction of the East River (Brooklyn) Bridge. The "new and commodious house" was built in 1863. It was 173 feet long and 35 feet high, made of wood, and replaced an iron structure. It featured an 11-foot bronze statue of Robert Fulton, the first successful commercial steam ferry operator, and an 86-foot tower that contained four illuminated clock faces.[227] Schuyler commented on the building's polychromatic 100-foot clear span roof and compared it to Eidlitz's redesign of the Tompkins Market/Seventh Regiment Armory roof (1860, Bowery between East 6th and 7th Street, New York City; demolished).[228] Nevertheless, the mansard roofs and "Franco-Italian" Renaissance[229] details that appear in a late photograph the building are stylistically inconsistent with the Hamilton Ferry House and Eidlitz's residential work.[230] The Fulton Ferry House was abandoned in 1924 when operations ended and demolished

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59. Little is known about him and the only building that I found by him is the First Presbyterian Church (Brooklyn, 1846); Stern *et al*, *New York 1880*, p. 877.

[227] The statue was designed by Caspar Buberl; Francis Morrone, *An Architectural Guidebook to Brooklyn* (Salt Lake City, UT: Gibbs-Smith, 2001), p. 106. Morrone dated the building to 1865 and claimed that the statue was made of zinc. Buberl (1834-95) was born in Bohemia and studied in Vienna. He came to the United States in 1854 and settled in New York City. He became a member of the National Sculpture Society and exhibited at the National Academy of Design in 1866 and 1878. Buberl is best known for a 1,200-foot terra cotta frieze on the Pension Building (1883-87, Montgomery Meigs, Washington DC) that depicts Civil War soldiers and sailors as well as his numerous Civil War memorial groupings. In New York City, his statue of Puck on the Puck Magazine Building (1885, Albert Wagner, 295-309 Lafayette Street, addition 1893) is also well known. "Kaspar Buberl" in *Allgemeines lexikon der bildenden künstler von der antike bis zur gegenwart; unter mitwirkung von 300 fachgelehrten des in- und auslandes*, vol. 5, pp. 172-73.

[228] Leopold Eidlitz I, p. 170. The three-story building contained a basement, a market hall on the first floor, the regimental rooms of the socially elite Seventh Regiment on the second, and their drill hall on the third. It was designed by Marshal Lefferts, a Colonel of the Seventh Regiment and secretly sub-let to the Regiment by the City. In 1860, after two and one-half years of construction, the building's structural system was changed from iron to brick, its iron exterior walls strengthened with iron-truss reinforced brick back-up, and its roof framing changed from iron to wood with a galvanized iron covering; The building burned and its notoriously leaky roof was destroyed on 25 July 1874 while repairs were in progress. In 1880, the Regiment moved to a new, privately owned, armory that was paid for by public subscription and located on the block bounded by Park and Lexington Avenues and 66th and 67th Streets (1877-80, Clinton Russell, architect, Charles MacDonald, engineer). The Market was demolished in 1911. "The New Market Houses," *New York Times*, 5 March 1860, p. 2; Common Sense, "Tompkins Market," *The Architects' and Mechanics Journal*, vol. 2 (17 March 1860), p. 48; L. W. L. "Roof of Tompkins Market," *The Architects' and Mechanics Journal*, vol. 1 (4 May 1860, p. 192); "Fire at Tompkins Market," *New York Times*, 26 July 1874, p. 8; Silver, pp. 95, 203.

[229] "The New Brooklyn Ferry-House," p. 232.

[230] William Lee Younger, *Old Brooklyn in Early Photographs, 1865-1920, 157 Prints from the Collection of the Long Island Historical Society* (New York: Dover Publications, Inc., 1978), "Fulton Ferry House,

two years later. The statue of Fulton is now in Fulton Park in the Bedford-Stuyvesant section of Brooklyn.[231]

*Christ Protestant Episcopal Church*

Schuyler did allow Eidlitz one successful Gothic building: Christ Protestant Episcopal Church in St. Louis, Missouri. The only project built by Eidlitz outside of the northeast region of the United States, it built during the 42-year tenure of the Very Rev. Dr. Montgomery Schuyler (1814-96), cousin and friend of Montgomery Schuyler's father.[232] Christ Parish was organized in 1819 and opened its first new church in 1829.[233] The congregation voted to enlarge the building in 1833, decided to move in 1836, and held services in the basement of its incomplete new building in 1838.[234]

By 1856, the congregation began to consider construction again, and three years later, the vestry acquired a property and announced a limited competition for a new church in which the winner

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Furman and Fulton Streets, 1924," p. 12-13. A view of a much simpler structure shown in Stiles raises the possibility of an earlier building designed by Eidlitz; Stiles, "Ferry House. At Foot of Fulton Street, (Brooklyn)," vol. 3, opposite p. 551.

[231] Stern *et al*, *New York 1880*, pp. 851-52; "Brooklyn Ferry Reforms," *New York Times*, 7 June 1871, p. 4; "The Fulton Ferry House Dispute," *New York Times*, 8 September 1871, p. 4; "The New Ferry House," *New York Times*, 6 January 1872, p. 2; "Brooklyn Before the Bridge, " *New York Times*, 29 October 1972, pp. 111-12; "Brooklyn Bridge Threatened by Fire," *New York Times*, 8 October 1925, p. 29.

[232] Dr. Schuyler was born in New York City on 9 January 1814. He was descended from early Dutch settlers who lived near Albany and came to the parish in 1854. He supported the Union during the Civil War, and his efforts on behalf of wounded Confederate as well as Union contributed to the growing prominence of his reputation. Montgomery Schuyler, *American Architecture and Other Writings*, vol. 1, p. 146 n. 43; Charles Kingsley, *Charles Kingsley's American Notes, Letters From a Lecture Tour, 1874*, Robert Bernard Martin, ed., (Princeton, NJ: Princeton University Library, 1958), p. 43, n. 80. Also, see William Schuyler, *An Ambassador of Christ, Being a Biography of the Very Reverend Montgomery Schuyler, D.D.* (New York: Edwin S. Gorham,1901); J. Thomas Scharf, *History of Saint Louis City and County. From the Earliest Periods to the Present Day: Including Biographical Sketches of Representative Men*, (Philadelphia: Louis H. Everts & Co., 1883), vol. 2, pp. 1719-20; "A Saintly and Manly Priest," *New York Times*, 25 June 1902, p. BR14; review of *An Ambassador of Christ.*

[233] The building was consecrated in 1834; Scharf, vol. 2, pp. 1717-18, 1720.

[234] The new building was consecrated in 1839 but the congregation remained in its basement until it was completed in 1842; Scharf, vol. 2, p. 1719-20; Eugene L. Rodgers, *and then A CATHEDRAL, A History of Christ Church Cathedral, St. Louis, Missouri* (St. Louis, MO: Christ Church Cathedral, 1970), pp. 6-8.

would receive $500 and employment as its architect.[235] Guidelines called for a stone church, preferably Gothic, containing, galleries without supporting columns, if possible. It was to accommodate 1,000 worshippers in the main building and 250 to 300 in a separate chapel; the cost was set at $75,000 to $100,000.[236] Responses were solicited from four architects: Leopold Eidlitz and Richard Upjohn of New York, John Notman of Philadelphia, and Calvin N. Otis of Buffalo.[237] Notman, a prolific architect with several Gothic Revival churches to his credit, would not submit a design without payment. Eidlitz concurred, recommending that the church contact other "reputable" architects and doubting that any would work without payment. Otis was similarly reticent about entering because he had not been fully paid for a design he had submitted in 1857 for a $100,000 brick church. It was based on his Gothic Revival St. John's Episcopal Church located in Buffalo, NY (1853), however, the project was cancelled, and the property upon which it was to stand was sold due to parish financial problems.[238] The architects prevailed and the competition rules were amended to provide $200 for each submission.[239] Eidlitz and Otis eventually responded as did Brown, Brady and Mitchell, a St. Louis firm, who submitted an unsolicited design.[240] Neither Notman nor Upjohn submitted entries. Eidlitz was successful, his sketches were approved on 11 July 1859, and notice of the project appeared in *The Crayon*

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[235] William Schuyler, *An Ambassador of Christ*, p. 152; Rodgers, p. 12.

[236] Rodgers, p. 12.

[237] Rodgers, p. 12. Little is known about Otis. He moved from Buffalo to Chicago as a young man and is thought to have built several churches in the Midwest during the mid-nineteenth-century including Grace Episcopal Church, (1850, Galena Illinois; altered by William Le Baron Jenney). He also wrote a book on church design, *Sacred and Constructed Art: Its Origins and Progress* (New York: G. P. Putnam and Sons, 1869). "C. W. Otis" in *Biographical Dictionary of American Architects (Deceased)*, p. 450.

[238] William Schuyler, *An Ambassador of Christ*, pp. 129-30, 152, 152 n *.

[239] Rodgers, p. 12.

[240] Rodgers, p. 12.

shortly thereafter.[241] The cost of the new building was estimated to be $125,000 and Eidlitz was to receive a $5,000 fee and $100 per visit.[242]

Contracts for the work were let on 23 August 1859 and work began the following spring after the congregation moved into the first of several rented spaces in January 1860.[243] Although the cornerstone was laid on 22 April 1860 and the vestry intended to have the walls erected and ready to receive the roof by July 1861, construction stopped in December 1860 because of the onset of winter and financial problems related to the imminent outbreak of the Civil War. The walls were only 10 feet high at the time.[244] The vestry had intended to build the church and chapel simultaneously, however, their limited funds were redirected toward finishing the 300-seat chapel and the first service was held in it on 11 May 1862.[245]

When work stopped, it was estimated that the church could be finished for $35,000. By the time construction was ready to resume, however, the cost had risen to $105,000. Eidlitz visited the site in the fall of 1863 and thought that the cost could be reduced to $80,000 if the west tower and galleries were omitted[246] and to $65,000 if the porch, interior stone facing of the clerestory, and interior finishes were also left out and changes made to the exterior doors and pulpit and chancel furniture.[247] Eidlitz's most draconian suggestions were adopted when construction resumed in October 1864, although the congregation was able to raise money to retain the black walnut trim

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[241] William Schuyler, *An Ambassador of Christ*, p. 152; "Architectural Gossip," Crayon Vol. 6 (August 1859), p. 251.

[242] Scharf, vol. 2, pp. 1720-21; Rodgers, p. 13.

[243] Scharf, vol. 2, p. 1721; William Schuyler, *An Ambassador of Christ*, pp. 154, 157.

[244] William Schuyler, *An Ambassador of Christ*, p. 157; Scharf, vol. 2, p. 1721.

[245] William Schuyler, *An Ambassador of Christ*, pp. 164, 205-6.

[246] Although often included in Gothic Revival buildings, galleries were never a part of medieval Gothic churches.

[247] William Schuyler, *An Ambassador of Christ*, p. 225.

originally specified.[248] When he returned in the late fall of 1865, Eidlitz acceded to the vestry's request for a resident architect. Unimpressed with the knowledge of Gothic architecture possessed by most candidates, he appointed John Beattie after one-hour conversation and a recommendation from the supervisory stonemason.[249] Costs continued to increase and Rev. Schuyler came to New York in June 1866. He stayed with the Eidlitz family while he unsuccessfully sought a $50,000 loan to complete the building.[250]

Rev. Schuyler returned to St Louis and, after resolving the project's financial problems, moved into the vestry room and rector's study in January 1867; the church opened for its first service on Christmas Day of that year.[251] By that time, $235,000 had been spent.[252] The new Gothic Revival building could seat 1,500 and its 126-foot long nave was said to be 25 feet higher than that of Trinity Church and only 10 feet lower than that of Westminster Abbey.[253] Although incomplete (the intended flying buttresses were absent and Eidlitz replaced the rose window with a triptych), twenty memorial windows had been installed, galleries were present in the north and south transepts (funds from the sale of the windows and gallery pews provided additional funding),[254] and the west gallery contained an organ that had been brought from the previous church. Nevertheless, despite its shortcomings, the new building contained all of the components required for the full High Church experience and, with the exception of its exposed hammer beam timber trusses and polychromatic wood ceiling, it was made of solid masonry. *King's Handbook of Notable Episcopal Churches In the United States* described its architectural style as "that

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[248] William Schuyler, *An Ambassador of Christ*, pp. 233; 237.

[249] William Schuyler, *An Ambassador of Christ*, p. 238. I have been unable to find any biographical information on Beattie.

[250] William Schuyler, *An Ambassador of Christ*, p. 244.

[251] William Schuyler, *An Ambassador of Christ*, pp. 250, 255.

[252] Scharf, vol. 2, p. 1722; Rodgers, p. 18.

[253] Scharf, vol. 2, p. 1721.

[254] Scharf, vol. 2, p. 1721.

which prevailed in the 14th Century technically named 'Second Pointed' or 'Early English Decorated'" and concluded "The edifice throughout is an honest one – not a sham in it."[255] Brooks lauded its "hard, sharp-edged, almost metallic treatment of masonry,"[256] and Schuyler called the building "its author's masterpiece in the stricter kind of church architecture," but he qualified the compliment by noting that it was merely "skillful and scholarly Gothic" although he admitted, "the scholarliness by no means excludes individuality."[257]

Although designated the cathedral of the Diocese of Missouri in 1880, Christ Church has been substantially altered.[258] It was damaged by fire on 1 January 1871, and the galleries in the north and south transepts were removed in 1891 to make way for a new organ. The chancel furniture was also extended into the crossing at that time. The original chapel located in the southeast corner of the church was replaced 1893-95 and relocated parallel to the south side of the nave by Jerome Bibb Legg. A porch and tower were also built 1910-12. Eidlitz's design for the tower had been known as early as 1860, when an illustration of the church based on his drawings appeared in *Edward's Great West*, a history of St. Louis, and the same image was published in *King's Handbook of Notable Episcopal Churches* in 1889.[259]

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[255] Shinn, p. 262-63. The description was written by Dr. Schuyler for a local newspaper two weeks before the building opened; William Schuyler, *An Ambassador of Christ*, p. 256 n *. An interior view of the nave appeared in Shinn, p. 261.

[256] Brooks, p. 12.

[257] Leopold Eidlitz I, p. 175. An exterior view of the church appeared in Leopold Eidlitz I, p. 173.

[258] Information on interventions at the church is based on Esley Hamilton and Carolyn Pitts, ed., *National Historic Landmark Nomination, Christ Church Cathedral, 1210 Locust Street, St. Louis, MO* (March 1989).

[259] Richard Edwards and M. Hopewall, *Edwards's Great West and Her Commercial Metropolis* (St. Louis: Edwards's Monthly, 1860), opposite p. 362; Shinn, p. 260. The work was taken on by Kivas K. Tully (1852-1915) who was born in Canada and had designed two other Episcopal churches in partnership with Charles Wright Clark. Tully used Indiana limestone instead of the Illinois sandstone of Eidlitz's building and added an additional level to the tower. Tully was also responsible for an altar and reredos installed in 1911 made of Caen stone in Exeter, England, by Harry Hems. An Episcopal chair, also designed at the same time, was installed by Jamieson & Spearl in 1916.

*Brooklyn Academy of Music*

The Brooklyn Academy of Music (1858-61) was Eidlitz's largest secular commission at the time. With the Gothic Revival Brooklyn Art Association (J. C. Cady, 1869-725) and Mercantile Library (Peter B. Wight, 1865-68), its Romanesque presence contributed to a new monumental civic district in what was then America's third largest city.[260] The first concert was held in the new building on 15 January 1861[261] and when it was destroyed by fire in 1903, the event was considered a serious blow to Brooklyn's autonomy, particularly in light of the city's recent consolidation and fear that its identity would be subsumed into Manhattan's.[262]

The Academy project was initiated privately toward the end of 1858 and presented to the public 14 February 1859 at meeting convened to discuss the need for a new building "adapted to Musical, Literary, and Scientific purposes."[263] Shortly thereafter, eleven lots were purchased on Montague Street near Court [264] and solicitation of $150,000 in subscriptions to finance the project

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Other significant changes to the building were also made. In 1929, the interior walls of the church were lined with Guastavino tile intended to resemble ashlar, but by 1949, the building was said to be in poor condition and its crumbling Illinois sandstone exterior cladding was replaced with Indiana limestone. At the same time, the clerestory windows were replaced, a steel structure was added to support the west wall, and tie rods were installed to brace the transept walls. In 1961, the roof was reinforced with concealed steel trusses and the chapel was redesigned by Frederick Dunn. The organ was removed from the transepts and returned to the west balcony in 1965. The work, by Burks and Landberg, also included removal of carpeting and installation of a travertine floor. The pews were replaced by moveable interlocking chairs and kneelers and the high altar was retained, but new platforms and a moveable altar were placed in the crossing. Steel triforium balconies were also installed in the area between the arcade and clerestory windows to support banners and lighting. *A Guide to the Architecture of St. Louis* (Columbia, MO: University of Missouri Press, 1989), p. 58; E. A. Sövik, "A Problem in Church Renewal: Christ Church Cathedral, St. Louis, Mo.," *Faith & Form*, vol. 3 (April 1970), pp. 12-14.

[260] See "Brooklyn Progress," *New York Times*, 9 December 1865, p. 1. Brooklyn's population at the time was nearly 400,000; Gabriel, p. 10.

[261] "Architectural Gossip," The Crayon, vol. 6, (February 1859), p. 221; Gabriel Harrison, *A History of the Progress of the Drama, Music and the Fine Arts in the City of Brooklyn (Brooklyn, 1884), reprinted from The Illustrated History of Kings County, H. R. Stiles, ed.* (New York: W. W. Munsell & Co., n.d.), p. 9.

[262] Stern *et al*, *New York 1900*, p. 212. It was replaced in 1908 with a new structure designed by Herts & Tallant and located at 30 Lafayette Street.

[263] "Brooklyn Academy of Music," *Brooklyn Eagle*, 15 February 1859, p. 2.

[264] "City News and Gossip. Real Estate Prospects in Brooklyn, " *Brooklyn Eagle*, 1 March 1859, p. 3.

began on 4 March.[265] A competition for the new building was announced that drew responses from "ten or twelve eminent architects,"[266] however, none was chosen because the costs would have equaled or exceeded the amount of the subscription. The building committee subsequently asked Eidlitz to prepare a design (his name was listed as architect of the project in the February 1859 issue of *The Crayon* but no description of his design was given[267]) although an estimate indicated that it would cost more than $10,000 beyond the $140,000 raised by the subscription. Nevertheless, the committee decided to proceed with the project because "the deficiency was so trifling in proportion" and agreed to raise an additional $30,000.[268]

On 20 May, the building committee announced its intention to begin foundation excavations and appointed an unnamed architect. Four days later, the *Brooklyn Eagle* reported accusations of favoritism toward the anonymous architect (who was known to be one of those who had entered the competition) and claimed that his plan "had not been adopted nor recommended by the committee appointed."[269]

Eidlitz subsequently revised his design and the cost of the new building increased by another $30,000. Work stopped in September for documentation of the changes and additional fundraising. A newspaper account included a description of the revised project according to "the plan of Mr. Eidlitz."

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[265] "City News and Gossip. The Academy of Music A Fixed Fact – The Whole Sum Subscribed," *Brooklyn Eagle*, 5 March 1859, p. 3.

[266] Jacob Wray Mould was among them. He also submitted an interior design scheme. David Van Zanten, "Jacob Wrey Mould: Echoes of Owen Jones and the High Victorian Styles in New York, 1853-1865," *Journal of the Society of Architectural Historians*, vol. 28, no. 1 (March 1969), pp. 54, 56.

[267] "The New Academy of Music," *Brooklyn Eagle*, 20 May 1859, p. 3; "Architectural Gossip," *The Crayon*, vol. 6, (February 1859), p. 221.

[268] "The Brooklyn Academy of Music – Meeting of Stockholders – The Additional Amount to be Raised," *Brooklyn Eagle*, 17 September 1859, p. 2.

[269] Untitled Article, *Brooklyn Eagle*, 24 May 1859, p. 3.

> The *Brooklyn Academy of Music* will have 250 feet front on Montague Street and be 92 feet deep. It will contain two galleries above the dress circle, and will seat comfortably 2,200 persons. The stage is to be 75 feet deep, and to be provided with painting room, dressing rooms, green room, &c. Besides the above, the building will have an assembly hall 42 feet wide and 82 feet deep; also a vestibule of the same size on the first floor. The basement has a janitor's accommodations, and a great kitchen for the preparation of the annual dinners of the New England Society. The building is to be faced with Philadelphia brick or Little Fall sandstone. The windows and door jambs and arches, also the belting courses and cornices, as also the window tracery are to be Nova Scotia sandstone. The roof is to be covered with slate. There are three separate entrances to the audience department, and two others to the green room and janitor's room.[270]

Construction began on 6 October 1859, and by March 10 of the following year, the exterior walls were 30 feet high and "ready for the first tier of beams."[271] On 29 June 1860, a squall passed over the construction site, the building's unfinished roof was blown off, and several workers were injured. Damages were estimated at $3,000, and work was delayed for three weeks. Although the *Brooklyn Eagle* regarded the event as an accident, *The Architects and Mechanics' Journal* claimed that the design or the construction of the roof trusses and their connections to the building's walls were inadequate.[272]

Built specifically for music rather than theatre,[273] the Academy cost $180,000, of which $45,000 was for the land.[274] Its main facade faced Montague Street and paralleled the long dimension of

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[270] "The Academy of Music, "*Brooklyn Eagle*, 5 September 1859, p. 3.

[271] Untitled Article," *Brooklyn Eagle*, 10 March 1860, p. 3.

[272] "Roof of the Academy of Music Blown Down and Several Persons Injured," *Brooklyn Eagle*, 30 June 1860, p. 3; "Accident to the Roof of the Brooklyn Academy of Music," *The Architects and Mechanics' Journal*, vol. 2 (7 July 1860), p. 134; "Late Accident to the Brooklyn Academy of Music," *The Architects and Mechanics' Journal*, vol. 2 (14 July 1860), p. 140.

[273] *Hamlet* soon made an appearance, opening on 23 December 1861. It was followed by a full range of dramatic presentations; Gabriel, p. 10.

[274] "The New Academy of Music, Brooklyn," *The Architects and Mechanics' Journal*, vol. 2 (29 September1860), p. 252.

the auditorium.[275] Although seven entrances were located on Montague, the main foyer was originally situated on Clinton Street. Schuyler saw the arrangement as "an attempt to express a theatre on its exterior." He commended the approach as "novel on this side of the ocean and not common on the other."[276] The photograph that accompanied his description showed the building (250 feet long, 92 feet deep, 60 feet high at the cornice) as a group of six variously sized blocks that revealed the location and relative size of their contents (he mentioned the greenroom, stage, auditorium, and foyer).

> If any one wishes to see how exquisitely the most varied material can be contrasted in the same frontage let him go and study the Academy of Music in Brooklyn. See here how little the dark red surface of the walls is allowed to interfere with the form and outline of the beautifully enriched openings; how distinctly each door and window opening tells its own story, whether seen near or from a distance; and while the eye pleasantly takes in the whole mass, there is no fussy fretting of details to mar the general harmony.[277]

Brooks noted a similar division[278] and *The Crayon* saw "an effort at free translation of medieval motives into a building of the nineteenth century."[279]

*The Architects and Mechanics' Journal* described the style of the new building as "German Gothic" and "Italian Gothic"[280] while the *Brooklyn Eagle* saw it as "a combination of Moorish and Gothic" and added that "[while] we are as proud of our new Academy as anybody can be, we still cannot endorse and intermarriage of Gothic and Moorish architecture as a successful union to

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[275] An exterior view appeared in Leopold Eidlitz II, p, 283.

[276] Leopold Eidlitz II, p. 287.

[277] Montgomery Schuyler, "Improvements in New York Architecture," *New York World*, 26 November 1871, p. 3.

[278] Leopold Eidlitz II, p. 283. "Defined by vertical divisions were... the entry, foyer, auditorium, stage, stage house, and dressing rooms"; Brooks, p. 15.

[279] "The Brooklyn Academy of Music," *The Crayon*, vol. 8 (February 1861), p. 45.

be elsewhere imitated."[281] The *New York Times* used the term "Saracenic" to describe the application of "brilliant colorings after the Moorish style" to decorative forms that "strictly belonged within the pale of the Gothic school."[282] For once, Schuyler made no attempt at stylistic attribution, and while the building was indebted to Gärtner as a whole, its approach to extended linear composition was considerably more expressive and varied.

The 232-foot long façade was aligned in a single plane and faced with pressed red Philadelphia brick and Dorchester stone quarried in New Brunswick, Nova Scotia. The latter material, "a fine graine [*sic*] sandstone," was described as "drab-colored..., assuming, when damp, a light olive tint."[283] While stringcourses linked some sections of the building, internal divisions were clearly delineated by changes in roof height and shape, and, as at the Produce Exchange, by slightly projecting piers whose "cappings and corbels" extended beyond past the piers and cornices of the individual sections. *The Crayon*'s critic acknowledged the importance of the piers and wrote that individual portions of the structure were "treated symmetrically by themselves, and at the same time relatively to a harmonious whole." The writer also noted that there was no single point at which the façade could be "taken in one comprehensive view."[284] *The Architects and Mechanics' Journal* was considerably less complimentary and derided the "ill-looking and dromedary-like elevations at each end."[285] In an earlier article about the building, the publication stated a preference for "something more cheerful," but acknowledged that

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[280] "The New Academy of Music, Brooklyn," *The Architects and Mechanics' Journal*, vol. 2 (29 September1860), p. 252; "The New Academy of Music, Brooklyn," *The Architects and Mechanics' Journal*, vol. 3 (22 December 1860), p. 114.

[281] "Public Buildings in Brooklyn," *Brooklyn Eagle*, 31 December 1860, p. 2.

[282] "Brooklyn Academy of Music," *New York Times*, 15 January 1861, p. 2. The *Times* article contains an extremely detailed description of the building's interior.

[283] "Our Building Stones," *The Crayon*, vol. 4 (March 1857), p. 85-86.

[284] "The Brooklyn Academy of Music," p. 45.

[285] "The New Academy of Music, Brooklyn," *The Architects and Mechanics' Journal*, vol. 3 (22 December 1860), p. 114.

> the peculiar style seems to be the pet and specialty of the architect MR. LEOPOLD EIDLITZ; he has shown it to perfection in that splendid building the American Exchange Bank, and he succeeds so well with its quaint intersections and ingenious surprises that we are almost tempted, on this occasion, to forget the inappropriateness of the style, in the excellent manner in which it is carried out.[286]

Curran did not comment on the vertical demarcations, but found the building's "projectionless façade with flush window treatment... strikingly similar to the flat, parade-like character of the Ludwigstrasse."[287] She also pointed out a similar comparison made when Wight's Mercantile Library opened.[288]

The differences in these accounts suggest that it was unclear if the building was intended to be perceived as a single structure or a group.[289] Schuyler saw it as single entity and wrote

> There is, indeed, something severe, almost monastic about the long front, with such sparing decoration as could be afforded under the conditions, at the ends and especially at the entrance, ...where the ornament, admirable in its kind and unfailingly placed and "scaled" was wisely concentrated. But blank wall, after all, is that of which the exterior of an auditorium must largely and the exterior of a stage almost exclusively consist.[290]

When describing the presence of what he claimed were comparable conditions at the rear walls of J. Cleveland Cady's Metropolitan Opera House (1883) and Hippodrome (1905), he went considerably farther in this direction and proclaimed that "for the purpose of breaking it up upon

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[286] "The New Academy of Music, Brooklyn," *The Architects and Mechanics' Journal*, vol. 2 (29 September1860), p. 252.

[287] Curran, *A Forgotten Architect of the Gilded Age: Josiah Cleaveland Cady's Legacy* (Hartford, CT: Watkinson Library and Department of Fine Arts, Trinity College, 1993), p. 8 n. 10. This view is supported by the illustration of the Montague Street façade that appeared in *Harper's Weekly*, vol. 5 (2 February 1861), p. 77.

[288] "Brooklyn Mercantile Library," *New York Times*, 19 January 1869, p. 8 quoted in Curran, *A Forgotten Architect of the Gilded Age*, pp. 9-10

[289] Curran pointed out another ambiguity: although the extrados of the arched openings in the façade were pointed in the Gothic mode, the intrados were rounded in the Romanesque manner; Curran, *A Forgotten Architect of the Gilded Age*, p. 7-8.

[290] Leopold Eidlitz II, p. 287.

the beholder's apathy, these [façades] outweigh all the 'architecture' applied elsewhere with such excellent intentions and so little effect."[291] Mariana Griswold Van Rensselaer also found merit, if not beauty, in her well-known defense of the Opera's rear façade.[292] A photograph of upper portion of the rear elevation of Eidlitz's building showed it to be as ambiguous as the front.[293] No less articulated, it employed shallow volumetric projections rather than piers to demarcate internal spaces. Ornament was limited to arcuated corbel tables on the recessed portions with the projections directly intersecting the soffits of the building's gambrel and hipped roofs.

Aside from spaces directly related to its 2,300-seat auditorium, the building contained an assembly room located over the foyer that could be used for small concerts, dinners, or meetings, a basement kitchen located below the foyer, and a janitor's apartment.[294] The 89- by 43-foot wide auditorium was 45 feet high[295] and contained two tiers of balconies, a parquet and dress circle, and several proscenium boxes and private rooms. Its decorative style was shared with the vestibule and described as "a sort of cross between the Turkish and Gothic, done in stencil, with the coloring sombre [*sic*] of brown and yellow keys, not wholly appropriate to a building of its nature."[296] *The Crayon* approved "the interior of a theatre that is eminently a wood construction" and claimed to find "a first effort to substitute for meretricious architectural display the more appropriate graces of color."[297]

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[291] Leopold Eidlitz II, pp. 287-88.

[292] Mariana Griswold Van Rensselaer, "Recent Architecture in America. II. Public Buildings." *The Century Magazine*, vol. 6, no. 27 (May 1884), pp. 323-334, reprinted in *Accents as Well as Broad Effects: Writings on Architecture, Landscape, and the Environment, 1876-1925*, David Gebhard, ed. (Berkeley, Los Angeles, London: University of California Press, 1996), pp. 154-55.

[293] "42. Downtown Brooklyn, ca. 1902" in Younger, pp. 46-47.

[294] "The New Academy of Music, Brooklyn," *The Architects and Mechanics' Journal*, vol. 2 (29 September1860), p. 252.

[295] "The Brooklyn Academy of Music," *Harper's Weekly*, vol. 5 (2 February 1861), p. 78.

[296] Harrison, p. 9.

[297] "The Brooklyn Academy of Music," p. 46.

The auditorium was illuminated with 28 five-light gas fixtures attached to the boxes, and with chandeliers under the balconies and wall fixtures. The assembly room and foyer used three nine-light chandeliers and twenty-three wall fixtures. All of the lighting devices were described as being "in the medieval style, entirely new modeled expressly for the buildings." The work was done by Cornelius and Baker, a Philadelphia firm that made fixtures for opera houses in Boston and New Orleans.[298]

The ceiling was unusual for Eidlitz in that it consisted of a suspended plaster shell divided by wood "beams" hung from concealed wood trusses rather than an exposed timber structure. Brooks ascribed the design to Eidlitz's recognition of acoustical considerations and claimed that the trim "existed merely as an attempt at a rational, visual explanation" for the ceiling's support.[299] However, the *New York Times* wrote that the ceiling was originally to be covered with painted canvas that was omitted for reasons of cost.[300] *The Architects and Mechanics' Journal* also seemed to find evidence of cost cutting and noted

> ...the costliness of the outside of the Brooklyn house does not prepare one for the cheapness at once noticeable inside. Whether the amount laid out on brick and stone unexpectedly curtailed the capital of the company, or whether the smashing of the roof involved a loss beyond that first anticipated, certain it is that the ornamentation of the auditorium seems extremely economical. There is an abundance of inexpensive machine-sawed pine. The fronts of the boxes are finished with a figurative style of boards, the designs of which most people have been familiar from their earliest childhood. A dark paint has been selected on which the gilding experiences no relief. The painting of the dome is entrusted to Mr. Cohen, who ornamented the assembly-room. A screen of scaffold and plank refuses to

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[298] "Tuesday Evening, Dec. 20. Philadelphia Works for Brooklyn," *Brooklyn Eagle*, 20 December 1860, p. 3.

[299] Brooks, p. 15. The auditorium's acoustics were highly praised.

[300] "Brooklyn Academy of Music," p. 2.

> reveal what the dome shall eventually be, but the somber character of the building will probably be conformed to."[301]

Nevertheless, the writer concluded, "The lobbies and passages are ample. The vestibule is large, tasteful and beautiful. Over this is an assembly-room, of wide dimensions and lofty ceiling, plainly and appropriately finished."[302]

As usual, Schuyler was less opinionated about the interior of the building than the exterior. He called the auditorium "very pretty and rather festal and rather elaborate" and noted that the interior was "found by many observers architecturally too 'strenuous' for a theatre, if not for an 'Academy of Music.'"[303] The *Brooklyn Eagle* was considerably more direct.

> ...the result is that our Academy inside looks as though a compromise had been made between it and one of our fashionable churches; it is less airy and ornamental perhaps than any building ever intended for lyric purposes, while it is rather too florid for more serious purposes. When lit up the effect will be very fine, and it is hardly fair to judge of it at any other time.[304]

Despite his reservations, Schuyler was favorably inclined toward the work as whole and turned the fault of architectural strenuousity into a Whitmanesque virtue:

> But it would be hard to point to one of the successors of the Brooklyn Academy in either city or in any line, and quite hopeless to designate any successor in its own line which shows greater architectural individuality or as great power of robust, vigorous and masculine architectural expression.[305]

The opinion was not universal, however, and in a review describing changes made to the building during its second season, a critic commented

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[301] "The New Academy of Music, Brooklyn," *The Architects and Mechanics' Journal*, vol. 3 (22 December 1860), p. 115.

[302] "The New Academy of Music, Brooklyn," p. 115.

[303] Leopold Eidlitz II, p. 288.

[304] "Public Buildings in Brooklyn," p. 2.

> It is a pity, while the Directors were about it, that they have not had the auditorium, and vestibule especially, repainted. A lively coat of paint put on the interior, with something of taste, is all that is needed to render the Academy one of the most complete establishments of the kind on this continent.[306]

Soon after the building burned on 30 November 1903,[307] plans were made to rebuild in the fashionable Fort Greene section. The cornerstone was laid at 30 Lafayette Avenue in 1907[308] and the new building opened in the fall of 1908.[309]

*Produce Exchange*

Eidlitz's Produce Exchange marked the beginning of his involvement with institutional and governmental clients and represented a shift in the nature and scale of his practice. The building was intended to provide a setting for trade in grain and other commodities, although securities were also sold there. An article published shortly after the building was completed noted

> All the receivers and buyers of produce now meet at the Produce Exchange, which is therefore the business centre of that very important interest. It is a source of general satisfaction to have the whole trade thus concentrated in one Exchange.[310]

Merchants and traders had operated Monday markets on the site of the Produce Exchange since 1648 when they were established by Peter Stuyvesant while more recent operations were managed by the Produce Exchange Building Company and the Corn Exchange, the latter incorporated in 1853. The 700 member Produce Exchange could also trace its origins to the New

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[305] Leopold Eidlitz II, p. 288.

[306] "The Academy of Music," *Brooklyn Eagle*, 24 September 1862, p. 2. Changes to the seating in the upper levels were also made.

[307] "Brooklyn Academy in Ruins," *New York Times*, 1 December 1903, p. 3.

[308] "Brooklyn Academy Cornerstone Laid, *New York Times*, 26 May 1907, p. 4.

[309] "Test Brooklyn Opera House," *New York Times*, 9 October 1908, p. 9.

[310] "New-York Produce Exchange Co.," *New York Times*, 11 May 1861, p. 3.

York Commercial Association, a group that obtained rights to the term "Produce Exchange" when it received permission to incorporate from the New York State Legislature in 1868.[311]

The members of Produce Exchange initially intended to issue subscriptions to purchase and alter a block of brownstone warehouses to accommodate its needs. They hired an unnamed architect to proceed on that basis, however, after he determined that the existing buildings would be unable to support the required second floor meeting room, the group decided to commission a new building and the warehouses were demolished. It was subsequently discovered that soil conditions required piles rather than conventional foundations.[312] Planning for the new building began in 1860 with purchase of the property for $155,000 and election of nine trustees empowered to organize the Exchange and use $170,000 in subscription funds previously raised.[313] The irregularly shaped site was bounded by 108 feet of frontage on Whitehall and Moore Street, 95 feet on Water, and 77 feet on Pearl.[314]

Eidlitz won the commission for the building in a competition that included Frederick Clarke Withers and Richard Upjohn. Kowsky suggested that the competition marked the end of the Gothic revival as an acceptable mode for American commercial architecture,[315] and Schuyler described how, after seeing Eidlitz's drawings, an unnamed competitor attempted to copy his

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[311] Severini, p. 78.

[312] *Origin, Growth, and Usefulness of the New York Produce Exchange. Its leading members and representative businesses in other branches of trade. An epitome of New York's history, and the prominent points of interest*, Edward Richards, ed. (New York: Historical Publishing Co., 1884), pp. 43.

[313] "News of the Day," *New York Times*, 7 May 1860, p. 4.

[314] Leopold Eidlitz II, p. 283.

[315] Francis R. Kowsky, *The Architecture of Frederick Clarke Withers and the Progress of the Gothic Revival in America After 1850* (Middletown, CT: Wesleyan University Press, 1980), p. 136.

approach to the difficulties imposed by the non-rectilinear qualities of the site. An article in the 12 June 1860 *New York Times* stated that Eidlitz would be assisted by Henry G. Harrison.[316]

A description of the $80,000 building written shortly before it opened on 22 April 1861[317] noted that it was made of Philadelphia brick, with molded brick used for its arcuated cornice and olive-colored freestone from a Belleville, NJ, quarry for its trim. The main entrance was located on Whitehall Street, below a projecting stone porch, and a secondary entrance was located on Moore. The first floor contained eight offices that were accessible from the street, but as the scale of operations increased, the building was altered and the offices were assimilated into the second floor Exchange room.[318] Ten-foot wide black walnut staircases led from the Whitehall and Moore Street entrances to the Exchange room. It was lit by tall windows and a Greek cross-shaped clerestory supported on four carved stone columns, each 3 feet in diameter and braced against the sidewalls by a "flat-pointed" arches that consisted of one-half of a pointed arch. The room's wood ceiling was supported on exposed rafters and enriched with moldings, arches and

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[316] "City Intelligence," *New York Times*, 12 June 1860, p. 8. Harrison (1813-95) was born and trained in Lincolnshire, England, and appeared in New York City directories from 1853 to 1891. The circumstances and duration of his association with Eidlitz are unknown. Although competent in several styles, Harrison specialized in an ecclesiologically informed version of the Gothic Revival. He built several well-received parish churches for the Episcopal Diocese in the New York City area as well as a railroad station, townhouses, commercial buildings, and rural residences. He is best known for the Cathedral of the Incarnation (Garden City, Long Island, 1876-85), a relatively late addition to a suburban community (originally named "Hygiea") designed for and by the merchant A. T. Stewart with the assistance of John Kellum. Harrison also designed "The Cliffs," a Gothic Revival Estate in Oyster Bay, Long Island (1863-65), the Northwest Pavilion of the Women's Hospital in New York (1862-69), the Manhattan Market (New York City, 1871), Temple Mickve Israel (1876-78, Savannah, GA) and Trinity Cathedral in Omaha, Nebraska (1880-83). Francis, p. 37; "Mr. Henry G. Harrison," *The American Architect and Building News*, vol. 49, 7 September 1895, pp. 97-98; Anne H. Van Ingen, "Henry G. Harrison" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 320-1 and "Henry Harrison: Master of the Gothic Revival," *Newsletter / Preservation League of New York State*, vol. 8, no. 6 (November-December 1982), pp. 4-5; Stern *et al*, *New York 1880*, pp. 98-99; "A Suit Against Mrs. Stewart. An Architect Claims $95,732 for Work on the Garden City Cathedral," *New York Times*, 29 December 1895, p. 2; Shinn, pp. 257-59.

[317] "General City News," *New York Times*, 22 April 1861, p. 3; "General Markets," *New York Times*, 23 April 1861, p. 2.

[318] Severini, pp. 78-79.

tracery, and a painted polychromatic design. The Exchange room was heated by hot air furnaces while the first floor offices were warmed by stoves.[319]

Schuyler's comments on the building began with remarks on its exterior appearance, and he pronounced it "Gothic," although of the "German Gothic" variety, an insight that would have "hardly occurred" to the "untutored observer."[320] In an earlier article in which he attempted to sort out the distinctions between Gothic and Romanesque, he claimed that the Produce Exchange demonstrated "proof of its author's studies in German Romanesque" and pronounced it "evidently a reminiscence of the works of that style as it was evidently an improvement upon them."[321]

However, he soon moved away from his initial assessment by admitting, "In fact, the only badges of the style were the [buttressed] entrances, the cappings and corbels of the projections by which piers were carried past the main cornice, and the detail of the arcades above."[322] He also wrote that the use of brick, particularly at the cornices and around the windows "produces an effect more novel and pleasing than if wrought in stone."[323] As an accompanying photograph suggested,[324] this qualification took into account the presence of semicircular and segmental arches above each of the building's doors and windows and clerestories, and division of the facades into panels, a technique used by Gärtner at the Salinengebäude (Munich, 1840-43). A photograph of the building taken shortly after its completion showed its domination of the early nineteenth-century loft buildings that adjoined it (its cornices were 58 feet above the sidewalk

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[319] "The New Produce Exchange," *The Architects' and Mechanics' Journal*, vol. 2 (8 December 1860), p. 92; Landau and Condit, p. 55.

[320] Leopold Eidlitz II, p. 284.

[321] Montgomery Schuyler, "The Romanesque Revival in New York," *Architectural Record*, vol. 1, no. 1 (July-September 1891), p. 12.

[322] Leopold Eidlitz II, p. 284.

[323] Montgomery Schuyler, "Buildings on Broadway," p. 3.

with the clerestory rising another 18 feet), and suggested a common source for its primary façade and that of the earlier Springfield, Massachusetts, City Hall.[325] Schuyler compared the building's façades with those of the German Romanesque cathedral at Minden (1065), and Severini noted that because Eidlitz's use of basilcan plan for commercial purposes had considerable historical precedence, the gesture could be considered pragmatic as well as symbolic.[326]

> This building, which from its location, is probably quite unknown to a large number of our citizens, is, as a piece of architectural composition, one of the most remarkable and successful in this city. It is of pressed brick, with handsome Ohio stone portico, and trimmings of the same stone sparingly used to some of the upper windows and isolated pieces of decoration; the grand cornices and projections throughout depending entirely for their effect upon the ingenious devices and combinations of brickwork. This has been handled with the most extraordinary artistic skill – the bold overhanging cornices being so well contrived as to emulate the castellated machicolations of some old feudal fortress; and the varied disposition of projecting brickwork around the windows and elsewhere produces and effect of more novel and pleasing than if wrought in stone. The fact of the building being of brickwork but enhances the skill of the designer, and we have seen many a costly edifice here, of stone or marble, whose entire surface does not betray the artistic knowledge to be found in one window-head of the structure we are describing.[327]

Schuyler's attempts at stylistic attribution diminished as he began to describe the building's interior, and he quickly lost all concern for specificity of historical form as he echoed Viollet-le-Duc: "For the rest, and inside as well as out, the building seems to have made itself out of the materials and the conditions."[328] This notion is particularly clear in Schuyler's description of the

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[324] An exterior view appeared in Leopold Eidlitz II, p. 282.

[325] The photograph shows the area overrun with horse-drawn stagecoaches. Introduced in 1831 as the principal means of transportation in New York City, they were replaced by horse-drawn streetcars in the 1850s except on Broadway south of 14th Street where they remained in use until 1885. *Nineteenth-Century New York in Rare Photographic Views*, Frederick S. Lightfoot, ed. (New York: Dover Publications, Inc., 1981), No. 6, "Omnibuses starting from South Ferry, 1861; E. Anthony."

[326] Severini, p. 78.

[327] Montgomery Schuyler, "Buildings on Broadway," p. 3.

[328] Leopold Eidlitz II, p. 284.

double-height Exchange room that occupied the top floor of the building, and was its reason for being.

> The great hall, abundantly lighted from the sides and the transeptual clerestories, was entirely unobstructed except for the four brownstone piers at the inner angles, sustaining the open-timber roof, and modeled with reference to its framing. The clerestory walls were carried upon iron bowstring girders introduced and shown with perfect frankness.[329] There was a sparing, simple and expressive decoration in color, and inside and out, the building gave, in a higher degree than any other extant in New York, except of the same authorship, the sense of life and individuality and reality which are among the most desirable as certainly as they are among the rarest of architectural qualities.[330]

Despite a plan for the building to be purchased by the United States government, remodeled, and subdivided into "60 or 70 offices" for use by the Quartermaster-General, it was demolished when George B. Post's replacement opened in 1884 and the site was occupied by Stephen D. Hatch's United States Army building (1888).[331] Schuyler did not approve of the destruction and wrote that "neither its pretentious successor, nor still less the Army Building that now occupies its site, offers any artistic compensation...."[332] Eidlitz's bank buildings and Produce Exchange marked the end of the burst of construction that took place in the Wall Street area of Manhattan between the financial panic of 1857 and the start of the Civil War in 1861. After the War, any notions of architectural consistency were largely subordinated to the effects of demolition and rapid reconstruction.[333]

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[329] The "iron bowstring girders," probably a kind of truss, were not mentioned by *The Architects' and Mechanics' Journal*. Except for the girders, it is likely that floor beams constituted the only other use of iron in the building; Landau and Condit, p. 55.

[330] Leopold Eidlitz II, p. 284.

[331] "Buying the Old Produce Exchange," *New York Times*, 31 March, 1885, p. 5.

[332] Schuyler, "The Romanesque Revival in New York," p. 12.

[333] Severini, p. 79.

*Competitions*

In 1861, Eidlitz, Jacob Wray Mould, Henry Van Brunt, and Richard Morris Hunt entered an invited competition for the two street-facing façades of a new building for the National Academy of Design (1863, northwest corner of Fourth [now Park] Avenue and East 23rd Street; demolished).[334] The Fourth Avenue façade was to hold five stores, and the main entrance to the building was to be located on the second floor of the 23rd Street front.[335] Design of the interior was not a part of the competition because the internal arrangement of the building had been previously determined by the Academy. A reception room, offices, lecture rooms, art school facilities (classes were offered at no cost to pre-professionals), and a library were located on the second floor while the third contained sky-lit exhibition spaces. All of the major rooms were to employ several different kinds of unpainted wood.[336] Peter B. Wight was subsequently permitted to join the competition, and his entry won. Eidlitz's design has not survived. Wight's polychromatic arrangement of gray and cream-colored Tuckahoe marble reminded many of the Dodge's Palace, a resemblance that he always denied.[337] The completed building was said to cost between $150,000 and $175,000.[338] To Wight's displeasure, the basement and main facades were salvaged when it was demolished in 1901 and incorporated in the Church of Our Lady of Lourdes (1903, 467 West 142nd Street).[339]

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[334] "Designs in Competition," *The Architects' and Mechanics Journal*, 19 January 1861, p. 154. The previous building was located at 663 Broadway; *Phelp's New York City Guide*, p. 35. Carrère and Hastings designed the new building located at Amsterdam Avenue and 110th Street.

[335] "National Academy of Design," *The Architects' and Mechanics Journal*, 23 March 1861, p. 245.

[336] McCabe, p. 311.

[337] Wight, "Reminiscences of the Building of the Academy of Design," *New York Times*, 22 April 1900, p. 25; *Nineteenth-Century New York in Rare Photographic Views*, No. 103, "The National Academy of Design, ca, 1868; E. & H. T. Anthony & Co."; Landau, *P. B. Wight*, pp. 16-21. The entire June 1864 issue of *The New Path*, an art journal of which Wight was a co-founder, was dedicated to description and criticism of the building.

[338] *The 1866 Guide to New York City*, p. 60; *New York Illustrated*, p. 25.

[339] Iron beams and windows from Renwick and Sand's Catholic Male Asylum (ca. 1870, Madison Avenue, 51st to 52nd Street), marble from Kellum's A. T. Stewart Residence (1864-69, 34th Street and Fifth Avenue),

Another invited competition held in 1863 for the design of the Mutual Life Insurance Company Building at 140 Broadway in Manhattan (1863-65, 1871 addition; demolished) drew Eidlitz, Griffith Thomas, Samuel A. Warner, and Robert G. Hatfield. Each received $100 for their proposals, but several architects submitted unsolicited entries for what must have been a highly coveted job. These included Henry Hudson Holly, Diaper & Dudley, and Richard Upjohn & Son, and Richard Morris Hunt. Russell Sturgis[340] made a joint entry with Peter B. Wight. Kellum won the job, having submitted Classical, Italianate, and round-arched schemes, the last of which was selected because of his assurance that it would provide more light than the others would.[341]

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and the Madison Avenue (east) façade of Renwick's St. Patrick's Cathedral that was removed to permit construction of the Lady Chapel (1850-79, 1888, Madison to Fifth Avenue, East 55th to East 56th Street) were also used. Landau, *P. B. Wight, Architect, Contractor, and Critic, 1838-1925*, p.p. 20-21; Christopher Gray, "A Coat of Many Colors, a Building of Many Parts," *New York Times*, 3 August 2003, p. R7.

[340] Sturgis (1836-1909) was born in Baltimore but his family moved to New York City in 1850. He graduated from the Free Academy (the forerunner of the City College of New York) in 1856, spent a year in Leopold Eidlitz's office and, possibly on the recommendation of Eidlitz, attended the Akademie der Bildenden Künst in Munich (1859-60), a school that emphasized the relationship between architecture and engineering. Sturgis returned to America in 1862. He established an architectural practice with Peter B. Wight, in New York City two years later. Sturgis opened his own office in 1868 but did little architectural work after 1878 when he became a professor of architecture at the College of the City of New York and even less after 1880 when he and his family moved to Europe for five years. The remainder of his life was devoted to his writing and developing the Avery Library at Columbia University. For a short time, he was the secretary of the New York Municipal Civil Service Board. He was also president of the Architectural League of New York 1889-93, first president of the Fine Arts Federation 1895-97, and member of the National Society of Mural Painters, the National Sculpture Society, the National Academy of Design, and the New York chapter of the American Institute of Architects. He became a Fellow of the Institute in 1865 and lectured on art at Columbia University, the New York Metropolitan Museum of Art, the Peabody Institute of Baltimore, and the Art Institute of Chicago. He was nearly blind during his last years. The most recent study of Sturgis is Charlotte Ann Kelly, *Russell Sturgis: Architect, Art Historian, and Critic* Thesis (M.A.) University of Delaware, 1980; also see her "Russell Sturgis" in *Macmillan Encyclopedia of Architects*, vol. 4, p. 150; Peter B. Wight, "Reminiscences of Russell Sturgis," *Architectural Record*, vol. 26, no. 2 (August 1909), pp. 123-31; Karin M. E. Alexis, "Russell Sturgis: A Search for the Modern Aesthetic – Going Beyond Ruskin," *Athenor*, vol. 3 (1983), pp. 31-39; David Howard Dickason, *The Daring Young Men, The Story of the American Pre-Raphaelites* (New York: Benjamin Blom, Inc., 1953), pp. 106-116.

[341] Stern *et al*, *New York 1880*, pp. 390-91.

*Residential Work*

Although now believed to be designed by Richard Morris Hunt,[342] an avowed Francophile, the Hugh Willoughby House[343] was published in 1854 in *The American Cottage Builder*[344]as "Rural Home No. 4" and attributed to Eidlitz, "a New York architect of established reputation" although the extent of his involvement, if any, is unknown. Sitting on a stone-walled terrace that extended outward from the south face of Hallidon Hill, its dining room was located at terrace level, the kitchen a half level below, and the drawing room and library on the principal floor, a half level above the dining room. The library, located in its own wing on the north side of the principal floor, opened onto a covered gallery that overlooked the terrace. The drawing room, located in the southwest corner of the same floor, "which, by general consent, is the pleasantest part of the building," also overlooked the terrace, but through a semi-octagonal oriel. The drawing room and library were situated adjacent and at right angles to each other; a fireplace separated the drawing room from the main staircase and entrance hall. A third wing of the house, situated at right angles to and at the same level of the drawing room, was located on the opposite side of the staircase and entrance hall. It contained a bedroom, bathroom, and service stairs. Several additional bedrooms were located on the upper floor. Because it was a summer vacation house,

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[342] Nancy Goeschel and Paul Baker claimed that the chalet was only superficially similar to the house that appeared in Bullock and that it and its accompanying stable were designed 1866-67 and completed by 1870 by Richard Morris Hunt for Mrs. Mason Colford Jones of New York City. Their research indicated that the property was subsequently purchased by Hugh Willoughby of Philadelphia and that the house was obscured by later additions whose author is unknown. Landau published an undated photograph said to show the house before the additions and Goeschel and Baker reproduced a pen-and-wash drawing of the house from the AIA Foundation/Prints and Drawings Collection dated 1 October 1866 and signed by Hunt that was said to show the original configuration. Landau, "Richard Morris Hunt, the Continental Picturesque, and the 'Stick Style'," pp. 280-81; Nancy Goeschel, "Richard Morris Hunt, Mrs. Clifford Jones House, Chastellux (formerly King) Ave., Newport, 1866-69" in William Jordy and Christopher P. Monkhouse, *Buildings on Paper, Rhode Island Architectural Drawings 1825-1945*, exhibition catalog (Providence, RI: David Winton Bell Gallery, List Art Center, Brown University, 1982), pp. 89-90; Paul R. Baker, *Richard Morris Hunt* (Cambridge, MA and London: The MIT Press, 1980), pp. 236-37, Fig. 48, 505-6 n. 18.

[343] 1867, Hallidon Avenue, Newport, RI

view and ventilation were important aspects of its design. As noted above, the dining room opened onto the terrace, and nearly all of the rooms on the principal floor led to covered porches or galleries while the upper floor bedrooms opened onto balconies.[345]

The house was made of wood, sheathed in horizontal siding, and featured all of the stylistic identifiers of the "Swiss Cottage" style. Hitchcock approved the building's asymmetrical plan and composition (he called it an "excellent example" of the Swiss Chalet type), but not its ornament.

> But the temptation to decorate eaves and balustrades with wooden "gingerbread" (detail cut out with the jigsaw and imitated very vaguely from Alpine and Tyrolean originals) was too much for the Victorians; "gingerbread" spread rapidly from the rare chalets and also from the barge boards of the Tudor cottages like a sort of fungus until the detail of almost all types of domestic architecture was corrupted.[346]

The plan of the example shown in "Design XL. – A Swiss Cottage" in *The Architecture of Country Houses* is nothing like the Willoughby House, although the side elevation is quite similar. However, while the plan of "Design IV. – A small Cottage of Brick and Stucco, in the Gothic Style" does not feature offset floor levels, is otherwise quite similar.[347] Downing and Scully regarded the building's response to site and construction as exemplary of a "new and organic development in domestic [American] architecture," attributing it to "[Andrew Jackson]

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[344] John Bullock, *The American Cottage Builder: A series of designs, plans, and specifications from $200 to $20,000. For homes for the people* (New York: Stringer & Townsend, 1854), pp. 223-24. The book appeared in seven editions between 1854 and 1883.

[345] Although it did not employ the offset levels of the Willoughby House, Eidlitz's Solomon Merrick House (1849-50) was volumetrically, if not decoratively, similar.

[346] Henry-Russell Hitchcock, *Rhode Island Architecture* (Providence, RI: Rhode Island Museum Press, 1939), pp. 51-52.

[347] Downing, *The Architecture of Country Houses*, p. 91.

Downing's drive toward structural expression" and [Horatio] Greenough's "insistence, in the late [eighteen] forties and fifties, upon what he called the 'organic'."[348]

Echoes of a different aspect of Eidlitz's European experience and training are present in the Solomon Merrick House[349] (1849-50; demolished). Similar in massing and detail to Richard Upjohn's slightly earlier Edward King House[350] (1845-47), Hitchcock called it an "Italian Villa," but qualified the remark by comparing it to the work of "Schinkel's later followers." He also suggested, "It might have been taken almost bodily from the German magazines of the day to which Eidlitz, as a rather newly arrived foreigner, was probably a subscriber."[351] Similar comments can also be made about the Johnathan Newton Harris House[352] (1859) and the William

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[348] Downing and Scully, pp. 139-41; Vincent Scully, Jr., *The Shingle Style: Architectural Theory and Design from Richardson to the Origins of Wright*, revised ed. (New Haven: Yale University Press, 1971), liii.

[349] 104 Maple Street, Springfield, Massachusetts.

[350] 35 King Street, Newport, Rhode Island; Upjohn, pp. 93-94, 202 fig. 48-49. The plans are dated 22 July 1846-5 June 1852 and Eidlitz may have been in Upjohn's office when the project began. The building was given a glowing review by Andrew Jackson Downing in *The Architecture of Country Houses; Including designs for cottages, farm houses, and villas, with remarks on interiors, furniture, and the best modes of warming and ventilating* (New York and Philadelphia: D. Appleton & Company, 1850), pp. 317 ff, fig. 143, "Design XXVIII. Villa in the Italian Style." Upjohn owned a copy of the 1853 edition of the book. His Charles H. Russell House (1851-52, Newport, Rhode Island; demolished) is a more complex version of similar themes; Antoinette F. Downing and Vincent J. Scully, Jr., *The Architectural Heritage of Newport, Rhode Island, 1640-1915*, second ed. (New York: Bramhall House, 1967), pp.125-26, pl. 166.

[351] Hitchcock, *Springfield Architecture 1800-1900*, p. 20. Although he did not mention the building in his memorial series, Schuyler seemed to be aware of it and the William Gunn House; "Leopold Eidlitz, *Dictionary of American Biography*, vol. 6, p. 61.

[352] 130 Broad Street, New London, Connecticut; altered. Harris (1815-96), a deacon of the First Congregational Church (New London, Connecticut, 1849-51) designed by Eidlitz, was born in Salem, Connecticut, and began working in 1838. Ten years later, he established the J. N. Harris & Co. in Cincinnati, Ohio, a patent medicine firm. He was president of the New London City National Bank for many years and had an interest in railroad and navigation operations. Harris was elected to several public offices and served six consecutive years as mayor of New London (1856-62). He also served as a representative in 1855 and as a state senator in 1864. His political career ended in 1865 when his divorce was contested by his wife, Jane, in a sensational trial. In 1889, he founded the Harris School of Science at Doshisha University, Kyoto, Japan, and established a permanent foundation for a hospital in New London in 1892. The house has been extensively altered and now houses the offices and church of a religious organization. Dale S. Plummer, *National Register of Historic Places Inventory – Nomination Form, Jonathan Newton Harris Residence, New London*, Connecticut, 1981. Shortly after it was completed, a historian wrote "On a commanding eminence in Broad Street, J. N. Harris, Esq., the present Mayor of the city, has recently erected an elegant family mansion, which is the highest and most conspicuous building in

Gunn House[353] (ca. 1850), the latter attributed to Eidlitz by Hitchcock who claimed that it "derives from the traditional architecture of Southern Germany."[354]

Schuyler illustrated two New Jersey houses as examples of Eidlitz's residential work.[355] While the lower story of one was made of stone and that of the other was made of brick, the upper floors of both employed wood construction.[356] The "Cottage at Englewood New Jersey, About 1860" is the Murray-Vermilye House (ca. 1861, Englewood, NJ; demolished 1930's), the likely inspiration for approximately fifteen similar but more modest structures built during the 1880s along the cliffs of the New Jersey Palisades in the East Hill section of Englewood, across the Hudson River from the north end of Manhattan.[357] The house was apparently built by Byron Murray, Jr., and Col. Washington R. and W. Romeyn Vermilye, a group of unscrupulous private bankers who moved to Englewood from New York City in 1861.[358] It is possible that the other house was built for William A. Booth who commissioned the American Exchange Bank in New York City in 1857 and a house in Stratford, Connecticut, from Eidlitz. Booth retired to Englewood in 1868 and built a house on property he purchased in 1860. It cost $20,000 exclusive of land and, after

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the place, towering first into view from se and land, and from all points of the horizon. From its cupola, Montauk Point and the Atlantic ocean beyond Montauk, may be discerned." Caulkins, p. 677.

[353] 146 Maple Street, Springfield, Massachusetts; demolished.

[354] Hitchcock, *Springfield Architecture 1800-1900*, p. 23.

[355] Leopold Eidlitz I, pp. 168-69.

[356] "Cottage at Englewood, New Jersey (About 1860)" and "Cottage in New Jersey (About 1860)," Leopold Eidlitz I, pp. 168, 169.

[357] T. Robins Brown and Schuyler Warmflash, *The Architecture of Bergen County, New Jersey* (New Brunswick, NJ: Rutgers University Press, 2001), pp. 90, 110, 112. Englewood City was established in 1859 by J. Wyman Jones, a New York City lawyer who had met a surveyor who was working on the construction of the Northern New Jersey Railroad, the first overland connection between northern New Jersey and Manhattan that made daily travel to New York City feasible. Redacteur, "Rural Houses on the East Bank of the Hudson," *New York Times*, 30 March 1862, p. 3; *History of Bergen County, New Jersey, 1630-1923*, 3 vols., Frances A. Westerveldt, supervising ed. (New York and Chicago: Lewis Historical Publishing Company, 1923), vol. 1, pp. 510-14.

[358] *History of Bergen County, New Jersey, 1630-1923*, vol. 1, p. 511. Washington R. was W. Romeyn's father.

giving it to his daughter, Mary, the wife of his one-time partner, J. Hugh Peters,[359] he built another across from it.

[359] Peters, a banker, businessman, and financier, was the son of a minister. He died in 1907, seven years before his wife.

## 6. AFTER THE WAR: 1865-74

The post-Civil War period was a time of tremendous economic growth in New York City; however, Leopold Eidlitz did not benefit from it as much as those among his contemporaries who designed the commercial projects that sustained it. After an initial round of unsuccessful of competition entries, he returned to religious work augmented by small commercial and institutional projects and competitions, one of which led to a commission for an Episcopal church and another for a bank. He also participated in a failed plan promoted by the Tweed Ring for construction of an elevated railway in New York City. Near the end of the period, however, economic conditions deteriorated and few architects had much work.

### *Three Competitions*

Eidlitz entered a competition in 1866 for a Civil War memorial to be built at Yale University. Although Frederick Clarke Withers submitted the winning entry, it was not built.[1] During the following year, he also entered a paid competition for the New York Life Insurance Company Building.[2] Other entrants included Griffith Tomas, Bryant & Gilman, and James Renwick, Jr. Thomas won the project.[3]

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[1] Emlen Littell; Frederick C. Withers; Vaux, Withers & Company; Jacob Wray Mould, and several other architects also submitted entries; Kowsky, *The Architecture of Frederick Clarke Withers*, p. 174, n. 29; Montgomery Schuyler, "Architecture of American Colleges II. Yale," *Architectural Record*, vol. 26, no. 6 (December 1909), pp. 398-400, 404; *Guide to Yale Architectural Archives, Series I, Region/Chronology Inventory*. The project was realized ten years later, however, when the Battell Chapel, a building designed by Russell Sturgis, was completed. Kelly claimed to see similarities between the apse of Sturgis' building and that of Eidlitz's St. George's Church; Kelly, *Russell Sturgis: Architect, Art Historian, and Critic*, p. 33. Sturgis designed three other buildings for Yale, all of which were dormitories: Farnham Hall (1869-70), Durfee Hall (1870), and Lawrence Hall (1885-86).

[2] 1868-79, 346-48 Broadway; demolished.

[3] Stern *et al*, *New York 1880*, p. 391.

In 1865, Eidlitz competed unsuccessfully gain in a closed competition against Peter B. Wight, Jacob Wrey Mould, and Richard Morris Hunt for the Brooklyn Mercantile Library,[4] a building that was to be located directly across from his four year old Brooklyn Academy of Music.[5] John Kellum and Charles Alexander were also permitted to join the competition and George Hathorne jointly submitted an unsolicited entry.[6] A biographical account of Eidlitz that appeared in 1882 noted that he designed the Pittsburgh Mercantile Library but the statement may have been an incorrect reference to the Brooklyn competition.[7]

The Mercantile Library Association, a group founded in 1857, commissioned the new building. It was intended to replace outgrown facilities located on the second floor of the Brooklyn Athenaeum, an institution founded in 1853 and located in a French Revival structure at Clinton and Atlantic Streets.[8] Planning began in 1862, however, little progress was made until 1he site was purchased in 1864.[9] Wight's winning polychromatic design was sheathed in red Philadelphia

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[4] 1865-68, 195-99 Montague Street; demolished 1960

[5] "The New Mercantile Library Building," *Brooklyn Daily Eagle*, 17 May 1865, p. 2; "The Mercantile Library, *Brooklyn Daily Eagle*, 15 March 1866, p. 2. The site was previously occupied by the Hall of Manufacture and the New England Kitchen of the Brooklyn Long Island Sanitary Fair of 1864, an event held to raise money for the wives and children of impoverished Civil War draftees.

[6] Robert A. M. Stern, Thomas Mellins, and David Fishman, *New York 1880: Architecture and Urbanism in the Gilded Age* (New York: The Monacelli Press, Inc., 1999), p. 864. Alexander (d. 1897) was a Fellow of the American Institute of Architects and worked in Portland, ME before coming to New York City. He appeared in New York City directories 1864-69 and in 1875. Hathorne (d. 1899) came to New York from a practice in Springfield, ME, and was an early member of the American Institute of Architects. He appeared in New York City directories from 1867 to 1876 and in 1882. Dennis Steadman Francis, *Architects in Practice, New York City 1840-1900* (New York: Committee for the Preservation of Architectural Records, n.d. 1980?), pp. 11, 38; "Charles A. Alexander" and "George Hathorne" in *Biographical Dictionary of American Architects (Deceased)*, Henry F. and Elsie Rathburn Withey, eds. (Los Angeles, CA: Hennesy & Ingalls, Inc. 1970), pp. 15, 272.

[7] "Leopold Eidlitz" in *The Public Service of the State of New York. Historical, Statistical, Descriptive, and Biographical. Illustrated with Views and Portraits*, Paul A. Chadbourne, editor-in-chief, 3 vols. (Boston: James R. Osgood and Company, 1882), vol. 2, p. 77.

[8] "Brooklyn City," *New York Times*, 29 January 1853, p. 1.

[9] Henry R. Stiles, *A History of the City of Brooklyn. Including the Old Town and Village of Brooklyn, the Town of Brunswick, and the Village and City of Williamsburgh*, 3 vols. (Albany, NY: Joel Munsell, 1870), vol. 3, pp. 901-2.

brick and trimmed with light Ohio and dark Haverstraw sandstone. The design was substantially simplified to reduce the building's cost to $227,000.[10]

*St. George's Church: Fire and Reconstruction*

St. George's Church burned on 14 November 1865, an event depicted in an engraving published on the front page of the 2 December 1865 issue of *Harper's Weekly*.[11] The fire was first noticed around 2:30 p.m. and the roof fell an hour later. Only the walls and towers remained standing; the interior, roof, furniture, and organ were destroyed.[12] The adjacent Rectory (1851-52) was said to have been spared because the extreme height of the church confined the flames.[13] *Harpers'* attributed the disaster to "the careless use of a furnace in making repairs in the roof of the church" although it also reported "There were rumors that the cause may have been related to the Rector's public espousal of abolition."[14]

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[10] Sarah Bradford Landau, *P. B. Wight: Architect, Contractor, and Critic, 1838-1925,* exhibition catalog (Chicago: Art Institute of Chicago, 1981), p. 23; "The New Mercantile Library Building, *Brooklyn Daily Eagle*, 1 July 1867, p. 2; "Mercantile Library Association, *Brooklyn Daily Eagle*, 15 January 1869, p. 3; "Brooklyn Mercantile Library," *New York Times*, 19 January 1869, p. 8; "The Mercantile Library, *Brooklyn Daily Eagle*, 19 January 1869, p. 2.

[11] The image was made from a sketch by Alfred Rudolph Waud (1828-91). Waud was born and trained in London and came to New York around 1858. He was known for Civil War illustrations made in the field for *Harpers Weekly* and, later, for the *Century*. Following the War, he lived in New York City in a twenty-two-room mansion and worked as a freelance illustrator. He exhibited his work at the National Academy of Design. "Obituary Notes," *New York Times*, 10 April 1891, p. 5. The article that accompanied Waud's image contained the text of "The Destruction of Dr. Tyng's Church" previously published in the *New York Times*, 16 November 1865, p. 8.

[12] The Rev. Henry Anstice, *History of St. George's Church in the City of New York, 1752-1811-1911* (New York: Harper & Brothers, 1911), p. 230; "St. George's Church after the fire, 1865," Anstice, photograph opposite p. 232. Pre- and post-fire exterior and interior images of the church were also published in Montgomery Schuyler, "A Great American Architect: Leopold Eidlitz, I: Ecclesiastical and Domestic Work" [hereafter, Leopold Eidlitz I], *Architectural Record*, vol. 24, no. 3 (September 1908), pp. 165-67.

[13] Anstice, p. 232.

[14] "Burning of Dr. Tyng's Church," *Harper's Weekly*, vol. 9 (2 December 1865), p. 758. The possibility of arson was also raised in Tyng's biography; Charles Rockland Tyng, *Record of the Life and Work of the Rev. Stephen Higginson Tyng, DD. and History of St. George's Church, New York to the Close of His Rectorship* (New York: E. P. Dutton, 1890), p. 431.

Although the vestry considered moving the congregation to a new location after the fire, the implicit assumption in Peter Stuyvesant's gift of the building site was that the church would always remain on Rutherford Place. Accordingly, the parishioners decided to reconstruct the damaged building "on its present location and restored to its former condition, with as little expense over $120,000 as possible, exclusive of organ and clock."[15] They contacted Eidlitz on 20 November (Blesch had returned to Germany by this time) and solicited "plans, specifications, and estimates."[16] Eidlitz responded on 21 December and the vestry instructed the building committee to proceed with his design and to "restore the church as nearly as possible to its original aspect, with discretionary power to make alterations to its finish and interior."[17] The scope of the alterations was resolved at a meeting held on 11 January 1866 when the building committee received approval "to line the exterior walls of the church with a twelve-inch hollow brick wall, to raise the apse thirteen feet and introduce five windows therein, to extend the chancel, and to substitute iron for wooden stairs up to the organ loft."[18] Tyng also requested installation of eight "Scripture testimonies" on the walls as "a system of divine teaching in responsive utterances."[19]

While the pre-fire floating galleries may have been controversial (column supports were added during the post-fire repairs), the post-fire apse was well received. Considerably taller, it featured a semi-dome ceiling and plaster ribs similar to the old. Now, however, the area received light

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[15] Elizabeth Moulton, *St. George's Church, New York* (New York: St. George's Church in the City of New York, 1964)p. 55; Anstice, pp. 233-34; "Destruction of Dr. Tyng's Church," *New York Times*, 15 November 1865, p. 5 "St. George's Church," *New York Times*, 22 November 1865, p. 2. The building and its contents were insured for $70,000.

[16] Anstice, p. 234.

[17] Anstice, p. 234.

[18] Anstice, p. 234.

[19] Charles Rockland Tyng, pp. 435-37. As late as 1939, the Lord's Prayer was inscribed in large, plain letters on the west wall of the chancel and a table served in place of an altar and reredos; *The WPA Guide to New York City, A Comprehensive Guide to the Five Boroughs of the Metropolis – Manhattan, Brooklyn, the Bronx, Queens, and Richmond – Prepared by the Federal Writers' Project of the Works Progress Administration in New York City* (New York: Random House, 1939), p. 190.

from a row of clerestory windows instead of a skylight[20] to accommodate the tablets requested by Tyng.[21] James Renwick, Jr. used a similar design for the art gallery in the west wing library of the Smithsonian Institution (1852-54).[22] Phillip Brooks (1835-93) who commissioned H. H. Richardson's Trinity Church (Boston, MA, 1872-79) after its predecessor burned in 1872 visited St. George's several times that year and was said to be especially enthusiastic about the tablets and their evocation of the "Word."[23] When the church reopened for public worship on 29 September 1867, $181,457.50 had been spent, an amount that included the cost of furniture.[24]

*The Literary World* responded positively to the changes and summarized them as follows:

> There is one thing, however, of indubitable excellence in the idea of this Church. This is, its attempt to adapt ancient architecture of the necessities of modern worship. Here we find no deep Chancel, because it is not intended to be filled either by a host of priests, or the whole body of communicants, no Altar Screen, because there is no Tabernacle of the holiest to be protected and displayed; no niches where there are no statues; no rood loft because the Crucified is not here to be lifted except to the mental eye. Preaching, singing, and communing together, the requirements of modern worship are here represented and none other.[25]

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[20] Anstice, "Interior of St. George's Church, 1869," photograph opposite p. 396.

[21] Kathleen Curran, "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," *Art Bulletin*, vol. 81, no. 4 (December 1999), p. 697.

[22] An exterior view of the apse appeared in Robert Dale Owen, *Hints on Public Architecture, containing, among other illustrations, views and plans of the Smithsonian Institution: Together with an appendix relative to building materials. Prepared, on behalf of the Building Committee of the Smithsonian Institution* (New York and London: George P. Putnam, 1849), Plate 10 facing p. 75, "West Wing, Smithsonian Institution, with Apse and single Campanile. On wood by L. R. Townsend, after a sketch by James Renwick, junr. Engraved by Childs." An interior view of the library appeared in Kathleen Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange* (University Park, PA: The Pennsylvania State University Press, 2003), Figure 154, p. 255.

[23] Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 269. Brooks visited the church on 9 April and 20 December.

[24] Anstice, p. 235.

[25] Robert Cary Long, Jr. (writing as "An Architect"), "Architectonics. No. II. St. George's Church, Stuyvesant Square," *The Literary World, A Journal of American and Foreign Literature, Science, and Art*, vol. 3, no. 95 (25 November 1848), pp. 853-54.

All was not perfect, however, and the magazine concluded with a swipe at the building's eclectic assemblage of forms and expressed a desire that the design could have achieved its ends without violating "the sacred harmonies of ecclesiastical architecture, and the high principles of artistic effect," transgressions associated with "different styles of architecture not only, apparently, used at random, but their dissimilar characteristics brought frequently into the closest juxta position."[26] This charge of mixing architectural styles was to follow Eidlitz throughout his life and writing several years later, Schuyler seemed to agree with the charge.

> The church of Rev. Dr. Tyng, on Stuyvesant Park, which was some time ago injured by fire, is a work of considerable merit, its towers especially being models of fine proportion. But this, like Trinity Church, was the early work of another architect, who has since far eclipsed it by his riper productions, and imperfections are to be found among its many beauties. It is still, however, one of the finest churches in New York.[27]

By 1866, an additional $2,000 had been spent for a rose window[28] and $20,000 on a rectory.[29] While he did not attribute the structure to Eidlitz, Anstice noted that on 13 March 1851, a "special committee on the temporalities of the church" authorized its construction "using a sufficient quantity of stone already purchased for the building required" in lieu of "immediate erection of the spires."[30] *Putnam's* called the result "a plain brown-stone building, not remarkably pleasing in itself nor successful in the vain attempt to harmonize a modern five-story house with the Italian Gothic style of the church adjoining" and concluded disapprovingly

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[26] Long, Jr., p. 854.

[27] Montgomery Schuyler, "The Churches of New York," *New York World*, 22 October 1871, p. 2.

[28] "Burning of Dr. Tyng's Church," p. 758. An illustration and an account of a two-storey gable-roofed Parish House appeared in "Educational Institutions of New-York," *Putnam's Monthly Magazine of American Literature, Science and Art*, vol. 2, no. 7 (July 1853), p. 11. The building, likely designed by Eidlitz and contemporary with the Rectory, was described as "a good example of what a parish-school house should be, – convenient and tasteful without extravagance. The ornamental cornice, as well as the walls, is of brick. The building adjoins the parsonage and the church (St. George's), and harmonizes well with those fine structures."

[29] Moulton, pp. 50.

> This imitation has only been made in the porch, the architraves of the windows, and the cornices to the gables. But we have no authority in antiquity, nor reason in common sense to apply church ornaments to domestic dwellings. What the domestic architecture of the so-called *Byzantine* period really was, would puzzle the enthusiastic but paradoxical author of "The Stones of Venice" to inform us. But judging by analogy from the old English, French, and Netherlands remains, it probably resembled any thing rather than their church architecture.[31]

*Temple Emanu-el*

In an article written after Eidlitz died, Schuyler gave some of his highest praise to Temple Emanu-el (with Henry Fernbach, 1866-68, built by Marc Eidlitz,[32] 521 Fifth Avenue; demolished 1927). Although Fernbach was a member of the congregation, Schuyler did not mention his role in the design or construction supervision of the building.[33] In contrast, Stern suggested that Fernbach, rather than Eidlitz, may have been responsible for the design. He also suggested that although Eidlitz and Blesch had designed the first building for Congregation Shaaray Tefila, Fernbach may have received the commission for the second (1868-69, 127 West 43rd Street; demolished) because his design was less expensive to build than Eidlitz's and the congregation was more comfortable with a Jewish architect.[34] Fernbach seemed to have maintained a

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[30] Anstice, pp. 191-92.

[31] "New York Daguerreotyped. Private Residences, "*Putnam's Monthly Magazine of American Literature, Science and Art*, vol. 3, no. 15 (March 1854), pp. 237-38

[32] Marc Eidlitz also built Fernbach's cast iron-faced 8-10 White Street commercial building (New York City, 1869). Margot Gayle and Edmund V. Gillon, Jr., *Cast-Iron Architecture in New York* (New York: Dover Publications, Inc., 1974), p. 26.

[33] Rachel Wischnitzer, *Synagogue Architecture in the United States, History and Interpretation* (Philadelphia: The Jewish Publication Society of the United States, 1955), pp. 74-76; Montgomery Schuyler, "The Work of Leopold Eidlitz, II: Commercial and Public" [hereafter Leopold Eidlitz II], *Architectural Record*, vol. 24, no. 4 (October 1908), p. 277. An article about the demolition of the building referred to Eidlitz as "one of the men who designed the building"; "Wreckers Start Work on Temple Emanu-el," *New York Times*, 2 September 1927, p. 12.

[34] Stern *et al*, *New York 1880*, pp. 326, 329. Stern did not confirm the existence of an Eidlitz design for the second building. Fernbach is described as the son of a rabbi in "Henry Fernbach," *Universal Jewish Encyclopedia*, Isaac Landman, ed., 10 vols. (New York: Universal Jewish Encyclopedia, Inc., 1939-43), vol. 4 p. 279. In contrast to Eidlitz, he received much work from the New York City Jewish institutional community including the Hebrew Orphan Asylum (1860), the Harmonie Club (1866-68), the German

connection with Temple Emanu-el and in 1877, an illustration for his unbuilt project for a "Moorish" parsonage that adjoined the building on East 43rd Street appeared in *The American Architect and Building News*.[35]

Schuyler claimed that he met Eidlitz for the first time at the dedication of the building and made his début as an architectural critic for the World in an unsigned and unsympathetic review.[36] He later wrote that the encounter with Eidlitz "led to a meeting, and that began in an altercation which became a friendship, and on my side a pupilage."[37] In an article that he wrote several years later describing the work of Eidlitz's son, Schuyler seems to have lost none of his admiration:

> Perhaps this is not the place for the present writer to record his personal obligations for the teaching by precept of the architect who has taught his art by these examples. But he cannot refrain from applying to Mr. Leopold Eidlitz in respect of architecture what [Charles James] Fox [1749-1806] said of [Edmund] Burke [1729-97] in respect to political knowledge, that 'if he were to put on one scale all that he had learned from books, and from other men, and in the other all that he had learned from the conversation and instruction of his right honorable friend he should be at a loss to which to assign the preference'."[38]

The commission came to Eidlitz in a gradual manner. The congregation was formed by German immigrants in September 1844 as a Cultus Verein (cultural society) and formally organized as a Reform congregation under the name of Temple Emanu-el (God with us) on 6 April 1845.[39] Its

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Savings Bank (1871-73), the *Staats-Zeitung* Building (1873-75), and the Ahawath Chesed Synagogue (1872); Olga Bush, "The Architecture of Jewish Identity: The Neo-Islamic Central Synagogue of New York," *Journal of the Society of Architectural Historians*, vol. 63, no. 2 (June 2004), p. 193.

[35] "Proposed Parsonage for Temple Emanuel, N.Y.," *The American Architect and Building News*, vol. 2 (21 April 1877), p. 124.

[36] "Temple Emanu-el, The Dedication Yesterday – Full Description of the Building, &c., &c, &c.," *New York World*, 12 September 12, 1868, p. 7.

[37] Leopold Eidlitz II, p. 277.

[38] Montgomery Schuyler, "Cyrus L. W. Eidlitz," *Architectural Record*, vol. 5, no. 4 (August 1895), p. 413.

[39] For a history of the congregation see, Myer Stern, *The Rise and Progress of Reform Judaism, Embracing a History Made from the Official Records of Temple Emanu-el of New York, With a Description of Salem Field Cemetery, Its City of the Dead, With Illustrations of Its Vaults, Monuments, and Landscape Effects* (New York: Myer Stern, 1895), pp. 13-90.

thirty members met in a rented room in a three-story house located at Grand and Clinton Street.[40] In 1847, during construction of Shaaray Tefila Synagogue, Eidlitz was asked to submit ideas for alterations to a former Methodist church located at 56 Chrystie Street purchased by the group that year for $12,000.[41] Although an organ was installed and his suggestions, including conversion of the building's vestibule into an open porch, were discussed at a meeting held on 1 January 1848, no decisions were made and his only known work involved furniture design.[42] On 2 February 1854, the Chrystie Street building, by then considered to be located in an undesirable location, was sold to Congregation Beth Israel and the group purchased a Baptist church located at 110 East 12th Street, midway between Third and Fourth Avenues.[43] The Gothic Revival building featured an openwork stone spire and wood-faced groin vaults, but did not contain a gallery. Eidlitz designed an ark and installed an organ, but the need for a new building became apparent in 1864 and planning for a new structure to be located at the corner of Fifth Avenue and 43rd Street began two years later. It was to cost from $300,000 to $500,000 including building lots valued at $106,750. The corner stone for the new building located at the northeast corner of Fifth Avenue and East 43rd Street was laid on 30 October 1866 and the 12th Street facility was sold the following February for $35,000 to St. Ann's Catholic Church. It was subsequently remodeled by Napoleon Le Brun, a parishioner and a friend of Eidlitz.[44]

In an article written on the day of the planned cornerstone laying ceremony the *New York Times* noted that the style of the new synagogue was "of no special order, although the Moorish

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[40] Leon A. Jicks, *The Americanization of the Synagogue, 1820-1870* (Hanover, NH: Brandeis University Press, 1976), p. 90; "Local Intelligence: The Temple Emanu El," *New York Times*, 1 November 1866, p. 2.

[41] Jicks, pp. 90-93; Stern, *The Rise and Progress of Reform Judaism*, p. 28. The building was erected in 1821 and used as an Episcopal Church; "Rededication of a Synagogue, *New York Times*, 5 September 1881, p. 8.

[42] Wischnitzer, pp. 48-49.

[43] Jicks, p. 141; Wischnitzer, p. 50. The building is extant and is now the Armenian Catholic Cathedral.

[44] Wischnitzer, pp. 50; "Consecration of the Temple Mishkan Israel," *New York World* (September 12, 1886), p. 7.

decidedly preponderates." The newspaper also noted that "the general effect of the interior is of rich but subdued magnificence" and gave credit for the design to Eidlitz and "Henry Feurbach."[45] When the cornerstone ceremony was finally held (it had been postponed because of bad weather), the *Times* noted that the congregation numbered three hundred and was prepared to build a facility that could seat two thousand. Of the building's architectural qualities, the article noted, "The style of the building may be named as Moorish; but like most modern structures, whether in good taste or not, it will exhibit the features of several styles of architecture." Completion was expected "very early in 1868 – not later than the Feast of Passover." [46]

Lewis claimed that the Moorish qualities of the building reflected similar aspects of the fashionable, technically advanced, and highly influential Neue (Oranienburgerstraße) Synagogue (Eduard Knoblauch, 1858-66, burned 1938) in Berlin.[47] Calling the iron-framed and galleried basilica "one of the richest synagogues in Europe as well as a visual manifestation of Reformed Judaism itself," he pointed out that the 3,000 seat building not only referred to the eastern origins of the Jewish faith, but also implied that architecture and religion were progressive institutions and capable of change over time. Thus, such a structure could be modern and a part of the fabric of the city in which it was located yet distinct from that fabric and endowed with its own

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[45] "Local Intelligence: The New Temple Emanu El," *New York Times*, 11 September 1868, p. 2.

[46] "Local Intelligence: The Temple Emanu El," p. 2.

[47] For a history and description of the Oranienburgerstraße Synagogue, see Carol Herselle Krinsky, *Synagogues of Europe: Architecture, History, Meaning* (The MIT Press, 1985), pp. 265-70. For discussions of the influence of the "oriental" version of the *Rundbogenstil* and Romanesque Revival on synagogue design in Europe and America, see Wischnitzer, pp. 67-83; Bush, pp. 180-201; Brian de Breffny, *The Synagogue* (New York: Macmillan Publishing Co., Inc., 1978), pp. 155-72; Krinsky, pp. 80-85; Ivan Kalmar, "Moorish Style: Orientalism, the Jews, and Synagogue Architecture," *Jewish Social Studies: History, Culture, and Society*, vol. 7, no. 3 (2001), pp. 68-100.

Knoblauch (1801-65) was a Protestant architect who had studied at the Bauakademie. He was the first head of the Berlin Architects' Association and built many private mansions, the first Russian Embassy, the Jewish Hospital, and additions to the eighteenth-century Heidereutergaße Synagogue. He died the year before the Oranienburgerstraße Synagogue was completed; it was finished by his son, Gustav (1833-1916). "Eduard Knoblauch" in *Allgemeines lexikon der bildenden künstler von der antike bis zur gegenwart; unter mitwirkung von 300 fachgelehrten des in- und auslandes*, 37 vols., Ulrich Thieme and Felix Becker, eds. (Leipzig, W. Engelmann, 1907-50), vol. 21, pp. 9-10.

historical identity.[48] Eidlitz and Fernbach could have learned about the synagogue from contemporary local accounts such as the one that appeared in the *Jewish Messenger*, a New York City newspaper,[49] and from technical descriptions and illustrations in the German-language architectural press such as those written by Knoblauch and his son and published as early as 1866.[50]

Olga Bush pointed out Temple Emanu-el's position in a succession of American Moorish Revival synagogues that began with Temple Congregation B'nai Yeshurun (1866, Cincinnati, James Knox Wilson[51]) and Temple Emanau-El (1866, San Francisco, William Patton[52]) and continued with Temple Rodeph Shalom (1870, Philadelphia, Frank Furness[53]) and Congregation Ahawath

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[48] Michael J. Lewis, *Frank Furness: architecture and the violent mind* (New York and London: W. W. Norton & Company, 2001), pp. 77-78.

[49] Krinsky, pp. 268, 270.

[50] Eduard Knoblauch, "Die neue Synagoge in Berlin" (The new synagogue in Berlin), *Zietschrift für Bauwesen* (Journal for building concerns), vol. 16 (1866), cols. 3-6; Gustav Knoblauch, "Die neue Synagoge in Berlin," *Zietschrift für Bauwesen*, vol. 16 (1866), cols. 482-86, Plates 1-6; vol. 18 (1868), cols. 3-4, Plate 1; W. Schwedler, "VI. Kappelconstruction von 44 Fuß Durchmesser auf der neuen Synagog zu Berlin in der Oranienburgerstraße, Nr. 30, Erbaut 1863" (6. Construction of the 44 foot diameter dome built in 1863 at the new synagogue in Berlin, No. 30 Oranienburgerstraße), *Zietschrift für Bauwesen*, vol. 18 (1868), cols. 32-34, Plate 14. Except for a colored illustration of the Alhambra-influenced polychromatic decoration of the east interior end wall, all of the plates were line engravings and many of them showed details of building's iron framing. Schwedler's description of the design and construction of the synagogue's iron-framed dome (a feature that was not a part of Eidlitz's design for Temple Emanu-el) appeared in a separate article, "Die Construction der Kuppeldächer" (The construction of domed roofs) that described similar structures used for industrial buildings in Berlin.

[51] Wilson (1828-94) practiced in Cincinnati for twenty years and specialized in commercial work. He organized the Cincinnati chapter of the AIA in 1870 and served as its first president. "James Knox Wilson" in *Biographical Dictionary of American Architects (Deceased)*, pp. 663-64.

[52] Patton (1821-99) was born in England and trained by Gilbert Scott. He came to California in 1849 in response to the news of gold discoveries but was unsuccessful as a miner or shopkeeper. After returning to architecture, he eventually settled and practiced in San Francisco for thirty years where he pursued religious and commercial commissions and was the supervising architect of the first San Francisco City Hall. Bailey Millard, Lewis F. Byington, Oscar Lewis, *The Bay of San Francisco: the metropolis of the Pacific Coast: a history*, vol. 1 (Chicago: Lewis Publishing Company, 1892), p. 422.

[53] Furness (1839-1912), born and trained in Philadelphia, also studied with Richard Morris Hunt in New York City. After serving in the Civil War and rejoining Hunt's atelier, he returned to Philadelphia where he established a general practice and remained until his death. His work fell out of favor toward the end of his life but has regained appreciation. Sandra Tatman, "Frank Furness" in *Biographical Dictionary of Philadelphia Architects: 1700-1930*, Roger W. Moss and Sandra L. Tatman, eds. (Boston, MA: G. K. Hall & Co., 1985), pp. 287-96.

Chesed (1872, New York City, Henry Fernbach).[54] These buildings were preceded in Euorpe by Rosengarten's Kasel Synagogue (1839),[55] Semper's Dresden Synagogue (1838-40),[56] and Förster's Tempelgasse Synagogue in Vienna (1853-58)[57] and Dohány Street Synagogue in Budapest (1854-59),[58] all of which, with the exception of the latter, were published in architectural periodicals available to Eidlitz.[59] Bush also repeated P. T. Barnum's opinion that "Iranistan" (1848, Bridgeport, CT), the villa built for him by Eidlitz, was the first American instance of the style and she and Bernstien noted its use of motifs borrowed from John Nash's Brighton Pavilion (1815-21).[60]

Shortly after the completion of Temple Emanu-el, the *Scientific American* published an extremely detailed description of the building. Calling it "a specimen of Moorish architecture, slightly modified to adapt the structure to its destined use," the account noted

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[54] Olga Bush, The Architecture of Jewish Identity: The Neo-Islamic Central Synagogue of New York," *Journal of the Society of Architectural Historians*, vol. 63, no. 2 (June 2004), pp. 195-96.

[55] Albert Rosengarten, "Die Synagoge in Casel" (The Synagogue in Kasssel), *Allegemeine Bauzeitung*, vol. 5 (1840), pp. 205-6.

[56] "Die Synagoge in Dresden von Semper, Professor der Baukunst zu Dreseden" (The Synagogue in Dresden by Semper Professor of Architecture in Dresden), *Allegemeine Bauzeitung*, vol. 12 (1847), p. 127, Plates 105-7; Heidrun Laudel, "Der Bau der Synagoge in Dresden (1838-40) – ein Werk Gottfried Sempers/The Construction of the Semper Synagogue in Dresden (1838-40)" in *Einst & jetzt: zur Geschichte der Dresdner Synagoge und ihrer Gemeinde/Then and now: the history of the Dresden synagogue and its community* (Dresden: ddp goldenbogen, 2001), pp. 16-35; Volker Helas, *Architektur in Dresden 1800-1900* (Braunschweig/Weisbaden: Friedr. Vieweg & Sohn, 1985), pp. 25-27; Krinsky, p. 158; de Breffney, p. 159; Joseph Rykwert, "Gottfried Semper: Architect and Historian" in *The Four Elements of Architecture and Other Writings*, pp. 276-79.

[57] [Christian Freidrich] Ludwig [Ritter] von Förster, "Das Israelitische Bethaus in der Wiener Vorstadt Leopoldstadt" (The Jewish Prayerhouse in the Vienna Suburb of Leopoldsatd), *Allegemeine Bauzeitung*, vol. 24 (1859), pp. 14-16, Plates 230-35; Krinsky, pp. 157-59, 191-95.

[58] Krinsky, pp. 157-59.

[59] Krinsky suggested that Förster did not publish the Budapest synagogue because it was not completed to his design, however, it appeared in several German-language periodicals published before Temple Emanu-el was finished; Krinsky, pp. 159, 162-63.

[60] Bush, pp. 192, 196; Gerald Bernstein, "Two Hundred Years of American Synagogue Architecture," p. 14 in *Two Hundred Years of American Synagogue Architecture*, exhibition catalogue, The Rose Art Museum, Brandeis University, Waltham, MA, 30 March-2 May 1976 (Waltham, MA: The American Jewish Historical Society, 1976).

> It occupies a lot one hundred and four feet on Fifth Avenue, and one hundred and eighty-four feet on Forty-third Street. It consists of a nave thirty-four feet wide, one hundred and sixty feet long, and seventy-two feet high, with transepts of about ninety feet in length, attached to which are aisles about twenty feet wide, containing, the galleries. In front, on either side of the nave, rise two towers detached above the aisle walls, but connected with the nave by two bridges on a line with its ceiling and with the choir gallery. These towers are to be about one hundred and seventy feet high, and are to terminate in stone cupolas, the surfaces of which are to be covered in relief ornament. The building is built of sandstone, out of the New Jersey, Cleveland, and New Brunswick quarries – each of these being used and a ranged [sic] with reference to its color. The entire cost of the structure will amount to nearly a million dollars. The architects elected by the building committee were Mr. Leopold Eidlitz and Mr. Henry Feurebach [sic].[61]

The synagogue was larger than Trinity Church and could seat 1,800 on the ground floor and 500 in the galleries.[62]

The use of color was an extremely important aspect of the building. It was faced with brown and yellow sandstone, and its roof featured alternating rows of red and black tiles. The *Scientific American* approvingly commented on "the bright cream color of the pinnacles relieving against a blue sky and on the brown rubble, sparkling like so many jewels in their setting," and of its interior, the same magazine noted

> Attractive as the exterior is, the interior far surpasses it. On entering the building we seem transported to another sphere. Here we enter the realm of color; forms seem to have vanished or to resolve themselves into radiant splendor. Color as an architectural element appears to reign supreme; we have that which the Orientals, the acknowledged masters of this element of art, most delighted in. The problem they have solved through the skilful handling of ornament, and a consequent distribution

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[61] "The New Temple Emanuel," *Scientific American*, vol. 19, no. 14 (30 September 1868), pp. 219.

[62] James D. McCabe, *New York by Sunlight and Gaslight. A work descriptive of the great metropolis. Its high and low life; its splendors and miseries; its virtues and vices; its gorgeous places and dark homes of poverty and crime; its public men, politicians, adventurers; its charities, frauds, mysteries, etc., etc.* (Philadelphia, PA: Douglass Brothers, Publishers, 1882), p. 633.

> of color, is the production of general effects not only pleasing in themselves, but also in harmony with the constructive masses.[63]

The anonymous author of the article based the assertion on a claim that religious law prohibited realistic depiction of "animal forms" for "the Jews in their Bible, and the Mohammedans in their Koran," and concluded that "[they] have been obliged to make the most of color on its own merits; color, consequently, is their principal decorative medium."

> Yellow or gold, blue, red, black, and white are their vehicles of expression. All muddy compounds of hybrid tints, miscalled color in many modern pictures, are completely ignored. The only figures they employ are delicate arabesques and patterns arranged in a capricious but still regular manner, and which, adapted to the eye in conformity with its sensuous aptitude, challenge no criticism on the score of their non-resemblance to known natural objects. Gorgeous hues, therefore, in true complementary union, cover the spacious walls of this edifice; the eye wanders over them attentive to their innumerable harmonies as the ear listens to the infinite harmonies of musical sounds. Draped arches, festooned with divers tints, support blue panels decked with golden stars, while the stained glass windows, more like luminous interstices than anything else, pour in a flood of prismatic brilliancy to blend all together in soft and radiant light. The obscurities of the triforium, the sanctuary, the organ-loft, and other spaces lend an air of mystery to the general tone, which is again enhanced by the dark reflections of the richly carved wood work. The general effect is one of subdued richness, an effort in harmony with a spirit of adoration, and with that instinct which lends man to exalt worship by art.[64]

*Harper's Weekly* could only add "The gilding is profuse. When illuminated by its five hundred jets of gas the interior of the edifice presents a splendid appearance."[65] The *Scientific American* noted that Eidlitz had used color elsewhere, particularly during the reconstruction of St. George's, but not at such a "grand and effective scale." It concluded that while decoration usually consisted

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[63] "The New Temple Emanuel," pp. 219. The passage was attributed to the *Evening Post.*

[64] "The New Temple Emanuel," pp. 219.

[65] "The Hebrew Temple Emanu-el," *Harper's Weekly*, vol. 12 (14 November 1868), p. 729.

of "meaningless imitations of Renaissance ornament... expressing no sentiment and symbolizing no truth," Emanu-el represented something fundamentally different.

> Color, as here employed, conforms to natural law, and therefore a truth in itself. None of its combinations suggests the intellectual perversity associated with Renaissance symbols so conventionally applied to public and private edifices everywhere.[66]

Shortly after Temple Emanu-el was finished, George Templeton Strong[67] attended a "Sunset Service" and described the interior as "glowing and gorgeous with gold and color, arabesque wood carvings, and columns of polished syenite."[68] He also noticed that attendance was sparse and described the mostly choral ritual "polyglot," probably because it was presented alternately in Hebrew, English, and German.

> As a finale, we were astounded by the splendid "Gloria" of Haydn's No. 2, followed by the "Qui Tollis," and all the rest, adapted to German words (not a translation, of course), and effectively rendered.[69]

While Templeton seemed to be amused by the incongruity of the scene, *King's Handbook of New York City* pointed out that the congregation, "which is one of the most liberal in the city... is now the only one maintaining regular Sunday services, in addition to the usual Saturday service."[70]

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[66] "The New Temple Emanuel," pp. 219.

[67] Strong (1820-75) was a wealthy, conservative, New York lawyer. He is best known for keeping a meticulous diary that revealed his reaction to social change and his growing disgust with Southern politicians and slavery. During the Civil War, he funded a Union regiment and his wife served on a hospital ship. Subsequently, he served as treasurer of the U.S. Sanitary Commission.

[68] George Templeton Strong, *The Diary of George Templeton Strong*, 4 vols., Allan Nevins and Milton Halsey Thomas, eds. (New York: The Macmillan Company, 1952), 3 December 1869.

[69] Strong, 3 December 1869, vol. 4, p. 262.

[70] *King's Handbook of New York City, an outline history and description of the American metropolis, with over one thousand illustrations form photographs made expressly for this work*, Moses King, ed., second ed. (Boston, MA: Moses King, 1893), p. 402. The practice, which for a time supplemented traditional Saturday worship, persisted intermittently up to 1884 when, despite the opposition of the "Pastor," the congregation voted to discontinue it; "They Will Not Worship on Sundays," *New York Times*, 29 December 1884, p. 8.

In comments similar to those he had previously made about St. Peter's Church, he again suggested that the cultural background of an architect necessarily determined the limits of a project's success. Perhaps recognizing the building as yet another variation on the Ludwigskirche theme, Schuyler began his remarks by claiming "In the first place, a perfect synagogue cannot be designed except by a Jew, any more than a perfect church except by a Christian, or any good work of art be produced by a good man."[71] Accepting the Ruskinian notion that the quality of an ecclesiastical building reflected the degree of belief present in its architect, he castigated the Temple because it seemed to show that Eidlitz had betrayed his religion. "We do not know, indeed, but that the present architect is one of the ancient race and religion; but if he be, he certainly builds synagogues in a most heterodox and scandalously Christian manner."[72]

Despite criticism of awkward elevations and roofs and expressions of doubt about its ornamental elements, its primary offense was its configuration: "he has selected, of all forms in the world, the cruciform for the temple of the Jews. It is a form hallowed by associations, intrinsic and derived, to all Christendom, but by the selfsame associations hateful to all Judaism."[73] The same point was also mentioned in a description of the building published in the *New York Times*.[74] Because of the severity of that fault, little in the building had any value for Schuyler because it could not achieve "that satisfaction that results from unity."[75]

> The synagogue is most honestly and faithfully built, as far as building goes, from top to bottom, and that is a great comfort at any rate. But it is not in Mr. Eidlitz's style; and when that is said, all is said. Why should a man of his ability play tentative tricks of this kind? He has a style of his own, and a good one,

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[71] "Temple Emanu-el, The Dedication Yesterday," p. 7. Krinsky also discussed the issue and arrived at a similar conclusion, pp. 69, 71.

[72] "Temple Emanu-el, The Dedication Yesterday," p. 7.

[73] "Temple Emanu-el, The Dedication Yesterday," p. 7.

[74] "Saturday at the Synagogue," 10 March 1872, p. 6.

[75] "Temple Emanu-el, The Dedication Yesterday," p. 7.

> too. Why can he not stick to it? "'Tis a poor thing, but mineown," was a solace for one of Shakespeare's characters;[76] that is a good thing, and his own, ought to satisfy Mr. Eidlitz about his style. Or, if not to satisfy him, since an honest artist is never satisfied, it ought to make him content to stick it out, and follow the possibilities. If we ever get an American architecture, we shall get it by such means, and not by procreating hybrids of Saracen on Goth. As a commodious place of worship the new temple is a success; as an honest building it is a success; but as a religious monument it is a failure, and as a work of art commensurate with the ability of its designer, or of a good augury for American architecture, it is *nichts*.[77]

Nevertheless, the vestigial transepts that appeared in churches designed by Eidlitz for non-liturgical congregations contained ground floor seats and galleries rather than side chapels, and a plan of the building published in *The American Architect and Building News* showed that its extremely shallow transepts functioned precisely in this way, thereby mitigating the theological impact of the church-like, i.e., cruciform, configuration attributed to it by Schuyler.[78] This arrangement suited nineteenth-century reconfigurations of the traditional centralized synagogue plan by reducing architectural encouragement for continued gender segregation in seating and relocating the bimah (officiates' platform) from the middle of the room to the east endwall, thereby creating a quasi-theatrical space similar to those gaining popularity among non-liturgical Christian denominations. The use of vacated churches that contained such arrangements (or were easily modified to produce them) seems to have grown increasingly acceptable to contemporary Jewish congregations.[79]

The *Real Estate Record and Builders' Guide* recounted Schuyler's comments and noted that "this criticizing of an architect is something new in the American press." Of Eidlitz, the article said,

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[76] The quotation is a commonplace and could not be attributed.

[77] "Temple Emanu-el, The Dedication Yesterday," p. 7.

[78] "Temple Emanuel, New York, N.Y.," *The American Architect and Building News*, vol. 18 (31 October 1885), p. 210.

[79] See Krinsky, pp. 21-24 and de Breffny, p. 149.

"He is now the most popular architect in the metropolis, and can boast of having erected some very fine edifices... The great, or as Parton would say, the coming architect must be an American, and his work must savor of the soil."[80] Several years later, in another review of the building, the publication remained just as effusive in its praise of Eidlitz.

> This glorious edifice, more sumptuous perhaps in its interior decoration than even in its exterior decoration, stands decidedly as far ahead of all ecclesiastical structures yet seen in this city as the Equitable Insurance Building above all civil ones.[81] People may like or dislike Moorish architecture, according to their varied tastes; but most assuredly the man who undertook to give us this rich Moorish poem in stone knew the language he employed, and has her produced a miracle of artistic beauty, the equal of which, if existing on this continent, we have yet to see and hear of.[82]

All members of the congregation did not share this opinion, however, and in October 1875, one urged the appointment of a committee to investigate removing several columns said to obstruct the view and sound for nearly a quarter of the worshipers. The work was to be paid for by higher pew rentals that would be justified by the improved conditions.[83] Although a similar complaint had been made and acted upon in 1872 at Eidlitz's Broadway Tabernacle Church, nothing came of it at Emanu-el.

After his *World* article, Schuyler limited his criticism of the building to architectural rather than cultural concerns. Writing in 1908, he called it "the most conspicuous and probably the most

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[80] "Architects Criticized," *Real Estate Record and Builders' Guide*, vol. 2 (26 September 1868), p. 1. The reference is to the phrase "the coming man" that is identified with the work of James Parton (1822-91), a prolific English-born writer and historian who came to America when he was five years old. Parton founded *American Heritage* magazine and was the best known biographer of his day; "James Parton," *New York Times*, 18 October 1891, p. 5. I was unable to identify the source.

[81] Montgomery Schuyler suggested a similar standard for judging religious buildings in "The Churches of New York," *New York World*, 22 October 1871, p. 2.

[82] "An Architectural Ramble," *Real Estate Record and Builders' Guide*, vol. 6 (17 September 1870), pp. 1-2.

[83] Stern, *The Rise and Progress of Reform Judaism*, p. 68.

meritorious of the works of its author which still stand in New York."[84] His words represented a significant change from his initial assessment of the building made almost forty years earlier when he and Eidlitz confronted some of the problems inherent in an approach to architecture that acknowledged and embraced situations for which neither rejection nor acceptance of precedent was possible. Schuyler defined the problem clearly: despite advances in theology, the design of ecclesiastical buildings remained bound to the past, in both appearance and construction. The situation was especially significant for American Jews, "breaking away, not from the faith, but the exclusion of the ages... faithful but advanced people: no longer refugees; no longer shut in by any form and fashion from the outer world, but equal with it – part of it."[85] The *New York Times* echoed similar themes when it wrote

> The Jewish temple Emanuel [*sic*] on Fifth-avenue, shows how far the Hebrews have adopted the modes and ideas of the Gentile world in general. It exhibits in rare combination the peculiarities of the Oriental and Western orders of architecture, putting them together gorgeously; and investing them with the ornament of minarets, airy galleries, stained glass windows, frescos, and there is an organ to imitate the melodious thunder of the Gregorian or Ambrosian chants. The men and women will sit together, an arrangement never allowed under the old *régime*, and the men will be uncovered. Thus do the oldest and most cherished rites of the world give way in time before the silent influence of new ideas and social habits, working themselves out according to the suggestions of common sense, which is, after all, a greater divinity than many people suppose.[86]

Schuyler acknowledged that the convention of using oriental motifs had been established before Temple Emanu-el was built, and quoted its "author" to the effect that that while he knew that it was necessary to distinguish a synagogue from a church, the latter provided "the only available

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[84] Leopold Eidlitz II, pp. 178-79. Exterior and interior views of the synagogue appeared in Leopold Eidlitz I, pp. 176-77.

[85] "Temple Emanu-el, The Dedication Yesterday," p. 7.

[86] Untitled article, *New York Times*, 4 October 1869, p. 4.

repertory of constructions suitable for so elaborate a work."[87] Schuyler grudgingly agreed and concluded that, despite its faults, "The temple is an attempt accordingly to combine Gothic structure with Saracenic decoration... It was a very bold attempt, but it was justified by the event."[88] In response to the increasing commercialization of its neighborhood and a corresponding increase in the value of the land on which the Temple stood, the congregation sold the property to a developer for $7 million in 1925; the building was demolished two years later.[89]

*Church of the Pilgrims (alterations and additions)*

Eidlitz visited Upjohn's Church of the Pilgrims in 1854 when he and Upjohn examined it before its roof and roof framing were replaced and side galleries installed; it is likely that Upjohn did the work.[90] Eidlitz subsequently modified the building between 1868 and 1870 at a cost of $130,000 (the original budget was $70,000) to accommodate an additional 300 seats and raise its capacity to 3,000 worshipers. His design involved moving the organ from the west end of the nave to the rear of the pulpit and adding a two-story structure to the east end that contained a first floor lecture room and Sunday school room and second floor facilities for bible and infant classes and committee meetings.[91] The former south transept formed the link between the old and new work. Formerly a shallow gabled vestibule that projected from the right side of the building, it was

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[87] Leopold Eidlitz I, p. 179.

[88] Leopold Eidlitz I, p. 179.

[89] Nathan Silver, *Lost New York* (Boston and New York: Houghton Mifflin Company, 2000)p. 150; Jenna Weissman Joselit, "Temple Emanu-el" in *The Encyclopedia of New York City*, Kenneth T. Jackson, ed. (New Haven, CT and London: Yale University Press; New York: New York Historical Society, 1995), p. 1161.

[90] Curran, "The Romanesque Revival, Mural Painting, and Protestant Patronage in America," pp. 705-6, 720 n. 58 and *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, pp. 275-76; H. H. McFarland, "The Church of the Pilgrims, In Brooklyn, New York," *Congregational Quarterly*, vol. 13 (second series, vol. 3, no. 1, 1871), pp. 64-69.

[91] "The Church of the Pilgrims – Proposed Enlargement," *Brooklyn Eagle*, 29 May 1868, p.2; "Reopening of the Church of the Pilgrims, Brooklyn," *New York Times*, 13 June 1870, p. 8; Stiles, vol. 3, p. 786. Curran referred to the addition as a "parish house"; *The Romanesque Revival: Religion, Politics, and*

extensively altered and now featured a variety of round- and flat-headed windows and a shed roof that supported a new spire whose appearance had little to do with the earlier two. The addition that extended beyond the transept featured paired round-headed windows at the first and second floors and gabled stone dormers with round headed windows at the attic. Although Eidlitz used stone similar to that of the old building, the addition's smooth Nova Scotia yellow sandstone trim, variously sized and asymmetrically placed windows in the transept, and horizontal bands of windows and dormers in the addition contrasted strongly with it. The Congregational Quarterly justifiably reported that "The extended southern front [now 180 feet long], thus secured, is, architecturally, one of the most imposing in Brooklyn or New York."[92]

The alterations also included new interior decorations[93] and the *Congregational Quarterly* noted "The ventilating and acoustic properties of the [church] are found to be all that can be desired, and in closing what is said of it, its decoration alone claims attention."[94] The reference was to the polychromatic paint scheme installed by Louis Cohn. The magazine quoted a recent newspaper article that traced Eidlitz's approach to "the architects who built the All Saints Church and the Basilica, in Munich"[95] and noted that modern use of color decoration in Europe did not occur before 1835.

> The walls of the church are blue-gray, with a red fleur de lis. The clerestory is decorated in two colors of red, and the ceiling is Prussian blue, with gold stars. The woodwork, in the main, retains its oak color, the deep parts being covered with

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*Transnational Exchange*, p. 276. It was built on the site of existing lecture and Sunday school rooms and the pastor's study.

[92] McFarland, p. 65. A drawing of the altered building appeared in McFarland opposite p. 56.

[93] McFarland, pp. 64-65. The decorations are extant.

[94] McFarland, p. 67.

[95] McFarland, p. 68. The newspaper article cited is "The Church of the Pilgrims in Brooklyn," *New York Evening Post*, 15 June 1870. All Saints Church (Allerheiligenhofkirche, 1826-37) was designed by Klenze; the Basilica [of St. Boniface] (Bonifaziusbasilika, 1835-50) was designed by Georg Friedrich Ziebland. Both churches contained important fresco cycles; Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, pp. 79-80.

> vermilion, while the bright lights of the capitals and the principal mouldings are gilt. A broad gilt band runs all around the church at the spring of the window arches, while the windows, rather short in proportion to the architecture, are carried up by a pointed [they are actually round-headed] arched border to the spring of the roof, thus greatly improving the appearance of the separate bays, which were originally rather wide for their height.
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> The organ [located on a gallery above the pulpit] shows all its pipes in successive rows, the first being mainly blue and gold, the second gold upon red, and the third contrasting reds; while the more receding pipes and other parts of the organ are treated in a subdued bluish gray and a vermilion ornament. This coloring harmonizes perfectly with the substantial character of the architecture, which is sustained by the stone of the organ screen and the solid oak of the pews and furniture. The effect of the whole is suggestive of genuineness and durability, while the harmony of the colors, lights, and forms of decoration is perfectly satisfactory to the eye.[96]

The *Brooklyn Eagle* was equally enthusiastic about the painted work and commented

> ...the interior [is] tastefully finished in oak, while the walls and ceilings have been chastely tinted and frescoed. The ceiling is of a beautiful blue, studded with gilded stars, and the tinting and frescoing is at once pleasing and free from gaudiness.[97]

Curran claimed that the location of four semicircular figural panels located on the west end of the church was similar to that in Gärtner's Ludwigskirche although the majority of the decoration was said to be based on Schinkel's St. Johannes Kirche in Moabit, (Berlin, 1832-38).[98] Schinkel regarded that building as being unusual because its roof was supported on trusses that were encased to simulate round arches with pierced spandrels. He wrote "This adds more height to the interior of the church and produces an open effect."[99] It is unclear if similar structural details used at the Church of the Pilgrims were installed by Upjohn in 1854 or added by Eidlitz.

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[96] McFarland, pp. 68-69. The organ is extant.

[97] "Church of the Pilgrims," *Brooklyn Eagle*, 13 June 1870, p. 2.

[98] Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, pp. 275-76.

[99] Karl Freidrich Schinkel, *Collection of Architectural Designs including designs which have been executed and objects whose execution was intended* (Chicago: Exedra Books Incorporated, 1982), reprint of

The original congregation vacated the building and removed its memorial windows in 1934 when it merged with the former Plymouth Congregational Church to become the Plymouth Congregational Church of the Pilgrims.[100] It was purchased by the present occupant, Our Lady of Lebanon Catholic Church, on 9 September 1944 and the first Mass was celebrated on 26 November of that year. The building became the Cathedral of the Diocese of St. Maron in 1978 when the Maronite See moved from Detroit to Brooklyn. Alterations made by the new congregation include installation of bronze doors removed from the Normandie, a French ocean liner that burned and sank in New York City harbor on 9 February 1942,[101] marble sanctuary paneling from the French and Lebanese pavilions of the 1939-40 Worlds' Fair and Charles M. Schwab residence (Maurice Herbert, 1901-05, New York City),[102] and mahogany vestibule doors from the Schwab residence.

*Church of the Holy Trinity*

More to Schuyler's taste was the Church of the Holy Trinity (1870-74, Madison Avenue and East 42nd Street; demolished), a church that "remembers the past, but it belongs to the present," and "a much more radical version than any of its predecessors."[103] It was built for Dr. Stephen Higginson Tyng, Jr. (1839-98) as a $300,000 replacement for Jacob Wray Mould's chapel for the

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*Sammlung architektonischer Entwürfe enthaltend theils wereke welche ausgeführt sind theils gegestände deren ausführung beabsichtigt wurde* (Berlin: Ernst and Korn, 1866), Plates 159-60, translation of notes to Plates 159-62, p. 52. A drawing of the Eidlitz/Cohn decorations appeared in McFarland between pp. 64-65.

[100] "Plymouth Church and Pilgrims Unite," *New York Times*, 24 March 1934, p. 17; "Old Pilgrim Church in Brooklyn Bought," *New York Times*, 3 February 1944, p. 20. Initially, Plymouth Church was to be used for morning services and the Church of the Pilgrims for vespers.

[101] "Church Buys Items of the Normandie,' *New York Times*, 20 July 1945, p. 44. A bronze statue and bas-relief were also purchased for use in the building.

[102] Herbert (1861-1933), who was born in France and received no formal design training, worked as an architect and decorator there and in America. Photographs of "Riverside," Schwab's 75-room Chateauesque house located on the city block bounded by Riverside Drive, 73rd and 74th Street, and West End Avenue were published in *The Inland Architect and News Record*, vol. 47, no. 1 (February 1906), plate following p. 20. It was demolished and replaced by apartments after Jimmy Walker refused the former Bethlehem Steel chairman's offer to give it to the City as a mayoral residence.

Church of the Holy Trinity (1865).[104] Tyng was the son of the rector who commissioned St. George's Episcopal Church from Eidlitz and Blesch, and both churches were somewhat confusingly referred to as "Dr. Tyng's church." Schuyler wrote

> Architecture should express purpose. An idea can be expressed in architectural lines and proportions, and there should be congruity between the idea so expressed and the idea which has led to the erection of the edifice. It is manifest that one form of building does not equally well express the different purposes of worship, amusement, or business. In the new Church of the Holy Trinity, Mr. Eidlitz, the architect, has chosen simple lines and several but not crude forms, to accord with Dr. Tyng's purpose of a working church for working people.[105]

The younger Tyng claimed to profess even stronger commitment to Low Church beliefs than his father did and came into conflict with church officials in 1868 for his ecumenical beliefs.[106] However, he left the pulpit in 1881, after twenty years of service, to run an insurance agency in Paris.[107]

Mould (1825-86) was born in Kent, England and educated at King's College in London. After training with Owen Jones[108] and assisting him in the polychromatic decoration of the London

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[103] Leopold Eidlitz I, p. 175. An exterior view of the church appeared in Leopold Eidlitz I, p. 174.

[104] An account of the cornerstone laying appeared in "General City News. The Church of the Holy Trinity," *New York Times*, 8 September 1864, p. 8.

[105] Montgomery Schuyler, picture caption for drawing of the Church of the Holy Trinity, *New York World*, 19 October 1873, p. 1.

[106] Tyng was tried for violating of a section of the Canon of the Protestant Episcopal Church that forbid any minister of the Church from officiating within the parish of another minister without his permission or that of a majority of the church-wardens or of the vestrymen. The trial was held at St. Peter's Church, New York, from 10 January 10th to 18 February, and the charge was preferred by Rev. Dr. Stubbs, of New Brunswick who and accused Tyng of preaching and reading prayers within his jurisdiction without the consent of the Bishop of the diocese; the preaching and reading occurred in a Methodist chapel. Tyng was found guilty and sentenced to receive a public admonition from the Bishop. "Current Events," *Putnam's Monthly Magazine of American Literature, Science and Art*, vol. 11, no. 4 (April 1868), p. 506.

[107] Leopold Eidlitz I, p. 175; Strong, vol. 4, p. 189 n. 8; "Teachings in the Pulpit," *New York Times*, 2 May 1881, p. 8.

[108] Jones (1809-74) was born in London, apprenticed from 1825 to 1830 to architect Lewis Vulliamy (1791-1871), and attended the Royal Academy Schools from 1829 to 1832. Vullimay's eclectic buildings employed the Gothic, Romanesque, and Classical Revival styles, and his publications included *The bridge*

*of the SSa. Trinita over the Arno, at Florence. Drawn and measured, and accompanied by explanatory remarks* (London: 1822) and *Examples of Ornamental Sculpture in Architecture: drawn from the originals of bronze, marble, and terra cot[ta] in Greece, Asia Minor, and Italy in the years 1818, 1819, 1820, 18[21]* (London: Lewis Vulliamy and Henry Moses, 1827). Jones apparently thought enough of his teacher that he later sent Mould to train with him. Jones traveled briefly in Paris, Milan, Venice, and Rome in 1830, and took an extended trip through Alexandria, Cairo, Constantinople, and Thebes from 1832 to 1834.

His travels culminated in a project undertaken with Jules Goury (1803-34), a French architect he met in Athens at the beginning of the trip. Goury had been traveling with Gottfried Semper and assisting him in a study of polychromatic work at Greek temples in search of a quasi-musical chromatic system said to have been used in pre-Roman buildings. Semper was not alone in this quest; Schinkel in Germany and Hittorff and Labrouste in France pursued similar projects. Goury and Jones had come to believe, however, that the Alhambra was the system's principal surviving monument and, after traveling in Egypt and Istanbul, they arrived in Granada during the summer of 1834, intending to document the complex (Mould may also have been present). Goury contracted cholera after they began work and died six months later. Jones returned to England to begin publication of the work and financed it by selling family property in Wales. Although only three of its ten planned sections were issued (1836-37), they were the first significant examples of chromolithography published in England. In the spring of 1837, Jones returned to Granada to complete the project and took plaster and paper impressions of the ornament. When it was finally published under joint authorship, the work included several descriptive essays and 101 color plates. The earlier portion of the Goury-Jones collaboration resulted in *Views on the Nile: from Cairo to the second cataract drawn on stone by George Moore; from sketches taken in 1832 and 1833 by Owen Jones and the late Jules Goury; with historical notices of the monuments by Samuel Birch* (London: Graves and Warmsley, 1843).

During the 1830s and 1840s, Jones designed two Orientalist villas in Kensington Palace Gardens, several interiors, a range of decorative tiles, and a number of books. However, during the mid-1830's, he was also lecturing on the need for a new scientific and industrial style of architecture that would incorporate iron and the universal laws of color and decoration he claimed to have found at the Alhambra. Jones' ideas reflected his travel experiences and the scientific color theories of Michel-Eugène Chevreul (1786-1889), *De la loi du contraste simultané des couleurs, et de l'assortiment des objets colorés, considéré d'après cette loi* (Paris: Pitois-Levrault et ce., 1839) and George Field (1777?-1854), *Chromatography; or, A treatise on colours and pigments, and of their powers in painting, & c.* (London, C. Tilt, 1835). He got a chance to implement some of them when he was appointed Superintendent of Works for the Great Exhibition of the Industry of All Nations in 1851. In that capacity, he provided the decorative scheme for Paxton's Crystal Palace and designed the Alhambra Court.

He was subsequently appointed a lecturer at the Kensington science and art museums for which he compiled *The Grammar of Ornament by Owen Jones. Illustrated by examples of the various styles of ornament. One hundred folio plates. Drawn on stone by F. Bedford. And printed in color by Day and Son.* (London: Day and Son, 1856). It contained nearly 2,400 conventionalized drawings of motifs from various historical periods and cultures and from nature intended to support thirty-seven "General Principles in the Arrangement and Form of Color and Architecture in the Decorative Arts" formulated several years earlier. The book introduced Western artists to previously unknown non-Western approaches, particularly Islamic and Hispano-Moorish, and presented an alternative to naturalistic decoration in its demonstration and advocacy of flat, conventionalized, and geometrically based design, a notion that Jones may have gotten from Christopher Dresser. In addition to working as a book designer, interior decorator, and tile and silk designer, Jones received architectural commissions, most of which were for exhibition and sales spaces and nearly all of which employed iron construction and extensive polychromy. Jill Allibone, "Lewis Vulliamy," in *Macmillan Encyclopedia of Architects*, vol. 4, pp. 352-53; "Lewis Vulliamy" in *Directory of British Architects 1834-1914*, vol. 2, p. 878; "Owen Jones" in *Directory of British Architects 1834-1914*, vol. 1, pp. 1040-42; David Van Zanten, "Owen Jones" in *Macmillan Encyclopedia of Architects*, vol. 2, pp. 514-15; Catherine Hoover Voorsanger, "Owen Jones" in "Dictionary of Architects, Artisans, Artists, and Manufacturers" in *In Pursuit of Beauty: Americans and the Aesthetic Movement* (New York: Rizzoli, 1986), exhibition catalog (Metropolitan Museum of Art, New York, 23 October 1986 – 11 January 1987), pp. 444-46.

Crystal Palace and illustration of his books, he maintained an architectural practice in London before coming to America in 1853.[109] When Mould, who also wrote songs and translated opera libretti, arrived in New York, he was regarded as the personification of the bohemian artist. George Templeton Strong called him "the ugly and uncouth but very clever J. Wray Mould, architect and universal genius,"[110] and Montgomery Schuyler referred to him as "that strange genius, Wray Mould."[111] In a paper read in January 1867 to the Royal Institute of British Architects, William Robert Ware acknowledged the significance of Mould's English background and described him as

> ...an architect whose works, though not numerous, show great vigour and fertility of mind, besides exhibiting characteristics, rare on our side of the water, of the school in which he was trained. These circumstances have given him an influence, and an influence for good, as marked and extensive, perhaps, as any one of our number.[112]

Like Owen Jones, Mould's abilities extended beyond architecture, and he designed stained glass, books and book bindings, bank notes, ceramics, textiles, metalwork and glassware. He did not travel in the mainstream of the architectural profession, however, and never achieved great success due to his eccentricity, poor manners, lack of business sense, and open habitation with a woman who was not his wife.[113]

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[109] Mould appeared in New York City directories from 1853 to 1874, in 1880, and from 1883 to 1886; Francis, p. 56.

[110] Strong, 3 January 1858.

[111] Montgomery Schuyler, "Italian Gothic in New York," *Architectural Record*, vol. 26, no. 1 (July 1909), p. 46.

[112] William Robert Ware, "Architecture and Architectural Education in the United States," *The Civil Engineer and Architect's Journal*, vol. 30 (1 April 1867), p. 108.

[113] Francis R. Kowsky, "Jacob Wray Mould: Master of Color," *Newsletter (Preservation League of New York)*, Vol. 11, no.2 (March-April 1985), p. 4.

Mould became a friend of and significant influence on Eidlitz[114] as a charter member of the AIA and through his advocacy of Owen Jones' theories of color and ornament. He had prepared highly detailed and intensely colored drawings for Jones' *Plans, elevations, sections, and details of the Alhambra,*[115] the precursor to Jones' more well known *The Grammar of Ornament*, an illustrated encyclopedia of the historical styles of ornament that contained thirty-seven axioms said to reveal the "general principles in the arrangement of form and colour, in architecture and the decorative arts."[116] Eidlitz's references to both books in his writing and work suggest a close affinity between his ideas and those of Mould. That basis of that affinity was can be seen inferred from a review of Mould's decorative interior design for the Second Empire style residence of John A. C. Gray designed by Calvert Vaux (1857, 40 Fifth Avenue; demolished): "Every line and every leaf betrays the spirit and life of a master hand, and reminds us of the best works of the Alhambra and Gartner's [*sic*] modern productions in Munich."[117]

Mould's All Souls' Unitarian Church (1853-55, Fourth Avenue and 20th Street; demolished), an Anglo-Italianate manifestation of the Romanesque Revival, was said to be the first constructional, i.e., non-painted, polychromatic building in America, and the *Architects' and Mechanics Journal* called it "the most excellent ecclesiastic specimen" of Byzantine design in New York City.[118] Located just off Union Square, it was clad with alternating bands of Caen stone and red

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[114] David Van Zanten, "Jacob Wray Mould: Echoes of Owen Jones and the High Victorian Styles in New York, 1853-1865," *Journal of the Society of Architectural Historians*, vol. 28, no. 1 (March 1969), p. 56.

[115] Jules Goury and Owen Jones, *Plans, elevations, sections, and details of the Alhambra: from drawings taken on the spot by the late M. Jules Goury and in 1834 and 1837 by Owen Jones, archt: with a complete translation of the Arabic transcriptions, and an historical notice of the kings of Granada, from the conquest of that city by the Arabs to the expulsion of the Moors; by Mr. Pasqual de Gayangos*, 2 vols. (London: Owen Jones, 1842, 1845). Eidlitz's strong advocacy of the decorative work at the Alhambra is mentioned throughout Chapter XXII ("Carved Ornament and Color Decoration") of *The Nature and Function of Art*, pp. 316-29.

[116] Jones, *The Grammar of Ornament*, "Preface," n.p.

[117] "Decorative Painting in the House of J. A. C. Gray, Esq.," *The Crayon*, vol. 6 (February 1859), p. 60. Gray was a banker and a Central Park commissioner. Christopher Gray, "A Teddy Roosevelt House, a Calvert Vaux Design," *New York Times*, 1 March 1998, p. RE5.

Philadelphia brick intended to "harmonize with the deep blue of the clear American sky."[119] A 227-foot high campanile that would have cost an additional $40,000 beyond the $170,000 cost of the church was never completed.[120] Antagonistic critics referred to it as the "holy zebra," "Joseph's Coat," "fat and lean," and the "immaculate beefsteak"[121] while a positive review emphasized the novelty of its appearance.[122] It was unsigned but attributed to Eidlitz by Schuyler who also quoted Mould as saying, "Eidlitz is death on form; but I'm hell on color."[123] George Templeton Strong did not care for it ("too glaring") but approved of the approach ("I'm glad the precedent is to be followed and improved upon") for a new building in the Ruskinian "Venetian pointed" style to be designed by Richard Upjohn for Columbia College.[124]

Mould worked in a number of styles during the late 1850s and 1860s including English-based and Ruskinian Gothic Revival and a version of the "Swiss Chalet." Although he attempted to

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[118] "Byzantine Windows, &c.," *Architects' and Mechanics Journal*, 9 February 1861, p. 186.

[119] *New York Journal of Commerce* (27 December 1855) cited in Van Zanten, "Jacob Wray Mould," p. 54.

[120] *The River Hudson, Together with Descriptions and Illustrations of the City of New York, Catskill Mountains, Lake Champlain, Lake George, Saratoga. Illustrated with Fifty Engravings* (New York: Alex. Harthill and Company, 1859), p. 54

[121] Peter B. Wight, "What Has Been Done and What Can Be Done," *The New Path*, no. 6 (October 1863), p. 70. For a history of the magazine (it published 23 issues from May 1863 to December 1865), see Alfred J. Bloor, "The Architectural and other Art Societies of Europe; some account of their origin, processes of formation and methods of administration, with suggestions as to some of the conditions necessary for the maximum success of a national American architectural-art society, with its local dependencies," a paper read before the New York Chapter of the American Institute of Architects, February 16th, 1869" in American Institute of Architects, *Proceedings of the Second Annual Convention of the American Institute of Architects, Held in New York, December 8th, 1868* (Committee on Library and Publications, 1869), pp. 95-96. Similar comments were made by Montgomery Schuyler in "Our City Architecture," *New York World*, 1 October 1871, p. 6 and "Italian Gothic in New York," pp. 46-47.

[122] "The Church of All Souls," *The Crayon*, vol. 5 (January 1858), pp. 20-22.

[123] Montgomery Schuyler, *American Architecture and other Writings by Montgomery Schuyler*, William Jordy and Ralph Coe, eds., 2 vols. (Cambridge, MA: Belknap Press of Harvard University Press, 1961), vol. 1, pp. 154 n. 55; Leopold Eidlitz I, 178; *King's Handbook of New York City*, pp. 385-86.

[124] Strong, 1 October 1855. The project, designed in 1856, was to be located on the present site of Radio City. The College decided not to proceed with it and in 1857, signed an agreement with Upjohn that gave him $1,875, an amount equivalent to 1.5% of the estimated $125,000 costs. He insisted that the payment was to be considered in full if the work did not go ahead and on account if it did. He also retained ownership of the drawings and would be the architect if the project were built. Everard M. Upjohn,

maintain a successful ecclesiastical and residential practice, in 1867, he became an assistant to Calvert Vaux, Chief Architect of Public Parks in New York City. In that role, he designed several structures in Central Park for Vaux and Frederick Law Olmsted. From 1870 to 1874, he succeed Vaux as architect-in-chief of the Department of Public Parks after it was reorganized by William Magary Tweed, however, his work during that period became less sympathetic to the intentions of his former superiors. Nevertheless, he served Vaux as associate architect for the first portions of the Metropolitan Museum of Art (ca. 1875-79) and the American Museum of Natural History (1874-80). From 1875 to 1879, he lived in Lima, Peru, became architect-in-chef of the city's Department of Public Works, and designed its park system. After he returned to New York, he worked on the architectural design of Morningside Park (1880-82) following the Olmsted-Vaux plan of 1873 and, until his death, was an architectural drafter for the Department of Public Parks.[125]

Eidlitz won the Church of the Holy Trinity commission in a competition for a church and rectory held in 1869 in which he got the church and Frederick Clarke Withers the rectory.[126] Rather than

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Richard *Upjohn, Architect and Churchman* (New York: Columbia University Press, 1939), pp. 94-95, 153, 165, 223.

[125] Dennis Steadman Francis and Joy M. Kestenbaum, "Jacob Wray Mould" in *Macmillan Encyclopedia of Architects*, vol. 3, pp. 246-47; Van Zanten, "Jacob Wray Mould," pp. 41-67; "J. Wray Mould," *New York Times*, 16 June 1886, p. 5; "Jacob Wray Mould" in *Biographical of Dictionary American Architects (Deceased)*, p. 431; "Death of J. W. Mould, Architect," *The American Architect and Building News*, vol. 19 (26 June 1886), pp. 301-2; Montgomery Schuyler, picture caption for drawing of the Church of the Holy Trinity, p. 1.

[126] Francis R. Kowsky, *The Architecture of Frederick Clarke Withers and the Progress of the Gothic Revival in America After 1850* (Middletown, CT: Wesleyan University Press, 1980), p. 91. Withers, an extremely prolific and successful architect, was born and trained in England and immigrated to America in 1852 at the invitation of Andrew J. Downing to assist Calvert Vaux and him with their work. When Downing died that summer, Withers formed a partnership with Vaux that lasted until 1856. Withers rejoined Vaux in 1863 after a period of independent practice and a brief enlistment in the Union army, and the two remained partners until 1871. By that time, Withers and Vaux were also associated with Frederick Law Olmsted. Withers maintained an active practice for the rest of his life, after 1888 in partnership with New York City architect Walter Dickson (1834-1903). The Withers and Vaux partnership was largely involved with institutional and governmental commissions, but Withers was best known as a church architect, although he also applied his Gothic revival sensibility to variety of secular work. Francis R. Kowsky, "*Frederick* Clarke Withers" in *Macmillan Encyclopedia of Architects*, vol. 4, pp. 409-10; "*Frederick* C. Withers" in *Biographical Dictionary of American Architects (Deceased)*, p. 668.

moving to a new site, the congregation decided to erect a new building on the on the 145-foot by 100-foot site of their old church at a cost of $200,000.[127] That building was designed by Mould (ca. 1854-65) and Schuyler referred to it as "a pretty little wooden cottage ornée."[128] The *New York Times* noted that it had been in use for nine years before it was demolished.[129]

In response to a request for an auditorium-type design, Eidlitz created what he called "a theatre with ecclesiastical details." It featured an elliptical screen of columns that defined the worship space that was contained within its rectangular brick envelope.[130] In a pre-construction description, the *New York Times* noted that

> ...[the] seats [will be] arranged somewhat like the orchestra and dress circle of the Academy of Music. Above will be a gallery, extending all the way around, with a gallery for the organ and choir on the right of the chancel. The ceiling will conform to the shape of the roof, varied with polished beams and arches. There will be seats for 1,900 persons. The acoustics in this church are to be assisted by the elliptical shape, according to the plans furnished by the architect, Mr. Leopold Eidlitz.[131]

Schuyler was particularly enthusiastic about the building's structural system because it seemed to emphasize the distinction between enclosure and support. Rather than being held up by the elliptically arranged interior columns, the building's gabled roof was carried on two longitudinal trusses located outside of the ellipse and spanning between massive decorated granite piers. Similarly, dormers were framed into the roof rather than obtaining their support from interior columns. Details of the construction of the trusses are unknown, but the use of engineered trusses became common in America by mid-century after the principles of mechanics were first applied

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[127] "New Churches in New-York," p. 2.

[128] Leopold Eidlitz I, p. 175.

[129] Schuyler, "Italian Gothic in New York," p. 47; "Holy Trinity Church," *New York Times*, 9 June 1873, p. 8.

[130] Leopold Eidlitz I, p. 175.

[131] "New Churches in New-York," p. 2.

to their design at the beginning of the nineteenth-century in France and subsequently expanded in England. Nevertheless, in America, interest was mainly directed toward their use in railroad bridges.[132]

The building was faced with bluestone, yellow Ohio stone, and red brick laid in black mortar. Of the church's "less interesting exterior," detractors of its vivid polychromatic facades and 185-foot bell tower (two were planned) referred to it as the "Church of the Homely Oilcloth."[133] *King's Handbook of New York City* deemed it "a conspicuous object,"[134] and the *Times* claimed "the style of architecture is mixed, and cannot properly be said to belong to any style."[135] The stonework was said to cost $120,000 and the brickwork "about $62,000."[136] Located a block from the new Grand Central Deport (John B. Snook, 1869-71, Fourth To Vanderbilt Avenue, East 42nd to East 45th Street; demolished) and unconstrained by High Church associations, its exterior walls featured a "brick mosaic" consisting of a "diaper of yellow, brown and blue" that Schuyler described as being "entirely successful where it was removed far enough from the eye, as in the main [front corner] tower and the apse, and even at the top of the smaller [rear corner] tower.[137]" While *King's Handbook of Notable Episcopal Churches In the United States* remarked that the building's "variegated brick walls and corner tower form quite a striking feature of the neighborhood, and arrest great attention,"[138] at close range, it was somewhat less agreeable: "by some optical illusion which the architect had not foreseen, [the pattern] produced a zig-zag which

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[132] D. A. Gasparini and Caterina Provost, "Early Nineteenth Century Developments in Truss Design in Britain, France and the United States," *Construction History*, vol. 5 (1989), pp. 21-28.

[133] Schuyler, "Italian Gothic in New York," p. 47.

[134] *King's Handbook of New York City*, p. 360.

[135] "Holy Trinity Church," p. 8.

[136] "Holy Trinity Church," p. 8. The *New York Times* estimated the total cost at $200,000; "New Churches in New-York," p. 2.

[137] Leopold Eidlitz I, p. 178.

[138] The Rev. George Wolfe Shinn, *King's Handbook of Notable Episcopal Churches In the United States* (Boston, MA: Moses King Corporation, 1889), p.106

gave the look of confusion and weakness."[139] Eidlitz seems to have recognized the problem and offered to redesign shop fronts planned for construction next to the church at no cost to the architect who was working on them. He hoped to create "some sort of grouping," but the gesture was declined.[140]

Eidlitz may have made a similar gesture when he offered to model the towers of the Brooklyn Bridge (1869-83) designed by John Augustus Roebling.[141] Schuyler referred to the incident without mentioning Eidlitz by name in "The Brooklyn Bridge as a Monument."[142] In the article, the unnamed Eidlitz was portrayed as a partner with nature whose skills were required to bring the bridge to wholeness. After chiding Roebling for failing to bring out "the lines of effort and resistance," Schuyler called for

> an architect who pursued his calling in the spirit and with the skill of the medieval builders of whom we have been speaking, who knew in his province the lesson the engineer has re-enforced in his, that 'Nature can only be commanded by obeying her,' and that the function of an organism, in art as in nature, must determine its form – such an architect might have helped the designed of the Brooklyn Bridge to make it one of the noblest

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[139] Leopold Eidlitz I, p. 178.

[140] Leopold Eidlitz I, p. 178.

[141] Roebling (1806–1869) was born in Mühlhausen, Thurginia, and received a degree in civil engineering from the Berlin Bauakademie in 1826 where his philosophy professor was Georg Friedrich Hegel (Mumford quoted an un-named biographical memoir that called Roebling "his favorite pupil") and the influence of Friedrich Gilly was substantial. He immigrated to the United States in 1831 with his brother Karl, settled near Pittsburgh, and attempted to establish a utopian farming community comprised of other German immigrants. After the effort failed, he took a position as the Pennsylvania State Engineer in which his duties involved survey and construction of locks, dams, and canals. In 1841, Roebling invented the twisted wire-rope cable that quickly advanced the development and practicality of suspension bridges, a subject in which he had maintained a strong interest since writing his graduation thesis on a bridge of that type located in Bamburg, Bavaria. Carl W. Condit, "John Augustus Roebling and Washington Augustus Roebling" in *Macmillan Encyclopedia of Architects*, vol. 3, pp. 597-98; Ulrich Pfammatter, *The Making of the Modern Architect and Engineer*, Madeline Ferretti-Theilig, trans. (Basel, Boston, Berlin: Birkhäuser, 2000), p. 272; Lewis Mumford, *The Brown Decades, A Study of the Arts in America, 1865-1895* second revised ed. (New York: Dover Publications, 1955), p. 44.

[142] *Harpers Weekly*, vol. 27 (26 May 1883), pp. 326, reprinted in Montgomery Schuyler, *American Architecture, Studies by Montgomery Schuyler*, (New York: Harper & Brothers, Publishers, 1892), pp. 68-85. The bridge construction office rented rooms in Eidlitz's *Brooklyn Union* Building that was located on the northwest corner of Front and Fulton Street.

> monuments of architecture in the world, as it is one of the greatest and most honorable works of engineering."[143]

The story was repeated many years later in the *North American Review*, but with an entirely different slant.

> Leopold Eidlitz to whom the Victorian architecture of New York owed so much, offered, when the Brooklyn Bridge was building, to make the towers architectural. At the time public opinion would have sustained the official declination he met with and the bridge remains the strictly engineering monument it was then considered and considered preferable to have. Eidlitz was a native of Prague and would perhaps have given New York something comparable to the Karlsbrüke towers, not as appropriate as the Pont Alexandre III is to Paris, nor as splendid, but in any case a monument of a style which it is still exasperating to remember we have lost. As it is we have the simplicity of masonry to console us.[144]

Schuyler called the church "very unconventional and necessarily 'unchurchly'." While the lack of correspondence between exterior appearance and interior arrangement was troublesome for him,[145] he acknowledged, "the result was an interesting exterior and a far more interesting interior."[146]

> Color, which has only lately begun to be used in the interior decoration of churches in this country, is susceptible, even under the restrictions imposed by evangelical severity, of the most varied and appropriate effects. Other works of the architect of the Holy Trinity – notably the Jewish temple in Fifth Avenue, St. George's Church, and the interior of Dr. Storrs's Church [the Church of the Pilgrims], in Brooklyn – have furnished the most

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[143] *American Architecture, Studies by Montgomery Schuyler*, p. 84-85.

[144] William Crary Bronwell, "Prose Style," *The North American Review*, vol. 220, (September 1924), p. 116. Bronwell (1851-1928) was a literary critic who worked at the New York *World* from 1871 to 1879 and may have become aware of Eidlitz through Montgomery Schuyler.

[145] Leopold Eidlitz II, p. 288.

[146] Leopold Eidlitz I, p. 175. Interior furnishings were provided by Smith & Crane, 74 Wooster Street, New York City; "Rev. Dr. Tyng's New Church," John W. Kennion, *Architects' and Builder's Guide. An elaborate description of all the public, commercial, philanthropic, literary & ecclesiastical buildings already constructed, and about to be erected next spring in New York and its environs, with their cost respectively, and the names of the architects and builders* (New York: Fitzpatrick & Hunter, 1868), Part III, p. 86.

> notable and successful examples we have had of the free use of color in churches.[147]

Van Zanten was less pleased, however. Comparing it to its heavily articulated Latin cross-shaped predecessor ("The inexpensive Holy Trinity Chapel had as many gables and breaks in its roof as Mould could justify"), he remarked, "Its polychromy is extravagant but it is still a preaching box with towers buried in its rectangular mass."[148]

In acknowledging the rapid changes occurring to Protestant worship, Schuyler wrote

> But the modern Protestant church is by no means a cathedral. A cathedral was a place for ecclesiastical pageants. A Protestant church is a sacred lecture-room. In the former everything was sacrificed to emphasize the sanctity of the altar and to impress the worshipper. In the latter everything ought to be sacrificed to the unobstructed seeing and hearing of the preacher by the worshippers. There have been several recent attempts to meet this new want and some of them have been eminently successful for their immediate purposes. But not one of them has been entitled to any consideration as a specimen or even as a promise of a new church architecture. The Reverend Mr. Beecher preaches in a barn [the Plymouth Church, Brooklyn]; the Reverend Mr. Talmage lately preached and the Reverend Mr. Hepworth now preaches in a circus [the Brooklyn Tabernacle, and the Church of the Disciples, New York City].[149] The new Church of the Holy Trinity is the first serious attempt in New York to construct a Protestant church of the nineteenth century...

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[147] Montgomery Schuyler, picture caption for drawing of the Church of the Holy Trinity, p. 1.

[148] Van Zanten, "Jacob Wray Mould," pp. 48, 56 n. 46.

[149] The Brooklyn Tabernacle was located on Schermerhorn Street near Third Avenue. Constructed in 1870 using wood frame construction sheathed with corrugated iron, it was enlarged and re-dedicated in 1871. It contained a semi-circular amphitheater that seated 3,500 in ground floor pews and could hold additional 500 in the aisles. The roof was supported on wood columns. The *New York Times* called it "a novelty in church architecture" and noted that it cost $75,000, exclusive of its lot. It burned on 22 December 1872 because the fire spread rapidly within its iron sheathing. "The Brooklyn Tabernacle," *New York Times*, 23 December 1872, p. 8.

The Church of the Disciples was located on the southeast corner of 45th Street and Madison Avenue, three blocks from Eidlitz's Church of the Holy Trinity. It could seat 3,000 and was built for $225,000 including the cost of its corner site that extended for 125 feet along both frontages. The *New York Times* compared it to the Brooklyn Tabernacle and described it as "simply an immense amphitheater, like the Cooper Union, [but] without galleries." The *Times* quoted its builder's claims of safety relative to the Brooklyn Tabernacle because it used brick rather than wood for structural purposes and limited the use of corrugated iron; "New Churches in New-York," p. 2; "Church of the Disciples – Superintendent Macgregor's Report," *New York Times*, 1 April 1873, p. 5.

> We have no doubt that the verdict of all competent critics will be that the attempt is successful and that it is fortunate that a work so long needed should have fallen into the hands of one of the most original and most accomplished of our architects.[150]

Eidlitz's ultimate judgment of his scheme (and possibly that of St. George's, also) was less positive. Eleven years later, he wrote

> Ultra-Protestantism is content with rejecting... every picturesque form representing an idea, while the idea itself is tenaciously retained; no effort being made to substitute other forms equally expressive or any forms that express it. This is done under the impression that all forms, all ceremonies, in fact, all art expressions of religious ideas are unnecessary in the process of making man religious. Whether this is true or not, need not be discussed here; but it must be understood that the moment a picturesque expression of religious ideas is abandoned, we also abandon the structure which accommodates and contains these picturesque groups. We abandon the church as a place of worship, and sink down to the lecture-room or the theatre, where a literary performance is most conveniently accommodated, and nothing else is expected. We substitute a shop for a library, a barrack for a dwelling, a bar-room for a dining-room, a stable-yard for a garden.[151]

Toward the end of its life, the building was modified. Eidlitz was invited to participate in the project, but declined. In an attempt to make the church "more Gothic," its apse windows were enlarged and its granite piers covered with walnut mouldings. Schuyler claimed that the changes justified its demolition in 1901 because they "converted a construction full of purpose and character into a meaningless and characterless sham."[152]

*Viaduct Railway*

Schuyler referred to the period that extended from the late1860s to the early 1870s as one in which Eidlitz "diverted into a phase of 'artistic engineering,' in which the substantive was much

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[150] Montgomery Schuyler, "Modern Churches," *New York World*, 19 October 1873, p. 4.

[151] Eidlitz, *The Nature and Function of Art*, pp. 90-91.

[152] Leopold Eidlitz I, p. 178.

more conspicuous than the adjective."[153] This suggests that the number of commissions received by Eidlitz declined, although he did complete the *Brooklyn Union* Building (1868), interior decoration and alterations and additions to Upjohn's Church of the Pilgrims (1868-70), chancel alterations at St. George's Church (1869),[154] and began the Church of the Holy Trinity (1869-74). He also went to Europe in 1868 and read a paper at a meeting of the New York Chapter of the American Institute of Architects "in support of certain theories as to the relative moral and aesthetical rank of the architectural practice prevalent in several European countries."[155] Thus,

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[153] Leopold Eidlitz II, p. 291.

[154] A new organ was installed in 1869, its case designed by Eidlitz; Anstice, p. 236. During the summer of that year, the apse was decorated to his designs, probably to complete work begun in the nave during post-fire reconstruction. The finished area was called "one of the handsomest in the city"; *New York Illustrated: Containing illustrations of public buildings, street scenes, and suburban views, with a map, and general stranger's guide* (New York: D. Appleton & Co., 1870), p. 20. By the time the new organ was installed, the galleries had sagged "owing to the inferior quality of the supporting columns and culpably careless construction"; Anstice, p. 242. They were re-aligned and the defective columns were replaced. As suggested by a photograph taken before repairs and alterations begun in 1948, portions of the decorative work may survive behind burlap installed at that time to improve the building's acoustics; Moulton, photo, p. 143. Although the congregation's membership and finances dwindled during the post-Civil War period as its older and richer members moved uptown, Eidlitz built a $44,000 "German Chapel" and school (1872, 420 East 14th Street, New York City; demolished), a project whose completion was delayed by the demands of its workers for an eight-hour day; Moulton, p. 57. The eight-hour day gained popularity after the Civil War when the federal government adopted it for arsenal and workshop employees; Strong, vol. 4, p. 429 n. 22.

[155] Richard M. Hunt, R. G. Hatfield, and Alfred J. Bloor, "Report of the New York Chapter" in American Institute of Architects, *Proceedings of the Second Annual Convention of the American Institute of Architects, Held in New York, December 8th, 1868* (Committee on Library and Publications, 1869), p. 54. Previously, Richard M. Hunt reported on his travels in Denmark, North Germany, Russia, Sweden, and Norway, "northern countries not generally comprehended in an artistic tour"; American Institute of Architects, *Proceedings of the Second Annual Convention of the American Institute of Architects, Held In New York, December 8th, 1868* (The Committee on Library and Publications, 1869), p. 53. Although I have been unable to find a more detailed account of Eidlitz's itinerary or talk, it is possible that he may have gone to examine European polytechnical schools in conjunction with the AIA's proposal to establish such an institution in the United States; Leopold Eidlitz, Richard Griffith Hatfield, Emlen Littell, Samuel Adams Warner, William Robert Ware, "Report of the Committee on Education," in American Institute of Architects, *Proceedings of the Annual Convention Held at the Rooms of the New York Chapter, October 22d and 23d, 1867* (New York: Raymond and Caulon, Publishers, 1867), p. 14. Eidlitz's name (he gave his occupation as "Gentleman") appeared on the list of the 32 passengers that arrived in New York City from Liverpool aboard the R.M.S. China on 26 March 1868; National Archives and Records Administration, Film M237, Reel 292, List 220, transcribed by Phil Buckley of the Immigrant Ships Transcribers Guild, 29 December 2003.

although Eidlitz remained active as an architect, Schuyler's interest seemed to be in a study made in 1870 with John J. Serrell for an elevated railway system for New York City.[156]

Schuyler noted that the project was sponsored by the Tweed Ring under the direction of Peter B. Sweeny (1825-1911), City Chamberlain, Tweed's adviser, head of the Department of Public Works, and a sophisticated and well-trained lawyer. In addition to Tweed and Sweeny, the Ring included Mayor A. Oakley Hall and Comptroller Richard B. Connoly. It was synonymous with Democratic Party "machine" politics and with the Tammany Society, an organization formed in New York City in 1789 that grew out of the Sons of Liberty. Officially named "The Society of Saint Tammany" and also known as "The Colombian Order," it began as an artisan's social club. Although formed as a social organization, the Society became increasingly political and achieved significant influence in local government by the middle of the nineteenth-century. Controlled by wealthy men, the organization attracted strong working class and immigrant support because of its active support for laws intended to protect artisans, its opposition to anti-Catholic legislation, and campaigns to elect similarly inclined candidates. It also helped to expedite naturalization of immigrants and acted as a go-between for new arrivals and local government. By the 1860s, it was impossible to hold political power in New York City without its backing, and by 1865, William Magear Tweed (1823–1878), the head of the Society, effectively ran New York City. At one time, its candidates held the top positions in the executive branch of the state government, a majority in the state Legislature, control of the New York City Board of Supervisors, and the Mayor's office. Tweed's ability to control Democratic nominations, rather than his holding political office, was the source of his power. Politicians often needed his support to gain nomination and, in return, allowed him to make their patronage appointments. In this way, many appointed officeholders became indebted to Tweed. This centralization of power came at a time

[156] John J. Serrell and Leopold Eidlitz, *A Viaduct Railway for the City of New York; As Designed by John J. Serrell, Leopold Eidlitz* (New York: October, 1870).

of great infrastructure growth and public works projects in New York City such as the creation of Central Park, development of the waterfront, and construction of government offices.[157]

How Eidlitz came to be associated with Tweed is not clear, although Schuyler described Sweeny as having

> an ambition much higher than most of his associates. He regarded power, however gotten, as a means to other ends than the gathering of dollars without any olfactory investigation of their origin. He had an ambition to leave monuments of public utility behind him and "to plant things that were like to last," And, in this ambition, when he met Leopold Eidlitz, he met a man after his own heart.[158]

The need for a rapid transit system became apparent in New York City around the time that the first subway opened in London in 1863,[159] but the form that it would take remained unresolved for more than four decades. By 1860, the southern end of the island as far as 14th Street or Union Square had become a central business district with residential areas pushed to the north, a process that accelerated as the business district grew. While early modes of public transportation such as stagecoaches, omnibuses, and horse cars were initially adequate to the situation, without the availability of improved rapid transit, the northern development of the city could not continue due to the cost in time and inconvenience involved in traveling long distances at slow speed.[160]

City officials initially agreed that an elevated line would best solve the problems of serious congestion. Although the first proposal made in 1825 was followed by others, little happened

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[157] For a discussion of New York City during the Tweed period, see Seymour J. Mandelbaum, *Boss Tweed's New York* (New York: John Wiley and Sons, Inc., 1965).

[158] Leopold Eidlitz II, p. 291.

[159] London's first subway opened Street on 10 January 1863 and ran from Paddington to Farringdon. The first phase of construction was completed on 22 December 1865 when it reached Moorgate Street. T. C. Barker and Michael Robbins, *A History of London Transport: I* (London: George Allen and Unwin, 1965), pp. 99-135.

until Charles Thompson Harvey (1829-1912) received two patents that led to an operational system.[161] Harvey had formed the West Side and Yonkers Patent Railway Company on 10 April 20 1866 and received approval from the state Legislature to begin construction of an elevated line that would run up Greenwich Street (then Ninth Avenue) from Battery Place to 30th Street. Construction began on 1 July 1867 and the first column was erected on October 7 and tested in December. A half-mile segment ran on Greenwich Street from the Battery to Cortland Street. Passenger cars were pulled by a continuous chain or cable wound around a drum driven by stationary steam engines placed below the sidewalk. The cars would be pulled from engine to engine and the demonstration proved satisfactory to stockholders and company officials. Although allowed to construct twenty-five miles of track, Harvey only built three. After the Rapid Transit Commissioners inspected the system and made a favorable report on 1 July1868, the plan and operation were approved.

From 1868 through 1870, the line ran on a single track and after a Committee appointed by the Legislature approved further construction, it was extended to 30th Street. The project was never popular, however, and there were several accidents. Mechanical, financial, and legal difficulties also appeared. The cable system proved impractical and was abandoned and the system remained idle for months. The assets that included three passenger cars, four machinery vaults, and patent rights, were purchased by the Westside and Yonkers Patent Railway on 15 November 1870 at a Sheriff's Auction on for $960.[162].

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[160] Wallace Katz, "The New York Rapid Transit Decision of 1900: Politics, Economy, Society," Survey No. HAER NY-122, pp. 2-144, (Washington, DC: Historic American Engineering Record, National Park Service, United States Department of the Interior), p. 14.

[161] Patent Nos. 65,908 and 65,909, both titled "Improved Elevated Railway" and dated 18 June 1867.

[162] Katz, p. 30; *Nineteenth-Century New York in Rare Photographic Views*, Frederick S. Lightfoot, ed. (New York: Dover Publications, Inc., 1981), No. 124, "The first elevated railroad, Greenwich Street, ca. 1869; National Photograph Company."

On February 9, 1871, the City Transit Commissioners granted permission to the company, now the New York Elevated Railroad Company, to discard its existing equipment and begin to use steam locomotives. Steam operation began on 20 April 1871 after repairs were made to the existing structure and steam power was used on all subsequent lines until electrical operation began in 1902. Only two stations were in use in 1871, Dey Street and 29th Street, however a three tracks line reached 116th Street by 1891.

Despite the success of the elevated railways, the advantages of subways remained strong enough that in 1868, Tweed influenced the Democratically controlled New York State Senate to defeat a proposal submitted two years earlier by army-trained engineer and surveyor Egbert Ludovicus Viele (1825-1902).[163] Viele was a strong supporter of development on the West Side of Manhattan and his house was located at 89th Street and Riverside Drive in close proximity to that of Eidlitz.[164] His design for an "arcade railway" called for a tube to be located 30 feet below Broadway. Ventilated and lit by a 5-foot wide slot cut into the street above, it would have accommodated pedestrians as well as subway cars.[165]

The most serious attempt to build a subway was made by Alfred Ely Beach. His pneumatic design opened in 1870, the year in which Serrell and Eidlitz published their proposal. In 1849, Beach had proposed a gas-lit tunnel located below Broadway that would carry a horse car line, but his scheme did not receive much interest. In 1867, he designed a pneumatic system that he

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[163] Viele (1825-1902) was trained at West Point and served as military governor of Norfolk, VA, in 1862. He authored a topographical survey of New Jersey and an engineering survey of New York harbor and made preliminary surveys for the area that would become Central Park. Although he submitted a design in 1855 that was accepted by the Central Park advisory board, his role in the project was eliminated in 1857 after the state replaced the advisory board with new board of commissioners and Frederick Law Olmsted and Calvert Vaux won the job in a new design competition. Paul E. Cohen and Robert T. Augustyn, *New York City in Maps, 1527-1995* (New York: Rizzoli International Publications, Inc., 1977), pp. 130-1.

[164] M. Christine Boyer, *Manhattan Manners, Architecture and Style 1850-1900* (New York: Rizzoli: 1985), p. 196, fig. 237, 198.

[165] A year earlier, another subway project, the Metropolitan Railroad, was also denied state approval. Stern *et al*, *New York 1880*, pp. 71-72.

demonstrated at the American Institute Fair at the 14th Street Armory as an example of a practical means of transit in underground tunnels.

Fearing interference from Tweed who promised to defeat any measure that would weaken his control over surface transportation systems, Beech built his demonstration subway in secret. In 1868, he obtained a City permit to build a pneumatic package delivery system consisting of two small tunnels running from Warren to Cedar Street. During the following year, he amended the permit to build one large tunnel, to "simplify construction." Working from the basement of a clothing store located across from City Hall at the corner of Warren and Broadway and using his son as foreman, the tunnel was built in 58 days. Capable of carrying twenty-two passengers in its only car, the track ran east onto Broadway, curved south, and proceeded down the middle of Broadway to Murray Street, a distance of approximately 300 feet. It opened to the public on 26 February 1870 and operated until 1873 when it closed because he was unable to obtain funding from the state.[166]

Because of the history of failures associated with subways, anything other than street level systems came to be considered risky by private investors, and public funding for a mass transportation did not become available until 1894. While Stern noted that the 1878 opening of steam powered elevated railroad on Third and Sixth Avenues gave easy access to the upper part of the island for the first time, and that the opening of the Ninth Avenue El contributed to the development of the Upper West Side,[167] real progress was made when construction of an electrified subway system began on 24 March 1900, and a portion extending from City Hall to

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[166] Beach (1826-96), inventor, publisher, and patent attorney to Thomas Edison, was the son of a wealthy New England family. His father was founder of the *New York Sun,* and when he turned twenty-two, he and his brother Moses assumed management of the newspaper and subsequently acquired the *Scientific American, Ladies Home Journal,* and an agricultural publication, the *People's Journal.* Alfred Ely Beach, "The Pneumatic Tube Under Broadway," *Scientific American*, vol. 22 (5 March 1870), pp. 154-56.

[167] Stern *et al*, *New York 1900*, p. 12.

145th Street and Broadway opened to the public on 27 October 1904. The first section of the system that eventually linked New York City with the surrounding boroughs was completed in 1908, the year that Eidlitz died.[168]

The Serrell-Eidlitz design was intended to unite lower New York City ("which must be the commercial center of the western world")[169] with its upper regions and, ultimately, Westchester County.[170] Their report pointed out that travel from New York City to New Jersey was much faster than travel within New York City north of City Hall and that growth within the city could only proceed northward despite geographic and practical impediments to street-level steam railways. This notion would have been common after the publication of the "Topographical Map of the City and County of New-York, and the Adjacent Country" delineated by David H. Burr and published in New York by J. H. Colton and Company in 1836. It showed Manhattan Island to be a narrow strip of land, twelve miles long, one half to two miles wide, bounded on one side by the East River, on the other side by the Hudson, and with the Atlantic Ocean at its tip. The gridiron street plan of 1811 limited expansion into the west side of the island above 59th Street due to the presence of extremely hilly and rocky terrain. Few streets penetrated the area and traffic flow was generally limited to east-west movement, although the largely unrealized street grid extended to 155th Street.[171]

Serrell and Eidlitz dismissed earlier schemes for subways because they lacked political support at the state level and would require excessively expensive excavation, interfere with existing subsurface utilities and streets, reduce property values, require an excessively large right-of-way,

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[168] Peter Derrick, "Subways" in *The Encyclopedia of New York City*, pp. 1135-37.

[169] Serrell and Eidlitz, p. 3. In 1870, when the population of New York was just under 1 million, more than half lived below 14th Street; Katz, p. 15.

[170] In 1874, New York City annexed the western portion of Westchester County; it became part of the Bronx in 1898.

[171] Cohen and Augustyn, pp. 120-1.

be financially unsound, and "for most of their distance, [provide a] dark, damp and unhealthy means of transit."[172] In contrast, they proposed an elevated system that would operate on mid-block viaducts made of stone, brick, and iron "at sufficient height to properly cross all streets and avenues without interruption to their usual use."[173] In the same issue in which it carried an advertisement offering stock in the project, *Manufacturer and Builder* noted

> Considerable misunderstanding seems to prevail outside the city as to the precise nature of the Viaduct Road. It will run, on an average, almost 25 feet above the surface of the ground, on brick arches, between transverse iron ribs, supported by heavy iron lateral columns, of elegant design, themselves supported on inverted arches of solid masonry built into the ground. The space under the arches will be converted into stores and markets, having entrances on both sides of the line.[174]

Trains would be concealed from view at street crossings and would run from a terminal located across from City Hall, through the blocks located between Broadway and the Bowery, to a fork near Bleeker Street and then along east and west branches that extended north to the top of Manhattan Island. Containing four tracks, two for service between stations located about a half mile apart and two for stations a mile or more distant, Serrell and Eidlitz claimed that the project would cost less than a two-track subway because of reduced land acquisition, excavation, and street restoration expenses, offer greater capacity, and be less affected by snow (!). Space below the viaduct would be rented to reduce costs and the authors provided calculations to show that projected expenses ($21 million) and patterns of usage (52 million riders per year) would eventually produce revenues of $3 million per year or fourteen percent on the original investment.

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[172] Serrell and Eidlitz, pp. 6-7.

[173] Serrell and Eidlitz, p. 8.

[174] "The Viaduct Railway," *Manufacturer and Builder*, vol. 3, no. 12 (December 1871), p. 3.

Although the scheme seems needlessly cumbersome and expensive at first glance,[175] the right-of-way would have been close enough to Broadway to accommodate much of its traffic and the use of express and local trains was not achieved until the first section of the existing subway system opened in 1904. The design also relied on steam rather than relatively unproven pneumatic or cable technology and its infrastructure would have been far more substantial and permanent than the Greenwich Street elevated. Nevertheless, the Tweed Ring's economic concerns and Eidlitz's aversion to iron construction cannot be separated from the project and several years later, Eidlitz dismissed the notion of building elevated railways in the middle of streets, noting that existing legal statutes would not allow it. Referring to the limited provisions of eminent domain laws enacted by the state in 1812, he wrote that the laws were only intended to give the City of New York authority to establish thoroughfares for vehicular and pedestrian traffic in what had been privately owned streets and to build sewers and lay gas and water pipes below them.

> Yet the legislature of the state, in the act of authorizing elevated railroads in the City of New York, utterly ignores these rights [i.e., fair compensation for property owners when their property is taken for private profit]. It authorizes corporations to erect structures in the streets without the consent of the property owners and without compensation for the rights in said streets still held by them. These property owners are left single-handed to fight corporations so chartered, in the courts of law, and thus far with some success as to the establishment of the principle involved, though without pecuniary results. The elevated roads have converted the lower stories of the buildings adjoining them into cellars with but little light or sun. The streets are irretrievably disfigured, the sidewalks intruded upon by stairways leading to stations occupying the centre of the streets, and all the protection granted to the public by terms of the grant is the restriction of fares to ten cents per trip. The fairness of this

[175] See "The Viaduct Railroad," *New York Times*, 26 July 1871, p. 2 and 5 August 1871, p. 3. The articles consist of copies of letters written by Origen Vandenburgh, a wealthy New Yorker and the main financial backer of a Broadway subway scheme who appeared to have knowledge of viaducts constructed in London for similar purposes. He claimed that construction of viaducts was abandoned in favor of subways and surface tracks because viaducts proved inefficient for the short distances between stops typical of inner city trains.

> protection to the people may be determined by the fact that the companies have voluntarily reduced the fare one half.[176]

In any case, the financial projections of his scheme were hotly contested by some and deemed as irrelevant by others. The *Real Estate Record and Builder's Guide* commented

> So far, therefore, from considering this railroad as ruinous to our city, we can only say that if carried out, as we have every reason to think it will be, in the style it is designed, it is far more likely, in our present fearfully crowded condition, not only to prove one of the grandest boons ever offered to a long-suffering community, but to place New York upon a new career of prosperity, which, in ten years from now, will make all the present splendor sink, in contrast, into insignificance.[177]

The *Guide* also pointed out that congestion caused by slow travel encouraged the wealthiest to leave the city, a process that resulted in lowered property values due to neglect. It concluded "We regard the proposed city railway as the main security of New York against the system of absentee ownership which has long been the curse of Ireland, and which has already injured the political character of the city."[178]

The *Brooklyn Eagle* had a far more jaundiced view. After recounting the political connections of the project's backers, it grudgingly concluded

> But if all of these gentlemen co-operate, albeit some of them only ornamentally, the great politicians, the great purses, and the great men of the press in New York will be behind the affair, and it will go through, for these three make "public opinion." The first cost is named at $60,000,000. A railroad of that kind for overcrowded New York would be cheap at twice the money. We hope if those who have power mean to give the people this road,

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[176] Leopold Eidlitz (writing as "A Foreman") *Big Wages and How to Earn Them* (New York: Harper & Brothers, 1887), p. 96.

[177] "The Viaduct Railway," *Real Estate Record and Builder's Guide*, vol. 7 (8 July 1871), p. 1.

[178] "New York and the Viaduct Railway," *Real Estate Record and Builder's Guide*, vol. 7 (10 June 1871), p. 1.

> they will do it forthwith. It is quite useless to warn them against making it too inexpensive.[179]

While Schuyler felt that the high initial costs of the Serrell-Eidlitz design doomed its chances for implementation, he portrayed Eidlitz as detached from such concerns, supremely rational, optimistic, and confident in his approach.

> ...he entered heart and soul into the work, and was ready to point out to the frequent objector to his scheme upon the ground of its inordinate cost that the longer the city waited the costlier it would be, while some such scheme was the only real and permanent solution of the question of rapid transit. It was, in fact, according to him, a sort of Sibylline proposition that the city, as an aggregation of landholders, was making to the city, as a municipality, a proposition becoming more "prohibitive" as the acceptance of it was delayed.[180]

Schuyler also questioned the project's seeming absence of architectural opportunities. However, Serrell and Eidlitz showed that the number of bridges and stations required for its implementation would be more than sufficient to meet his concerns, and their proposal estimated that of the 600 properties required, 100 would dedicated to railroad use for depots and other structures while the remaining 500 would contain viaduct and basement foundations.[181]

Eidlitz and Serrell acknowledged the political realities of their project when they introduced it by noting that it was specifically intended to "aid in obtaining from the Legislature of the State, at its next Session, an Act to incorporate a proper Company with authority to construct and operate a system of railways for passenger traffic...."[182] They had submitted a "Report of the Majority of the Committee on Cities and Villages, In Relation to the Bill Authorizing the Construction of a Railroad in New York City" to the state Legislature on 3 March 1859 in which they advocated an

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[179] Untitled article, *Brooklyn Eagle*, 11 March 1871, p. 2.

[180] Leopold Eidlitz II, p. 292.

[181] Serrell and Eidlitz, p. 15.

[182] Serrell and Eidlitz, p. 2.

eight-track elevated railway in preference to a subway because it would be cheaper and safer.[183] Although they claimed that $3.5 million would be generated with a seven-cent fare, it was rejected and in their new proposal, they acknowledged that their design was subject to change by many parties and referred to it as

> ...a brief sketch of the general plan proposed by us. We have carefully elaborated this plan, as to location and construction, in numerous drawings, which, at the proper time, we propose to exhibit to all interested in the enterprise, but which we deem best to withhold from publication at present; knowing that much of the detail of the route may be subject to alteration, and should not, in any event, be published before legislative action is had upon it."[184]

Alfred Ely Beach's proposal for a privately funded $5 million subway project had been approved by the state Legislature in January 1871, but Tweed countered with the Serrell-Eidlitz design. After that project also passed the Legislature, Governor John T. Hoffman, a Tweed ally, vetoed Beach's scheme and approved Tweed's.[185] The Legislature subsequently authorized Tweed to charter a New York Railway Company, a $60,000,000 rapid transit railroad that, after initial private capitalization, would receive $5 million from the city for construction. The Company would be exempt from all taxes and assessments and could demolish and build as it pleased. Tweed attracted some of the wealthiest and most powerful New York City politicians, business owners, and publishers to the Company's board of directors.[186] In the mean time, Beach made an attempt to override the veto, but came up one vote short. In November 1872, Hoffman was voted out of office and Beach's project was approved in 1873 by the new governor, John Adams Dix

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[183] Serrell and Eidlitz, pp. 14-15.

[184] Serrell and Eidlitz, p. 11.

[185] Edwin G. Burrows and Mike Wallace, *Gotham, A History of New York City to 1898* (New York and Oxford: Oxford University Press, 1999), p. 932.

[186] "The Viaduct Railway," *New York Times*, 10 March 1871, p. 5. The members included Sweeny, Tweed's son, Broadway omnibus line owner Hugh Smith, city Comptroller Richard B. Connolly, Serrell, Eidlitz, industrialist and merchants Peter Cooper, A. T. Stewart, and newspaper publishers Manton Marble

(1798-1879). By that time, however, its cost had doubled, Beach's personal fortune was gone, his financial backers were alienated, and public support vanished because his subway was not useful in its existing form. He attempted to use his subway tunnel, first as a shooting gallery and then as a storage vault, but it was eventually sealed up.

Eidlitz and Serrell were no more successful. By the time Tweed was sentenced in 1872, the five year project had lost its backing and only two sketches had been made: one for "a huge steep-roofed station at the eastern end of the Brooklyn-East River Bridge, then already projected, and [another for] the southern terminal of the Viaduct or one of its branches." Schuyler noted that the latter appeared in "the illustrated newspapers."[187] Stern showed the two images: a side elevation of a "downtown depot" that was probably the "huge steep-roofed station" to which Schuyler referred and a perspective drawing of a "bridge over Broadway." [188] On 15 November 15 1871, after receiving intense criticism of its design, cost, and the political connections of its backers, the project ended when the Board of Directors passed a resolution reorganize itself. All of the Directors were asked to submit resignations and all but two employees were to be suspended.[189]

Schuyler "always supposed" that the basic concept of the Serrell-Eidlitz proposal, "the monumental scheme of buying a right of way through the blocks, asking the public only to grant the right of crossing the streets, and thus constructing the road at the most convenient and

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and Horace Greeley of the *Tribune*, James Gordon Bennett, Jr., of the *Herald*, Charles Dana of the *Sun*, and Oswald Ottendorfer of the *Staats-Zeitung*.

[187] Leopold Eidlitz II, p. 292.

[188] Stern et al, *New York 1880*, p. 73. The illustrations appeared in the *Tribune* on 7and 8 June 1871. The first looked north and showed what appeared to be the main station: a gable-roofed three-story Romanesque Revival structure with clock tower situated above an open ground floor arcade and linked by pedestrian bridges to two smaller hip-roofed buildings of similar style located on Centre Street and Park Row. The second also looked north and showed the viaduct with a large pointed arch spanning Broadway and two smaller arches above the sidewalks. The *Times* fiercely opposed the scheme because of Tweed's connection to it and commented, "There are to be 348 bridges, all, we suppose, of the "Saracenic" order of architecture, according to the beautiful drawing published by the *Tribune* on Sunday." "The Viaduct Railway," *New York Times*, 9 July 1871, p. 4. An anonymous but "eminent engineer of this City" made similar comments in "The Proposed Viaduct, *New York Times*, 3 September 1871, p. 3.

economical grades, instead of following the casual undulations of the terrain" came from Eidlitz, with Serrell's participation based on his railroad building experience and accorded secondary importance.[190] However, little biographical information has been located for Eidlitz's co-author and without explaining the discrepancy in names, Schuyler claimed that he was actually Edward Wellman Serrell ("General Serrell"), a bridge engineer, railroad designer, and Civil War hero.[191] However, there were many Serrells in New York City at the time. A John I. Serrell is named as a member of the "body corporate and politic" of "The Viaduct Railway Company,"[192] a John Serrell is listed among the members of the Board of Consulting Engineers who reviewed the feasibility of Roebling's design for the Brooklyn Bridge,[193] and a John J. Serrell is given as the

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[189] "End of the Viaduct Scheme," *New York Times*, 17 November 1871, p. 5.

[190] Leopold Eidlitz II, p. 292.

[191] Leopold Eidlitz II, p. 291. Jordy and Coe also followed Schuyler's assumption; Montgomery Schuyler, *American Architecture and other Writings by Montgomery Schuyler*, vol. 1, p. 172-73 n. 86. An unidentified "Major Serrill" [*sic*], probably Edward Wellman Serrell, showed drawings of a steam-powered railroad car brake at a meeting of the Polytechnic Club of the American Institute of Architects on 6 June 1870; "Meeting of the Polytechnic Club of the American Institute of Architects," *Architects and Mechanics Journal*, vol. 2 no. 11, (16 June 1860), p. 103.

Edward Wellman Serrell (1826-1906) was born in New York City and studied surveying and civil engineering under the direction of an older brother. In 1845, he became assistant engineer in charge of the Central Railroad of New Jersey and subsequently served in a similar capacity for several other railroads. In 1848, he accompanied an expedition that established the route of the first trans-Panama railroad. After building suspension bridges in Lewiston, ME and St. Johns, New Brunswick, Serrell assumed charge of construction of the 4.5-mile Hoosic, ME, railroad tunnel, then, the longest in the world. He also consulted on the construction of the Bristol Bridge across the Avon River, the largest span in that country at the time it was built. At the beginning of the Civil War, he entered the 1st New York volunteers as lieutenant colonel. He soon became a full colonel and served as chief engineer of the 10th Army Corps in 1863. During that year, he became chief engineer and chief of staff under General Benjamin P. Butler and designed and superintended construction of the "Swamp Angel," an 8-inch gun that bombarded Charleston with 200-pound loads. It caused extensive damage until it exploded on the thirty-sixth shot. He suggested many improvements to guns and processes during the War and became brigadier-general of volunteers in 1865. He settled in New York City after the War and resumed his involvement in railroad construction, becoming president and consulting engineer of the Washington County (NY) Railroad in 1887. Serrell was involved in the financing of the Union Pacific Railroad and published nearly fifty reports on railroads and bridges as well as numerous papers on scientific and technical subjects. "United While Critically Ill to Miss Marion C. Roorbach," *New York Times*, 8 September 1900, p.1. Steinman described several of Edward Wellman Serrell's bridges in an uncomplimentary fashion; D. B. Steinman, *The Builders of the Bridge, The Story of John Roebling and His Son* (New York: Harcourt, Brace and Company, 1945), pp. 176, 189, 192.

[192] Stern referred to him as "John W. Serrell"; Stern *et al*, *New York 1880*, pp. 72-73.

[193] "The East River Bridge," *Scientific American*, vol. 20 (Mar 27, 1869), p. 201; Steinman, p. 316.

holder of a patent for an "Improvement in Apparatus for Collecting Floating Oil."[194] The large quantity of New York City survey maps produced by yet another John J. Serrell and a technical publication in which his name appears[195] suggests that Eidlitz's partner was actually the older brother of James E. Serrell, the chief New York City municipal surveyor.[196] John J. Serrell was a civil engineer and a surveyor and he was listed as "City Surveyor" in Legal Notices and Referee's Notices published in the *New York Times* beginning in1866 with reference to maps prepared as early as 1848. Thus, the appearance of Serrell's name above Eidlitz's on the title page of their proposal suggests that its authors may have considered political insight and topographic knowledge to be as crucial to the realization of their project as architectural and engineering skill.

*Myron Decker Pianos Building*

The Myron Decker Pianos Building (1869-70, 33 Union Square; demolished 1892) was a five-story structure that faced Union Square and occupied the former site of the Church of the Puritans (James Renwick, Jr., 1846).[197] The business had moved from its former building located at 550 Broadway (Richard G. Hatfield, 1853-54) and the Square had become an increasingly important commercial center after the Civil War, a process that had accelerated with the 1869 arrival of the Tiffany & Co. Building designed by John B. Kellum and located on the southwest corner at

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[194] Patent No. 61,880 issued on 5 February 1867. The inventor's address is given as Hudson County, NJ.

[195] *Communication from the Comptroller to the Board of Councilmen, in relation to the Lowber judgment, made August 10, 1857: together with a survey and map of the premises, made by John J. Serrell, and extracts from the report of the Harbor commissioners...* (New York: J. A. H. Hasbrouck, 1857). The survey maps are kept at the New York Historical Society. Lowber brought suit against the City of New York over a contested land parcel and demanded compensation that included most of the contents of City Hall; "The Lowber Claim," *New York Times*, 21 August 1857, p. 2.

[196] James E. Serrell (1820-1892), the brother of Edward Wellman Serrell, was born in London and appointed city surveyor in the New York City Streets Department in 1845. He maintained a private surveying practice in the city until he died. His professional papers are at the New York City Public Library. "An Old Surveyor's Funeral," *New York Times*, 14 June 1892, p. 9; John D. Stinson, "Serrell-Opdycke-Patrick Papers, ca. 1828-1963" (New York: New York Public Library, November 1995), p. 4.

[197] An exterior image of the store appeared in Leopold Eidlitz II, p. 288. Union Square was the center of the piano trade at the time; the Decker Brothers piano business was established in 1856.

Broadway and 15th Street.[198] The firm was established in 1856 when Decker took on a partner and began trading as Decker& Barnes. The first floor and basement of the new 30-foot wide structure contained a bookshop and library, the second held a piano warehouse and office, and the third was leased as warehouse space.[199] The building was demolished in 1892 and replaced with an eleven-storey structure (Alfred Zucker with John H. Edelmann,[200] 1893) that housed the business until 1905.[201]

Eidlitz's building was one of six that faced the Square and varied in height from three to six stories and in style from Greek Revival to indefinable. To the left of the Decker building, a three-story structure designed in the 1870s by Henry Rutgers Marshall[202] contained artist studios. It was remodeled in the 1880s for Brentano's bookstore, the former basement tenant of the Decker building. To the right, a three-story building designed in 1880 by David and John Jardine[203]

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[198] "Islamic Venetian Silver With Minaret," *New York Times*, 18 December 1994, p. R5; Stern *et al*, *New York 1880*, pp. 710-12.

[199] "A Fire in Union-Square," *New York Times*, 14 March 1879, p. 8.

[200] Zucker was born in Silesia in 1852, studied in Germany, and came to America in 1873 to work for the Treasury Department. Between 1876 and 1883, he worked in Galveston, TX and Vicksburg. MS. He appears in New York City directories from 1884 through 1897 and had an office in the Decker Building from 1894 to 1897. He left New York City for Argentina in 1903; he date of his death is unknown. Francis, p. 85; "Q and A," *New York Times*, 22 July 1984, p. R9. Edelmann, a social activist as well as an architect, came to New York City in 1886 to work on the mayoral campaign of Henry George after working for William LeBaron Jenney and Dankmar Adler in Chicago. He introduced them to Louis Sullivan who had worked for him as a draftsman and who credited Edelmann with the maxim "form follows function." Edelmann appeared in New York City directories from 1889 to 1892 and worked for Zucker from 1891 to 1893 and died in New York City 1900. Francis, p. 28; Christopher Gray, "Islamic Venetian Silver With Minaret," *New York Times*, 18 December 1994, p. R5.

[201] "Tiffany & Co.'s Store, ca, 1870; E. H. & T. Anthony & Co.," *Nineteenth-Century New York in Rare Photographic Views*, No. 73; *New York Illustrated*, p. 19; Gray, "Islamic Venetian Silver With Minaret," p. R5.

[202] Marshall (1852-1927) was an architect, author, and lecturer at Yale and Princeton. A fellow of the AIA, he designed buildings at several educational institutions and large suburban residences in New York state and New England. He appeared in New York City directories from 1879 to 1922. Frances, p. 52; James Ward, *Architects in Practice, New York City, 1900-1940* (New York: Committee for the Preservation of Architectural Records, 1989), p. 50; "Henry Rutgers Marshall," *Biographical Dictionary of American Architects (Deceased)*, p. 393.

[203] David (1840-1892) was the head of the firm of Jardine & Jardine. He was born in Scotland, apprenticed to his father, and came to America in 1860. He was joined by his brother, John, and then by a third brother, George. The firm was most successful during the 1880s. David appeared in New York City directories

contained the store and warehouse of the Schirmer sheet music company. After the Schirmer building was remodeled in 1881 by William Schickel,[204] it housed Napoleon Sarony's photographic studio.[205]

The *Real Estate Record and Builders' Guide* portrayed Eidlitz's building as being considerably more refined than its neighbors .

> Although upon a comparatively small scale, the best attempt of the kind which has yet come to our notice is Decker's piano store, lately erected on the western side of Union square from design of Leopold Eidlitz. Everything about the little front: – the bold arrangement of the stoop at the entrance, – the pleasing sunk paved space leading to the store below, and occupied by Brentano's literary emporium, – the variety of ingenious forms adopted for windows in the several stories, – the distinction and meaning of the ornamentation, – the tasteful combination and contrasts of different stones and brickwork, – all exhibit traces of artistic thought and skill. The windows are large and wide enough for al the purposes for which they were intended, and although the architect has freely availed himself of the pointed arch, the mouldings and other forms of Gothic architecture, there certainly is nothing either gloomy or monastic about the building.[206]

Schuyler favorably compared Eidlitz's "charming little Gothic edifice of brick relieved by Ohio-stone trimmings"[207] to the larger Tiffany & Company Building and to the larger and better situated Herald Building (1865-67, Vesey Street and Broadway), both designed by Kellum.

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from 1855 to 1892 and the firm of D. and J. Jardine appears from 1865 through 1893. John appears from 1865 to 1894 and George from 1887 to 1894. Francis, p. 44; "David Jardine," *Biographical Dictionary of American Architects (Deceased)*, p. 3212-22.

[204] Schickel (1850-1907) was born in Germany and came to America in 1870. After working for Richard Morris Hunt and forming his own firm, he joined a partnership in 1881 with Isaac E. Ditmars (1850-1934). After designing a number of public and commercial structures, the firm specialized in Roman Catholic churches. Schickel appeared in New York City directories from 1873 to 1907 and was a fellow of the AIA. Francis, p. 67; Ward, p. 68; "William Schickel," *Biographical Dictionary of American Architects (Deceased)*, p. 537-38.

[205] Boyer, p. 77.

[206] "Gothic Architecture," *Real Estate Record and Builders' Guide*, vol. 6 (3 December 1870), p. 1.

[207] Montgomery Schuyler, "Our City Architecture," *New York World*, 17 September 1871, p. 3.

> Turn from this [i.e., the Herald Building] to a little building recently erected as Decker's piano store, on the western side of Union square. It is only a comparatively small edifice, with no advantage of a corner location, being squeezed in between two others in an ordinary block. But examine that little edifice from top to bottom. Look at the cunning and tasteful arrangement of the entrance steps; the variety and beauty of the detail scattered over the whole front; the ingenious way in which ornamentation is blended with construction, so as to form part of it and not a mere adjunct; the exquisite care and judgment with which various materials have been contrasted; the elegant and meaning proportions of all the openings; whether large or small. Every square inch of that frontage betrays not only taste and skill in the designer, but shows that every line was carefully matured and studied. And yet, the first of these examples has been heralded to the four corners of the globe as one of the grandest productions of architecture, while we question if one passer-by out of a dozen has hitherto taken the trouble to notice the beauties of the little edifice to which we have just drawn attention.[208]

A week later, he added

> Decker's Piano Store... which, contrasted with Tiffany's, goes to show the difference between well and ill-directed taste. Everything about this little Gothic building is truthful, well-studied, meaning; in the other all is sham and vulgarity, showing no more invention that there is in a leaden bullet shot out of a mould.[209]

Schuyler claimed that the "combination of brick and stone and the mild polychromy of the stonework... [that] gave the Venetian look to a front in which the detail owed nothing to North Italy," made the Decker Building "a partial predecessor" to the Dry Dock Savings Bank (1873-75).[210] This paradoxical statement afforded him another opportunity to assert that style was a quality that existed independently of historical form. Because an "unlearned beholder" could perceive a building as an "example" of historical form in a manner unintended or unanticipated by its designer, the outcome of such a situation could not always be controlled by a designer ("it

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[208] Montgomery Schuyler, "Our City Architecture," p. 3.

[209] Montgomery Schuyler, "Buildings on Broadway," *New York World*, 24 September 1871, p. 3.

[210] Leopold Eidlitz II, p. 289.

'looked like a church'"), and Schuyler concluded that an architecture that relied on associations of meaning in historical forms was inherently risky. However, he also claimed that historical forms could be used if it was clear they were "intrinsic and not historical," that is, their presence was a confirmation of "free architecture" and, therefore, immune to the possibility of erroneous association implicit in what he called "examples" of historical architecture.[211] Thus, despite acknowledging the presence of several faults in its design, Schuyler could write of the Decker Building "How one would like to see a row of such in the commercial quarter of a town... and how such a row would put to shame the actual commercial building, as, in truth, this little front did put to shame the Western front of the Union Square of 1870,"[212] an opinion that was shared by Mariana Griswold Van Rensselaer.[213]

*New York City Masonic Temple Competition and Long Island Historical Society Project*

In 1869, Eidlitz made an unsuccessful entry in an invited competition for a Masonic Temple, "the city's first postwar purpose-built clubhouse."[214] Other entrants included Griffith Thomas, James Renwick, Jr., and Joseph Sands; Napoleon Le Brun was the winner (Sixth Avenue and West 23rd Street, 1870-75; demolished).[215] During the same period, he prepared a design for a new building for the Long Island Historical Society.[216] Formed in 1863, the organization had accumulated a

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[211] Leopold Eidlitz II, p. 290.

[212] Leopold Eidlitz II, p. 291.

[213] Mariana Griswold Van Rensselaer, "Recent Architecture in America. I. Public Buildings." *The Century Magazine*, vol. 6, no. 27 (May 1884), pp. 48-67, reprinted in *Accents as Well as Broad Effects: Writings on Architecture, Landscape, and the Environment, 1876-1925*, David Gebhard, ed. (Berkeley, Los Angeles, London: University of California Press, 1996), p 128. An active architectural critic during the last quarter of the nineteenth- and first quarter of the twentieth-century, she is best known for her biography of H. H. Richardson; *Henry Hobson Richardson and His Works* (NY: Houghton, Mifflin and Company, 1888).

[214] Stern *et al*, New York 1880, p. 225.

[215] "The Temple Begun and Finished," *New York Times*, 26 May 1875, p. 2.

[216] "A Thriving Institution," *Brooklyn Eagle*, 12 November 1870, p. 6; "Long Island Historical Society," *Brooklyn Eagle*, 17 May 1871, p. 3. Russell Sturgis and several other architects had also been approached; Christopher Gray, "An 1880 Landmark in Red Brick and Terra Cotta," *New York Times*, 11 February 2001, p. RE7.

library of more than 18,000 volumes, 20,000 pamphlets, natural history specimens, a museum of curiosities, a portrait gallery, 700 manuscript letters relating to the history of Long Island and Brooklyn, 123 George Washington autograph letters, and a genealogical collection. All of the material was kept in an eight-room library located in the Hamilton Building at Court and Joralemon Streets.[217] The new 75 by 100-foot building was to cost $150,000 and be located next to the Church of the Holy Trinity at the corner of Clinton and Pierrepont Street on three lots to be purchased for $32,000.[218] Designed in "the round-arched Gothic style of which Mr. Eidlitz is so perfect a master," it was to be built of rough, dark stone with ashlar trimmings and feature two towers.[219] Eidlitz design was one of several submitted to the Society; Peter B. Wight had also prepared one.[220] While the Society could not raise the needed funds and the project did not proceed,[221] Eidlitz may have designed alterations to the library of the existing building that were carried out during the summer of 1871.[222]

*Brooklyn Union Building and Troy Masonic Temple*

Although he included photographs of them in his memorial series on Eidlitz, Schuyler did not write about the *Brooklyn Union* Building (2 Front Street, Brooklyn, 1868-69; demolished)[223] and the Troy Masonic Temple (1871-72, Third Street, between Broadway and River Street, Troy, NY;

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[217] Stiles, vol. 3, p. 903.

[218] "A Thriving Institution," p. 6.

[219] "Brooklyn Architecture," *Brooklyn Eagle*, 9 June 1871, p. 3. The article also commented on the architectural group made up of Eidlitz's Brooklyn Academy of Music ("whether or not it is Mr. Eidlitz's best work, [it] is better than the best of any other American architect"), Peter B. Wight's Mercantile Library and J. C. Cady's Art Building.

[220] Landau, Landau, *P. B. Wight: Architect, Contractor, and Critic*, p. 77.

[221] "The New Building of the Historical Society," *Brooklyn Eagle*, 22 April 1877, p. 4.

[222] "Local News In Brief. Brooklyn, *New York Times*, 8 October 1871, p. 8; "A Thriving Institution," p. 6; W., "Correspondence," *The American Architect and Building News*, vol. 2 (8 December 1877), p. 402.

[223] An exterior view of the *Brooklyn Union* Building appeared in Leopold Eidlitz II, p. 289.

burned 1924).[224] Both were brick-faced buildings, the former situated on a triangular site at the end of a commercial row and the latter embedded within a residential block. Both featured Mansard roofs with gabled attic dormers and Romanesque Revival motifs such as round-headed windows within pointed surrounds and polychromatic stone voussoirs and trim. Perhaps because it was primarily an office building, the facades of the *Brooklyn Union* Building were relatively austere and its window and door openings were symmetrically aligned while the uppers stories of the multi-purpose Troy Masonic Temple employed a variety of asymmetrically placed window types and sizes and a pyramidal spire to suggest its significance and internal arrangement.

The first issue of the *Brooklyn Daily Union* appeared on 14 September 1863. The newspaper had been established in 1862 to promote the views of the Republican Party that had been previously supported by the *Brooklyn Daily Star*[225] and attacked by the *Brooklyn Daily Eagle*.[226] The Brooklyn Bridge Company rented offices in the building in 1870 because of its proximity to the construction site. After the consolidation of New York City and Brooklyn in 1887, the newspaper changed its name to the *Standard-Union* and moved to new offices on Washington Street, an area that superseded the importance of the Fulton Ferry district after the Brooklyn Bridge was completed.[227]

The Apollo Lodge, No. 49, was organized in Troy on 16 June 1796 and took a leading role in the entertainment of Lafayette, a Masonic sympathizer, on his visit to Troy in 1824. The Lodge had occupied a series of rented rooms beginning in1799, and planning for its own building began on

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[224] An exterior view of the Masonic Temple appeared in Leopold Eidlitz II, p. 285.

[225] Originally the *Long Island Star* and then the *Brooklyn Daily Evening Star*, the newspaper was published from January 1841 through June 1863.

[226] The *Brooklyn Daily Eagle* began publication as the *Brooklyn Daily Eagle and Kings County Democrat* in 1846.

[227] Stiles, vol. 3, pp. 941-42; William Lee Younger, *Old Brooklyn in Early Photographs, 1865-1920, 157 Prints from the Collection of the Long Island Historical Society* (New York: Dover Publications, Inc.: 1978), p. 56.

17 January 1871 when the general-room committee decided to purchase two lots for $30,000. A Masonic Hall Association was formed the following month and construction began on 19 June. The cornerstone was laid on 2 August, and the building was dedicated on 2 April 1872.[228] Inclusive of the site and furnishings, the total cost was approximately $100,000. The four-story building was 50 feet wide by 134 feet[229] and a local account described the front elevation as "a sort of composite gothic of the plainer school, and though Italian in style, it is not at all florid."[230] The ground floor featured a cast iron façade with large shop windows and three pairs of entrance doors while the floors above were sheathed in brick and separated by string cornices, each with a row of deeply recessed windows trimmed with cut stone. The uppermost floor also contained dressed stone jambs and colonettes with carved capitals and a moulded cornice and the mansard was covered in multi-colored slate laid in patterns, pierced with pointed dormer windows and capped by iron cresting finished in blue and gold. At the south corner of the front elevation, a shallow projecting tower supported on a stone corbel cornice contained a round tracery window bearing Masonic emblems in leaded glass. The window was intended to be illuminated when the group met. The tower was capped by a slated spire.[231] The ground floor housed a dry goods store, the second was occupied by a carpet dealer, and the remaining floors were used by the Masons. Their facilities included a double height meeting room, library, kitchen armory, and drill rooms. The building was demolished after it burned on 4 February 1924.[232]

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[228] "Telegraphic Breveties," *New York Times*, 3 August 1871, p. 1; "By Mail and Telegraph," *New York Times*, 4 April 1872, p. 1.

[229] Arthur James Weise, *The City of Troy and Its Vicinity* (Troy, NY: Edward Green, 1886), pp. 200-1; Arthur James Weise, *History of the City of Troy, From the Expulsion of the Mohegan Indians to the Present Centennial Year of the Independence of the United States of America, 1876* (Troy, NY: William H. Young, 1876), p. 258; Rutherford Hayner, *Troy and Rensellaer County, New York, A History*, vol. 2 (New York and Chicago: Lewis Historical Publishing Company, Inc., 1925), pp. 439-40.

[230] "Dedication of the Masonic Temple," *The Troy Daily Press*, p. 1, 3 April 1872.

[231] "Dedication of the Masonic Temple," p. 1.

[232] "$300,000 Fire in Troy," *New York Times*, 5 February 1924, p. 10.

*Bulkeley School*

Construction of the Bulkeley School (Huntington Street, New London, CT, 1870-73) was funded by a $25,000 bequest made in 1849 by Leonard H. Bulkeley, a New London merchant.[233] The money was to be invested until $50,000 had accumulated at which time a free school for the boys of New London was to be erected providing that it and the site did not cot more than $7,000. In 1869, the City of New London gave the Bulkeley trustees a parcel of land previously occupied by an almshouse; they commissioned Eidlitz to design the school the following year. Construction began in 1871 and, as costs reached $40,000, the trustees were forced to obtain additional funding from the state.

The building opened in September 1873 with 36 pupils. It consisted of a two-storey gable-roofed raised basement Romanesque Revival structure with a three-stage entrance tower capped by a pyramidal roof and small corner turrets. Similar in scale and detail to the Hinsdale Public Library (Hinsdale, Massachusetts, 1866), it contained three classrooms on each floor with vertical access provided by a staircase located at the center of its pinwheel-shaped plan. Asymmetrical and subtly polychromatic, the exterior walls featured a combination of rough granite ashlar with limestone window surrounds (flat headed and pointed) and colonettes and sandstone trim. The polychromatic treatment of the slate shingled roof was bolder and featured small contrasting rectangles and narrow stripes situated within wide horizontal bands.

*Western Union Telegraph Building Competition*

Eidlitz seemed to have run out of patience with competitions by 1872 when he, Richard G. Hatfield, and Griffith Thomas refused to enter an invited competition for a new ten-storey building for the Western Union Telegraph Company because they considered the competition fee

[233] This account is based on Dale S. Plummer, *National Register of Historic Places Inventory – Nomination Form, Bulkeley School, Huntington Street, New London, Connecticut*, 1980.

insufficient to cover the costs of their work and because the sponsor would not agree to pay them according to established fee schedules should they win. The competition was to be a two-stage affair with initial designs solicited from six architects and more detailed work from the most successful three. George P. Post, Richard Morris Hunt, Russell Sturgis, Napoleon Le Brun,[234] George Hathorne, and Arthur Gillman submitted schemes. Post won the commission (Broadway and Dey Street, New York City, 1873-75; demolished) but proceeded with the project only after demanding (and receiving) a promise of adequate payment.[235]

*Dry Dock Savings Bank*

Schuyler reserved his greatest praise for the Dry Dock Savings Bank, a commission Eidlitz won in a competition, noting that "[even] after a full generation [it] remains so unquestionably the chief architectural ornament of the Bowery."[236] The building was the subject of a widely distributed stereoscopic image[237] and remained in use until 1954.[238] Said to have cost $568,000 including $150,000 for land,[239] it was the third built for the Dry Dock Savings Institution, an

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[234] Le Brun (1821-1901) was born in Philadelphia and trained with Thomas Ustick Walter. He opened his own office in 1841 and specialized in ecclesiastical work. He is best known for the Cathedral of SS. Peter and Paul (1846-51 and 1860-64) and the Academy of Music (1855). After the Civil War, he moved to New York City with his sons. The Le Brun were the official architects of the New York City Fire Department in the 1880s and designed skyscrapers during the 1890s. Le Brun joined the national AIA in 1868, became a fellow in 1870, and served as president of the New York Chapter for several years. Roger W. Moss, "Napoleon Le Brun" in *Biographical Dictionary of Philadelphia Architects*, pp. 467-69.

[235] Stern *et al*, *New York 1880*, pp. 396-98; Diana Balmori, "George B. Post: The Process of Design and the New American Architectural Office (1868-1913)," *Journal of the Society of Architectural Historians*, vol. 46, no. 4 (December 1987), pp. 345-47; "Western Union Telegraph Building," *The Aldine, The Art Journal of America*, vol. 7, no. 13 (1 January 1875), p. 258; "An Immense Telegraphic Establishment," *Scientific American*, vol. 32, no. 10 (6 March 1875), pp. 144-45.

[236] Leopold Eidlitz II, p. 288.

[237] Andrew Mills, *The Story of the Dry Dock Savings Institution, 1848-1948* (New York: Dry Dock Savings Institution, 1948), pp. 42, 44.

[238] H. Allen Brooks, Jr., *Leopold Eidlitz (1823-1908)* unpublished Thesis (MA) Yale University, 1955, p. 17.

[239] Costs given in another account were not as high: "The new Dry Dock Savings Bank is one of the most expensive buildings, in comparison with its size, was erected last year. It cost nearly $400,000; Mr. Eidlitz

organization formed in 1848 by several shipbuilders to encourage "thrift and prudence" among their workers. The Institution's first office was located in a rented building located at 619 North 4th Street near Avenue C, and activities moved to 661-5 East 4th Street in 1859.[240] The bank purchased the 107- by 140-foot site on which Eidlitz's building was erected on 18 September 1872 and opened for business on 14 October 1875.[241] The property faced several unexpected challenges, the first being that it had to straddle a portion of The New York Marble Cemetery, a facility that opened in 1831 that was one of two in the city in which burials were made in underground vaults. The second was the unanticipated construction of the Third Avenue elevated railway less than five years after the building was completed, a structure that obscured it for more than forty years.[242]

When savings banks first opened during the second decade of the nineteenth century, they were conceived of as economic and geographic extensions of commercial banks, however, by the end of the next decade, they had achieved independence and provided services to the poor as well as the wealthy. This required them to be located where their depositors lived and they never regained a sizeable presence in the New York City financial district. Concerns for the security of such remote outposts were evident in a description of the new building's construction.

> While the security vault was built of massive granite blocks and rested on a base of cement filled with canon balls which extended down through the basement, the door, although the best available, left much to be desired.[243]

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was the architect." "Building Operations in New York," *Manufacturer and Builder*, vol. 8, no. 2 (February 1876), p. 30.

[240] A competition was held for the building in 1858. Wight produced a design submitted by his employer, Isaac G. Perry that reflected the influence of Eidlitz's American Exchange Bank (1857) and Continental Bank (1856-57). Landau, *P. B. Wight: Architect, Contractor, and Critic*, p. 14. Perry appeared in New York City directories from 1854 through 1878; Francis, p. 61.

[241] Mills, pp. 42, 44.

[242] Mills, pp. 22-36.

[243] Mills, p. 44.

Eidlitz's building was exactly contemporary with George B. Post's Williamsburg Savings Bank (Brooklyn, 1875) and it is perhaps the only time that he beat Post in a competition.[244] Both buildings were early examples of monumental, freestanding structures situated in locations relatively remote from the New York City financial district, and Post's was particularly significant for its reintroduction of classical motifs to the building type.[245]

Schuyler referred to Eidlitz's bank in the opening paragraphs of his survey of his work and claimed to see reminiscences of Prague and Nuremberg in its roof forms.[246] Dismissing those whose opinion of the building was tied to its style, he restated his previous claims for Eidlitz's ability to transcend that issue.

> It differed from its predecessors by the same author in being unmistakably and, as one may say, aggressively Gothic. It took an academic classifier to assign [Eidlitz's] early secular works to a style. Indeed they were not of a style, or if any, rather classifiable as Romanesque than Gothic. True, the motive of any one of the four fronts of the old Produce Exchange might have been, whether it was or not, suggested by the front of the well known Romanesque church at Minden.[247] True, both that edifice and the Brooklyn Academy of Music bore evidence of their author's admiration of the monuments of the secular German Romanesque, of the Wartburg and of the palace at Gelnhausen.[248] And the banks could also be traced to their

[244] Peter B. Wight, who also submitted a design, did the interior decorations as per a pre-competition agreement with Post; Landau, *P. B. Wight: Architect, Contractor, and Critic, 1838-1925*, p. 28.

[245] Stern *et al*, *New York 1900*, p. 177; "The Dry Dock Savings Bank Building," *New York Times*, 31 March 1874, p. 5; Winston Weisman, "The Commercial Architecture of George B. Post," *Journal of the Society of Architectural Historians*, vol. 31, no. 3 (October 1972), p. 179. Post won the commission for the Williamsburg Savings Bank in a competition beating Peter B. Wight. Wight painted the interior decorations, however; Eve M. Kahn, "50-Year Dark Age Ends in Brooklyn," *New York Times*, 4 May 1995, p. C4.

[246] Leopold Eidlitz I, p. 164; Leopold Eidlitz II, p. 288.

[247] The reference was to the implied similarity of the attic of the Produce Exchange to the upper portion of the main façade of the c. 1064 German Romanesque cathedral. Both featured a hip-roofed pavilion that contained an arcade of tall, semi-circular arches above a wider base with similar arched openings, however, the scale of the church was significantly greater.

[248] Schuyler seemed to be referring to the extended linearity and smooth walls typical of these buildings rather than any specific architectural features. Wartburg Castle is located in Eisenach and was founded by Duke Ludwig of Thuringia in 1067 AD. It was altered throughout its history, most intensely during a nineteenth-century restoration campaign. Aside from its significance as a canonical example of German

> originals by a technical expert. One may suppose that these things had their influence upon that architectural expert and "Teutonic" zealot, Professor Freeman, when he declared that it was Broadway which had convinced him that the proper prototype of modern commercial building was to be sought in the Romanesque.[249] It remained true for the general sensitive but unlearned beholder that these things were not "examples" of anything but free architecture, and that they possessed "style," the style was intrinsic and not historical. But the wayfaring man could not be prevented from perceiving the Dry Dock Savings Bank was "high Gothic," and the ready nomenclator found it quite feasible to dismiss it with the ready criticism that it "looked like a church." [250]

Calling the Dry Dock Savings Bank "equally Gothic, evidently," Schuyler introduced the term "motive" to his discussion, referring to the underlying basis of a design irrespective of its style.[251]

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Romanesque architecture, its fame is associated with Martin Luther's stay during which he translated the New Testament into German. Emperor Frederick Barbarossa built the Kaiserpfalz (Palatine Palace) of Gelnhausen at the end of the twelfth-century on a small island in the River Kinzig, southeast of the city. Another well-known example of German Romanesque architecture, it was famous for the quality of its masonry work, entrance portal, arcades, friezes, and capitals. Plates 31, 43, 59, and 72 in Hope's *Essay on Architecture* show details of the complex.

[249] Edward Augustus Freeman (1823-92) was the Regius Professor of Modern History at Oxford and a prolific author and lecturer. Montgomery Schuyler called him "historically, at least, if not aesthetically, our great authority on Romanesque," *Architectural Record*, vol. 1, no. 1 (July-September 1891), pp. 12, 15. After visiting "the chief northern [portions of the United] States" during a lecture tour that extended from October 1881 to April 1882, he published his observations and suggested that the column and round arch of the Italian Romanesque as developed at Pisa and Lucca and as observed by him as a revival style in New York City provided an appropriate basis for "a really national American style." He also expressed admiration for the New York State Capitol at Albany and Eidlitz's addition to the New York County ("Tweed") Courthouse in New York City. Edward Augustus Freeman, *Some Impressions of the United States* (New York: Henry Holt and Company, 1883), pp. 246-49; Montgomery Schuyler, *American Architecture and other Writings by Montgomery Schuyler*, vol. 1, pp. 169-79 n. 82; Curran, *The Romanesque Revival: Religion, Politics, and Transnational Exchange*, p. 325 n. 1. Portions of Freeman's observations were published in "The Architecture of American Cities," *American Architect and Building News*, vol. 13 (24 February 1883), p. 91.

[250] Leopold Eidlitz II, p. 288.

[251] The term "motive" as used here derives from the French word *motif* and came into use during the mid-nineteenth-century in the context of art criticism. The OED defines the term as "A constituent feature of a composition; an object or group of objects forming a distinct element of a design; a particular type of subject for artistic treatment. Also used for: The structural principle or the dominant idea of a work." Ruskin regarded it as a fundamental quality of a work of art, and wrote "we must always remember that a great composition always has a leading emotional purpose, technically called its motive, to which all its lines and forms have some relation. Undulating lines, for instance, are expressive of action; and would be false in effect if the motive of the picture was one of repose. Horizontal and angular lines are expressive of rest and strength; and would destroy a design whose purpose was to express disquiet and feebleness. It is therefore necessary to ascertain the motive before descending to detail." John Ruskin, *Modern Painters*, "new" [1873] ed., (New York: John Wiley & Sons, 1885) VIII, ii, §1.

The Bank was located on a corner, and Schuyler wrote that, in contrast to the Decker Building which was "a mere 'front'," it "was evidently composed for the perspective view and... either elevation by itself not only does not do the design justice but does not disclose its motive."[252] The motive that Schuyler claimed to see behind the composition was "pyramidization," a term he borrowed from Thomas Hope ("Mr. Hope's uncouth word").[253] A two-story gabled porch, located at the building's corner and projecting into a space shaped by the acute angle of the site's street lines, was said to make the "picturesque effect of the pyramidization"[254] impossible to overlook, even by the casual observer. The necessity of the potentially superfluous porch to the overall composition was justified in this way, and a projecting balcony on the side elevation was treated similarly.

Schuyler was not completely pleased with the building and he wrote, "All the same, in spite of the picturesque successes, there is, one sees on reconsidering the building after so long, a distinct failure of expression."[255] That failure, similar to a fault he pointed out at St. George's Church, was related to lack of expression of "two unmistakably divided stories" on the elevations because the corresponding interior space contained only "a light gallery which is but a mere passageway around the banking room."[256] Brooks traced the problem to Eidlitz's use of the "transeptual

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[252] Leopold Eidlitz II, p. 291.

[253] Montgomery Schuyler, "The Vanderbilt Houses," originally published (unsigned) in *Harper's Weekly*, vol. 26 (21 January 1882), p. 43; reprinted in American *Architecture, Studies by Montgomery Schuyler*, p. 58. In the article, Schuyler compared the use of pyramidization at the Dry Dock Savings Bank to what he considered to be a less successful example: Richard Morris Hunt's William Kissam Vanderbilt House (1879-81, Fifth Avenue and 52nd Street). Hope was the author of *An Historical Essay on Architecture, by the late Thomas Hope. Illustrated from drawings made by him in Italy and Germany*, second ed., (London: John Murray, 1835). The term "pyramidise" appears in his discussion of the structural qualities of Byzantine domes and vaulting systems and refers to a compositional action taken by a designer to control the appearance of a building; Hope, p. 115 ff. Eidlitz was also familiar with Hope's book and cited it in a discussion of the ideal forms of architecture in *The Nature and Function of Art, More Especially Architecture*, p. 219.

[254] Leopold Eidlitz II, p. 291.

[255] Leopold Eidlitz II, p. 291.

[256] Leopold Eidlitz II, p. 291.

scheme" first introduced twenty years earlier at [the Second Congregational Church in] Greenwich." He agreed with Schuyler that the double-height space of the banking room was not expressed on the exterior of the building, however, he noted that the use of arcaded bands of windows rather than equally spaced single windows allowed more light into it.[257] Nevertheless, although the presence of the "the large and lofty banking room" was not expressed clearly, Schuyler seemed to subjugate that fault to the building's positive scenographic qualities: "But the pyramidal mass is so impressive, the relation of voids to solids so effective, the detail so well studied and so well adjusted that the exterior of the bank remains one of the best things in our street architecture."[258] Schuyler made a final attempt to situate the bank as a Gothic building ("The interior has a still higher interest as the only example on a large scale of groin vaulting in New York"). In fact, the vaults were made of "inexpressive plaster" rather than masonry.[259] This went unnoticed by Mills who claimed that they were made of masonry and supported by "heavy columns of imported Scotch granite."[260]

A less enthusiastic judgment of the building was expressed by Alfred Janson Bloor, the keynote speaker of the 1876 convention of the American Institute of Architects, in his review of contemporary work.

> The Dry Dock Savings Bank in New York, finished within a year by L. Eidlitz, is perhaps the most pleasing example of its author's characteristic manner of interpreting German Gothic to modern eyes, and along with his usual apt appropriation of good but somewhat monotonous detail, shows more mastery of outline and cosmopolitan feeling than have hitherto distinguished his generally interesting and clever but somewhat stiff and unequal work. The squaring of the plan on the site (which is considerably off the square) seems to indicate a facile building committee, and cleverly cuts a Gordian knot with the least

[257] Brooks, p. 17.

[258] Leopold Eidlitz II, p. 291.

[259] Leopold Eidlitz II, p. 291.

[260] Mills, p. 44.

> expenditure of trouble to the designer; while at the same time the unusual arrangement calls attention to the building.[261]

Bloor followed his assessment of Eidlitz's bank with comments on Griffith Thomas' National Park Bank of New York (1866-68, 214-18 Broadway; demolished), one of the first buildings in New York City to successfully emulate Hector Lefuel's New Louvre (1852, Paris). Bloor acknowledged that the by the time of his address, the older building "probably [found] little favor with purists of the modern school" but he called it "a rich and spirited production in the French Renaissance – one of the best examples of its florid phase to be found among us...."[262]

The building was "rediscovered" in 1916 when the 3rd Street El was demolished and many of Schuyler's earlier judgments were repeated by a new author.

> On the Southwest corner of Third Street is one of the finest buildings in the city architecturally, the Dry Dock Savings Bank. This was built in 1875 and for four brief years stood alone, where its charms might be admired. But since the elevated was built in 1879, effectually blotting it out, no one has noticed its fair proportions. Now the obstruction is gone and the Gothic façade is visible again. The interior has a vaulted ceiling which gives it a cathedral-like air, and especially is this so now that the semi-gloom has been dispersed and the western sun slants through the high windows, throwing long shadows athwart the mezzanine gallery which partially surrounds the main hall. Outside the striking feature is the tower on the corner. This forms the apex of what the architects term the pyramidicalness [*sic*] of the building, but what to the lay mind is just a number of minor towers and sections rising from about two stories on all sides to a symmetrical and eye-filling completion in the square-topped tower.
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> This harks back to Prague, the birth place of Leopold Eidlitz who designed the building. In Prague, one of the most notable

[261] A. J. Bloor, "Annual Address," in *Proceedings of the Tenth Annual Convention of the American Institute of Architects, Held in Philadelphia, Oct. 11 and 12, 1876*," (Boston: Committee on Publications of the American Institute of Architects, 1877), p. 25. Bloor (1828-1917) was born in England and apprenticed in the office of Frederick Diaper in New York City. He was active in local and national AIA affairs, serving as National Secretary several times during the last quarter of the nineteenth-century and was one of the founders of the Metropolitan Museum of Art. "Alfred J. Bloor" in *Biographical Dictionary of American Architects (Deceased)*, p. 62.

[262] Bloor, p. 25.

> features of the skyline is the picturesque Pulverthurm, or powder tower, and Eidlitz used the form in a number of his productions here. So much of his work that was beautiful has been obliterated, as, for instance, the Broadway Tabernacle, the Old Academy of Music in Brooklyn, and the Holy Trinity Church, that the Dry Dock Bank takes on an additional interest. Eidlitz was also the parent of St. George's Church in Stuyvestant Square and the Temple Emanu-el.[263]

*Newsboy's Lodging House*

Erdmann and Brooks attributed the Newsboy's Lodging House (244 William Street, 1874; demolished) to Eidlitz.[264] Although its appearance is similar to his *Brooklyn Union* Building (1868-69), I was not able to confirm his participation in the project. Eidlitz may have received the commission through his relationship with William A. Booth, the President of the organization and the American Exchange Bank. Booth hired Eidlitz to build him a vacation house in Stratford, CT, in 1857 and was likely involved in the decision to hire him to design the First Congregational Church (1858-59), also located in Stratford.

The Children's Aid Society, a charitable organization founded by Rev. Charles Loring Brace (1826-1890), purchased the property, the former site of the Shakespeare Hotel,[265] in 1872. Their new six-story building fronted on Chambers, Willliam, and Duane Streets could hold 600 boys. The ground floor contained shops with flat-headed transoms above paired windows and doors while at the upper floors, flat brick facades were punctured by rows of round-headed double-hung windows joined by narrow stringcourses and embellished with flush polychromatic voussoirs. The third floor was similar except the windows of the William Street façade were set within pointed openings flanked by Romanesque half-columns and surmounted by modeled

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[263] "The Bowery Basks in Its New-Found Sunshine," *New York Times*, 16 January 1916, p. SM 11.

[264] Biruta Erdmann, *Leopold Eidlitz's Architectural Theories and American Transcendentalism*, Thesis (PhD), University of Wisconsin-Madison, 1977 (Ann Arbor, MI: UMI Dissertation Services, 1989), p. 161; Brooks, p. 35. Both referred to it as the "Children's Aid Society Building" and dated it to 1872.

[265] "City Real Estate of Past Century," *New York Times*, 19 February 1922, p. 125.

polychromatic voussoirs, all of which were located below a decorative brick band. The building's mansard roof contained gabled dormers with round-headed double-hung windows.[266] The Society's programs were supported by rents obtained from commercial operations housed in the basement and on the ground floor as well as payments received from the boys who lived in the building. The second story contained dining rooms, the third classrooms, the fourth and fifth dormitories, and the sixth a gymnasium.[267] Horatio Alger lived in the building and wrote most of his books there.[268]

Brace, a Yale-trained Presbyterian minister and a friend of Olmsted, founded the Children's Aid Society in March 1853 as an alternative to almshouses and prisons. Before the Society was established, few public or private agencies existed to help vagrant children and thousands of them lived on the streets, many born to immigrants. The Society's first shelter, the Newsboys' Lodging House, opened in 1854 at 128 Fulton Street on the top floor of the New York *Sun* building at Fulton and Nassau Streets. The location was particularly appropriate because the *Sun* began publishing in 1833 with a business plan that relied on advertising and bulk sales of newspapers to newsboys for resale on the street rather than subscriptions. Twenty additional lodging houses, each containing an industrial school, were established over the next twenty years for sick or abandoned babies, homeless girls, women with children, and homeless boys. In 1859, Brace changed the Society's approach when he published "The Best Method of Disposing of Our Pauper and Vagrant Children"[269] in which he called attention to the national demand for child labor, especially in the rural West. As early as 1854, the Children's Aid Society had loaded

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[266] A photograph of the building appeared in *The New Metropolis: Memorable Events of Three Centuries, 1600-1900, From the Island of Mana-Hat-Ta to Greater New York at the Close of the Nineteenth Century*, E. Idell Zeisloft, ed. (New York: Appleton, 1899), Plate 196.

[267] "The Latest Work of the Children's Aid Society," *New York Times*, 27 March 1874, p. 5.

[268] "Coast Guard Gets Newsboys' House," *New York Times*, 12 June 1943, p. 21.

[269] New York: Wynkop, Hallenbeck & Thomas, 1859.

groups of children onto trains and sent them westward, mainly to farmers, and when the program ended in 1929, the Society had removed 30,000 children from the city to new homes. The children were popularly referred to as "orphan train riders" although many were not orphans. Nevertheless, Brace claimed that in addition to providing a superior environment, his "Emigration Plan" did not require the expensive properties, large staffs, and the high costs of the "asylum system" since only a few dollars were needed to relocate a child from New York City to a country home. Competing charities also organized orphan trains but frequently indentured children to prospective employers, a legal arrangement that was binding to age 18 and opposed by Brace.[270]

[270] See Charles Loring Brace, *Dangerous Classes of New York, and Twenty Years Work Among Them* (Washington, DC: National Association of Social Workers, 1973), reprint of first ed. (New York: Wynkop & Hallenbeck, 1872). For a brief history of Brace's activities, see the Carole R. Inskeep, *The Children's Aid Society of New York, An Index to the Federal, State, and Local Census Records of Its Lodging Homes (1855-1925)* (Baltimore, MD: Genealogical Publishing Co., 1996), i-ix.

# 7. EDUCATIONAL TRAINING OF ARCHITECTS I: 1867-69

Leopold Eidlitz maintained an interest in architectural education that persisted throughout his life. Although his ideas on the topic grew more intense and complex over time, his belief in polytechnical schooling as the best way of mediating the artistic and technical demands of the profession received its first exposure at this time. Eidlitz's attempt to persuade the American Institute of Architects to sponsor such a school did not succeed and probably led to his resignation from the organization. Nevertheless, his view of architecture as a social and a fine art permeated his writings and culminated in an extraordinary literary debate with members of the Royal Institute of British Architects thirty years later.

## *An American Polytechnic School*

The first convention of the American Institute of Architects took place in New York City in 1867. During an evening session on the second day, its members were asked to approve a report that advocated establishment of a combined "Polytechnic School" and "Academy of Art" to be operated by the organization, a notion of combining that may have reflected the Committee's familiarity with the Berlin Bauakademie (Architectural Academy). The report was written by the Institute's Committee on Education, a group that consisted of Leopold Eidlitz, Richard Griffith Hatfield, Emlen (or Emlyn) T. Littell, William Robert Ware, and Samuel Adams Warner.[1] The educational background of the Committee members was typical for its time. Eidlitz was trained in the European polytechnical tradition, Hatfield came to architecture through construction, Littell and Ware were graduates of American colleges and universities, and Warner was trained in his father's office. Nevertheless, it is significant that Richard Morris Hunt, the first American to

[1] Leopold Eidlitz, Richard Griffith Hatfield, Emlen T. Littell, William Robert Ware, and Samuel Adams Warner, "Report of the Committee on Education" in American Institute of Architects, *Proceedings of the Annual Convention Held at the Rooms of the New York Chapter, October 22d and 23d, 1867* (New York: Raymond and Caulon, Publishers, 1867), pp. 13-16.

attend the École des Beaux-Arts in Paris and the patron of a New York City atelier that employed its methods, was not a member of the Committee.

Hatfield presented the Committee's report to the convention. Although the operational details of the proposed school were incomplete and would not be finalized until the Committee returned from a tour of comparable European facilities, the document was sufficient to describe the intentions of its authors. Admission would require passing a post-high school entrance examination. In an arrangement similar to that established at the Prague Polytechnical Institute in 1833-34, for the first two years, students would follow a preparatory curriculum in which they would study drawing, elementary mathematics, geometry, trigonometry, geography, elementary chemistry, and French or German. Graduates of the preparatory course or those who could pass an examination could attend a three-year course that would include drawing, higher mathematics, "natural philosophy" (i.e., physical science), civil, engineering and triangulation, astronomy, architectural, naval, and mechanical construction, chemistry, and two foreign languages. Students who passed an examination based on this material could enter an academic course that would include aesthetics, the history of art and architecture, drawing, writing, and "practical solutions to problems." Graduates of the preparatory course could also choose a program of "commercial instruction" in raw materials, chemical compounds and manufactured goods, foreign production, monetary systems, commercial law, and banking systems, and "the commercial branch of political economy." The latter had many similarities to the Gewerbe Schule (College of Trade) that was established in Berlin in 1821 and merged with the Bauakademie in 1827. The Bauakademie and the Gewerbe Schule separated in 1845, although during the late 1860s, the Prussian government began discussions that resulted in another merger in 1879.

It was anticipated that the academic course would take one year for graduates of the three-year preparatory course and two years for others. These detailed recommendations reflected the Committee's belief that taste was a product of education and their recognition that American

architectural education was based, for the most part, on study of existing buildings. However, contemporary buildings were of such poor quality that they could not function as examples of "good taste." A change in this situation could only be expected if architects received thorough and comprehensive training based on a return to "pure sources."[2]

The Committee expected that the school would cost $500,000 to open and would be funded by voluntary contributions eventually repaid from an operating surplus. Contributors would have the first say in the granting of free scholarships and would receive a fixed rate of return on their outlays. Of the amount raised, $300,000 would be set aside as an endowment. As soon as income exceeded expenditures by 20%, $100,000 would be placed in a permanent fund that would never exceed $300,000 or diminish below $100,000. $200,000 would be used for classroom buildings and the remainder invested to pay salaries, build a library, and purchase scientific equipment. An additional $100,000 would be allocated to purchase a site in upper Manhattan or Westchester County along the Hudson River for "a moderate college town entirely under the management of the Institute." Half of the site would be sold or leased with the profits going to the building fund and to pay for student and teacher boarding. Thirty professors would be hired at $3,000 per year and other expenses were expected to range from $10,000 to $20,000 per year. Although the school was intended to accommodate 4,000 students, initial financial assumptions were based a yearly enrollment of 1,000 for the first ten years with each student paying a $150 yearly fee.

The Committee also proposed to establish a "school for mechanics" that would be located in New York City. Staffed by graduates of the polytechnical school who would receive free lodging from charitably-minded sponsors, it would provide free day and evening instruction in drawing, elementary mathematics, geometry, modeling, and construction. A similar program had been

[2] Eidlitz *et al*, "Report of the Committee on Education," p. 13.

initiated in 1858 by the Mechanics Institute of the General Society of Mechanics and Tradesman to provide daytime training for those unable to pursue a technical education because of work obligations. The focus of the Institute was subsequently changed to privately funded free evening classes for men and women and to assist those who were forced to work before completing their education.

The Committee's report provoked considerable debate. After a motion to adopt was introduced, George B. Post, who had spent two years in Hunt's atelier and was a member of the AIA's Committee on Library and Publications, a group chaired by Hunt, proposed delaying the vote until the report was printed and distributed to each member. He also asked the Committee on Education to request the Board of Trustees to call a special meeting for a vote only when the Committee had determined that "the proper time has arrived for definite action on the subject." It is likely that Post's actions were intended to give Hunt time to lobby the membership in support of his own notions of architectural education that had little room for polytechnic training. Post's recommendations prevailed when the vote was taken[3] and at the next convention, The Committee on Library and Publications dutifully reported that it had printed 1,000 copies of the proceedings and minutes of the 1867 meeting and distributed 250 to AIA members and 500 to others.[4] The project was dead.

In 1868, Littell left the Committee on Education, Ware remained, Arthur Gilman joined, and Eidlitz became Chairman. While the role of architectural education at the 1868 AIA convention is unknown because the relevant portions of the proceedings have been lost, the topic was discussed in three papers presented at the 1869 convention. The first emphasized the usefulness

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[3] *Proceedings of the Annual Convention Held at the Rooms of the New York Chapter, October 22d and 23d, 1867*, pp. 4-5.

[4] Richard Morris Hunt, Henry Van Brunt, Peter Bonnet Wight, Emlen T. Littell, and Alfred J. Bloor, "Report of the Committee on Library and Publications," American Institute of Architects, *Proceedings of the Second Annual Convention of the American Institute of Architects, Held in New York, December 8th, 1868* (Committee on Library and Publications, 1869), p. 50.

of science, however, because portions of the proceedings have been lost, the author and tile of the paper are unknown.[5] The second, which discussed the primacy of art, [6] was given by Ware, who had recently returned from a trip to Europe to gather information for the newly established Architecture Department of the Massachusetts Institute of Technology, the first in the United States to use Beaux-Arts methods.[7]

Both papers elicited comments from Russell Sturgis, Richard Morris Hunt, and Frederick A. Pedersen. While Beaux-Arts trained Hunt expressed strong agreement with Ware's position, Sturgis who had worked briefly with Eidlitz and attended school in Germany, and Petersen, a graduate of the Bauakademie, were generally sympathetic but not completely convinced. Sturgis was especially concerned about the "exceedingly cold and lifeless" quality of the modern French architecture that Hunt, and, by extension, Ware, advocated. Petersen, while acknowledging the importance of the views in both papers, claimed that nothing could be built "that deserves the name of Architecture" without "a perfect understanding of construction."[8] In subsequent

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[5] The paper is mentioned in comments that appeared in Committee on Library and Publications of the American Institute of Architects, *Proceedings of the Third Annual Convention of the American Institute of Architects Held in New York, November 16th and 17th, 1869* (New York: Western & Company, 1870), p. 44.

[6] William Robert Ware, "Relations of Science and Art in Architectural Study." Because he did not provide a copy to the AIA's Publication Committee, the convention proceedings contained only a one-paragraph summary of Ware's paper taken from "the New York morning papers of November 19th [1868?]." Committee on Library and Publications of the American Institute of Architects, *Proceedings of the Third Annual Convention of the American Institute of Architects*, p. 42.

[7] During the trip, Ware spoke about American architecture and architectural education at the 28 January 1867 meeting of the Royal Institute of British Architects and mentioned the work of Eidlitz as being representative of the German influence in America. William Robert Ware, "Architecture and Architectural Education in the United States," *The Civil Engineer and Architect's Journal*, vol. 30 (1 April 1867), pp. 107-9; revised version of a paper ("On the present condition of Architecture and Architectural Education in the United States") read at the 28 January 1867 meeting of the Royal Institute of British Architects and published in *Royal Institute of British Architects Transactions*, 1st series, vol 17 (1867), pp. 81-90.

[8] American Institute of Architects, Committee on Library and Publications of the American Institute of Architects, *Proceedings of the Third Annual Convention of the American Institute of Architects*, pp. 44-45.

remarks, he also warned of the potential for Balkanization of the AIA by excessively eager partisans of the various architectural styles.[9]

The third paper was given by former Committee member Hatfield, by then Vice President of the New York State Chapter and a member of the national Executive Committee. He called for establishment of "an institute for Architecture" but did not provide specific recommendations beyond encouraging hard work, talent, and the pursuit of knowledge.[10] However, in response to a comment made by Ware that advocated emphasis on artistic training for architects, he remarked

> In the polytechnical institutions of the old country, in which students are taught not only Architecture but Engineering, the tendency is to that mathematical turn of mind, that, while necessary in a certain degree in the Architect, will not answer the purpose in thoroughly educating him for his profession. We find that the students that come from several of the institutions that I have mentioned, the polytechnical institutions of Germany, for instance, are particularly mathematical, and there is very little of the aesthetic in them.[11]

Petersen quickly pointed out that German polytechnical schools were not intended to educate architects although he claimed to know of a school in Prussia that taught chemistry and geology to its architecture students. Somewhat chastened, Hatfield referred to an institution in Berlin "at which I was very much interested in their manner of teaching." He also mentioned schools in Hanover and Turin that owned "perfectly splendid" collections of models and equipment said to be useful to architects and hastily concluded his remarks by stating, "If we could have anything

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[9] Frederick A. Pedersen, "Remarks by Mr. Petersen on the State of the Institute," Committee on Library and Publications of the American Institute of Architects, *Proceedings of the Third Annual Convention of the American Institute of Architects*, pp. 44-47.

[10] Richard Griffith Hatfield, "Elementary Training of the Architect" in Committee on Library and Publications of the American Institute of Architects, *Proceedings of the Third Annual Convention of the American Institute of Architects*, pp. 51-56.

[11] Hatfield, "Elementary Training of the Architect," pp. 55-56.

like it in our country, and students would take hold and devote themselves to this, we might hope for great things."[12]

By the end of the year, the membership of the Committee on Education had changed again. Eidlitz, Hatfield, and Warner resigned, Gilman and Ware remained, Littell returned, and Josiah Cleveland Cady and John Davis Hatch joined. Eidlitz resigned from the AIA during the following year and the Committee abandoned the notion of a "Grand School of Architecture" on grounds of cost, an inadequate supply of teachers, and a preference for multiple regional schools rather than a central facility.[13]

Eidlitz said no more on the subject until 1878 when he wrote a lengthy letter to *The American Architect and Building News* in 1878 in which he defined architecture as a profession and recommended that architects study construction, mathematics, the physical sciences, literature, aesthetics, general and architectural history, and drawing. Such an education was best obtained in a polytechnical school; those who could not attend one would be offered an examination to demonstrate the scope of their knowledge.[14]

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[12] Hatfield, "Elementary Training of the Architect," p. 56.

[13] Josiah Cleveland Cady, Arthur Gilman, John Davis Hatch, Emlen Littell, and William Robert Ware, "Annual Report of the Committee on Education" in Committee on Library and Publications of the American Institute of Architects, *Proceedings of the Third Annual Convention of the American Institute of Architects*, pp. 15-16.

[14] Leopold Eidlitz, "The Qualifying of Architects," *The American Architect and Building News*, vol. 3 (25 May 1878), p. 185-86.

## 8. THE CAPITOL AND THE COURTHOUSE: 1875-85

Leopold Eidlitz received the two most important commissions of his career, the New York State Capitol and the New York County ("Tweed") Courthouse, within a year of each other. Both projects were among the most prestigious of their kind, and both offered Eidlitz a respite from the financial depression that was afflicting the country and the opportunity to operate at level not previously available to him. Both projects were also affected by events over which Eidlitz had little control and whose magnitude he attempted to counter by the force of his personality and will. Initially involving debates on artistic subjects, the events soon evolved into assertions of political influence and technical incompetence. By the time the period ended, Eidlitz's personal and professional reputation was under assault, and his attention turned to writing as commissions grew increasingly scarce.

### *New York State Capitol*

Leopold Eidlitz joined Frederick Law Olmsted (1822-1903) and H. H. Richardson (1838-86) in 1875 to begin work at the New York State Capitol in Albany, a project begun seven years earlier by Thomas Fuller[1]. In 1859, Fuller and his partner, Chilion Jones,[2] had won second prize in a

[1] Fuller's (1821/2-98) biographical details are incomplete. Although some accounts claim that he was the son of the Mayor of Bath and a member of the gentry who fell out of favor for acting as a general contractor on a building of his own design, documentary evidence is limited to confirmation of his birth, training, and practice in Bath, and additional training in London. Fuller went to Antigua in 1843, having obtained a commission for a replacement for the earthquake-damaged St. John's Anglican Cathedral (ca. 1845-49). After completing the twin-towered English-Baroque building and others in Jamaica and the Antilles, he went to Toronto in 1857 where he built an Anglican church, St. Stephen-in-the-Fields (1858). In 1881, he accepted an invitation to return to Ottawa where he served as Chief Architect of the Dominion Government's Department of Public Works. He kept the position until 1897, the year before he died, having completed 140 public buildings. His son, Thomas W. Fuller, was appointed to the same position in 1927, and his grandson, Thomas G. Fuller, founded Fuller Construction, an enterprise that built many of Ottawa's important buildings during the city's post-World War II expansion. Robert Hill, "Thomas Fuller" in *Macmillan Encyclopedia of Architects*, vol. 2, p.127; unsigned obituary [Thomas Fuller] in *The American Architect and Building News*, vol. 62 (29 October 1898), p. 37; "Thomas Fuller" in *Directory of British Architects 1834-1914*, vol. 1, p. 695; John Coolidge, "Designing the Capitol: The Roles of Fuller, Gilman, Richardson and Eidlitz" in *Proceedings of the New York State Capitol Symposium* (Albany, NY: Temporary State Commission on the Restoration of the Capitol, 1983), p. 21. Fuller and Eidlitz may have

competition for the departmental government buildings of the Canadian Houses of Parliament and the Governor-General's residence, both to be built in Ottawa.[3] Montgomery Schuyler described their design as "a picturesque group, in free Gothic, which was not conventional and which might lay fair claim, as such claims went, to a degree of architectural 'inspiration'."[4] While they were supervising construction of the Parliament buildings, they won a competition announced on 31 August 1863 for a New York State capitol building. Only three entries were received (a fourth came in after the deadline), probably because the announcement was published only in newspapers circulated within in New York State, and no money was offered to compensate the competitors for their efforts.[5]

The desire for a new building remained strong, however, and after rejection of a proposal to remove the capitol from Albany, $10,000 was appropriated for construction on 1 May 1865, Governor Reuben E. Fenton (1819-1885) appointed three "New Capitol Commissioners" to oversee the work.[6] The project did not go forward, and on the recommendation of Richard Morris Hunt, a second competition was announced on 9 July 1866.[7] This time, Fuller teamed

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known each other outside of the Capitol project as Fuller was an early member of the American Institute of Architects and a Vice-president from 1874 to 1878; "Thomas W. Fuller" in *Biographical Dictionary of American Architects (Deceased)*, p. 226; Carolyn A. Young, *The Glory of Ottawa: Canada's first parliament buildings* (Montreal and Kingston, London, and Buffalo, NY: McGill-Queen's University Press, 1995), p. 30.

[2] Jones (1838-1912), a civil engineer, was born in Ottawa province. He and Fuller served as supervising architects during the construction phase of the project; Young, p. 30.

[3] Young, pp. 29-43. Fuller was appointed architect for the Parliament buildings. He and Jones supervised construction of the complex from 1859 to 1867; he was given full control in 1863. Their Library (1859-97) is extant; their Center Block (1859-66) burned in 1916 and was rebuilt with a taller tower designed by Darling and Pearson with Jean-Omer Marchand (1916-27).

[4] Montgomery Schuyler, "The Work of Leopold Eidlitz, III: The Capitol at Albany, New York," *Architectural Record*, vol. 24, no. 5 (November 1908) [hereafter, Leopold Eidlitz III], p. 365.

[5] *Historic Structures Report*, 18 vols. (New York: Ehrenkrantz Group, 1983), vol. 1, *Historical Analysis*, pp. 8-12.

[6] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 17.

[7] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 20.

with Augustus Laver,[8] another successful entrant in the Ottawa competition, and their entry was one of thirty submitted. Again, none was found satisfactory, although $250,000 was appropriated for construction on 22 April 1867, and $1,000 premiums were awarded to Fuller and Laver, and Paul Schultze and Paul F. Schoen on 13 May.[9] On the same day, the New Capitol Commissioners asked another competitor, Boston architect Arthur D. Gilman,[10] to prepare a design. Despite concerns about costs and the way in which the project was handled, the Senate Finance Committee appropriated an additional $250,000 for construction six days later.[11] On 1

[8] Laver (1834-98) was born in Folkstone, England and immigrated to Ottawa when he was twenty-three years old. He and another English-born architect, Thomas Stent (1822-1912), came in second in the competition for the Canadian Parliament Buildings; their East and West Blocks (1859-65) are extant. Laver worked on the construction of the buildings with Fuller and designed projects in several other Canadian cities, including the Catholic Cathedral of Montreal. During the mid-1860's, he moved to the United States where he rejoined Fuller, who had also recently arrived, in a successful competition entry for the New York State Capitol. Laver and Fuller also won the San Francisco City Hall competition in 1870, one year after an unsuccessful entry in the Philadelphia City Hall competition with local architect Henry Augustus Sims (1832-1875). Laver left Albany for the San Francisco commission, completed it (1875, destroyed by earthquake in 1908), and became active in several professional organizations. "Augustus Laver" in *Biographical Dictionary of American Architects (Deceased)*, p. 364; "Augustus Laver" in *Directory of British Architects 1834-1914*, vol. 2, p. 19; "Thomas Stent" in *Directory of British Architects 1834-1914*, vol. 2, p. 693; Young, pp. 43-50.

[9] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 31; "The New York State Capitol at Albany" in Kennion, pp. 135-40. Schultze (1827-97) and Schoen (n.d.) appeared jointly in 1867-74 New York City directories; Schoen appeared alone in 1866-88 directories. Francis, p. 68. Schultze and Schoen also entered competitions for the Library of Congress Building (1873 and 1878) and the Divinity Building of Catholic University (1886), both in Washington DC. They designed Boylston Hall at Harvard University (1857), however, it was incorrectly attributed to Eidlitz by Kermit C. Parsons in "The Quad on the Hill: An Account of the First Buildings at Cornell," *Journal of the Society of Architectural Historians*, vol. 22, no. 4 (December 1963), p. 211.

[10] Gilman (1821-82) was born in Newburyport, MA, educated at Trinity College in Hartford, CT, and studied architecture in Europe and Boston. He was said to have been the first Boston architect after Bulfinch to take up the profession without apprenticing in the building trades and was an early member of the American Institute of Architects. He collaborated with Gridley Bryant on Boston City Hall (1862-65), with Edward H. Kendall (1842-1901) on the Albany competition entry, and subsequently joined him and consulting architect George B. Post (1837-1913) in New York City on the design of the first Equitable Life Assurance Building. By the time he took part in the Albany competition, Gilman was recognized as one of the most skillful practitioners of the Second Empire style. "Arthur D. Gilman" in *Biographical Dictionary of American Architects (Deceased)*, p. 236; Coolidge, p. 22.

[11] *The Public Service of the State of New York*, vol. 2, p. 60.

August 1867, the New Capitol Commission reviewed Gilman's design along with the other submissions and, as before, all were found lacking.[12]

On 8 August, the New Capitol Commissioners accepted the design previously prepared by Schultze & Schoen, but it was rejected by the Commissioners of the Land Office. Six days later, the New Capitol Commissioners asked Fuller and Gilman to prepare a joint design, but the Commissioners of the Land Office rejected it on 4 September. After several unsuccessful attempts to revise the design, consideration stopped until a State Constitutional Convention adjourned.[13] The Commissioners of the Land Office and the New Capitol Commissioners finally accepted a revised plan submitted by Fuller and Gilman on 13 November 1867. Governor Fenton approved the design and authorized the project on 7 December 1867, and ground was broken two days later.[14]

Because his work in Ottawa was finished, Fuller moved to Albany. Now associated with Gilman as well as Laver, he was appointed Architect of the Capitol on 14 August 1868 after the final siting for the building was approved and additional ground purchased. After financial objections from engineers assigned to review the project were overcome, the New Capitol Commissioners accepted a revised $4 million estimate prepared by Fuller and Gilman and the work proceeded.[15] Foundation excavations were completed in June 1869, the first foundation stone was placed on 7 July, and the cornerstone was laid on 24 June 1871,[16] the same year in which Governor John A. Dix, an ally of William Magear Tweed, replaced the New Capitol Commission with eight Capitol Commissioners.

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[12] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 32.

[13] Up to this time, New York State had adopted constitutions in 1777, 1821, and 1846. The constitutional convention that took place 1867-68 focused on woman's suffrage but did not result in a new constitution.

[14] *The Public Service of the State of New York*, vol. 2, p. 59.

[15] Ehrenkrantz Group, vol. 1, *Historical Analysis*, pp. 40-41.

In November 1874, Samuel J. Tilden (1814-86), a vigorous opponent of Tammany Hall, succeeded Dix as Governor. Although $1 million had been appropriated each year from 1872 to 1874, and more than $5 million had been spent,[17] construction had only gotten as far as the spring lines of the third floor arches. Fuller ominously reported that nearly $8 million was needed to finish the building, but the legislature refused to make any additional funds available and dismissed the Tweed-influenced Capitol Commission on 29 June 1875. Tilden subsequently created a new ex-officio Commission to oversee the project that was independent of the legislature and consisted of the Lieutenant Governor, Attorney General, and the Auditor of the Canal Department.[18]

Lieutenant-Governor William Dorsheimer (1832-88), President of the new Commission from its inception until 1879, was a prominent Buffalo lawyer and a founder of the Buffalo Academy of Fine Arts and Buffalo Historical Society.[19] Schuyler claimed that Tilden's concern about the progress of the Capitol was purely financial ("with all his eminent qualities, [he] was as innocent of esthetic perceptions as a horse"), and emphasized the point by questioning his selection of Calvert Vaux as architect of his Gramercy Park residence on the advice of Andrew Haswell Green, a mere politician.[20] In contrast, he wrote that Dorsheimer was "very consciously a person

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[16] *The Public Service of the State of New York*, vol. 2, p. 62.

[17] *The Public Service of the State of New York*, vol. 2, p. 67.

[18] Cecil Roseberry, *Capitol Story* (Albany, NY: State of New York, 1964), p. 32; Schuyler, "The New York Capitol," p. 164.

[19] *The Public Service of the State of New York*, vol. 2, p. 76.

[20] Green (1820-93), known as the "Father of Greater New York" (and in a less complimentary appellation as "Handy Andy"), was active in New York City and New York State politics. He guided creation of Central Park in New York City (probably meeting Vaux in that capacity) and the Niagara State Preserve, the first state park in the United States. He also implemented consolidation of the five boroughs that now comprise New York City, and was involved in the creation of the New York Public Library, the Bronx Zoo, Central Park, and other cultural institutions. He was shot and killed in front of his Park Avenue house by an assailant who mistook him for someone else. Green met Vaux in conjunction with the design and construction of Central Park. Schuyler referred to him as "Green's artistic favorite, and one might say protege," and gave Tilden's house a favorable review ("Another interesting piece of Gothic work, though this time of distinctly Victorian Gothic"). Montgomery Schuyler, Leopold Eidlitz III, p. 365; "Concerning

of culture, and indeed of all his public services, some of them famous in their time... revision of the Capitol of New York was the most notable and perhaps the most memorable."[21] While Schuyler's comments emphasized Dorsheimer's aesthetic sensibilities, his pragmatic approach to politics (he had switched from the Republican to the Democratic Party in 1874 and nominated Tilden for President of the United States at the Democratic Party convention of 1876, held in Tammany Hall) served the Capitol project well.[22]

Dorsheimer quickly appointed an Advisory Board of architectural professionals to assist with the state capitol project. It consisted of Frederick Law Olmsted, Henry Hobson Richardson, and Eidlitz.[23] Olmsted, who was in his mid-fifties, was valued for his frequent advisory participation in important public works projects, and his presence virtually guaranteed a credible outcome.[24] Richardson was Dorsheimer's Harvard classmate and although lately a renowned architect, he had been in practice for only ten years. He and had not yet completed Trinity Church, and seems to have been selected on a more personal basis. As the chief promoter of the park movement in Buffalo, Dorsheimer had invited Olmsted to come to the city in August 1868 to inspect a site for a large, new, public park.[25] Olmsted met Richardson, his Staten Island neighbor, shortly before

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Queen Anne" in *American Architecture*, p. 41. The article is a reprint of Montgomery Schuyler, "Recent Buildings in New York," *Harper's Magazine*, vol. 67 (September 1883), pp. 557-78.

[21] Leopold Eidlitz III, p. 365.

[22] Dorsheimer served as Lieutenant Governor of New York 1875-79. He was also a member of the House of Representatives 1883-85, and a United States District Attorney for the Southern District of New York 1885-86.

[23] Richardson, who was thirty-six at the time of his appointment, named his sixth child, born that year, Frederick Leopold William after his co-workers; Elliot, p. 92.

[24] "The Report on the New York State Capitol," p. 82.

[25] See Francis R. Kowsky, "Municipal Parks and City Planning: Frederick Law Olmsted's Buffalo Park and Parkway System," *Journal of the Society of Architectural Historians*, vol. 46, no. 1 (March 1987), pp. 49-64. Kowsky noted that Dorsheimer was of German descent, and that the Germans exerted "a profound influence on the economical, political, and cultural life of the city." He quoted historian Allan Nevins' comment that the Germans had "an appreciation of the uses of leisure which many New Englanders lacked." Francis R. Kowsky, "Delaware Avenue" in *The Grand American Avenue: 1850-1920*, Jan Cigliano and Sarah Bradford Landau, eds. (San Francisco: Pomegranate Artbooks, 1994), p. 47.

the meeting, and, hearing that Dorsheimer wanted to build a house, suggested Richardson for the job.[26]

How Eidlitz came to be associated with the project is less clear. He had been in practice for about thirty years by that time and had been known by Olmsted for at least fifteen years.[27] Eidlitz had also probably met Richardson during the period in which the latter maintained a New York City office and served as editorial director of the *New York Sketch-Book of Architecture*, a publication that had also employed Schuyler.[28] Additionally, Eidlitz and Dorsheimer were members of the Century Club, as was Schuyler.[29] Schuyler maintained that Eidlitz's recommendation came from

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[26] The house was built 1869-71. Schuyler claimed that Dorsheimer assisted Richardson in obtaining the commission for the Buffalo Insane Asylum (1870-71); Leopold Eidlitz III, p. 366.

[27] In a letter written on 21 October 1860 to James T. Fields, editor of the *Atlantic Monthly*, concerning a future article on Central Park, Olmsted mentioned Eidlitz, Henry Van Brunt, and Richard Morris Hunt as the architects who knew most about it. Frederick Law Olmsted, *Creating Central Park, 1857-1861* (The Papers of Frederick Law Olmsted, vol. 3), Charles E. Beveridge and David Schuyler, eds. (Baltimore and London: Johns Hopkins University Press, 1983), p. 269. He also mentioned Eidlitz and his churches favorably ("Idlitz [*sic*], is, I think, the most unquestionably successful church-builder in New York. I like him very much.") in a letter he wrote to his brother, John, on 17 August 1874, in which he disdained Richard Upjohn and advocated hiring specialized architects for church projects; Olmsted, *The California Frontier, 1863-1865*, p. 246. Olmsted's personal copy of Eidlitz's book, *The Nature and Function of Art, Especially Architecture*, was given to the University of California at Berkley by Frederick Olmsted, Jr.

[28] Thorn, vol. 1, p. 24. The *New York Sketch-Book of Architecture* was published by James Ripley Osgood (1836-92), the inventor of the heliotype process, from January 1874 through December 1876. Although *The Architect's and Mechanic's Journal* published a few photolithographs in 1860, the *New York Sketch-Book of Architecture* and was the first American architectural publication to introduce the use of photography and rely on large-scale application of photomechanical technology; Woods, *The "American Architect and Building News" 1876-1907*, pp. 79-90, 93-96, 198-99; Jordy and Coe, vol. 1, pp. 7-8.

[29] Kowsky, "Municipal Parks and City Planning: Frederick Law Olmsted's Buffalo Park and Parkway System," p. 49; Thorn, vol. 1, p. 19. Eidlitz was elected a member of the Century Club in 1859; Montgomery Schuyler, "Leopold Eidlitz," *Dictionary of American Biography*, vol. 6, p. 61. The Century Club, more correctly the "Century Association," was founded on 13 January 1847 in the rotunda of the New York Gallery of Fine Arts in City Hall Park as private men's club. Its forty-two organizers (ten artists, ten merchants, four authors, three bankers, three physicians, two clergymen, two lawyers, one editor, one diplomat, and three "men of leisure") included twenty-five members of the Sketch Club (founded 1829), and six from The Column (founded 1825). The Association moved from its original rooms located at 495 Broadway to 435 Broome Street (1849), then to 575 Broadway (1850), 24 Clinton Place (1852), and 109 (old 42) East 15th Street (1857). It remained there until 1892 (the building was remodeled by H. H. Richardson in 1862) when it took possession of a purpose-built structure located at 7 West 43rd Street (Stanford White for McKim, Mead & White, 1889-91). Stern *et al*, *New York 1880*, p. 216; Strong, vol. 1, p. 297, n. 3; Christopher Gray, "Richardson's Lost Work Discovered Housing a Travel Agency on East 15th," *New York Times*, 11 December 1988, p. R10; Allan Nevins, "The Centurions Survey a Century," *New York Times*, 27 April 1947, p. SM16.

Manton Marble, editor and owner of the *World*, the public voice of the Democratic Party in New York City. While Schuyler claimed that Marble's recommendation was based on esteem for Eidlitz,[30] he had also been a shareholder in the Viaduct Railway Company and may have met Eidlitz thorough that circumstance. It also possible that Marble met Eidlitz through Schuyler who began his career as an architectural writer at the *World* in 1866, six years after it was founded. In any case, Marble's work for Tilden in the gubernatorial election probably assured the appointment.

On 15 July 1875, the Advisory Board was directed to make a critical examination of the Fuller-Gilman design, suggest modifications, and prepare cost estimates for the original design and the modifications. According to Schuyler, the Board was instructed to

> examine the work done and the plans for the work not done; to consider whether the building could be reduced in height, since it was committed in every other dimension; whether the legislative halls were too large, and if so, how they could be reduced; to examine the dimensions and arrangement of other specified rooms, "and, lastly, all questions of taste and judgment, which may suggest themselves as of practical importance to be now discussed."[31]

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Eidlitz was also a charter member of the American Photographical Association, an organization formed in 1859 by John W. Draper (1811-82), a chemist who investigated the chemical effects of radiant energy. Draper helped organize the medical school of the University of the City of New York and became its president in 1850. He also founded the American Chemical Society in 1876 and is believed to be the first in New York to make a Daguerreotype. "A Great Scientist Dead," *New York Times*, 5 January 1882, p. 8.

[30] Leopold Eidlitz III, p. 366. Marble (1834-1917) made the *World* a force in American journalism by controlling all news transmitted by transatlantic telegraph cable in 1866, a feat that neither the *New York Herald* nor the Associated Press could match. Two years later, he obtained a controlling interest in the newspaper and attempted to gain editorial independence from the Boss Tweed faction of the Democratic Party. However, readership declined and the paper suffered heavy financial losses during the economic depression of the early 1870s. In 1876, he sold the *World* to a group headed by Thomas A. Scott, president of the Pennsylvania Railroad. Nevertheless, the paper continued to loose money, and in 1887, Joseph Pulitzer purchased it and shifted its focus to human-interest stories, scandals, and sensationalism. Marble became an advocate of bimetallism, the free coinage of gold and silver, but made little progress in convincing others of the validity of his beliefs after he sold his newspaper. He moved to England in the late 1890s and died there. "Manton Malone Marble" in *Dictionary of American Biography*, vol. 12, p. 267.

[31] Montgomery Schuyler, "The New State Capitol," *New York World*, 26 January 1877, p. 165.

He wrote that the Board initially approached its task with few reservations: "A more gratifying or purer source of employment an architect could not have. It carried with it no obligation to the architect, except that of doing his best,"[32] and he described the interaction among the members of the Board on their frequent night boat trips from New York City to Albany.

> Verily, those were good nights aboard that North River steamer. There was Richardson, with his headlong precipitate enthusiastic discourse, suddenly brought up, at a crisis of the rhapsody, with a proposition from Eidlitz, which, to impose itself as axiomatic needed to be stated. There was Olmsted, interjecting at critical points a mild Socratic inquiry always of the highest pertinence, the point or the edge of which went unfelt and unperceived, for the most part by the heated disputants. There was Dorsheimer, hovering on the circumference of the discussion like a genial chorus, though of Teutonic rather than Hellenic suggestion, and occasionally breaking in with some explicit praise of the "lucid German intellect" as exemplified by Eidlitz....[33]

Despite the Advisory Board's charge, Fuller's plans for the third floor of the building were approved by the legislature on 4 August 1875. He was also asked to submit plans for the remainder of the structure, suggest modifications to reduce costs, and prepare supporting specifications, detail drawings, and estimates.[34] He submitted the requested material to the Capitol Commissioners on 15 December 1875 and it was passed on to the Advisory Board.[35]

The first annual report of the New Capitol Commissioners described Fuller's design as being "in general adherence to the style of the New Louvre, of the Hotel de Ville of Paris, and the elegant Hall or Maison de Commerce recently erected in the City of Lyons,"[36] but when the Advisory Board arrived, they found an incomplete Italian Renaissance Revival building. Its exterior walls

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[32] Leopold Eidlitz III, p. 366.

[33] "Leopold Eidlitz, III," p. 371.

[34] "The Report on the New York State Capitol," *The American Architect and Building News*, vol. 1 (11 March 1876), p. 82.

[35] *The Public Service of the State of New York*, vol. 2, p. 69.

[36] New Capitol Commissioners, *Annual Report for 1869*, p. 29 quoted in Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 42.

extended 14 feet above the third floor level and its interior partitions were 19 to 20 feet high except in the legislative chambers, where little work had been done in accordance with the recommendation of the Commissioners.[37] Schuyler grudgingly equated what he saw with the recently completed State, War, and Navy Building (1873-77, Washington DC) and the partially completed New York City Courthouse and Post Office (1869-75, Broadway and Park Row; demolished 1938-39), both designed by Alfred B. Mullett.[38] He considered the project substantially inferior to John McArthur's partially completed Philadelphia City Hall (1869-1901).[39]

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[37] New Capitol Commissioners, *Report for the Year 1875*, pp. 13-14, quoted in Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 82.

[38] Mullet and McArthur were the leading American practitioners of the Second Empire style during the 1860s and 1870s. While the term initially referred to art produced in France during the reign of Napoleon III as Prince President of the Second Republic (1848–52) and as Emperor during the Second Empire (1852–70), it was also used more narrowly to define an architectural style that developed in other European countries and the United States during the 1860s and became popular in the 1870s and 1880s for secular buildings ranging in scale from city halls to cottages. Based on Louis-Tullius-Joachim Visconti's New Louvre (Paris, 1853–69), the style was easily recognized through the presence of mansarded pavilions, pedimented dormers, and French Renaissance detailing. Christopher Mead, "Second Empire Style" in *Grove Dictionary of Art*, vol. 28, pp. 345-46.

Mullet (1834-90) was born in Taunton, England, and moved with his family to Glendale, Ohio in 1845. He received his architectural training through an apprentice system and worked with Isaiah Rogers and Ammi B. Young. He is best known for his 1865-80 work as Supervising Architect of the United States Treasury. During that period, he produced forty-two buildings, nearly all of them in the Second Empire style. By the end of his career, his buildings were considered old-fashioned and unstylish, and he died a suicide. Donald J. Lehman, "Alfred B. Mullett" in *Macmillan Encyclopedia of Architects*, vol. 3, p. 249; "Alfred B. Mullett" in *Biographical Dictionary of American Architects (Deceased)*, p. 432. At one time, it was rumored that Eidlitz was in line to become Supervising Architect of the Treasury, but a newspaper account to dismiss the possibility, noting the position's low salary ($4,500 per year), his supposedly considerable backlog of work (of which there was actually very little) and, most of all, his personality: "Mr. Eidlitz is a man of somewhat expensive tastes, and with some business sense. Not without ambition, but not so ambitious so as to gratify his desire for fame at an exorbitant price." E. G. D., "Autumn in Washington," *New York Times*, 30 October 1886, p. 3.

[39] McArthur (1823-90) was born in Bladenock, Scotland, and came to Philadelphia when he was ten years old. He apprenticed to a carpenter but also attended lectures given by Thomas U. Walter. He began his career as an architect at age by winning a competition for an almshouse. Although he worked for many government agencies, he is best known for his success in another competition also entered by Fuller: the Philadelphia "Public Buildings," a combined City Hall and Courthouse. The project was plagued with disputes and delays and McArthur died before it was completed. John Maass, "John McArthur, Jr." in *Macmillan Encyclopedia of Architects*, vol. 3, p. 133; "John McArthur, Jr." in *Biographical Dictionary of American Architects (Deceased)*, p. 402.

When the Advisory Board submitted its preliminary findings, sketches and suggestions to the Capitol Commission in September 1875, they were instructed to enlarge and complete their work, and the resulting report was delivered to the Senate on 2 March 1876.[40] Written by Olmsted and illustrated by Eidlitz, it estimated completion costs at nearly $5 million and other necessary work at $2 million.[41] The report confirmed the structural stability of Fuller's work and dismissed claims of poor superintendence by him; however, it called for complete redesign of the building because of serious practical and aesthetic problems. *The American Architect and Building News* began its summary of the findings with a vivid account of the most serious problems.

> The building is a large hollow rectangle, surrounding an open court. The four sides, or wings, are pierced longitudinally by central corridors twelve feet wide, running for the most part continuously from end to end, and with a range of rooms on each side. The corridors are therefore directly lighted only at the ends; and two of them are three hundred and forty feet long, each with only a single window at each extremity. The floors of the building are from twenty to twenty-seven feet apart; the width of the wings between walls is from eighty-six to one hundred and three feet; and the exterior is pierced by windows at regular intervals of about eighteen feet, which govern the subdivision of the interior; so that the building is essentially a cellular structure, in which the normal unit of space is a room eighteen feet wide, twenty to twenty-five high, and at least thirty long, lighted by a single window at the end, and communicating with the rest of the building by a doorway opposite the window, opening into a dark passage.[42]

The summary concluded "'Neither by subdividing the such rooms, nor throwing two together... can much of the space be turned to good account for the ordinary work of legislative committees... or any other of the more common business of bureau officers or clerks.'"[43]

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[40] Ehrenkrantz Group, vol. 1, *Historical Analysis*, pp. 82-83.

[41] *The Public Service of the State of New York*, vol. 2, p. 69.

[42] "The Report on the New York State Capitol," p. 82.

[43] "The Report on the New York State Capitol," p. 82.

The Board found similar problems with the arrangement of the rooms. The building's principal floor, the third, sat on an "entrance-story" above a raised "basement." The "legislative halls," i.e., the Senate and Assembly chambers, "extending quite across the wings, cutting of the corridors, and carried up through the third and fourth stories"[44] were situated such that circulation between them and the committee rooms and offices that supported them would be extremely difficult: "to reach the halls from the main entrance it will be necessary to journey nearly four hundred feet, climbing four flights of stairs, of fourteen feet high each, which are described as narrow and dimly lighted."[45] The Board concluded that reconfiguration of the ground floor could not make it suitable for its intended use and recommended against rebuilding the principal floor because costs would be excessive.

The most controversial section of the report, however, involved a proposal to change the architectural style of the uncompleted portions of the building from Renaissance to Romanesque, and a letter to the *New York Times* presciently noted that the new work would be "in the style of the [Eidlitz-designed] American Exchange Bank."[46] Schuyler traced the recommendation to Eidlitz's dissatisfaction with Fuller's indiscriminate use of a uniform pilastered window surround on all of the facades.

> The report of the advisory board summed up the architectural faults of the building, by saying that it lacked repose and dignity. The first purpose of the preliminary studies for the completion of the building was to amend this fault. These studies, it is understood, were prepared by Mr. Eidlitz. One can readily understand how a very brief season of experiment should have convinced a designer that any real expression of dignity, considering the unalterable divisions of the building, required the suppression of the subdivisions marked by the pilasters and the substitution, in the principal masses which contained the great rooms, of an unbroken field which could be emphasized as one

[44] "The Report on the New York State Capitol," p. 82.

[45] "The Report on the New York State Capitol," p. 82.

[46] S. T. Auchmutz, "Renaissance and Romanesque," *New York Times*, 20 February 1877, p. 5.

> feature of the building, and not broken into a succession of features insusceptible of emphasis. When this was done, when the pilasters had been suppressed and the division they marked had been disregarded, the "change of style" had been virtually effected.[47]

The case for the change in style was introduced gradually in the, beginning with a condemnation of the proposed use of "cornices and other features of galvanized sheet-iron, in imitation of stone" and an insistence on the use of "substantial, well-tried, and unmistakably genuine materials and workmanship."[48] The change, said to take into account detail, massing, lighting, ventilation, acoustics, staircases, and an as-yet unbuilt dome,[49] was necessary so as "not to fritter away the effect which might otherwise be expected to result from the general simplicity of outline and the magnitude of the essential body of the structure" and involved elimination of features such as the cooper-clad, cast-stone and iron-framed roof said to be "cumbrous and costly beyond reason."[50]

These remarks preceded an innocuous reference to the accompanying drawings, which were said to have been prepared by Eidlitz.[51]

> The alterations which the Advisory Board propose for the design of the buildings are indicated by the plates which we publish to-day.[52]

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[47] Montgomery Schuyler, "The Capitol of New York," *Scribner's Monthly*, vol. 19, no. 2 (December 1879), pp. 165-66.

[48] "The Report on the New York State Capitol," p. 83.

[49] "The dome is [to be] little changed in its proportions, but greatly modified in detail; the eight small spires are reduced to four, which group like pinnacles around the dome. It is proposed to build the dome in stone instead of iron and concrete, instead of being shut away as before, it is to be decoratively treated; the cupola which crowns it is to be reached from within by a singularly bold double staircase which, springing from two opposite points on the base of the dome, forms an arch below its soffit, and supports at the crown the spiral staircase which leads up to the cupola." "The Report on the New York State Capitol," p. 83.

[50] "The Report on the New York State Capitol," p. 83.

[51] Schuyler, "The Capitol of New York," *Scribner's Monthly*, vol. 19, no. 2 (December 1879), p, 165.

[52] The unsigned illustrations from the "Report" consisted of a general perspective view, side and front elevations, a plan and section of the Assembly chamber, a plan of the Senate chamber, and a section through the dome; *The American Architect and Building News* vol. 1 (11 March 1876).

The text noted the beneficial effects of simplifying massing and reducing roof heights, but the first indication of the radical nature of the recommendations came in a brief reference to the Board's proposal for the upper floor windows.

> The windows, regularly spaced in the first two stories, are grouped in arcades in the upper and principal stories, which are further increased in importance by a greater richness of detail.[53]

This change, more than any other, created a situation in which the upper and lower portions of the building appeared to co-exist in a chronologically and structurally implausible relationship, with a heavier and older style of architecture resting on one that appeared to be lighter and newer. Although a seemingly minor point in the text, the effect was startling in the illustrations. As the Board's comments showed, Fuller's use of superposed classical orders to define uniformly-spaced and -sized wall openings revealed little about the size and purpose of the rooms located behind them. Even the presence of corner and center pavilions with projecting balconies, a dome supported on a massive stepped base, and a forest of low towers was unable to compensate for the unrelieved horizontality of the facades and their fussy and inexpressive uniformity. In contrast, Eidlitz's pyramidal roofs and planar wall surfaces used these features to express the complexities of the building's program and bring the existing construction into conformance with that view.

The Advisory Board's report concluded with a financial review of the project. It noted that in 1874, Fuller estimated the cost of his design at $7,886,000. By December 1875, $1,729,000 had been spent, and more than $6,000,000 more was needed for completion, exclusive of grading, fencing, decorative painting, and furnishings. While Fuller's modifications had reduced that amount to a bit over $4,800,000, the Advisory Board stated that its design would allow the building to become available for occupancy by 1 January 1879 at a cost of approximately

[53] "The Report on the New York State Capitol," p. 83.

$4,500,000 exclusive of the tower and eastern approach.[54] The actual difference was only $325,000, a tiny amount for a building so expensive. Realizing that its recommendations could not be advocated for purely financial reasons, the Board attempted to justify them on practical grounds: "The great advantage they propose to secure is the character of the work; the substitution of stone for a greater amount of cast iron, sheet iron, plaster, and wood; and the gain in the solidity, durability, and dignity of the work."[55]

Despite the high esteem accorded its authors, the Advisory Board's report was troublesome to the architectural community for professional as well as aesthetic reasons.[56] Never before had anyone recommended taking such a large commission from an architect and never before was such a radical change in appearance contemplated for a half-finished major public building. While Schuyler acknowledged the potentially self-serving aspects of the Board's recommendations, he also revealed an understanding of and admiration for the audacity of its intent:

> The effect they produced on the general professional mind was extraordinary. They showed complete contempt for the indestructible beginnings of which they were necessarily the continuation and in connection with which they were necessarily to be seen. There was, truly enough, a lack of comity in the operation.[57]

This response was consistent with his low opinion of Fuller's scheme

> The badness of the present building, and of the original design for the completion of it, is very eminent. It is bad from the beginning and it cannot but turn out badly. It differs from all good buildings in the world in that all those things are designed with especial and constant reference to the purposes for which

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[54] *The Public Service of the State of New York*, vol. 2, p. 69.

[55] "The Report on the New York State Capitol," p. 83.

[56] For a discussion of the impact of this situation on the architectural profession, state politics, and construction of the Capitol, see Geoffrey Blodgett, "Lieutenant Governor William Dorsheimer and the Politics of Architectural Reform" in *Proceedings of the New York State Capitol Symposium* (Albany, NY: Temporary State Commission on the Restoration of the Capitol, 1983), pp. 49-61.

[57] Leopold Eidlitz III, p. 366.

> they are meant in the first place practically to satisfy, and in the second place aesthetically to express... The problem of the architect would have been to bring all these various and loosely-related elements into one organic whole, and thus to secure the variety in unity which is the distinction of all good architecture.
>
> And all of this [i.e., the Advisory Board recommendations] is done without any violent transition. In fact it may almost be said that there is more real congruity between the unfinished building and the modified design for its completion that than between the unfinished building and the original design for its completion – as much congruity as there can possibly be between the work of an artistic architect and the work of a routine draughtsman.[58]

Despite Schuyler's arguments, supporters of the Board's recommendations were often unable to provide cogent reasons for their aesthetic notions. Eidlitz was especially pugnacious in this regard, and when asked to explain why he wanted to complete the upper stories of an Italian Renaissance building in a Romanesque style, he retorted, "What business had Fuller to put that basement under my building?"[59] Without explicitly sanctioning it, Schuyler implied that if the approach advocated by W. P. P. Longfellow, the sympathetic editor of the fledgling *American Architect and Building News*, been implemented without the change of style ("much more nearly in the right than any of the partisans"), the Advisory Board's recommendations would have been more palatable.[60] Olmsted seemed to feel otherwise, and in a letter he wrote to Charles W. Norton near the end of 1876 he confided

> The design of the Capitol has since last winter grown more Romanesque but also, I hope, a little more quiet and coherent. There will be much historical incongruity in it and some that I would gladly have escaped. But we must take men as we find them and Eidlitz would not if he could have it otherwise. If he had been a man who could and would, we might have more weak and meaningless and pottering work, and it is a comfort that we are likely to escape that.[61]

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[58] Montgomery Schuyler, "The New State Capitol," *World*, 4 March 1876, pp. 4-5.

[59] Leopold Eidlitz III, p. 367.

[60] Leopold Eidlitz III, p. 367.

[61] Quoted in Roseberry, p. 38.

An editorial in the *New York Times* that supported the Advisory Board attributed opposition to "a small circle of people, mainly residents of Albany, who had been turning the building to uses not connected with architecture – in short, had been using it as a political machine." The writer concluded, "It can scarcely be necessary to explain here that some of the worlds most celebrated architectural monuments extant two different styles in their construction, or that to impose one style on another in the same building is not necessarily a violation of the canons of art. It is only requisite that the two styles be harmonious."[62]

As might be expected, Fuller, the president of the New York Chapter of the AIA, led the opposition to the Advisory Board's recommendations. In a letter to Dorsheimer, he recounted the history of the project and cited four major objections raised by the Board:

The legislative chambers were too large, too high, and situated such that they would hinder access to the building and circulation within it.

The Court of Appeals and Governor's chambers were too large while the Law Library was too small.

The building was too high.

Small towers planned for the east and west facades were superfluous.

Although he offered to meet these objections while maintaining the design "strictly in harmony with the building as already erected,"[63] Fuller recommended against such action on technical,

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[62] The State Capitol Building," *New York Times*, 19 February 1877, p. 4. The newspaper also supported mixing styles in "Pedantic Architects, *New York Times*, 17 July 1882, p. 4.

[63] Thomas Fuller, letter to William Dorsheimer dated 20 April 1876 printed in *The New Capitol. The Modified Plans of the Advisory Board Architects Criticized. A Communication From Architect Fuller – The Proposed Changes Criticized in Detail – They are Deemed unwise and Out of Character With the Rest of the Building*, pp. 1-2. Undated pamphlet in AIA Archives, Scrapbook of New York State Chapter 1874-1876, RG 801, SR 1.2, Box 7L, Folder 10.

aesthetic, and financial grounds, and presented a letter from Richard Morris Hunt, Henry Dudley, and Detlef Lienau in support of his position.[64] He also quoted Richard Upjohn's opinion that the Advisory Board's report had actually confirmed the value of his design.[65]

The New York State Chapter of the AIA took a considerably less assured position on the dispute, however. In a letter sent to the Governor Tilden that conveyed the chapter's opinion after voting unanimously to oppose the Advisory Board's recommendations, Hunt claimed that the scheme was "designed in direct antagonism to the received rules of art" and noted

> that the Italian Renaissance understories are surmounted by other absolutely inharmonious Romanesque stories; that no successful attempt has been made to avoid the abrupt transition from one style to another; that the axes of the windows have been totally disregarded, a feature the preservation of which is indispensable to Renaissance work of importance; that the whole is surmounted by roofs, towers, and a dome of discordant character, Renaissance in form, Gothic in treatment; that it is proposed to introduce brilliant color in the facades and roofs, which is not only out of keeping with the work already done, but which will be destructive of the repose and dignity of a structure of this class and material; and that the new work is extravagantly rich and expensive in parts, while in others it is meager to badness."[66]

The letter ended much less stridently when he acknowledged that that Institute had "neither the intention of indorsing, as a whole, the old design of the building, nor of expressing an opinion as to the merits of the new design work *per se* (*i.e.*, from above the point to which the work is now

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[64] "Mr. Fuller's Reply," *The American Architect and Building News*, vol. 1 (11 March 1876), pp. 106-7.

[65] Fuller, letter to William Dorsheimer dated 20 April 1876, p. 3.

[66] Richard M. Hunt, "Remonstrance of the New York Chapter of the American Institute of Architects against the proposed changes in the plans for the building of the new Capitol," 29 March 1876, in *Documents of the Assembly of the State of New York, One Hundredth Session, 1877* (Albany: Jerome B. Parmenter, 1877) vol. III, no. 28, pp. 3-4. The text was also printed in the *World* on 1 April 1878.

constructed)." Instead, he merely recommended that "the [existing] facades should be removed and sold, and that the work should be commenced anew."[67]

Hunt had several reasons for writing such a letter for the AIA. Most obviously, he had appeared before the New Capitol Commissioners to provide guidelines for the competition won by Fuller and Gilman, and he desired to maintain the integrity of the competition's results.[68] He was also deeply concerned with the unresolved status of professional architects in the United States, having been a founder of the AIA, president of the New York State Chapter from its creation in 1868. Finally, although Eidlitz had resigned from the AIA and Olmsted never was a member, Richardson, perhaps the most successful architect of his time, remained in the organization but continued to consort with those beyond its control to interfere with the approved design.

Schuyler strongly opposed Hunt's position and claimed that it encouraged "trades-unionism" among architects. He also claimed to observe a kind of "unconscious trades-unionism" caused by

> the habit of mind which leads a man to regard as sacred those processes of work to which he is accustomed, and which in this case were described as "the received rules of art" and the "accumulated experience of centuries."[69]

Cognizant of the controversy about retaining Fuller's facades, the Advisory Board revised its designs for the facades and its recommendations were accepted by the Capitol Commission on 5 June 1876. The legislature appropriated $800,000 to continue the work to the roofline of the building, contingent upon submission of full plans and specifications and their approval by the Governor and a majority of the Commissioners of the Land Office.[70] Dorsheimer dismissed

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[67] Hunt, "Remonstrance of the New York Chapter of the American Institute of Architects against the proposed changes in the plans for the building of the new Capitol," p. 4. Hunt remained national president of the AIA until 1891; Wight, "Richard Morris Hunt," p. 3.

[68] Ehrenkrantz Group, vol.2, *Historical Illustrations*, Appendix C, p. 13.

[69] Montgomery Schuyler, "The Capitol of New York," p. 166.

[70] *The Public Service of the State of New York*, vol. 2, p. 69.

Fuller on 1 July, and Eidlitz, Richardson, & Co., a partnership created to complete the project, replaced him on 12 September.[71] The new firm received a welcome $50,000 per year; it is likely that none of its partners had much other work due to the economic depression that began three years earlier.[72]

Although work on the building was ready to resume, a majority of the Senate Finance Committee voted on 13 March 1877 to condemn the mixed use of two styles, and the legislature directed the Capitol Commissioners to complete the building "in the Italian Renaissance style of architecture adopted in the original design, and according to the style in which the building was being erected prior to the adoption of the so-called modified designs."[73] Nevertheless, work began again in June under the Board's direction and, despite the order, Schuyler believed that the project's worst days were over.

> The present Capitol Commissioners are the first set of officers in charge of the new Capitol who have shown any competency for their work or any sense of responsibility in aesthetic matters. The original design was adopted under bad advice, and if the Capitol had been built in accordance with it, the results would have been an extremely ill-arranged and inconvenient building and an eminently stupid and ugly work of art. The question for the Capitol Commissioners and their architects was whether the building should remain stupid and ugly throughout, or whether such parts of it as yet were unbuilt should be modified so as to promote the purposes for which it was designed, and to give architectural expression to them. The execution of the modified design will not give the State such a Capitol as it might have had if such architects as the authors of those designs had had charge of the Capitol from the beginning. But it will be an immeasurable improvement on the Capitol as originally designed, and the complaints that the modifications have resulted

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[71] Roseberry, p. 33; *The Public Service of the State of New York*, vol. 2, p. 70.

[72] Pamela W. Hawkes, "The Building of the State Capitol: 1867-1833" in *Proceedings of the New York State Capitol Symposium*, p. 44.

[73] *The Public Service of the State of New York*, vol. 2, p. 70.

> in a lack of unity are virtually a demand that a building which is bad at the bottom should also be bad at the top.[74]

Olmsted, who served as Treasurer of Eidlitz, Richardson, & Co., had little taste for the increasingly contentious nature of the project and quit, leaving the architectural work to be divided between the other partners.[75] Eidlitz quickly differentiated the old work from the new by introducing a belt course with a shallow incised arabesque pattern that ran around the exterior of the building between the second and third floors. Although subtle, it clearly divided Renaissance from Romanesque, although overtly Romanesque detailing was limited to the relatively secluded north courtyard where it began at the spring line of the third floor window arches. Schuyler admiringly wrote

> The plain unbroken expanse of the arcaded wall sufficiently shows the refusal of the architect to "compromise" or "palter" with what he regarded as the irredeemable folly of the mixed Roman [i.e., Italian Renaissance] construction of the superstructure while the dormers are all the richer and the more effective for the plainness of the wall from which they rise, a plainness which amounts to baldness, but comes in large part from the architect's dislike of what he called "wasting money in carving granite."[76]

While Eidlitz originally intended to enrich these areas by polishing and incising them with additional arabesques, he changed his approach so as not to diminish the effect of the "huge rich" triple dormers located above them said, by him, to be based on those at St. Stephen's Church in Vienna. Commenting on the results of these decisions, Schuyler wrote, "sensitive observers have been known to prefer the [north] court-fronts, with all their unreconciled contradictions, to the street fronts of the Capitol, and they will have at least be agreed to be impressive and interesting

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[74] Montgomery Schuyler, "The New State Capitol," p. 4.

[75] Olmsted's biography and photograph are conspicuously absent from *The Public Service of the State of New York* although he is mentioned in an account of the formation of the Advisory Board.

[76] Leopold Eidlitz III, p. 368. A view of the north courtyard appeared in Leopold Eidlitz III, p. 364.

works."[77] He also claimed that Richardson subverted the 's intent by working in a French Renaissance mode (he called it "free Renaissance") and credited him with maintaining and enhancing Eidlitz's recommendations ("his elder associate") for changes to the building's massing and roof design.[78]

In addition to the north courtyard elevations, Eidlitz designed the Assembly chamber and staircase, the Golden corridor (what Eidlitz called the "Grand corridor" and others referred to as the "Red Corridor"), the Assembly parlor, and the Court of Appeals room.

> The [Golden] corridor is even simpler in treatment than the entrance hall. Its forms have been left plain because it was conceived in color, and resplendence and intricacy of color are most effective and most appreciable when applied to fair surfaces and simple masses. The corridor is 140 feet long by 20 wide and perhaps 25 high, and extends along the whole "court side" of the north center. It is lighted by seven large windows opening on the court, which naturally divide it into bays of 20 feet square. Each bay is bounded by piers between which arches are turned, and these arches sustain a low and ribless groined vault. The piers themselves are plain but for a bead at the angle. Nothing could well be simpler than this arrangement, but its simplicity is neither rude nor affected. It is the structural basis of a most sumptuous and elaborate decoration in color. The piers are covered with a damask of red upon umber. The angle moldings are solidly gilded. The crimson wall screen on both sides is overlaid with a simple reticulation of gold lines framing ornaments in yellow. The whole vault is gilded and upon its ground of gold, traversing each face of the vault, is a series of bands of minute ornament in brown and scarlet and deep blue. The method – this close mosaic of minute quantities of crude color – is entirely Oriental; and the effect is Oriental also. The varying surfaces of the vaulting, each covered with fretted gold, give a vista, lengthened by the dwindling arches, alive with flashing lights and shimmering shadows; and under the iridescent ceiling there seems always to hang a luminous haze. In the quality of pure splendor there is no architectural decoration in this country which is comparable to this.[79]

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[77] Leopold Eidlitz III, p. 369.

[78] Montgomery Schuyler, "The New State Capitol," p. 167.

[79] Schuyler, "The Capitol of New York," p. 170.

In contrast to Schuyler's emphasis on its physical qualities, Henry Van Brunt's review of the Golden corridor called it "a fair example of the intellectual as opposed to the sensuous spirit, which has made its way into the best modern design, [in] that the functions of each member of this simple architectural ordinance are recognized by some difference of treatment."[80] Perhaps referring to Semper's distinction between support and enclosure, he wrote that

> The eye is balked of its natural, or perhaps inherited, desire to see certain of the belts of decoration upon the piers continued along the walls surfaces between, so as to bind the whole together. All such lines stop without ceremony at the internal angles, where also the belts of the wall surface experience a sense of discontinuance; but if the sense were cheated of their birthright in this manner, the intellect, which recognizes that the pier has a different service from the wall-veil, is expected to be moved by an emotion of gentle approval.[81]

The Court of Appeals room, completed in 1879, was located on the second floor, in an area intended to accommodate the Executive Chamber of the Court of Appeals and ceremonial spaces for the executive and judicial branches of government. It adjoined the Golden corridor that connected it to the Western Staircase and was located immediately below the Assembly Chamber.

> The Court of Appeals room, to which [the Golden Corridor] gives access has a richness as sober as the other is riotous. The room is a square of sixty feet with a height of twenty-five. It is subdivided into two parallelograms, one twice the width of the other, by a line of red granite columns carrying with broad low arches a marble wall. The walls are of sandstone, visible in some places but covered in most with a decoration in deep red, and with the tall wainscoting of oak which occupies the wall above the dado of sandstone. The ceiling is a superb construction in carved oak, carried on a system of beams diminishing in size from the great girders, supported by great braces, which stretch from wall to wall, and finally closed by

[80] Van Brunt, "The New Architecture at Albany, New York," p. 20.

[81] Van Brunt, "The New Architecture at Albany, New York," pp. 20-21. Semper was not translated into English in America for another ten years. See Gottfried Semper, "Development of Architectural Style," John W. Root, trans., *Inland Architect and News Record*, vol. 14, no. 7 (December 1889), pp. 76-78; vol. 14, no. 8 (January 1889), pp. 92-94; vol. 15, no. 1 (February 1890), pp. 5-6; vol. 15, no. 2 (March 1890), pp. 32-33. The "Assembly Parlor," similarly polychromatic, was "vandalized" when a "tint" of terra cotta replaced the original carmine color of its walls; Leopold Eidlitz, III, p. 369.

> oaken panels. These panels in the shadow of these deep recesses are profusely carved with foliage in high relief, and the panels of the wainscoting are profusely carved in diaper. The chief elements in the harmony of the room are thus crimson and oak. There is a temporary discord in this harmony, and a temporary drawback to one's complete enjoyment of the room in the glare of the white marble wall, to be softened ultimately with a diapered decoration in color. With this exception the room is already as delightful in color as it is rich, grave and impressive in design; and neither the rich modeling of the forms throughout it, nor its weight of color, are carried anywhere so far as to disturb its leading character of simple dignity.[82]

The intended occupants of the Court of Appeals room did not approve of its location, lighting, or acoustics, and in 1882, Governor Cornell informed the legislature of the Judges' desire for new accommodations. An appropriations bill, passed on 6 June 1882, directed the Capitol Commissioners to provide accommodations for the Court in whatever part of the unfinished building the Judges chose, and to submit plans for the completion of the chambers to the Judges for approval on or before August 1, 1882. The new room, designed by Richardson, was located on the third floor, directly above the Governor's office. The Eidlitz-designed room was thus occupied by the Court only for the October-December 1883 session.[83] The Court held its first session in its new space on 14 January 14 1884 and remained there until 1916.

Despite such problems, Schuyler found Eidlitz to be the creator of nearly all of the positive aspects of the Advisory Board's revisions to the original design, and he expressed his admiration by offering a great, but melancholy, compliment: Eidlitz had become the last true "Gothic" architect in America.

> It were not a very hazardous contention that "the noblest offspring of the Gothic revival in this country, at least in secular work, was "its last." If so, the credit is chiefly due to Leopold Eidlitz. The building is not an architectural whole, and never

[82] Schuyler, "The Capitol of New York," pp. 170-71. An interior view of the room appeared in Leopold Eidlitz III, p. 370.

[83] Haynes, p. 91.

> after it was begun and committed, could have been. It was aborted beforehand, and it has been grievously marred since. But it includes about the most interesting examples in the United States of free and rational architecture, of the architecture of fact and reality, of the architecture of the future if architecture with us is to have a future. If so, that is because Eidlitz laid a fearless hand on the ark of the traditional architectural covenant, appalling even his own colleagues by the boldness of which he followed his convictions.[84]

This passage recalled an earlier one in which Schuyler described Eidlitz as

> one of the pioneers of [the Gothic Revival]... [who] produced a series of works in which was visible not merely a capricious preference for medieval over classic architectural forms, but a rationalization of architectural form in general, that it should express and conform to the mechanical facts of structure, and the works which manifest this purpose also manifest a powerful artistic individuality.[85]

Schuyler even attributed the success of Richardson's Senate chamber and second Court of Appeals room to Eidlitz's "boldness."[86] Rhapsodizing on the quantity and quality of his work, Schuyler wrote

> Consider how elaborated and how unmistakably individual the design of all these things, and that the designer was also decorator, excepting of the two mural pictures [in the Assembly chamber painted by William Morris Hunt]. Consider that the architect was concurrently designing the interior of the addition to the ["Tweed"] Court House in [New York] City Hall Park [he received the commission in 1876], and architects will admit that it was a wonderful year's work for one man to do. And of how high a quality the work is, and how little it stands in need of allowance for the pressure under which it was done! How can anybody even now [in 1908] view what is left of it without perceiving how strenuous, how serious, how skillful and how

[84] Leopold Eidlitz III, p. 369.

[85] Montgomery Schuyler, "Cyrus L. W. Eidlitz," p. 413.

[86] Richardson designed the Senate chamber (1881), the Executive Chamber (1881), the Western Staircase (1883-97, completed by Isaac G. Perry), the Lieutenant Governor's Office, the State Library (1883), and the second Court of Appeals Room (1882). After his death, the Staircase design was altered and "tawdry and commonplace painted decoration" was installed in the Library; Leopold Eidlitz III, p. 369.

> noble it is, and without experiencing an impulse to take off his hat?[87]

The Assembly chamber, the largest space in the Capitol employed the widest stone groined vault ever attempted. Of the greatest interest to Schuyler and greatest difficulty to Eidlitz, it represented a radical change from Fuller's proposal for a "horizontally deeply paneled ceiling composed of iron and glass." [88] Eidlitz did not contest (or mention) the presence of the iron roof framing located above the proposed vault, and his recommendations to be applied to the Assembly and Senate chambers despite Fuller's prediction of acoustical and ventilation problems.

> We recommend, instead of a flat ceiling of paneled cast-iron at a height of forty-two feet, a vaulted ceiling, raised in the center to a height of fifty feet, to be supported by stone columns and spanned between moulded ribs of stone supported by stone columns. The columns will be so placed as to stand entirely clear and outside of the space necessary to be occupied by members, allowing for a much larger number in both Senate and Assembly then there are at present. The increased height and the subdivision of the chambers will increase the perspective effect; will improve their acoustical qualities; will admit screens to be introduced, by which the excessive area of the floor would be apparently reduced, and will provide suitable places outside of the bar for ladies or other guests specially privileged in this respect...
>
> We would also propose... to dispense with skylights, and all of the cast-iron and most of the plaster-work of the architect's plan.
>
> In front of the gallery, instead of paneled wood-work, we would propose stone-work with perforated tracery, also to use cut stone on the jambs of the doors and windows.[89]

Many years later, in *The Nature and Function of Art, More Especially of Architecture*, Eidlitz seemed to give a more willful justification for the recommendation.

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[87] Leopold Eidlitz III, p. 373.

[88] Fuller, letter to William Dorsheimer dated 20 April 1876, p. 2.

[89] Leopold Eidlitz, H. H. Richardson, and Frederick L. Olmsted. *Report of the New Capitol Commission Relative to the Plans Submitted by Messrs. Frederick Law Olmsted, Leopold Eidlitz and H. H. Richardson* (Albany, NY: State Senate of New York, 3 March 1876), p. 25, in AIA Archives, Scrapbook of New York State Chapter 1874-1876, RG 801, SR 1.2, Box 7L, Folder 10.

> ...the construction of vaulted roofs, as developed in the Middle Ages, may be considered as a mere empirical experiment when compared with vaulting made possible by the progress of science. The circle and the ellipse (its resultant in groined arching) demand ideal loads to bring the line of pressure in the centre of their voussoirs – loads, which differ materially from the actual loads need for their construction. The lines of pressures themselves, if scientifically applied, will not only lead to new and more expressive forms, to a variety of line in the cappings and ribs, to new methods of modeling and decoration, but also to a construction of greater magnitude, without a proportional increase of material, both in the vaulting itself and in the abutments. It needs no bold flight of the imagination to predict that the elegance of the cathedral roofs of the thirteenth century will be in time superceded [*sic*] by vaulting, in comparison with which the former will appear a mere clumsy contrivance. The theory for doing this work is fully and clearly in our possession. We positively know how it can be accomplished practically. The opportunities for doing it are multiplying every day, and all it needs is the conviction that the pursuit of such a system will develop a new architecture, which, in its elegance and boldness, will far exceed the works of the Middle Ages.[90]

Eidlitz's arguments prevailed, and a reporter for the *World* described the results:

> [The Assembly chamber] is a grand apartment, nearly 100 feet in length by nearly 90 feet in width. There are four enormous granite columns, 4 feet through, of red polished granite... leaving a central nave, so to speak, 58 feet by 41½ feet, with two side bays running from the columns to the outer walls opening upon the Washington street front and the inner court respectively. In the corners were other smaller bays, while running over the Speaker's desk the long reach was divided into two parts by a cross bearing arch, and in this way two other bays were formed over the ladies' gallery. This was duplicated at the stranger's gallery at the opposite entrance end of the chamber. In all it will be seen that there are eleven of these bays, and this gave chance for the building of that number of groined vaults, the central one covering an area of over 2,200 square feet, while the smaller ones in the angles do not cover more than 500 square feet.
>
> The ceiling is a bold conception boldly carried out, and no one competent to form an opinion upon it fails to be loud in its praises as a conception from an artistic point of view, though the painting of the stone surface of the constructional vault has provoked some criticism. The architect directed the use of Nova

[90] Eidlitz, *The Nature and Function of Art*, p. 402-3.

> Scotia sandstone, similar to that from the Ohio quarries... There was no sham in the work laid out by Mr. Eidlitz. He might have created a stucco ceiling painted like the present one, which from the floor would present exactly the same appearance as the present ceiling; but the counterfeit was scorned by Mr. Eidlitz, who built up a real vault of stone, with ribs down about two feet of bearing surface, while the intervening spaces were covered with voussoirs plates.[91]

Brooks suggested tectonic origins for the Assembly chamber in Eidlitz's recurring "transeptual scheme."[92] However, it may also reflect the influence of the similarly arranged auditorium of Jacob Wray Mould's West Presbyterian Church (1863-65),[93] a nearly windowless space lit by clerestories and a huge skylight divided by four enormous, non-structural, intersecting diaphragm arches supported on massive piers.[94] Nevertheless, in his summary of Eidlitz's work, Schuyler described the space as "perhaps the noblest monument to the Gothic revival in America,"[95] an opinion he had not changed since he wrote about the Capitol nearly forty years earlier.

> Except in one conspicuous instance [i.e., a lack of "aesthetic integration" among the four polished granite columns that supported the ceiling vaults], the structure is completely developed, and complete development is the mark of perfected Gothic. This completeness, however, nowhere degenerates into the attenuation that comes of excessive subdivision – nowhere into a loss of that sense of power which belongs to unhewn masses fulfilling structural necessities. There is nothing here of which one may say: '''Twere to consider too curiously, to consider so.' Neither is there anything of that ascetic intensity which most of all has set its stamp upon the ecclesiastical work of the Middle Ages. This work is as daylit as Grecian Doric. It

[91] "A Shattered Art Dream," *New York World*, 2 February 1888, AIA Archives, Scrapbook of New York State Chapter 1886-1888, RG 801, SR 1.2, Box 8L, Folder 4.

[92] Brooks, p. 17.

[93] 29-31 West 40th Street, New York City; demolished.

[94] For a discussion and illustrations of the church, see Van Zanten, "Jacob Wray Mould: Echoes of Owen Jones and the High Victorian Styles in New York, 1853-1865," pp. 47, 49.

[95] Leopold Eidlitz III, p. 369. Interior views of the Assembly chamber appeared in Leopold Eidlitz III, pp. 366-68.

> is frank and manly, and it is eminently alive – distinctly a product of our time.[96]

The Assembly chamber was intended to contain works of art designed by other artists, and on 1 June 1878, Eidlitz wrote to William Morris Hunt (1824-79), the brother of Richard Morris Hunt, and invited him to submit ideas for two murals. William had never participated in a similar project, and the only comparable works by American artists were Emanuel Leutze's *Westward the Course of Empire Takes Its Way* in the United States Capitol (1862) and John La Farge's painted decorations for Trinity Church, Boston (1876-77). He initially declined the offer because of poor health, but his architect brother convinced him to accept the commission. Although Sally Webster has suggested that Eidlitz might have offered the commission as "a way to appease Richard Hunt's continued antagonism to the project,"[97] Leopold and William took a liking to each other at once, and the architect described the painter as "not only an artist, but a philosopher," and the painter ascribed to the architect, "a great brain and a great heart,"[98]

William was at Niagara Falls when he received Eidlitz's letter, and although it stated that that the Advisory Committee wanted "allegorical or legendary" paintings, his first proposal was for a mural showing a view of the falls (*Niagara*, ca. 1878, Museum of Fine Arts, Boston).[99] He subsequently proposed two other themes, one of which, *The Flight of Night*, he had worked on in Europe in the late 1840s.[100] Although much of his work was lost when his studio burned in the

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[96] Schuyler, "The Capitol of New York," p. 173.

[97] Webster, p. 108.

[98] Leopold Eidlitz III, p. 371.

[99] Paul R. Baker, *Richard Morris Hunt* (Cambridge, MA and London: The MIT Press, 1980), p. 264.

[100] Hunt modeled a relief of a portion of the design that he called *The Horses of Anahita* (the Persian goddess of the Moon) between 1848 and 1850. A photograph of the "sketch model in clay" appeared in Leopold Eidlitz III, p. 373. He gave a tinted plaster cast of the model to the Metropolitan Museum of Art (New York) in 1880. A plaster cast made between 1882 and 1910 is in the Art Institute of Chicago and a bronze cast purchased in 1978 is in the Butler Art Museum (Youngstown Ohio). Commercially-made casts are still available.

Boston Fire of 1872, at least one version of it survived,[101] and he was able to recreate enough of the project to present a version.[102] The design showed the semi-nude Persian goddess, Anahita, on a cloud-chariot fleeing the dawn with three speeding horses guided by a black slave. Next to her, recumbent figures of Love and Repose were shielded from the light by a putto.[103] William also showed *The Discoverer*,[104] an allegorical representation of Columbus' discovery of America. In contrast to the celestial surroundings of *The Flight of Night*, the subject of *The Discoverer* stands in a small boat in the River of Destiny, surrounded by allegorical figures of Hope, Faith, and Science and with Fortune at the helm.[105] Webster noted that a charcoal sketch of the scene dated December 1877 might indicate the true beginning of the project.[106]

Working on a 40-foot high scaffold and painting directly on the dark Ohio sandstone facing of the chamber's walls, he began the two 17- by 40-foot murals on 19 October 1878. They were located in the north and south tympana of the ceiling vaults, above the clerestory windows. Hunt received $15,000 for his work, and it was completed on 23 December 1878, in time for the opening of the Assembly chamber; the murals were dedicated on 27 January 1879.

Hunt's work received favorable critical response and, with La Farge's paintings for Richardson's Trinity Church, were the subject of an article written by Henry Van Brunt in which he discussed the importance of the work of both artists, the meaning of the murals, and their relationship to

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[101] Paint on lacquer tea tray, 1863, Museum of Fine Arts, Boston.

[102] Oil and graphite on paperboard mounted on Masonite, 1878, Museum of Fine Arts, Boston. Several versions in other media completed during the same year also exist.

[103] The Metropolitan Museum of Art owns a ca. 1878 oil study of the work purchased in 1911. A view of a preliminary sketch appeared in Montgomery Schuyler, "The Work of Leopold Eidlitz, II: Commercial and Public," *Architectural Record*, vol. 24, no. 4 (October 1908) [hereafter, Leopold Eidlitz II], p. 373.

[104] Oil and graphite on paperboard mounted on Masonite, 1878, Museum of Fine Arts, Boston.

[105] A view of the finished work appeared in Leopold Eidlitz II, p. 372.

[106] Fogg Art Museum, Harvard University. Sally Webster, "The Albany Murals of William Morris Hunt: Their Commission and Meaning," in *Proceedings of the New York State Capitol Symposium*, p. 108.

their architectural setting.[107] Schuyler saw them just before the Assembly chamber construction scaffolding was removed and wrote "as pictures they are strangely impressive, and seem to be conceived in so large and unmodern a manner that they deserve and demand to be executed on a colossal scale... [They are] the chief part of the decoration of the room they were designed to decorate."

The acclaim given William's work prompted the Advisory Board to seek additional work for him in the building; however, Governor Lucius Robinson (1810-91) refused to pay for any more painting. Schuyler noted that bas-relief frieze intended to be located "between the two ranges of windows in the Assembly chamber [that] would complement Hunt's allegorical frescoes in the lunettes above the upper range" were commissioned from "a Mr. J. Q. A. Ward," but never installed "for some now forgotten reason,"[108] probably Robinson's refusal to allocate additional funds.

On 7 January 1879, the Assembly moved into its new home in the north portion of the building, escorted by the members of the Senate.[109] Van Brunt wrote two descriptions of the room. The first concentrated on technical details and faulted Eidlitz for "his characteristic indifference, even

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[107] "The New Dispensation of Monumental Art," *Atlantic Monthly*, vol. 43 (May 1879), pp. 633-41, reprinted in *Architecture and Society, Selected Essays of Henry Van Brunt*, William A. Coles, ed. (Cambridge, MA: Belknap Press of Harvard University Press, 1969), pp. 140-44.

[108] Leopold Eidlitz III, p. 370. Schuyler's reference was to John Quincy Adams Ward (1830-1910), one of the leading American sculptors of the second half of the nineteenth-century. Ward emphasized American themes and subjects, and his work tended toward naturalism at a time when a more idealized approach was common. He produced several large outdoor bronze commemorative portraits ("George Washington," New York City, 1883; "Henry Ward Beecher," Brooklyn, NY, 1891), and much of his work was located in New York City and Washington, DC. Ward was the first sculptor to become president of the National Academy of Design (1874) and was the first president of the National Sculpture Society (1893).

[109] *The Public Service of the State of New York*, vol. 2, p. 71.

to those external conditions of the façade which he might himself have controlled and adapted to his interior if he had so chosen."[110] However, he concluded

> Yet, setting aside, for the moment, my objections to Mr. Eidlitz's contemptuous indifference to the casket in which his jewel is enshrined, I am prepared to believe that there is no modern work recalling the medieval spirit of design, contrived with greater intelligence and learning and executed in a manner more thorough and, on the whole, more sincere.[111]

Van Brunt claimed that Hunt's murals were adversely affected by the rooms' two tiers of variously sized windows, the future bas-relief frieze that would be located between the tiers, and the ceiling vault ribs. Nevertheless, he concluded

> But the immediate results are unimportant as compared with the fact that an attempt is here made on a great scale to give to Architecture and Painting their proper relations in respect to each other. No one interested in the progress of better art can be indifferent to so noble a beginning.[112]

The Assembly chamber was located on the third floor of the building and reached by a staircase that provided the only access to the upper floors of the building when it opened. It was relatively small compared to staircases planned for the west entrance and Senate chamber access, a defect that Schuyler noted.

> In the [Assembly chamber] staircase, one finds that there are still allowances to be made. It is crowded into a well which is not only much too small for such a purpose, but is virtually lighted only from the top. Though the whole opening has been glazed, the detail of the lower flights cannot be well seen, and the general plan is perforce cramped and undignified. But the staircase itself, which is built of sandstone, and carried between the outer wall of the well and an inner wall, pierced in each flight

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[110] Henry Van Brunt, "The New Architecture at Albany. II," *The American Architect and Building News*, vol. 5 (25 January 1879), p. 29.

[111] Van Brunt, "The New Architecture at Albany. II," p. 29.

[112] Van Brunt, "The New Architecture at Albany. II," pp. 28-29. He came to a similar conclusion in "The New Dispensation of Monumental Art," *Atlantic Monthly*, vol. 43 (May 1879), pp. 638.

> and at each landing with pointed arches, is a vigorous and scholarly piece of work.[113]

Van Brunt was less impressed and wrote

> The great staircase is in two flights, and is a grammatical example of modern Gothic in the English sense. It is built in light and dark sandstones around a square well, which is enclosed in an open screen of columns and pointed arches carried up to the highest runs of the stairs, and there stopped. These arches on the lowers side are stilted in each case, the higher impost being unmarked on the lower side by a capital of a jamb shaft, which starts from the abacus of the next capital below. The rail is supported by a die elegantly pierced with open Gothic panels repeated in blank on the dado against the wall. The screen, however, considering its functions, seems quite too heavy, and its details are coarse enough for exterior work. It is to be regretted that a constructor so skillful should not have availed himself of the opportunity for a lighter and bolder treatment, and given us perhaps a single ramping or a flying arch for each run.[114]

A year later, painted wall decorations installed within the staircase and other changes addressed some of the comments made by Schuyler and Van Brunt. The New York *Times* reported

> The walls of the grand staircase, which were last year severely plain, have been colored a warm red brown; the arches of the doors and windows facing the staircase have been touched with lines of gold, and a band of gold, marked with a conventional floral pattern in vermilion extends along the wall about four feet from the floors and steps.[115] As the visitor climbs the staircase, he finds, on reaching the Assembly floor, that the stonework has been completed clear to the roof, and that the upper walls are glorious in red and gold, and that a skylight of stained glass has taken the place of the rude temporary skylight of last Winter.[116] The lavish use of gold and vermilion in producing an effect that suggests a Moorish temple or palace, has, strangely, been the

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[113] Montgomery Schuyler, "The Capitol of New York," p. 172.

[114] Henry Van Brunt, "The New Architecture at Albany, New York," *The American Architect and Building News*, vol. 5 (18 January 1879), p. 20.

[115] The decorations included stenciled patterns (restored in 1977) designed by Emanuel Mickel (1820-88), a German émigré who arrived in New York City in 1949. He was trained in Germany and Italy and moved to Albany in 1861 where he established a successful decorative painting business by 1866 and was assisted by his sons Charles and Henry.

[116] The skylight was removed during the 1940s when an attic area was converted into office space.

> cause of more apprehension about expense than the employment of skillful carvers in decorating the stone-work.[117]

Eidlitz was elated at the outcome of the work and was the recipient of much adulation. At a reception that took place under one of the vaults on 7 January 1879, the night before the room opened for use, he was said to remark, "Yes, I think that it was a success. I met Blank there (a feebly aesthetic architect, particularly antipathetic to him) after a pleasant separation of fifteen years, and he looked very miserable."[118] "Blank" may have been William Robert Ware, the classicist with whom Eidlitz served on the AIA's Committee on Education from 1867 to 1868.

After completion of the "North Center" section of the building, funding became available for work on other portions. Although Richardson did most of the design in these areas, Eidlitz was also involved.

> The Senate corridor [begun 1880] was done two years later, the Senate staircase [begun 1883] not finished until six years later.[119] They were designed at more leisure. Though the designs of the earlier work bear a few marks of haste, the latter justify their deliberation. The corridor... is known to all visitors to the Capitol. And the great Senate staircase... is not only one of the most original and vigorous works of the Gothic revival, it is in its scheme and intention, at least, if not in charm of handicraft and execution, one of the few modern Gothic works which one would be willing to set beside the ancient examples to show that the "revived" Gothic might not only be galvanized into a semblance of vitality, but might "really come alive."[120]

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[117] "The New Year at Albany, *New York Times*, 31 December 1879, p. 1. The Assembly staircase was altered again in 1895 when four arched openings and a fourth floor balcony were added.

[118] Leopold Eidlitz III, p. 369.

[119] Schuyler erred in the date of the completion of the Senate staircase; it was finished in 1885. A view of the corridor appeared in Leopold Eidlitz III, p. 374; views of the staircase appeared in Leopold Eidlitz III, pp. 375-76. Several arched openings that looked into the staircase have been infilled and its skylight was blocked up in 1942. The skylight was removed in 1952 when a new floor was constructed above the staircase. Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 216.

[120] Leopold Eidlitz III, p. 373. Also, see "The Senate Staircase," *New York Times*, 16 January 1885, p. 3.

Although designed by Eidlitz, the Senate staircase was completed by Issac G. Perry (1822-1904), an architect from Binghamton, New York, who had been appointed Capitol commissioner by Governor Cleveland.[121] It was built of brownish Corsehill sandstone imported from Scotland for its adaptability to carving.[122] Perry modified the design to introduce more light, a change he also made at the Assembly staircase in response to problems inherent in Fuller's design that were not fully addressed by Eidlitz.

> Many additional openings have been cut through the solid and massive walls which divide the corridors form the [Assembly] staircase for the admission of light in the corridors. All the openings have been richly embellished with columns having foliated caps of varied designs, from which spring ornamental arches; carved string courses have been introduced dividing the broad space between the upper landing and the cornice, between which is an ornamental colonnade on all sides.[123]

Despite Eidlitz's often-expressed concern for the important role of structure in architecture,[124] the main vaults of the Assembly chamber ceiling began to crack, and despite several attempts at repair, they were eventually demolished when the room came to be considered unsafe by its occupants,[125] and several years later, a *New York World* reporter alluded to early recognition of structural problems at Albany.

> There was an enormous job of centering and the work of final decoration was rushed so that the chamber could be opened for the Assembly on Jan. 1, 1881; but even before that time there

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[121] Perry, who had once practiced in New York City, had designed the New York State Inebriate Asylum (Binghamton, NY, 1858-64, altered 1879) with Peter B. Wight; Sarah Bradford Landau, *P. B. Wight: Architect, Contractor, and Critic, 1838-1925,* exhibition catalog (Chicago: Art Institute of Chicago, 1981), pp. 13-14.

[122] Roseberry, p. 73.

[123] Capitol Commissioners, *Report of the Work Done on the New Capitol During the Year 1884* (Albany, NY: Weed, Parsons, & Co., 1885, p. 3, quoted in Ehrenkrantz Group, vol. 1, *Historic Analysis*, p. 215.

[124] For Eidlitz's views on the relationship between design and structure, See Chapter XIX, "Form and Construction," in Leopold Eidlitz, *The Nature and the Function of Art, More Especially of Architecture.*

[125] The legislators may have been aware of the collapse of the masonry dome of the main pavilion of a new courthouse nearing completion in 1877 in Rockford, Illinois; "Sad Disaster in Illinois," *New York Times*, 12 May 1877, p. 1. The building was designed by Henry Lord Gay (1844-1921), a Chicago architect.

> were rumors of the instability of the ceiling, and when one of the ribstones cracked through from top to bottom the architect made haste in giving orders for its withdrawal and substitution of another in its place.[126]

Several other observers seemed to sense that something was not quite right when the chamber first opened. Van Brunt expressed a sense of unease at the discrepancy between the visual qualities of the space and an apparent absence of the structural accommodations necessary to sustain them.

> ...one looks in vain for an abutment to the thrusts of these vaults at the points named [i.e., at the wall piers located closest to the central columns]; there is no such appliance to be seen within or without, nor is the honesty of the Italian builders imitated by any visible tie at the springing line. But even this magician cannot conjure up a vault which can hold up itself, and we must seek in the dark recesses above the vaulting for the hidden contrivances of iron which must bind the construction together.[127]

Schuyler also saw the problem, but was unaware of, or did not mention, the concealed work.

> The other instance of an incomplete architectural development is furnished by the great arches, the voussoirs of which merge into the wall above them without any definition of the extrados, and, indeed, with hardly a continuous line to mark their outer boundaries, while the less important arches of the wall openings are carefully and strongly emphasized.[128]

Both writers were correct in their observations, and the *World* reporter described the complex concealed system that braced the vaults.

> The columns carry the vaulted ceiling. Of course there is a tremendous outward thrust, and unless braced the columns would topple over at once; so the counter arches have been carried to the outer wall, making the column capitol a stable place of resting. But these would soon thrust out the wall where they impinge upon it; so, in order to hold in the walls, the great tie-rod is carried across. This is composed of a double link, each

[126] "A Shattered Art Dream." The date is incorrect; the chamber opened on 7 January.

[127] Van Brunt, "The New Architecture at Albany. II," p. 29.

[128] Schuyler, "The Capitol of New York," p. 177.

> portion being made up of two rods 3 by 1½ inches. This disposes of the main vault, but there are the side vaults. Here again there is the double thrust on each side to push over the granite columns, and on the other side to break out the walls of the chamber. This arch would soon break out and send the wall and fetch the whole complicated structure down in a heap of ruin. Another plate took up the strain of these smaller arches, and to sustain this plate the rod shown was carried down from the iron cap-piece. This device was very ingenious and a very strong one, converting the whole into an enormous double-string girder. The danger now came from any possible expansion and contraction of the iron rod-work, but this was provided for by the protection of the rods in the loft over the ceiling where extremes of temperature are not likely to come.[129]

Cracking in the ribs of the main vault was first noticed on 9 December 1880, and Eidlitz was quickly called in by the construction superintendent. He ordered removal of the damaged work and installation of 60 tons of brick and stone above the arches to stabilize them. He also re-checked his calculations and confidently concluded that the problem was not significant: "...all causes of the fracture which could originate outside of the vault in which it occurred, or by reason of a disturbed equilibrium in the ribs were eliminated from consideration."[130] At the same time, the Capitol Commission had the building foundations surveyed to determine if the problem was caused by settlement of the supporting columns or walls.

In 1882, four new cracks were found.[131] Eidlitz again denied their significance and recommended an independent investigation. The task was performed between June and September by a "Commission of Experts" appointed by Governor Alonzo B. Cornell (1832-1904) and consisting of W. P. Trowbridge,[132] Charles Babcock, and George B. Post, all of whom had a reputation for

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[129] "A Shattered Art Dream." Also see "A Defective Ceiling in the Capitol Building, Albany, N. Y.," *Scientific American*, 10 March 1888, pp. 148-49.

[130] New Capitol Commissioners, *Annual Report for the Year 1880*, pp. 7-8, quoted in Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 3; "Bad Work at the State Capitol," *New York Times*, 17 December 1880, p. 8.

[131] Roseberry, p. 83.

[132] Trowbridge (1828-1892) attended the United States Military Academy and graduated at the head of his class in 1848. He initially participated in survey work for the Army and subsequently became involved in

engineering knowledge. In a report made on 26 September, the Commission acknowledged that "the calculations of the architect were substantially correct" and that "the details of the construction were studied with minute care that reflected great credit upon its author."[133] However, they also identified four significant problems:

the foundations that supported the four columns upon which the central vault rested were loaded to the limit of safety,

the stone from which the vault ribs were made was not of uniform quality or strength,

the side vaults displayed a tendency to rise, and

the thrusts of the main arches were mainly taken up by the concealed iron rods rather than the combination of iron and masonry intended in the design.

These problems were said to be aggravated by settlement of the four supporting columns, a situation whose progress could neither be predicted nor controlled, as well as the need to heat the Assembly chamber attic to limit thermally induced movement of the iron rods. The commission concluded that despite the technical correctness of his approach, Eidlitz had committed "...an error of judgement to erect that most delicate of all architectural devices, a stone groined ceiling, and particularly one of unusual span and weight, on foundations not absolutely secured against

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the design and repair of fortifications and supply of soldiers in the field. He became a professor of engineering at Yale in 1869 and assumed charge of the Engineering Department at the Columbia University School of Mines in 1876. He held several honorary degrees, was a member and officer of several scientific societies, and published technical numerous papers.

[133] Quoted in "The Assembly chamber Ceiling," *New York Times*, 8 May 1888, p. 4.

uneven settlement."[134] To resolve the situation, it recommended removing the vaults and associated masonry and replacing them with a flat wood ceiling.

> [The main vault] might remain without serious failure, but as we cannot count upon its doing so for any definite period, even if all possible repairs are made, we are compelled, with great reluctance, to recommend that the architect be instructed to remove all of the stone vaulting (except, perhaps the four small corner vaults), retaining arches, and walls above them, that run parallel to the sides of the room; and to supply the place of the groined ceiling with a construction of wood.[135]

Less than two months later, Eidlitz, Richardson, and Olmsted issued an 18-page response to the Commission's report limited to comments on the Assembly chamber and areas of the building located immediately above and below. They attributed the problems in the main vault to "disturbance of equilibrium during the main settlement of the building" and concluded that "The settlement, though small, was rapid because of the rapidity of the construction; and the evidences of disturbance such as are presented by the fractures of the ceiling should not be a subject of apprehension or astonishment."[136] They also claimed the Commission misunderstood the results of its own investigations, and that the vaults could be repaired.

> We find in the report of the Commission no warrant for any further recommendation, except that the fractured stone still in the main vault be replaced; that the work be properly pointed, and that the equilibrium of the all the vaults be reviewed and, if need be, corrected. Nor can we find in the report warrant for any other opinion than that when these slight repairs are made the vaulted ceiling of the Assembly chamber will be perfectly sound and permanent. In its present condition and without repairs, there is nothing in the condition of the ceiling to warrant

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[134] W. P. Trowbridge, Charles Babcock, and George B. Post, *Report of the Commissioners to Examine and Report on the New Capitol Building, Pursuant to Section 9 of Chapter 295 of the Laws of 1882* [Albany: 26 September 1882], n. p. quoted in Roseberry, p. 83.

[135] Trowbridge, Babcock, and B. Post, n. p. Also see "The Albany Capitol," *The American Architect and Building News*, vol. 12 (14 October 1882), p. 185-86; "A Defective Ceiling in the Capitol Building, Albany, N. Y.," *Scientific American*, 10 March 1888, p. 148.

[136] "The Assembly chamber," *New York Times*, 18 November 1882, p. 2.

> apprehensions in regard to its safety, or to prevent the immediate occupation of the chamber by the Assembly.[137]

Supporting comments acknowledged the complexity of the iron anchorage system but defended its ability to stabilize the ceiling vaults irrespective of attic temperature. Eidlitz, Richardson, and Olmsted also recommended against attempts to remove all subsurface water from the site in hopes of eliminating settlement and noted that none had been detected near the columns that had supported the vaults for the last two years. They claimed that it was unlikely that further settlement would occur because sewers in the area were located above the foundations and a "puddled wall" had been built around the building to protect against such problems, although they acknowledged that the column foundations could be doubled in size "with an inconsiderable outlay of labor an material" if necessary.[138] Eidlitz and Olmsted offered to pay for repairs to the vaults (Richardson was dead by this time) and spent $3159.55 of their own funds to replace the fractured stone ribs and remove other spalled and cracked stone.[139] While the work took place, the Assembly moved to the Court of Appeals room (by this time, the Court had moved to its new Richardson-designed space) and returned to the Assembly chamber when it was finished.

It is likely that Eidlitz was not certain that the repairs would fix all of the problems, and on 25 May 1877 he wrote a letter to future Governor David B. Hill (1843-1910), then a member of the Trustees on Public Buildings, in which he complained that Assembly chamber maintenance (funding for which had been defeated a month earlier) had not been performed, and rejected

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[137] Leopold Eidlitz, H. H. Richardson, and Frederick L. Olmsted, The New Capitol. An Examination of the Grounds on Which the Security of the Assembly Chamber is Held to be in Question. By the Architects of the Capitol. Submitted to the Governor November 17 1882.

[138] "The Assembly chamber," p. 2. Also see Leopold Eidlitz, "The Vault of the Albany, New York Capitol," *The American Architect and Building News*, vol. 10 (12 November 1881), p. 235; letter to the editor; "The Vault of the Albany, New York Capitol," *The American Architect and Building News*, vol. 12 (3 December 1881); Leopold Eidlitz, H. H. Richardson, and Frederick L. Olmsted, "The Reply of the Architects of the Albany Capitol," *The American Architect and Building News*, vol. 12 (25 November 1882), p. 249; "Reply of the Architects of the New Capitol at Albany, New York," *The American Architect and Building News* vol. 12 (9 December 1882), pp. 275-78.

responsibility for the room's safety unless the vaults were examined and repaired as needed. During the following year, he wrote another letter to the Trustees demanding that the Assembly chamber and other areas on the north side of the building be vacated until such work was performed.[140] These impolitic actions, the appearance of a 7-pound fallen stone on the Assembly chamber floor in October, and his 9 January 1888 request for reimbursement for the vault repairs made during the previous year (the claim was rejected by Governor Grover E. Cleveland[141]) led to more inspections and appointment of another commission of engineers and architects.

The new group was headed by New York State Engineer John Bogart[142] and included Richard Michell Upjohn[143] and Thomas C. Clark, a railroad and bridge engineer from Poughkeepsie. Finding "an immediate question of danger," the commission issued a preliminary report on 3 February 1888 that ordered the Assembly chamber and the rooms below it vacated, the ceiling vaults braced until they could be taken down, and other measures intended to relieve pressure on walls and supports.[144] An interim report issued on 7 March confirmed the recommendation for removal of the ceiling vaults and called for replacement with "one of lighter construction and

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[139] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 247.

[140] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 248.

[141] "A Contractor's Claim," *New York Times*, 11 October 1883, p. 1.

[142] Bogart (1836/7-1920) was trained as a civil engineer. After graduating from Rutgers in 1853, he worked for the New York Central Railroad. Subsequently he worked on the enlargement of the Erie Canal and served with the Union Army during the Civil War. After the War, he worked with Olmsted and Vaux as chief engineer for the Park Commission of Brooklyn and was chief engineering designer for the Department of Public Parks in New York City from 1872 to 1877. Noble E. Whitford and Minnie M Beal, *History of the Canal System of the State of New York, together with a brief histories of the canals of the United States and Canada*, 2 vols. (Albany, NY: Brandow Publishing Company, 1906), p. 1150; *Albany Architecture*, Diana S. Waite, ed. (Albany, NY: Mount Ida Press, 1993), vol. 1, p. 155.

[143] Upjohn may have been chosen because his design for the Connecticut State Capitol, accepted by the Board of Commissioners in 1872 over that of George B. Post, was completed in 1879. Although contemporary accounts referred to its style as "Gothic," like the New York State Capitol, it employed a mix of Romanesque, classical, and French Renaissance forms. "New Capitol at Hartford, Conn.," *The Aldine, The Art Journal of America*, vol. 7, no. 5 (May 1874) p. 106; "The New State Capitol at Hartford," *Scientific American*, vol. 30, no. 3 (17 January 1874), p. 31.

more favorable for Parliamentary purposes."[145] By the end of February, the Assembly chamber was vacated again and the vaults were braced with wood shoring designed by Perry. At the time, he believed that the vaults were safe and would stabilize after a short period of settlement.[146]

The Bogart commission's final report was issued on 26 April 1888. In addition to the ceiling vaults, it also addressed the Assembly chamber staircase, the proposed tower, and the Golden corridor. The Assembly chamber staircase had begun to subside three years after completion and, while the report hoped that repairs could be limited to enlargement of its foundations,[147] subsequent investigation showed that they rested on a sewer and that substantially more work would be required.[148] Cracks were first reported in the Golden Corridor on 26 March 1881.[149] The report recommended removal of the wall pier casings located in the corridor and installation of "heavy iron girders" to support the beams instead of the brick corbels on which they rested.[150] It also called for enlargement of the existing foundations that would be required to support Eidlitz's proposed 360-foot tower. The report attributed acoustical improvements to the temporary wood plank ceiling installed when the Assembly chamber was vacated and recommended a permanent version "constructed of wood or metal, possibly with glass panels... similar in treatment to the ceilings of the Senate or House of Representatives at Washington, or to the ceiling of the Senate chamber in the Capitol at Albany." It noted that the latter

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[144] John Bogart, Thomas C. Clarke, and Richard M. Upjohn, "Report to the Governor on the Condition of the Assembly chamber Vaulting at Albany," *The American Architect and Building News*, vol. 23 (9 June 1888), p. 270.

[145] Bogart, Clarke, and Upjohn, p. 271. The chamber's acoustical properties were considered to be poor.

[146] For a description and illustrations of the bracing, See "A Defective Ceiling in the Capitol Building, Albany, N. Y.," p. 148.

[147] Bogart, Clarke, and Upjohn, p. 271.

[148] "The New State Capitol," *New York Times*, 16 December 1888, p. 20.

[149] Ehrenkrantz Group, vol. 2, *Historical Illustrations*, Appendix C, p. 16.

[150] Wesley Haynes, "Isaac G. Perry: Craftsman-Architect" in *Proceedings of the New York State Capitol Symposium*, pp. 91-92. The area was converted into committee rooms in August 1891.

recommendation was made as much to reduce loads on walls and foundations as to improve sound.[151]

In contrast to the findings of previous investigations, the Bogart commission concluded its report with a passage that seemed to place the blame for the Assembly chamber problems directly on Eidlitz for reasons far more significant than an "error of judgment":

> It seems proper that this commission should add that the lamentable condition of parts of this great building is not due to bad workmanship, because the workmanship is really very good. Neither is it due to bad foundations, because we find that the settlement of the foundations has been slight, and not very irregular, while those foundations are, in places, loaded beyond what was intended in the original design and construction. The ruin of the vaulted ceiling is due to the fact that the design and method of construction and the loading of these arches and vaults have been such as to give pressures which have resulted in the disintegration of the structure – the joints being, in many places, open, and in others compressed to such an extent that the stone has splintered, and is full of cracks.[152]

Eidlitz wrote to Olmsted on the day the report was issued and asked for his help. He also spoke to his old nemesis, George B. Post, who had previously condemned the ceiling, and received assurances of his help. He hoped to get Napoleon LeBrun and even Richard Morris Hunt to testify on his behalf before the legislature, but was unable to convince Mariana Griswold Van Rensselaer to do so.[153]

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[151] Bogart, Clarke, and Upjohn, p. 271. Previous efforts at fixing acoustical problems by changes to the seating arrangement and reconfiguration of the Speaker's and Clerk's desks; "The New Year at Albany," *New York Times*, 31 December 1879, p. 1.

[152] Bogart, Clarke, and Upjohn, p. 271.

[153] Ehrenkrantz Group, vol. 1, *Historical Analysis*, pp. 250-51. Although she admired the Assembly chamber, Van Rensselaer was reticent in her evaluation of Eidlitz's work at the New York State Capitol, claiming that she could not add anything to Montgomery Schuyler's comments. Mariana Griswold Van Rensselaer, "Recent Architecture in America. I. Public Buildings." *The Century Magazine*, vol. 6, no. 27 (May 1884), pp. 48-67, reprinted in *Accents as Well as Broad Effects: Writings on Architecture, Landscape, and the Environment, 1876-1925* David Gebhard, ed. (Berkeley, Los Angeles, London: University of California Press, 1996), pp. 143-44; Montgomery Schuyler, "The Capitol of New York," *Scribner's Monthly*, vol. 19, no. 2 (December 1879), pp. 161-78.

Shortly after the report was issued, *The New York Times* published an editorial that summarized the history of the controversy and questioned the commission's recommendations.

> The Assembly chamber has been recognized since it was built as 'the most monumental interior in the country,' and it would be a piece of vandalism most discreditable to the State if it were replaced by a commonplace construction, except upon the warrant of a much clearer necessity than appears to have been shown"[154]

Nevertheless, concerns about Eidlitz's competence and the extent of his liability continued to be raised. Absence of clear professional standards made satisfactory resolution of the problems impossible, and he never again received a commission of comparable significance.[155]

It had become clear that the vaults would be removed, and Perry designed a flat suspended ceiling as a replacement. Made of coffered oak, it was intended to improve the much-maligned acoustical qualities of the room and maintain as many characteristics of Eidlitz's design as possible. His scheme retained something of the height of the original ceiling by placing the central portion of the new work at the level of the apex of the highest vault, 56 feet above the floor.[156] Richard Michell Upjohn also prepared a design, but it was lower and more ornate than Perry's.[157] Perry found other problems as well. Because the weight of the masonry slabs of the

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[154] "The Assembly chamber Ceiling," p. 4.

[155] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 269.

[156] Photographs of Perry's drawings are on file in the Leopold Eidlitz collection of drawings and photographs at the Avery Library: "Perspective Drawing of Proposed Ceiling & Interior of Assembly chamber" and "Transverse section of Assembly chamber Looking from Speaker's Desk, Scale ¼" = 1'," Eidlitz 23, C34, Box 1, 27 and 28. Perry began his career as a builder in Keesville, NY, and moved to New York City in 1852 to work as an architect. He received his first major commission five years later and began a career involved with design of large public structures, nearly all of which were located in New York State. Wesley Haynes, "Isaac G. Perry," in *Macmillan Encyclopedia of Architects*, vol. 3, pp. 397-98. Perry's "improvements" to the designs of Eidlitz and Richardson were often functionally appropriate but regarded as aesthetically misguided by Schuyler.

[157] The drawings are on file at the Avery Library. NYDA.1000.011.01379: [Transverse Section]. They show the outline of the original arches in red ink and the profile of the new ceiling a third lower than the top of the existing columns. NYDA.1000.011.01798: Transverse Section, incorrectly titled "Senate chamber" on rear. NYDA.1000.011.01799: Longitudinal Section. The drawing shows the profile of the new ceiling, portions of steel framing located above and below the Chamber, and the frieze designed by

Assembly chamber floor had damaged it and the Court of Appeals Room below, the north central section of the floor was replaced and the entire floor was reinforced with additional iron anchor rods.[158]

Neither Perry nor Upjohn designed the ceiling that was installed. An Assembly Ceiling Committee was appointed in April and the legislature authorized $278,992 for the new work and assigned responsibility to Charles B. Andrews, Superintendent of Public Buildings. Andrews, an old friend of Governor Cleveland, ignored both schemes, and on 26 June, he gave the job to John Snaith, a contractor and acquaintance who completed the job later that year.[159] Approximately 3,230 tons of stone and brick were removed from the upper regions of the Assembly chamber and 9-foot extensions were added to each of the room's four columns to support the massive iron frame from which a new 400-ton composite ceiling was hung.

> All the iron work is incased [sic] on the underside by oak, while the panels are of papier maché. The arches and spandrels that spring from the marble caps of the giant pillars are also of papier maché, all stained to look like oak. The panels are concave on the underside and are figured, so that they seem to the spectator on the floor of the chamber to be elaborately-carved oak. The builders defend the use of papier maché as here seen by claiming for it less weight than wood, that it is less expensive than carved oak would be, that is incombustible, and that it will not shrink or crack, as would be the case with would of any kind, however thoroughly seasoned.[160]

Roughly similar in appearance to the ceiling in Richardson's Senate Chamber, the installation was 14 feet lower than the original, and its placement brought it uncomfortably close to the tops of the room's windows and remaining arches. William Hunt's murals were concealed above the

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John Quincy Adams Ward that was not installed. NYDA.1000.011.01800: Ground Plan, Gallery Plan. NYDA.1000.011.01801: [Reflected] Ceiling plan.

[158] Ehrenkrantz Group, vol. 1, *Historical Analysis*, p. 266.

[159] Ehrenkrantz Group, vol. 2, *Historical Illustrations*, Appendix C, p. 18. "A Defective Ceiling in the Capitol Building, Albany, N. Y.," p. 148; Roseberry, p. 87.

[160] "The New State Capitol," *New York Times*, 16 December 1888, p. 20.

new ceiling less than ten years after they were completed. Despite his attention to technical problems, (Hunt was the first to try the approach in America), the paintings had been irreparably damaged by roof leaks. His brother and sister established a subscription in 1898 to restore the murals, but the Superintendent of Public Buildings refused to remove them or postpone the installation of the ceiling.[161]

Eidlitz continued to maintain that the defective portions of the ceiling vaults and walls could be repaired. However, as a newspaper account pointed out

> They have been repaired out of existence. In their place a flat ceiling of iron, oak, and papier maché is now completed. The incised, carved, tinted, and gilded sandstone, dumped into the street as rubbish, has been carted off to storage ground, where it will be chopped of its livery for use in some less public place. Mr. Evarte's[162] "Moorish Palace" is transformed into a more somber [sic], and it is hoped, more practical apartment for sophomoric Assemblymen to speak their pieces in.[163]

In January and February 1899, a commission appointed to investigate the activities of the Assembly Ceiling Committee found evidence of a conspiracy to defraud the government based on the use of the papier-maché panels.[164] The specifications had seemed to give Snaith the option to use it or oak but they may have been changed after the work began. He was indicted on charges of conspiracy and fraud but eventually acquitted.[165] Aside from the legal issues, papier maché was a common and durable replacement for carved ornament and despite being drenched during

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[161] "Leopold Eidlitz, III," pp. 370-72; Henry Adams, "William Morris Hunt's 'Chef d'Oeuvre Inconnu'" in *Proceedings of the New York State Capitol Symposium*, pp. 97-105; Helen M. Knowlton, *Art-life of William Morris Hunt* (Boston: Little, Brown, and Company, 1899), pp. 157-180; Baker, p. 510 n. 29; Schuyler, Montgomery. "The New State Capitol," *New York World*, 28 December 1878, p. 5; "Cannot Save Hunt's Paintings," *New York Times*, 9 September 1888, p. 5.

[162] Possibly a reference to William M. Evarts (1801-1901), a talented lawyer who worked for several United States Presidents and was a Senator from New York State. He refused to take any job in Albany, however.

[163] "The New State Capitol," *New York Times*, 16 December 1888, p. 20.

[164] "That Assembly Ceiling," *New York Times*, 31 January 1899, p. 8.

[165] Ehrenkrantz Group, vol. 2, *Historical Illustrations*, Appendix C, p. 18.

attempts to control a fire in 1911, it survived in the spandrel panels of the ceiling supports into the mid-1930s when it was replaced with uncarved wood.[166]

On the evening of 10 March 1881, escorted by the members of the Assembly, the Senate finally moved into its chamber.[167] By the time the Senate Chamber was completed, more than $12 million had been spent on the building.[168] During the next six years, other portions were completed and occupied, but the pace of construction remained slow and work stopped altogether in 1884 due to lack of funds. After Governor Cleveland named Isaac Perry sole Architect of the Capitol in 1885, he asked him to accelerate completion, effectively removing Eidlitz, Richardson, and Olmsted from the job. Despite problems resulting from another suspension of work in 1886 and an attempt to replace him with a four-member commission, Perry remained in charge and the Capitol reached substantial completion near the end of 1898.

On 4 February 1899, after 32 years and $25 million, and with portions still unfinished, Theodore S. Roosevelt, the first governor to take his oath of office in the new building, declared it done. Cleveland refused to attend the swearing-in ceremony and Perry was soon dismissed. He was succeeded by George Lewis Heins (1860-1907), a partner in the New York City firm of Heins & La Farge. Everyone seemed to be glad the project was over, and in a passage that appeared in *Architectural Record* in 1899, Cyrus, rather than Leopold, Eidlitz received the credit for the work.[169] Schuyler had accurately described the result many years earlier:

> In completing the building, the architect [i.e., Richardson] has evidently endeavored to reconcile, by including, both, the romantic and the classical elements in the work already done. The only period in the history of architecture during which these

[166] Roseberry, p. 88.

[167] *The Public Service of the State of New York*, vol. 2, p. 73.

[168] *The Public Service of the State of New York*, vol. 2, p. 73.

[169] Culyer Reynolds, "The New York Capitol Building," *Architectural Record*, vol. 9, no. 2 (October 1899), pp. 146-47.

> two elements were in fact employed together in important buildings, was the French Renaissance of the sixteenth century... although there is no French chateau so extensive as the Capitol, and none to which the general composition of the Capitol owes anything.
>
> The work of the architects in the interior of the Capitol [i.e., Eidlitz and Richardson] has this in common, that while it is accomplished and scholarlike, it nowhere aims at grammatical accuracy of style. In other words, it is recognized everywhere that the problems presented in a building constructed for the use of a legislature of the nineteenth century were not presented to any Greek architect of the age of Pericles, or to any European architect of the middle ages. The architecture of the Senate and of the Assembly Chambers, for example, is alike free architecture; but in every other respect it exhibits a striking and interesting contrast in aim, in method, in detail, and in ultimate expression.[170]

Restoration of the Assembly Chamber began in 1997 by Françoise Bollack Architects; the stone ceiling vaults were not replaced.

*New York County ("Tweed") Courthouse*

In 1876, the New York Court-House Commissioners appointed Eidlitz to complete New York County ("Tweed") courthouse begun by Thomas Little and John Kellum in 1861 and halted in 1872.[171] The origins of the Courthouse project lie in the explosive growth of New York City during the nineteenth-century and a series of failed attempts to build a new City Hall. By the time the population of the city passed half a million in the 1850s, the government had long outgrown its quarters in the building designed by John McComb, Jr. and Joseph François Mangin.[172] In 1857, after a series of unrealized projects for supplementary buildings that were to be located adjacent to it, Mayor Fernando Woods, elected three years earlier as the first Tammany

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[170] Montgomery Schuyler, "The Capitol" in *The Public Service of the State of New York*, vol. 2, pp. 79-81.

[171] "Notes and Clippings, New York Court-House" *The American Architect and Building News*, vol. 1 (22 April 1876), p. 136. The article noted that Eidlitz would report to the commissioners on the condition of the building "in a week or two" at which time plans would be decided on for completion of the work.

Democrat to assume the office, proposed to vacate the building and move uptown to be closer to the demographic center of the city. That move never took place, and the Board of Supervisors passed a resolution on 19 March 1860 in which they authorized construction of a courthouse adjacent to the old building rather than a new uptown City Hall.[173] However, by the time construction began on 16 September 1861, the project had changed to a County Courthouse. Despite another competition for new municipal buildings held in 1888, none was built until a gigantic structure designed by McKim, Mead & White was erected 1912-14.[174]

The change in program from City Hall to County Courthouse can be traced, in part, to a fire on the top floor of the 1813 building that broke put on the night of 17 August 1858. It was caused by fireworks set off from the roof to celebrate the completion of the Atlantic telegraph cable.[175] Although Eidlitz made repairs to the damaged areas (a newspaper account noted "a competent architect was put in charge of this work [on 28 June 1859]"[176]), a later observer found them expedient at best.

> In 1913, the roof space was still a litter of rubbish and a confusion of old and new roofs – the former telling in its blackened surface the narrowness of its escape, the latter quite unprotected and ready for its own turn... careless or stupid restoration left its marks in the eye of the dome with the result that until its re-widening in 1913, the splendid rotunda, robbed of its light, was rendered dull, cavernous, and dismal.[177]

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[172] The commission for City Hall was won in a competition held in 1802. Construction began the following year and it was competed in 1813.

[173] *Tweed Courthouse, 52 Chambers Street, Borough of Manhattan. Built 1861-1881; architects Thomas Little, John Kellum, and Leopold Eidlitz*, p. 6.

[174] See Eidlitz, *Big Wages and How to Earn Them*, p. 203

[175] Historic American Building Survey (HABS No.NY-234); May, "The New York City Hall, Part I – Historical Notes," pp. 318-19; "New-York City; The Burning of City Hall," *New York Times*, 19 August 1858, p. 8.

[176] "Municipal," *New York Times*, 15 July 1859, p. 3.

[177] May, "The New York City Hall, Part I – Historical Notes," pp. 318-19; "The New York City Hall, Part III – The Work of the Restoration (Continued)," p. 499-500. A photograph of the rebuilt cupola appeared

The shortage of courtroom space caused by the fire encouraged the city's Board of Supervisors to appoint a County Courthouse Committee. However, Mary Ryan claimed that this situation also reflected substantial changes in slate and local governmental organization that took place in the late nineteenth-century. Suspicion and fear expressed by business and rural interests of the power of ethnic voting blocks on New York City government led to increased surveillance at the state level, and a series of reforms transferred power from City Hall to the County Board of Supervisors, the proposed tenant of the new building. Municipal reforms of the same period also complicated the financing of major civic projects. Construction could not begin until the state Assembly and Senate authorized the County Board of Supervisors to sell stock in a public or "sinking" fund, and public officials eventually obtained $11 million for the courthouse work. The process of spending these funds was similarly cumbersome. A three-member Building Commission contracted for materials and construction while the Board of Supervisors and the state reviewed their actions. Consequently, at least thirty different suppliers became involved in the work.[178]

Kellum's architectural practice, perhaps the most economically successful of his time, concentrated on commercial structures. Born in 1809 in Hempstead, Long Island, he began his career as a house carpenter and became a self-taught architect. He moved to Brooklyn in 1842 where he worked for Gamaliel King (1795-1875) with whom he became a partner in 1846 and worked on the Brooklyn Borough Hall (1846-51, 209 Joralemon Street, Brooklyn). Kellum started his own practice with his son in 1859. The firm specialized in commercial buildings and frequently employed cast-iron facades. Kellum's second store for the Irish immigrant and dry goods merchant A. T. Stewart (Broadway and East 10th Street, 1859-62, burned 1956) was both

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in May, "The New York City Hall, Part III – The Work of the Restoration (Continued)," p. 535. Grosvenor Atterbury restored the majority of the building and widened the dome oculus by 5 feet after another fire.

[178] Mary P. Ryan, "'A Laudable Pride in the Whole of Us': City Halls and Civic Materialism," *American Historical Review*, no. 105, vol. 4 (October 2000), pp. 1131-70.

the largest iron building and the largest retail facility of its time. Its floor beams were made of wrought iron and its facades and interior columns were made of cast-iron. Kellum also prepared the preliminary design for Garden City, a suburban reform community funded by Stewart, his primary client.[179]

Despite his considerable success, the New York Chapter of the American Institute of Architects denied membership to Kellum because the members of the organization regarded him as little more than an unskilled drafter. His popularity was seen as proof of his baseness because it demonstrated that he was willing to surrender to the taste of his clients rather than raise it by using knowledge gained through professional training. Eidlitz particularly disliked his work and, commenting on his New York *Herald* Building, he quipped, "Kellum had a better draughtsman than usual that year." He also conceded that "though [the building was] mean, it was not infamous" and allowed that it "did not show the same nasty mind" as his earlier work.[180] While Kellum's association with the courthouse diminished his reputation as an architect, Schuyler believed that he was uninvolved in the corruption that accompanied it and called him "'the leading architect' of New York" at the time.[181]

Kellum was appointed by the County Courthouse Committee and had a relatively free hand in the design of the Italianate building because Common Council had only specified the site, just north of City Hall on Chambers Street. The decision reflected an administrative desire to be near the

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[179] Margot Gayle, "John Kellum," *Macmillan Encyclopedia of Architects*, vol. 2, p. 558.

[180] Burrows and Wallace, p. 968; Margot Gayle, "John Kellum" in *Macmillan Encyclopedia of Architects*, vol. 2, p. 558; Montgomery Schuyler, "The New York Courthouse and its Site," pp. 5-6; "A. T. Stewart's Retail Store, Broadway and east 10th Street, ca, 1869; E. & H. T. Anthony & Co.," *Nineteenth-Century New York in Rare Photographic Views*, No. 62.

[181] "Montgomery Schuyler, "The New York Courthouse and its Site," *Architectural Record*, vol. 36, no. 1 (July 1914), p. 1. Schuyler also commended Kellum's cast iron-faced Working Women's Hotel (Park Avenue between 32nd and 33rd Streets, 1869-77; demolished 1927), A. T. Stewart Residence (1864-69, northwest corner of 34th Street and Fifth Avenue; demolished 1903), and New York *Herald* Building (Vesey Street and Broadway, 1865-66; demolished).

other courts and offices that clustered around City Hall Park, an area that had become a governmental center by the 1860s. The courthouse was preceded by a broad exterior staircase that led up to a pedimented portico that framed the main entrance. Within the building, two interior staircases climbed three-and-a-half stories within an arcaded octagonal rotunda. Kellum's second A. T. Stewart Store also contained a central rotunda "with upper floors rising around it like the galleries in an opera house."[182] A ribbed dome planned to cover the rotunda was never built. Modeled after that of the United States Capitol, it was to have risen 210 feet above the sidewalk and contain a lighthouse.[183] The size of the dome and its more than $1 million cost was subsequently reduced by a third in cost cutting measures imposed by the Board of Commissioners.[184]

Few biographical details are available for Kellum's partner Thomas Little (1801-59?), and his role in the project is unclear. His name appeared in an 1857 Brooklyn directory and in New York City directories from 1858 to 1867.[185] Kellum (1809-71) probably met Little in Brooklyn; he was listed in Brooklyn directories 1848-62 and in New York City directories 1863-71.[186] Little was a member of the Manhattan Board of Supervisors and his role in the Courthouse project likely came through that position. He may have been responsible for the design of the building, having submitted an invoice for a "new City Hall" in 1859 and been identified as the designer in hearings held in 1866. However, in 1861, the Board of Supervisors passed a resolution authorizing

[182] Margot Gayle and Edmund V. Gillon, Jr., *Cast-Iron Architecture in New York*, p. 161.

[183] *New York Illustrated*, p. 13; McCabe, p. 297.

[184] "The New Court-House," *New York Times*, 21 December 1870, p. 8.

[185] Francis, pp. 50, 92.

[186] Francis, pp.46, 91.

employment of "a suitable architect," and both names were listed at the cornerstone laying ceremonies.[187]

Initial response to the courthouse was unfavorable and coverage of its cornerstone ceremonies was subdued. The *New York Times* noted

> We do not see in any one of [the speakers] a very satisfactory explanation of their reasons for throwing on the city the burden of this enormous additional expenditure just at this present time, or any estimate of the rate of taxation to submit to within the next few years according to present appearances.[188]

The *Times* also predicted, "unless we are greatly mistaken we shall soon see a movement for effective financial reform in our city affairs.[189]" Four year later, however, the newspaper boasted that the marble Corinthian columns of the courthouse façade resembled those of St. Paul's Cathedral,[190] and two years later, the *Times* changed its position yet again. On 11 October 1867, it wrote of "Extravagance and Plunder"[191] at the courthouse, and within five years, the building that had become a symbol of financial mismanagement and municipal graft became the "Tweed" Courthouse.[192]

The building was made of East Chester and Massachusetts marble. Kellum's concern for fire-resistant construction was revealed in his use of iron floor framing, staircases, and exterior doors,

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[187] *Tweed Courthouse, 52 Chambers Street, Borough of Manhattan*, pp. 8-9.

[188] "The New Court-House,; Laying of the Corner Stone. Addresses by Mayor Wood, Judge Clerke, and Supervisor Stewart. Dimensions of the Building and other Particulars," *New York Times*, 27 December 1861, p. 3.

[189] "The New Court-House.; Laying of the Corner Stone," *New York Times*, 27 December 1861, p. 3.

[190] "The New County Court-House.; Progress of the Work - Observations Behind the Fence - An Hour Among Marble and Masonry," New *York Times*, 27 December 1865, p. 8.

[191] "The County Court-House – Extravagance and Plunder, *New York Times*, 11 October 1867, p. 4.

[192] Mary P. Ryan, "'A Laudable Pride in the Whole of Us': City Halls and Civic Materialism," *American Historical Review*, no. 105, vol. 4 (October 2000), pp. 1152-57; Stern *et al*, *New York 1880*, pp. 125-29; *King's Handbook of New York City*, p. 262.

as well as concrete sub-flooring and brick encasement of cast iron structural components.[193] Nevertheless, the structure did not function well. Its circulation system did not lead to a central destination such as the Common Council chamber of the old City Hall, nor did the building contain a large assembly space. While some praised the interior staircase and rotunda (they were among its most highly decorated spaces and accounted for nearly a quarter of its floor area), others claimed that the building contained the darkest hallways in the city. Schuyler concurred in phrases reminiscent of his comments on Fuller's work at Albany.

> To every one who knew what a civic building should be, it has been perfectly plain that the new Court-House is very nearly everything it should not be. Bad inside and out, bad in its elevations which mean nothing themselves and express nothing behind them, and bad in its interior, providing with great waste of room and materials a series of air-tight boxes; it affords singularly convincing evidence of the practical and expensive inconvenience of bad art.[194]

The courthouse received its first tenant, the Court of Appeals of New York State, in 1867; other rooms opened the following year. Half of the interior, the rotunda staircases, and the skylight, remained unfinished when construction stopped in 1872. Tweed was convicted of corruption in one of the unfinished courtrooms during the same year; Kellum had died a year earlier.

Eidlitz's commission initially called for him to complete the Chambers Street portico and "the interior of the main hall to the ridge of the roof and place upon the latter a skylight sufficient to properly light the interior of the building." He estimated that the work would cost $490,581.50 and completion of the portico would earn the city $20,000 in undefined "rentals," but the matter was tabled for further discussion.[195] Eidlitz may have received the job on the recommendation of

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[193] *New York Illustrated*, p. 12.

[194] Montgomery Schuyler, "Architectural Malpractice," *New York World*, 28 May 1876, p. 4.

[195] "The New Court-House to Be Completed," *New York Times*, 4 July 1876, p. 2.

Governor Samuel J. Tilden because of his work on the Albany State Capitol Advisory Board.[196] When work resumed on 23 October 1876, the project included a new pedimented wing on the south (Chambers Street) side of the building that replaced the planned portico and provided additional office and courtroom space as well as a 25-foot high by 65-foot wide octagonal dome located above the rotunda. Work was to be finished in two years at cost of $475,000.[197] It went on until 1881, however, and cost considerably more.

Kellum's Italianate facades and interiors of the north wing of the building recalled Charles Barry's London adaptation of Renaissance palazzi as English gentlemen's clubs (the Travelers Club, 1829-31 and the Reform Club, 1837-41), but *King's Handbook of New York City* described the courthouse as "Corinthian architecture"[198] in reference to the order used for its exterior columns and pilasters. In stark contrast, Eidlitz's use of round-headed windows and foliated ornament on the new south wing was overtly Romanesque, and *The American Architect and Building News* reported that his initial design showed an additional story "in Gothic" and "a great dome treated with Gothic details."[199] This mixing of styles was consistent with his work at the New York State Capitol, and Schuyler was not troubled by it:

> What Mr. Eidlitz was concurrently or almost concurrently doing in his addition to the Tweed Court House in New York was what he ought to have done in his superstructure of the Capitol at Albany, namely to improve its composition and refine and rationalize its detail so far as those objects could be attained without a violent departure in "style" or a flat contradiction in terms.[200]

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[196] *Tweed Courthouse, 52 Chambers Street, Borough of Manhattan*, p. 11.

[197] "The New Court-House to be Completed, *New York Times*, 24 October 1876, p. 8.

[198] *King's Handbook of New York City*, p. 262. *New York Illustrated* pointedly remarked that "The pervading order of architecture is Corinthian, but although excellent, the building cannot be said to be purely Corinthian." This was because it was too narrow to use columns at the side elevations; p. 12.

[199] "Correspondence," *The American Architect and Building News*, vol. 1 (24 June 1876), pp. 207.

[200] Leopold Eidlitz III, p. 373.

Not all shared the opinion, and the *Real Estate Record and Builder's Guide* announced its opposition to any change from "what is usually regarded as a rigid classical style of architecture."

> ...we allude to the rumored question of placing a Mansard roof over the whole building [an option that was briefly considered], in lieu of the central dome which was originally contemplated by the architect. It is hoped that such a change will not be attempted.... We have seen many attempts to convert a building, after its erection, from the original intent of the design, but rarely one that did not end in artistic failure.[201]

The *New York Times* was equally dismissive of Eidlitz's approach and, in an article primarily concerned with financial improprieties, claimed that

> ...the new style of architecture is wholly out of keeping with the rest of the building, and, that while it might be well enough in a fashionable church on Fifth avenue, or a highly decorated lager beer brewery at Yorkville, it is cheep and tawdry in comparison with the elaborate finishing and classic exterior of the present structure. A large number of the Judges and other officials who have offices in the building are outspoken in their condemnation of the new work, while among the outside public who have viewed it, there seems to be one opinion.[202]

Schuyler acknowledged that the contrast between the old and new work was widely noticed and condemned, "mainly [by] excited academic opposition," and claimed that Eidlitz was "puzzled by the commotion."[203] The contrast was most apparent at the intersection of the existing and new portions of the building where Kellum's Renaissance trim terminated abruptly against Eidlitz's Romanesque interventions and the difference between Kellum's flat-headed and Eidlitz's round-headed openings was unmistakable. Similar collisions were visible in the ground floor corridors that led to the central rotunda and within the rotunda itself. In contrast to the smooth plaster and Italianate detailing of the older portion of the building, Eidlitz faced the corridors with light tan

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[201] "The New Court-House," *Real Estate Record and Builder's Guide*, vol. 6 (31 December 1870), p. 1.

[202] "The Court-House Swindle, *New York Times*, 29 April 1877, p. 7. The article also noted that only $105,000 had been appropriated for work contracted for $381,000 and that it was likely that the final cost would exceed $1 million.

brick, highlighted with black and red banding and diapering. Within the central rotunda, he infilled Kellum's perimeter arcade with brick and installed an octagonal skylight that contained translucent gilded panels set into blue, green, and red bands.[204] He also removed ironwork installed by Kellum to support the skylight and replaced it with massive stone and brick piers located to either side of the rotunda entrances. Black and red banded tan brick arches resting on paired gray Nova Scotia stone Romanesque columns located within the entrances reduced their width from 24 to 10 feet and required substantial alteration of Kellum's iron floor system.[205] Familiar with Eidlitz's ideas from its protracted coverage of events in Albany, *The American Architect and Building News* recognized the author of the changes and concluded, "The dome, by the way, in its new form, is accused of the same sins against congruity of style as were charged against the alterations of the Advisory Board in the State House."[206]

Romanesque motifs were also carried into the south wing courtroom, and a twentieth-century observer of the space seemed to be overwhelmed by the quantity and magnitude of the materials, textures, and patterns:

> Room 201-2 in the rear wing is entirely different from the rest of the interior, a monument to nineteenth-century medievalism. The floor is covered with multi-color encaustic tile in red, blue, beige, white and black laid in a geometric design with a foliate border. The arcaded walls consist of sandstone ashlar and columns with foliate capitals. Connecting stone arches spring from the rows of columns, giving the impression of a groined ceiling. Carved stone panels in the ceiling are made up of foliate and denticulated bands around a square filled with a Gothic

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[203] Leopold Eidlitz III, p. 374.

[204] An interior view of the addition appeared in Leopold Eidlitz II, p. 281. A 4-foot portion of the 1-inch thick skylight fell on 2 September 1896; "In a Shower of Glass," *New York Times*, 3 September 1896, p. 1.

[205] "The Work on the New Court-House," *New York Times*, 28 January 1877, p. 2; "Notes and Clippings. The Dome of the County Court-House, New York," *The American Architect and Building News*, vol. 2 (3 February 1877), p. 40.

[206] "Summary – The New York Courthouse," *The American Architect and Building News*, vol. 2 (November 1877), p. 366.

> dogtooth pattern.[207] The arched doorways, like the windows, are subtly delineated by colonettes. Two sets of oak double doors lead into the hall. Simple arched casement windows are set into the arcaded wall. The doors have etched glass panels depicting the City Seal. Two lines of polished stone columns supporting molded arches divide the room into three arcaded spaces. The columns have octagonal bases and foliate capitals with broad, naturalistic leaves, which are reminiscent of early English-style ornament. A magnificent rectangular stone fireplace dominates the arched north wall of the room. A round space in the tympanum above... held a plaque; a decorative iron plate covers the fireplace opening. The hardware on the doors... [consists of] an escutcheon, handle, locks and corner hinges.... The room... was illuminated by hanging fixtures with clusters of glass globes. Iron radiators are located under the windows.[208]

*The American Architect and Building News* sarcastically summarized what may have been the addition's most significant quality:

> ...an important work is going on in the patchwork additions to the New Court House standing in City Hall Park. The work is not out of place, since the Park has long been a place for everything and anything.[209]

After lamenting the lack of cohesiveness and high quality in the group of buildings located in the Park, i.e., Mangin's City Hall, Mullett's Post Office, an un-named governmental building,[210] and the courthouse, the writer attempted to evaluate Eidlitz's contribution.

> Upon this [i.e., Kellum's portion of the courthouse] has been grafted an addition by Mr. Leopold Eidlitz. Of course no attention was paid to the design of the existing building, and within and without a rank Romanesque runs cheek by jowl with the old Italian, one bald, the other florid; cream-colored brick and buff sandstone come in juxtaposition to white marble. What was merely proposed to be done in the case of the Albany

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[207] Eidlitz introduced a similar motif in the flat-roofed transepts of Christ Church Cathedral; Brooks, p. 13.

[208] *Tweed Courthouse, 52 Chambers Street, Borough of Manhattan*, p. 18. The recent restoration of the building returned some of the missing elements noted in the description.

[209] W., "Correspondence. A New Apartment House – The Buildings in City-Hall Square," *The American Architect and Building News*, vol. 3 (16 March 1878), p. 94.

[210] It was probably the New Gaol/Hall of Records. The three-and-a-half story brick structure was erected 1757-59 as the city prison and altered in 1830 when it received a portico and Greek columns and assumed its new role. Demolished in 1903, it was the oldest surviving municipal building in New York City.

> Capitol, has actually been carried out on our unfortunate Court House, and only raises the provoking wish that that the whole edifice had been done by the hand that that could produce the excellent though misapplied addition. As it stands now, the ensemble will always remain an eyesore to those who believe that purity of style and freedom from admixture, in forms and spirit, is a merit. If, as more than one prominent architect in this city declares, "style is nothing," then the criticism of such mongrel buildings as the Court House must be approached from a different standpoint; but at present, protest must be entered against the tacking on of additions, however excellent, to buildings designed under a totally different motive.[211]

Schuyler noted that Eidlitz's work and "its contradiction of its surroundings" was ultimately "shorn of much of its pristine force" and "considerably softened" when the tri-color brickwork and stone trim of the rotunda received "an equable coat of gray paint" some time before 1908 (the south wing court room was never touched). He also mentioned that the polychromatic façade of the Jefferson Market Courthouse (Frederick Clarke Withers [1828-1901] and Calvert Vaux, 1874-76) received a similar treatment from a custodian who wanted it "freshened up."[212]

Schuyler retained his positive view of the addition after Eidlitz died, and in an otherwise straightforward assessment of a preliminary design prepared by Guy Lowell for a Courthouse replacement, he commended him for the overtly confrontational qualities of his work but expressed a desire to see the building demolished because of its painful political associations.

> [Eidlitz's] addition gives the monument of civic shames the only architectural interest it possesses. As everybody knows, its architecture is entirely incongruous with that of the building to which it is adjoined. It is in fact an emphatic protest against the architecture, outside, and more particularly inside, where the straightforward and structural treatment of the brickwork puts to shame as it was meant to do the collection of quite meaningless members in cast iron into the midst of which it is intruded. Nevertheless, the honest development of the construction gives a considerable interest to the apartments of the extension in which it is employed, and which do not have to be seen in conjunction

[211] W., "Correspondence. A New Apartment House – The Buildings in City-Hall Square," p. 94.

[212] Leopold Eidlitz III, p. 374; Silver, p. 168.

> with the conventional metallic decoration very ill done, as in the rotunda. Such as it is, the interest of this extension, it may be repeated, is the only architectural interest in the "Tweed court house," and furnishes the only occasion for regret, on any grounds whatever, when the time comes, one hopes soon, when the whole monstrosity shall be torn down and make room for a fair green stretch of turf.[213]

Later opinion tended to be politely appreciative and considerably less effusive. In its assessment, the New York Landmarks Commission merely noted that

> Eidlitz used ornament and architectural detail to unify the design of the courthouse. He repeated ornamental details such as arches, foliation, and octagonal shapes – inside and out – to join the compartmentalized spaces. Arches are used for the doors, windows, walls, and entryways. Naturalistic foliate detail is repeated in banding on the exterior of the south wing and well as in the rotunda and Room 201-2 [the main space of the south wing] on the capitals. The octagon appears in the skylight, the floor tiles, and the column bases.[214]

Schuyler summarized Eidlitz's "notion of the duty of an architect" in a quotation from Cicero: "ne quid falsi 'facere' audeat, ne quid veri non audeat" (let him not make anything false, let him not suppress any truth), and ascribed Eidlitz's attempts to adjoin an "architecture of reason" and an "architecture of convention" at the Capitol and Courthouse to "a naiveté of intellectual integrity" rather than "boldness" or "defiance."[215] Portraying him as an engineer as much as an architect, he recalled an incident that provided support for such a view.

> Standing in the rotunda of the Court House one day, when his own vari-colored brick arches and columns had been inserted between the cast-iron panels of the older work, he said, "Is it possible for anybody to fail to see that this, pointing to the new work, "performs a function, and that that," pointing to the old, "does not?" A Q.E.D. was the aim of his every architectural

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[213] Montgomery Schuyler, "The New York Courthouse and its Site," pp. 6-7.

[214] *Tweed Courthouse, 52 Chambers Street, Borough of Manhattan*, p. 14.

[215] Leopold Eidlitz III, p. 374. The original quotation is in Cicero, *De Oratore*, II. In changing the reference from historians to architects, Schuyler substituted *facere* (to make) for *scribere* (to write); Jordy and Coe, vol. 1, p. 181 n. 96.

endeavor, what might be called a scientific solution of an artistic problem.[216]

[216] Leopold Eidlitz III, pp. 374-75.

## 9. NATURE AND FUNCTION, BIG WAGES: 1881-87

Leopold Eidlitz published two books, *The Nature and Function of Art, More Especially of Architecture*[1] and *Big Wages and How to Earn Them*[2] within six years of each other. Despite the brashness of their titles, they present a unified picture of their author and his ideas, with the first book concerned with the disparity between art and technology and the second (published under a pseudonym) addressing the conflict between capitalist and worker. Both were widely and unfavorably reviewed, and Eidlitz was accused of intruding in areas that were beyond his expertise. He ceased publishing altogether for several years and never again produced written works of such ambition.

### *After the War*

Collapse of the speculative railroad-driven post-Civil War economy led to financial depression and deflation and the architectural profession suffered accordingly.[3] Although the population of the United States increased sixty-two percent and taxable wealth increased 116 percent between 1870 and 1890, the situation in and around New York City was extremely volatile. The year 1868 marked the beginning of a great speculative craze in New York City real estate brought on by post-war inflation and the anticipated effects of planned public works and transportation projects. Similar bubbles developed in San Francisco, Chicago, Boston, and other metropolitan areas, and all were quelled by a national financial panic that began in New York City in 1873 with the failure of Jay Cooke & Co. and persisted until 1879. Situations that contributed to the decline in construction included inflated currency, delay in initiation of transportation projects, extravagance in building

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[1] New York: A. C. Armstrong & Son; London: Sampson Low, Marston, Searle & Rivington, 1881.

[2] New York: Harper & Brothers, 1887.

[3] This discussion is based on *A History of Real Estate, Building and Architecture in New York City During the Last Quarter of a Century* (New York: Arno Press, 1967), reprint of first ed. (New York: The Real Estate Record Association, 1898), pp. 56-76.

design, abuse of the building loan system, abnormally high wage and material rates, dishonesty and incompetence in city government, and undercapitalization. By 1874, construction in New York City had ceased in the newly fashionable area located between 42nd and 59th Street and prices for existing buildings fell quickly. Decreases in labor and materials, however, encouraged some wealthier investors to pursue residential projects above 59th Street and large apartment blocks were introduced to the city at this time. Business structures were also erected in the old commercial and financial districts. By 1879, construction began to accelerate on a citywide basis, largely in response to construction of elevated railway lines that made formerly undesirable areas suitable for development.

Eidlitz did not fare well during this period. His first post-Civil War projects involved unsuccessful competition entries for the Brooklyn Mercantile Library (1865), a Civil War memorial for Yale University (1865), and the New York Life Insurance Company (1867). Although he rebuilt St. George's Church after a disastrous fire (1866-67) and added a chapel and Sunday School to St. Peter's Church (1867-68), with the exception of Temple Emanu-el (1866-68) and the Church of the Holy Trinity (1869-74), new work was limited to relatively small projects such as the Hinsdale, MA, public library (1866),[4] the Brooklyn Union Building (1868), alterations and additions to the Church of the Pilgrims (1868-70), and yet another round of alterations at St. George's Church (1869).

The 1870's were not much better. His Viaduct Railway scheme (1870) offered the possibility of a great amount of work, but it was not adopted and he was unsuccessful in the competition for the New

[4] Located in the westernmost county in Massachusetts, Hinsdale was settled in the 1760's and incorporated in 1804. Its early history was dominated by farming, however, settlers gave up dairy farming when sheep were introduced and they turned to sheep raising. During the late eighteenth century and throughout the nineteenth, its residents settled along the Housatonic River and much of the wool was processed in local mills. By the early 1900s, the mills closed and the railroad became the main industry. The corner stone of the residentially scaled building (58 Maple Street, Hinsdale, Massachusetts) was laid in July 1866 and it was completed in December of the same year at a cost of $25,000. Although the library employs his "Swiss Chalet" vocabulary, local newspaper accounts claim that Eidlitz was told to base its design on a house seen by a local religious leader and his wife while on their honeymoon in England. *Springfield* [Massachusetts] *Daily Republican*, 26 March 26 1908, p. 12, *Springfield* [Massachusetts] *Republican*, 25 October 25 1934; Dale S. Plummer, *National Register of Historic Places Inventory – Nomination Form, Bulkeley School, New London, CT*, 1980.

York City Masonic Temple (1870). Although he obtained a commission for the Long Island Historical Society (1870), it was not built and he carried on with a series of relatively small projects such as Decker's Piano Store (1870), the Troy Masonic Temple (1871-72), the Bulkeley School (1871-73), St. George's German Chapel and School (1872), and alterations to the Children's Aid Society Building (1872). The politically and aesthetically contested work at the New York State Capitol (1875-85), although important, was not profitable, and similar comments could be made about his alterations and additions to the New York County ("Tweed") Courthouse (1876-81), a commission of comparable difficulty. After completion of the Dry Dock Savings Bank in 1875, his work dwindled to an unsuccessful entry in the second competition for the Long Island Historical Society (1877), assisting his son in the post-fire reconstruction of St. Peter's Church (1878-79), and an unsuccessful entry in the competition for the second New York Produce Exchange (1880). Soon, most of his time would be taken up with defending his work at the New York State Capitol, and the witty essays and poems he published in *The Crayon* and *Architect's and Mechanics Journal* during the mid-1850s and early 1860s gave way to explanatory letters and caustic essays in *The American Architect and Building News*. Eidlitz's setbacks in Albany were also thrown into relief by the successes of his contemporaries and his oldest son.

*The Nature and Function of Art*

Eidlitz published his major written work, *The Nature and Function of Art, More Especially of Architecture* near the end this troublesome period. Issued simultaneously in New York and London, it differed significantly from most contemporary architecture books. Closer to a treatise than a history, a guide to the styles, or a collection of designs, it was a summary of all that he learned from Europe and a meditation on the application of that knowledge in America. Its nearly 500 pages and

"too cosmic sweep"[5] made for tough going, and even his friend and biographer Montgomery Schuyler, Eidlitz's unacknowledged "literary man," claimed that he could or would not provide the "factitious attractiveness" that might have made the book more appealing.[6] An anonymous *New York Times* reviewer complained

> Mr. Eidlitz has no mercy. The subject is fascinating, and the cause in which the book is written is a great one. All the more reason why we should have well weighed and condensed statements in place of the interminable chapters of Mr. Eidlitz. He abuses his own powers and the patience of the reader... It is not necessary to discourse so learnedly on taste, matter, aesthetics, and art unless Mr. Eidlitz is really attempting a philosophy and not writing from the point of view of an architect. The title may give some cause for supposing that the former may have been his intention.[7] But we trust that the title is a misnomer, and that he really meant to give practical advice on architecture along with some commentary drawn from that and the sister arts.[8]

In her 1979 review of a reissue of the book, Biruta Erdmann, then the author of a recent dissertation on Eidlitz,[9] described it more positively.

> This book holds an important place in the history of American architectural theory and aesthetics, somewhere between Ralph Waldo Emerson's *Nature* (1836) and the writings of Louis H. Sullivan and Frank Lloyd Wright. Yet no American architectural

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[5] Montgomery Schuyler, *American Architecture and other Writings by Montgomery Schuyler*, William Jordy and Ralph Coe, eds., 2 vols. (Cambridge, MA: Belknap Press of Harvard University Press, 1961), William Jordy and Ralph Coe, "Introduction," vol. 1, p. 23.

[6] Montgomery Schuyler, "The Work of Leopold Eidlitz, III: The Capitol at Albany, New York," *Architectural Record*, vol. 24, no. 5 (November 1908), p. 378.

[7] The reviewer (and Eidlitz) may have been thinking of James Fergusson's *An Historical Inquiry into the True Principals of Beauty in Art more especially with Reference to Architecture* (London: Longmans, Brown, Green, and Longmans, 1849). Intended to be the first volume of a three-part work, Eidlitz may have come across it in Richard Upjohn's library; Judith S. Hull, "The 'School of Upjohn': Richard Upjohn's Office," *Journal of the Society of Architectural Historians*, vol. 41, no. 3 (September 1993), p. 306.

[8] "Art and Architecture," *New York Times*, 12 December 1881, p. 3.

[9] Biruta Erdmann, *Leopold Eidlitz's Architectural Theories and American Transcendentalism*, Thesis (Ph.D.), University of Wisconsin-Madison, 1977 (Ann Arbor, MI: UMI Dissertation Services, 1989).

> writer of comparable significance has been so long neglected as Eidlitz.[10]

Erdmann claimed that Eidlitz's ideas originated, for the most part, in America, and she wrote that his views, "especially in his discussions of the creative aspects of nature's processes," were largely "pervaded by the spirit of [Ralph Waldo] Emerson."

> The origins of Eidlitz's organic theories are to be found in 19th-century American transcendentalism. It was not Sullivan but Eidlitz who was the first practicing architect to celebrate nature as the source of and as the unending support for an organic expression of architecture.[11]

For her and many others since, the roots of Eidlitz's ideas seemed to lie in his adopted country. However, he never mentioned Emerson and his references are almost exclusively European authors. More importantly, they reveal him as a participant in a project undertaken by many of his German-speaking contemporaries, namely, reconciliation of the Idealist notions of philosophers such as Kant, Hegel, Schiller, and Schelling with the Realist concerns of architects such as Hübsch, Bötticher, Schinkel, and Semper. The goal was an architecture that that addressed the realm of spirit, art, and imagination while responding to the rapidly changing social and technological conditions particular to nineteenth-century German-speaking Europe.[12] Eidlitz's contribution to this project was a re-examination of the roots of the Idealist-Realist debates, what Plato referred to as "the old quarrel between philosophy and poetry."[13] For Eidlitz, the role of art was a crucial aspect of the debate, and he saw the possibility of extending that role into the realm of ethics because, in contrast to Plato, he believed that art possessed cognitive value. Such a position is usually associated with Aristotle, and

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[10] Biruta Erdmann, "Leopold Eidlitz, The Nature and Function of Art, More Especially of Architecture" (book review), *Journal of the Society of Architectural Historians*, vol. 38, no. 1 (March 1979), p. 65.

[11] Erdmann, "The Nature and Function of Art" (book review), p. 66.

[12] Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity* (Cambridge, UK and New York: Cambridge University Press, 1995), pp. 168-72.

[13] *Republic* X. 607b. References to the views of Plato and Aristotle are appear frequently in *The Nature and Function of Art*, and it is likely that Eidlitz became acquainted with them in Prague and Vienna, cities in which the Church had a substantial role in education.

it reached Eidlitz both in its classical form and in the work of the eighteenth-century philosopher Alexander Gottlieb Baumgarten, an important influence on Kant and his successors.

*Plato: The Danger of Art*

When discussing art, Plato usually refers to poetry and painting, and his views are often extreme.[14] In Book 3 of the *Republic*, he recommends removing poetry from society because it provides pleasure rather than moral improvement.[15] Claiming that the masses enjoy what is bad for them, he regards poetry dangerous in proportion to the pleasure it gives by appealing through an inferior part of the soul directly to the emotions, a faculty that should be controlled by reason.[16] In the *Ion*, for example, he describes the frightening physical changes that overtake the poet as he recites from Homer, and the similar response of the audience.[17] For Plato, when epic poetry and its subset, tragic drama, affect our emotions by causing us to weep at misfortune or respond to rhythmic cadences and melodies, they literally attack the health of our psyche, disable our reason, and make us unable to judge and reflect on the performances we witness. Poetry has the power to affect even the best of us because surrendering to emotion is so pleasurable.[18] Therefore, he tells us, the only defense is to avoid it altogether, in the same way that a lover removes himself from an affair that has gone bad.[19]

Perhaps even more distasteful to Plato than the emotional affect of poetry is its imitative aspect. In the same section of the *Republic*, he identifies two types of literature that future guardians of the state should study: diegsis (narration) in which the author speaks in his own voice, and mimesis (imitation)

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[14] This discussion of the views of Plato and Aristotle on art is based on *Classical Literary Criticism*, Penelope Murray and T. S. Dorsch, trans. (London: Penguin Books, 1965), Penelope Murray, "Introduction," xxiii-xxxvi.

[15] *Republic* III. 387b.

[16] *Republic* X. 606d.

[17] *Ion* 535d-e.

[18] *Republic* X. 605c-d.

[19] *Republic* X. 607e.

in which the author speaks in the voice of his characters.[20] Poetry and drama require mimesis because the presenter must imitate the person whose words he speaks. This kind of imitation involves character as well as voice and, because it involves appearance, gestures, and thoughts, the imitator nearly becomes the person imitated. In this way, the subjects of poetry and drama have a direct influence on those who encounter them because they affect the lives of the imitators and those who see the imitations.

Mimesis is also an aspect of painting, and in Book 10 of the *Republic*, Plato locates it at the lowest level of continuum that includes the ideal world of forms, the sensible world of particulars, and imitations of the sensible world.[21] He compares the painter to someone who carries a mirror and produces images of what he sees.[22] However, the images are only reflections of objects of the sensible world and are not as real as forms from the ideal world.[23] Because poets are also imitators, they also work at this third level of reality: they reflect nothing true and their imitations are just as worthless as paintings.

This view of mimesis as mere copying of appearance contrasts strongly with the intense personal identification and transformation that Plato says is inherent in poetry and drama in Book 3, and at the end of that Book, he recognizes the benefits of imitation and agrees to regulate its usage, despite its potential for harm.[24] In Book 10, however, mimesis is again condemned as trivial.[25] This is because imitation can be evaluated in two ways: on the quality of the object imitated, or on the quality of the imitation. For Plato, poetry fails in both because poets imitate the wrong kinds of behavior and

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[20] *Republic* III. 392c-394d.

[21] *Republic* X. 595c-597e.

[22] *Republic* X. 596d-e.

[23] *Republic* X. 597e, 600e.

[24] *Republic* III. 398a-b.

[25] *Republic* X. 602b.

corrupt the souls of their listeners.[26] They cannot even produce a true likeness of goodness because they do not know what is.[27]

Despite the harshness of these negative pronouncements, Plato still seems to be ambivalent about the role of poetry. In his last work, the *Laws*, he describes the poet as a divinely inspired but mindless imitator of the characters he portrays.[28] However, he agrees to sanction poetry and music, but only by writers and composers selected for virtuous behavior rather than ability.[29] The *Ion* compares the Muse-inspired poet to the gods but suggest that the poet is not in control of and, therefore, has no understanding of his art,[30] and in the *Phaedrus*, poetry is described as a form of divinely inspired madness.[31] However, in another section of the book, poets are rated sixth in value, below philosophers, kings, men of affairs, doctors, and seers.[32] Because poets were teachers in Plato's time, these charges imply that they are not worthy of their position because they are irrational and have no knowledge of the things they teach. Because the poet is unaware of what he is doing, he cannot judge his work, and the absence of cognition that he associates with poetry most arouses Plato's contempt.

*Aristotle: The Value of Art*

In contrast to Platos' overt epistemological, ontological, and ethical concerns, Aristotle claims to be interested in an investigation of poetry as an independent art, and in the *Poetics*, he concentrates on its formal aspects without reference to many of the issues that troubled Plato. Although he promises a discussion of poetry in general, he concentrates on tragic drama and defines it as

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[26] *Republic* X. 605c-608b.

[27] *Republic* X. 598d-600e.

[28] *Laws* IV. 719c.

[29] *Laws* II. 664-65.

[30] *Ion* 533e-534535a.

[31] *Phaedrus* 245a.

[32] *Phaedrus* 248d-e.

> the imitation of an action that is serious and also, as having magnitude, complete in itself; in language with pleasurable accessories, each kind brought in separately in the parts of the work; in a dramatic, not in a narrative form; with incidents arousing pity and fear, wherewith to accomplish its catharsis of such emotions.[33]

Aristotle classifies the different kinds of poetry and analyses their functions and purposes. Although he also uses the term mimesis, he provides no definition and applies it to sculpture, music, and dance as well as poetry, painting, and drama. However, mimesis is not only an aesthetic concern for Aristotle. He says this is because we enjoy looking at representations even if they are of things that would be unpleasant in real life, and we take pleasure in recognizing similarities between an image and the thing it represents. Perceiving similarities and working out resemblances is a positive human pleasure because it satisfies a natural desire to learn. Therefore, for Aristotle, pleasure obtained from the imitative arts is rooted in human nature and has cognitive value, a significant reversal of Plato's position.

The relationship between art and its object as expressed in similarity or resemblance is crucial for Aristotle, and in Chapter 25 of the *Poetics*, he refers to poets and painters as "imitators" and "makers of likenesses."[34] However, mimesis is not limited to physical copying because an artist can represent things as they are, as they seem to be, or should be. Thus, in addition to reproducing nature, (a task that may not even be possible), an artist can change or exceed it. This explains why, in Chapter 9 of the *Poetics*, Aristotle rejects Plato's notion that tragedy merely imitates reality, and he defines the poet's task as describing things that might happen rather than those that did. In this sense, facts are the concern of historians while the appearance of truth is the concern of poets. Fictions made by poets are subject to rules, however, and the events dramatized by a poet should be plausible in the sense that they could happen because they are either probable or necessary. Therefore, drama

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[33] *Poetics* 6, 1449b 25-29.

[34] *Poetics* 25, 1460b 7-9.

represents the probable rather than the actual, and in doing so, deepens our understanding of the world. Drama, and by extension, all art, is simultaneously real and unreal: real at the level of possibility and unreal at the level of actuality.

Aristotle also discusses the physical aspects of tragedy in his considerations of the effects of emotion, fear, and pity on the audience. We are said to feel pity for the unwarranted suffering of others and fear when the suffering is experienced by people "like ourselves."[35] Catharsis, however, is never fully explained in the *Poetics*, although he provides a reference to it in a discussion of music in the *Politics*:

> For feelings such as pity and fear, or again, enthusiasm, exist very strongly in some souls, and have more or less influence over all. Some persons fall into a religious frenzy, whom we see as a result of the sacred melodies – when they have used the melodies that excite the soul to mystic frenzy – restored as though they have found healing and purgation. Those who are influenced by pity or fear, and every emotional nature, must have a like experience, and others in so far as each is susceptible to such emotions, and all are in a manner purged and their souls lightened and delighted.[36]

Interpretations of catharsis range from the quasi-medical suggestion that it provides a release of pent-up emotions comparable to the effect of music, while others suggest that it is a purification of the emotions of pity and fear. Proponents of the latter theory cite Aristotle's belief that the emotions have an important role in our ethical lives and that it is important to achieve the correct level of response. In the *Nicomachean Ethics*, he explains that when we have too little fear we are cowards, while when we have too much, we are foolhardy, and this also applies to other emotions such as anger, desire, and pity. We must learn to feel our emotions in an appropriate way, that is, at the right time, in response to the right things, for the right reasons, and towards the right people.[37] In this

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[35] *Poetics* 13, 1453a 6.

[36] *Politics* VIII. 7, 1342a 2-16.

[37] *Nicomachean Ethics* II. 6, 1106b, 18-23.

sense, tragic drama trains the emotions and catharsis provides the mechanism to regulate the responses.

*Organism and Idea*

Shortly after the American Institute of Architects was founded in 1857, it voted to allow *The Crayon*, the first American journal devoted to serious consideration of painting, sculpture, and architecture, to publish its meeting minutes and announcements.[38] Eidlitz's first signed article, "Christian Architecture," which he read a month earlier at an Institute meeting appeared in the magazine in February 1858[39] and introduced the themes that were to concern him for the remainder of his literary and architectural life. In it, he claimed that Gothic structures are architecturally superior for Christian ritual relative to classical temples. This is because the seemingly boundless interiors of Gothic churches reflect the Christian desire to make the presence of God comprehensible to "the inner man"[40] while enclosed temple cellae can only express the "material presence of the Deity."[41]

The article opened with a concise, but opaque, definition:

> Architecture in the abstract is the art of representing and expressing in the *organism* of a structure, the *idea* which has given rise to its erection.[42]

By italicizing the words "organism" and "idea," Eidlitz alerted his readers to the significance the words would have in his argument.

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[38] David Howard Dickason, *The Daring Young Men, The Story of the American Pre-Raphaelites* (New York: Benjamin Blom, Inc., 1953), pp. 33-70; Mary Norman Woods, *The "American Architect and Building News"* 1876-1907, Thesis (Ph.D.) Columbia University, 1983 (Ann Arbor, MI: UMI Dissertation Services, 1989), pp. 31-32; Roger B. Stein, *John Ruskin and Aesthetic Thought in America, 1840-1900* (Cambridge, MA: Harvard University Press, 1967), pp. 101-23.

[39] Leopold Eidlitz, "Christian Architecture," *The Crayon*, vol. 5 (February 1858), pp. 53-55.

[40] Eidlitz, "Christian Architecture," p. 53.

[41] Eidlitz, "Christian Architecture," p. 53.

[42] Eidlitz, "Christian Architecture," p. 53.

He continued by explaining that technical knowledge (he called it "the science of construction"), although a necessary and fundamental aspect of the education of an architect, is only "an important accessory" to the art of architecture in the same way that a painter's knowledge of anatomy, the details of vegetable and mineral forms, and the chemical properties of plants and paint are accessories to the art of painting.[43] Furthermore, despite their common origin, architecture and painting have fundamentally different modes of production and purposes.

> ...the painter faithfully imitates Nature, either in copying examples as she offers them, or in combining existing forms in such conjunctions as his imagination may suggest. The problem of the architect is to represent productions of the mind, arising from philosophic deductions, from moral and religious sentiments, from the promptings, the necessities, the superfluous luxuries of an artificial state of society – in forms entirely unprecedented in Nature, and yet true to her, the common mother of Art.[44]

The important point here is that architecture is a mental, rather than a purely imitative, activity. Furthermore, imitation of nature elevates painting and architecture to the status of art and provides the only way to judge them.

> Painting follows Nature by faithful imitation, architecture by the force of principles, based upon sound deduction of analogy. Nature constructs with a single view to the ultimate purpose, and expresses her constructions clearly in her forms. The measure in which Art succeeds in following this example, determines its degree of progress and perfection.[45]

Eidlitz's advocacy of imitation of nature as the basis of art seems wildly anachronistic to us now since, in architecture, the doctrine is usually associated with classicism, in general, and Vitruvianism specifically. However, this mode of thought persisted well into the nineteenth and twentieth centuries, far longer than previously admitted by practitioners or recognized by historians. Caroline Van Eck has called it "organicism" and defined it as "the metaphorical application to architecture of

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[43] Eidlitz, "Christian Architecture," p. 53.

[44] Eidlitz, "Christian Architecture," p. 53.

concepts originally reserved for living nature."[46] She saw it as "a strategy of invention" used to make and justify stylistic choices, and as "a strategy of interpretation" through which the meaning of architecture, especially that of the past, can be interpreted.[47]

Van Eck found the roots of organicism in ancient practices intended to create the illusion of life rather than perfect copies of it. In this way, the qualities of nature could be conferred on human production in the hope of transforming dead matter into living beings. Although such transformations would be incomplete and metaphorical at best, the tradition claims that it is desirable to copy nature's methods and to speak of art (and architecture) as if it were a part of her and her shared qualities of growth and unity.[48] She claimed to see two "varieties" of organicism, the first concerned with maintaining a close connection between art and nature by imitating her methods in construction or ornament, and a second concerned with unity based on the relationship of the part to the whole,[49] especially within the sense of purposive unity, the belief that "the works of God and nature are unified wholes, based on the regulative use of the concept of the whole."[50] Although he writes more frequently about the first, both of these views of organicism can be found in Eidlitz's work.

*Art and Architecture*

In good organic (and classical) fashion, *The Nature and Function of Art, More Especially of Architecture* is divided into three parts. The first and shortest, "The Present Condition of Architecture," is concerned with the inadequacy of "taste" as a measure of artistic quality and

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[45] Eidlitz, "Christian Architecture," p. 53.

[46] Caroline van Eck, *Organicism in nineteenth-century architecture: An inquiry into its theoretical and philosophical background* (Amsterdam: Architectura & Natura Press, 1994), p. 18.

[47] Van Eck, p. 19.

[48] Van Eck, p. 18.

[49] Van Eck, p. 20.

thoughts on the need for and possibility of developing a new style of architecture. The second part of the book, "Nature and the Function of Art," contains extended discussions of aesthetic, ethical, and scientific aspects of art. The last part, "Nature of Architecture," is the longest, and applies the conclusions of the previous sections to the practice of architecture and the education of architects.

By the time Eidlitz published the book, his thoughts had changed profoundly from his *Crayon* pronouncements. In the book's Preface, he continued to claim that art is a "re-creation" of nature because it is concerned with depiction. However, rather than concentrating on technical and purposive differences between the arts, he introduced another commonality.

> Art deals with human emotions. It depicts them and depends on them for sympathy. Our training in the language of art determines the degree of sympathy we accord it, yet the rudest and most uncultivated beings are measurably subject to its benign influence.[51]

This statement appeared on the first page of the Preface, and he went on to state

the artist must understand the idea that is the cause of the emotions depicted and the relationship of the idea to its audience;

the artist must be the master of the emotions depicted rather than the victim; and

the artist cannot rely on "taste," enthusiasm, or genius because the skillful and efficient creation of art requires technical training.

Attempting to apply these notions to architecture, he concluded somewhat less directly that

contemporary architecture neglected contemporary ideas and the cultivation of new ones;

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[50] Van Eck, p. 21.

[51] Eidlitz, *The Nature and Function of Art,* iii.

contemporary architecture neglected contemporary technical developments, relying instead on historical structural forms for "art expression"; and

the ability of contemporary architecture to determine its own forms ended at least three hundred years ago.

Eidlitz called architecture "a species of language," having previously compared it to a "dead tongue" and to poetry unsuited to the "abstract philosophical inquiry" of his age.[52] His comparisons seem intended to suggest that the antiquarian productions of contemporary architects should not and need not continue indefinitely when advances in other arts such as music, literature, painting, and sculpture demonstrated that the nineteenth century was "if not in advance, at least equal to that of any other known era in human history."[53] He also increased the ferocity of his earlier assertion that of all the arts, only architecture had remained silent since the thirteenth century when he wrote

> No! Not silent, for nothing done by man with premeditation fails to express something, and the monuments of the last four centuries express this: that Architecture has either ceased to speak of living ideas, or that modern architects do not comprehend the ideas of their times.[54]

In addition to a decline in artistic quality caused by an absence of expression of "living ideas," architecture had become increasingly estranged from technical side of the profession. Although the technical aspects of construction continued to advance, Eidlitz noted that many architects continued to build as they did in the past or were content with not building at all.

> Whenever he resorts to modern engineering, he abandons his art as inapplicable; when he attempts the pursuit of Architecture as a fine art, he evades scrupulously all modern construction.[55]

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[52] Eidlitz, *The Nature and Function of Art,* vii.

[53] Eidlitz, *The Nature and Function of Art,* vii.

[54] Eidlitz, *The Nature and Function of Art,* vii.

[55] Eidlitz, *The Nature and Function of Art,* viii.

With these difficult, but apparently manageable, problems in mind, he ended with a terse proclamation of his intentions:

> It is the object of this volume to inquire into the cause of the present conditions of Architecture; to define the nature and function of Art in general, and of Architecture in particular, in order to show how Architecture may again become a living and creative art.[56]

Eidlitz followed the Preface with an Introduction that clarified some of these points, and to deflect the misapprehension that his analysis and recommendations were based on personal preferences rather than unassailably rational conclusions. Therefore, he began with an affirmation of the value of science, especially its ability to prepare the mind to receive truth and, through progress, avoid error. He approvingly described the distance that science maintained from the public, functioning only as a teacher, neither requesting nor receiving confirmation, because its convictions transcended personal opinion. Art, in comparison, possessed no laws for its methods and applications nor was there any agreement on the principles upon which such laws could be based. In contrast to science, art possessed only an incomplete chronology that should not be confused with a complete philosophy.

This lack of rationality was especially noticeable for artists, architects, and their critics (Eidlitz excepted musicians and their critics) who were divided into numerous factions, each sure of their own opinions, but without knowledge of the underlying principles of art. This situation made public opinion excessively important and gave it "a baleful influence on the progress of art,"[57] an influence that was manifested in common sense, taste, and

> the mental faculties employed in the popular judgment of all phenomena, natural and artificial. Taste is the judge of art work, and common sense of all else... The peculiarity of the common sense of the nineteenth century is the firm belief that it can perform its work quite well, in fact, better and quicker without the accumulated results of the common sense of the past. This is not only very singular, but is pregnant with untold danger to truth.

[56] Eidlitz, *The Nature and Function of Art,* viii.

[57] Eidlitz, *The Nature and Function of Art*, xviii.

> Taste is supposed to be the capability to experience a pleasurable emotion in the presence of a work of art. This capability is claimed by every one, and is freely made the test of the merit of art work.[58]

Eidlitz provided a "Definition of Architecture" near the end of the book that attempted to remove its subject from the realm of taste.

> If a structure is erected to accommodate a number of persons who congregate in it, not for the purpose of gratifying physical needs only, but in obedience to an idea, such a structure is called a monument of this idea.[59]

The requirement for "obedience to an idea" seems to recall Ruskinian requirements for "certain characters venerable or beautiful, but otherwise unnecessary;"[60] however, because ideas are not physical, this notion seems more closely allied with Schopenhauer's location of ideas between the phenomenal realm of the physical world and the underlying reality of the will. While we are usually aware of the sensuous qualities of things and their relation to each other in numerous ways, aesthetic perception provides insight into the permanent and essential forms of the world that lie outside of physical relationships and are related to the objects of the ordinary consciousness in the way that archetypes are related to copies. Schopenhauer referred to such Platonic forms as "ideas," and for him, they represent the true content of art. In this sense, the artist has the ability to perceive ideas, separate them from their worldly context, and display them in works that enable others to share the artist's personal vision.[61]

Eidlitz, in comparison, was more considerably more concerned with the form assigned to an idea by an artist, and he defined "idea" as "the observed relation of matter."[62] He began to explain this

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[58] Eidlitz, *The Nature and Function of Art*, xix.

[59] Eidlitz, *The Nature and Function of Art,* p. 211.

[60] John Ruskin, *The Seven Lamps of Architecture* (New York: John Wiley & Sons, 1885), pp. 7-8.

[61] Israel Knox, *The Aesthetic Theories of Kant, Hegel, and Schopenhauer* (New York: 1958: The Humanities Press), pp. 132-38.

[62] Eidlitz, *The Nature and Function of Art,* p. 228.

enigmatic statement by telling us, "We never know more than we have perceived with our senses; hence it may be said that all ideas are the result of sensuous perception."[63] He also tells us "A sensuous perception of isolated matter conveys no idea; a comparison is necessary with other matter observed at some time" and "The motion of matter constitutes an idea; but motion refers to a material point outside of the matter observed."[64] The gist of these statements seems to be that an idea imparts some kind of knowledge, is perceived through external bodily sensation rather than inner consciousness, and is in some way related to external physical change or movement.

*The Role of Sensate Knowledge*

Eidlitz wrote, "Man has two sources from which he derives knowledge, the heart and the brain," and he reminded us that the circulation of the blood is subject to the effect of emotion.[65] Here, it seems as if he is not speaking metaphorically but is actually affirming the validity of ancient Greek medical thought in which the heart was considered by Aristotle to be the seat of emotion because it was warm and moving and the brain the seat of knowledge by Plato because it was cool and still.[66] There is considerably more to the Eidlitz's statement, however, and the point of such an apparently unscientific position was revealed when he described it as

> the figurative, the poetical way of expressing the distinction made by Baumgarten between conceptive knowledge [begreifendes Erkennen] – the clear understanding which follows logical demonstration – and confused knowledge [verworrene Vorstelungen] – the result of sensuous perception which follows the examination of the works of art and nature.[67]

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[63] Eidlitz, *The Nature and Function of Art,* p. 228.

[64] Eidlitz, *The Nature and Function of Art,* pp. 228-29.

[65] Eidlitz, *The Nature and Function of Art,* p. 232.

66 H. M. Gardiner, Ruth Clark Metcalf and John G. Beebe-Center, *Feeling and Emotion, A History of Theories* (Westport, CT: Greenwood Press, Publisher, 1970), pp. 22, 53-57.

[67] Eidlitz, *The Nature and Function of Art,* p. 232. The German terms do not appear in Eidlitz's text.

The reference to the writing of Alexander Gottlieb Baumgarten (1714–62)[68] may be from the *Metaphysica*,[69] a work he wrote in Latin 1739. Eidlitz could have read a German translation that was available as early as 1766[70] and used by Kant as a textbook in his own metaphysics courses or he might have read *Anfangsgründe aller schöen Wissenschaften*, a treatise based on Baumgartens's lectures published 1748-50 by one of his students.[71] Baumgarten hoped to give sensuous perception an epistemological claim to a certain kind of knowledge, thereby raising the art and nature from the low level they had been consigned by traditional metaphysics. This was a difficult project in the face of Descartes' mathematical construction of the world and his rejection of aesthetic cognition on the grounds of subjectivity as well as increasing Protestant Pietist antagonism to the role of the senses.

Baumgarten's ideas were largely based on those of Gottfried Wilhelm Leibniz (1646-1716), who had posited a well-ordered world, reflective of its creation by God, which could be understood through a hierarchy of cognitive levels ranging from unconscious perception to full comprehension. The first distinction among these levels, obscurity and clarity, was based on the level of an observer's consciousness of an object. Leibniz gave the noise of an ocean as an example of obscure cognition because we cannot distinguish the sound of an individual wave from the totality of the overall sound. Clear cognition, the next level, encompassed two realms: confused and distinct. Cognition is clear and confused if an object has too many sensible features to comprehend while cognition is clear and distinct if we can understand all of its features to produce a complete definition of the object. He defined additional realms within clear cognition, the highest of which is reserved for God because He alone knows the totality of an object.

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[68] This discussion of Baumgarten and Leibniz is based on Kai Hammermeister, *The German Aesthetic Tradition* (Cambridge, UK: Cambridge University Press, 2002), pp. 3-20.

[69] Alexander Gottlieb Baumgarten, *Metaphysica* (Halle, Magdeburgicae: Verlegts Carl Hermann Hemmerde, 1739).

[70] Baumgarten, *Metaphysik* (Halle im Magdeburgishen: Verlegts Carl Hermann Hemmerde, 1766).

Leibniz located objects of nature and art in the realm of clear and confused cognition because we can be aware of an object's qualities but unable to comprehend all of them. Although judgments of such objects could be complex, they remained unjustifiable emotional responses because they involved what Leibniz called a "je ne sais quoi" response, a subjective and personal judgment analogous to taste that ultimately determined our response. In this sense, flawed human cognition was a necessary aspect of beauty because we cannot move from clear and confused cognition to clear and distinct cognition for objects of nature and art. God, on the other hand, has no need for beauty because His cognition is instantaneous and independent of the senses.

Baumgarten modified Leibniz's conclusions by showing that clear and confused cognition were not negative and personal and that a science based on this unique mode of perception was necessary to bridge the cap between obscure and distinct cognition, thereby identifying beauty with sensible perfection that is different from, but no less valid than, the rational perfection of logic.[72] He was the first to use the term "aesthetics" to signify a new science that was initially intended to strengthen rationalist metaphysics by including neglected elements that would reinforce rational cognition.[73] The term itself came from the Greek word aisthanomai (perception), and he used it to refer to the realm of immediate and particular sensory cognition as opposed to general, abstract forms of conceptual or intellectual cognition.[74] In the first paragraph of *Aesthetica*, his incomplete two-volume work on the subject published in 1750 and 1758, Baumgarten wrote

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[71] Georg Friedrich Meier, *Georg Friedrich Meiers öffentlichen Lehrers der Weltweisheit zu Halle Anfangsgründe aller schönen Wissenschaften*, 3 vols. (Halle im Magdeburgischen: Verlegts Carl Hermann Hemmerde, 1748-50).

[72] Howard Caygill, "Alexander Gottlieb Baumgarten" in *Grove Dictionary of Art*, Jane Turner, ed., 34 vols. (London: Macmillan Publishers Limited; New York: Grove's Dictionaries, Inc., 1996), vol. 3, pp. 411-12.

[73] Baumgarten, *Meditationes Philisophicae de Nonnullis ad Poema Pertinentibus* (Halle, Magdeburgicae: Verlegts Carl Hermann Hemmerde, 1735), § 116.

[74] Stephen Halliwell, *The Aesthetics of Mimesis: Ancient Texts and Modern Problems* (Princeton, NJ and Oxford, UK: Princeton University Press, 2002), p. 9.

> Aesthetics (as the theory of the liberal arts, as inferior cognition, as the art of beautiful thinking) is the science of sensual cognition.[75]

It is from these notions that Eidlitz finally revealed what he had in mind.

> Now art, as we have seen... deals exclusively with emotions, and contemplates them arrested at a given point in their development. The idea, as it were, serves in this case as the hypothesis, the act as an argument, and the emotion as the conclusion.[76]

In this sense, art consists of a static, after-the-fact, re-presentation of an "idea." An "idea," in turn, is a perception that originates in confused sensate knowledge that involves matter in motion, while an emotion is the physical response to such knowledge. This construct is important to Eidlitz because works of art or nature present the condition of an object at the conclusion of its development and appear to us instantly "in the form of an emotion which claims our sympathy, and spares us the mental effort which accompanies argument."[77] The trade-off is that while we arrive at a quick conclusion (an emotion); we remain incompletely informed of the hypothesis (the idea). Nevertheless, the bargain is worth it for Eidlitz, because art and nature are beneficial for society even if they are perceived through "confused" knowledge. Therefore, frequent exposure to art and nature, he calls them "the ideas of life," should be part of human activity because the surroundings and the objects that we come in contact with are an expression of the morality inherent in art.

*Big Wages*

The opening chapter of *Big Wages and How to Earn Them*, a book written by Eidlitz under the pseudonym of "A Foreman,"[78] contains a carefully considered self-portrait of its author.

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[75] Quoted in Halliwell, p. 7.

[76] Eidlitz, *The Nature and Function of Art,* p. 232.

[77] Eidlitz, *The Nature and Function of Art,* p. 232.

[78] Montgomery Schuyler made the attribution in "The Work of Leopold Eidlitz, III: The Capitol at Albany, New York," *Architectural Record*, vol. 24, no. 5 (November 1908), p. 378. None of the other reviews that I found mentioned Eidlitz as the author. Schuyler also claimed the book was "of much less pretension" and "had

I am a laborer,[79] and propose to say a word to my fellow-laborers on labor associations, on wages, and kindred matters.

When I say I am a laborer I do not mean that I carry a hod (although I must confess that from a child I have admired and envied the hod-carrier for his sturdiness and endurance), but simply that I am in the building business, in which I believe I have worked harder than any hod-carrier for the last forty years.[80]

I have worked harder, because the load I have carried has been exceptionally heavy, and also because I have worked steadily and put in a great deal of overtime. With it all I am continually on strike; that is, in a quite sort of way. I will not work for less than the highest market rates, and if any one offers me less I decline the engagement at once. For you can see that I can do the best of work and never loaf; so when a man wants to engage me at low wages, I feel somewhat aggrieved, but I am careful not to show temper, because I cannot well speak in praise of my ability and industry, nor will I disparage my fellow workmen; and as I am convinced that a fair day's work at fair wages is the cheapest in the end for the employer, and as I cannot explain this without saying (or intimating, which amounts to the same thing) that I am a clever workman and that others are not, it generally ends by my expressing a regret that I am not in a condition to accept the offer by reason of prior engagements. Fortunately, I have always been able to say this with truth. Besides, I do not like to avow that that I will *not* work below the highest wages, for though I have never done it, I reserve the right to do it in case of necessity, as I would rather work for less pay than not work at all. I have a family to support, and do not intend to cut off their supplies or my little savings by being idle; but, as I said before, I have never been placed in that position, and trust I never shall be, because in this battle for life it is quite enough that I try to work a little more intelligently and more steadily than my fellow-workman; I certainly will not compete with them in price, but rather endeavor to keep up that end of the lever as much as I can, and get a little more than common; so I have done most of the time.

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rather more vogue" than Eidlitz's major work, *The Nature and Function of Art, More Especially of Architecture*, published six years earlier.

[79] Eidlitz had been a member of the General Society of Mechanics and Tradesman of the City of New York for 43 years when he died in 1908; his brother Marc was also a member. "Eidlitz," *New York Times*, 24 March 1908, p. 7. The Society was founded in 1785 as a charitable organization to provide cultural, educational, and social services to the families of skilled artisans. Its Apprentice's Library, established in 1820, is the second-oldest library in New York City.

[80] The remark is consistent with a short biographical note published several years earlier claiming that Eidlitz became "a practicing architect and resident of the city of New York" in 1844; *The Public Service of the State of New York. Historical, Statistical, Descriptive, and Biographical. Illustrated with Views and Portraits*, Paul A. Chadbourne, editor-in-chief, Walter Burritt Moore, associate ed. (Boston: James R. Osgood and Company, 1882), vol. 2, p. 77.

> That a man of my notions cannot consistently join a Trade Union must be apparent from what I have said. I do not want to loose my independence, of which I am perhaps foolishly proud, and which has done me good service, for what with good wages and steady work I realize from fifty to a hundred per cent. more money at the end of the year than most of my fellow-workmen. At the same time, I regret my position in this regard, for you see I am not a "scab" (a man who does not know his trade or underworks his fellows), and would like to be in full communion with all my fellow-craftsmen.[81]

The persona adopted by Eidlitz presented him as an example for others; if not as a laborer, then certainly as an architect.[82] This view of the author as a modest, self-reliant, self-assured, empathetic, family-oriented, working man whose fortunes were dependent on knowledge, intelligence, individuality, and willingness to take on hard work can be seen as an extension of the critique of architecture and architectural education that he made six years earlier in *The Nature and Function of Art*. That book reflected his contention that "good taste" could not provide sufficient insight into the repertoire of historical forms to allow architecture to be extracted from them by inspiration or superficial invention. It also claimed that fashionably minded clients compromised and destroyed architecture as a serious discipline by subjecting it to their whims suggested that schools should emphasize structure and function as the basis of an architecture that was reflective of "reason and "law."[83]

*Big Wages* was equally direct in its views and Eidlitz laid out his basic positions in a chapter appropriately titled "How the World Lives." His approach to economics was no less pragmatic than his view of architecture, and in a few short sentences, he attempted to dismiss several thousand years of speculation on both topics

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[81] *Big Wages*, pp. 1-3.

[82] Biruta Erdmann, *Leopold Eidlitz's Architectural Theories and American Transcendentalism*, Thesis (PhD), University of Wisconsin-Madison, 1977 (Ann Arbor, MI: UMI Dissertation Services, 1989), p. 116.

[83] Eidlitz, *The Nature and Function of Art*, pp. 49-50, 200f, 357, 385f, 399f.

> To live physically, we need food, clothing, and shelter. I have no knowledge how primitive man provided these for himself. Probably his clothing and shelter did not amount to much, and his whole time was spent finding food.[84]

Noting that the development of agriculture and industry had substantially reduced the time required to obtain these essentials, he observed that if a person's desires were limited, they could be gratified with little impact on leisure time. He also noted that most work longer hours than were necessary to meet basic needs and concluded

> our desires are not identical with our needs. When the latter are gratified we always want something more. We want physical comforts, we want mental culture, we want things which gratify our palate, tickle our fancy; we want things which are totally indifferent or displeasing to us, but which we desire because they are desired by others; and finally, we desire things which do us positive injury.[85]

He ascribed the apparent illogicality of the situation to nature: we possess a craving for *more* to protect us against laziness and a propensity toward laziness to protect us from overwork. The balance was altered, however, when the quantity of labor required to support mere existence was reduced and the kind of labor required by occupations such as "the large number of persons [who] have been set aside to do our thinking and to instruct our children in public schools"[86] called traditional notions of work into question. These notions were also affected by the increasing use of machinery, a trend that Eidlitz claimed was often feared by those who would benefit from it most and led to attempts to limit the use of new technology and restrict new employment, attempts that were bound to fail because of the self-regulating relationship between production and supply. Eidlitz summarized the result as follows:

> The fact remains that our needs are few and easily supplied, our desires many, continually on the increase, and the gratification of

[84] Eidlitz, *Big Wages*, p. 21.

[85] Eidlitz, *Big Wages*, p. 22.

[86] Eidlitz, *Big Wages*, pp. 22-23.

> them always beyond our means. Those who succumb to artificial wants are left behind in the race of life. They provided for yesterday (that is, debt). Those who barely keep pace with their wants live from hand to mouth; they provide for today. Those who get the better of them provide for tomorrow.[87]

"Providing for tomorrow" in this sense meant that a wise worker was obliged to store some of his efforts for future use, perhaps by doing six days of work in five and using the time made available for leisure or to purchase someone else's labor. Stored labor and capital were said to be equivalent and possession of either was necessary to avoid the unnecessarily high prices that accompanied purchase of goods in small quantities or at inopportune times. Stored labor or capital could also be lent to others, although the situation that was rare among workers because of legal and financial complexities. However, investing capital in the banking and life insurance systems provided similar benefits because such organizations lent money for construction, thereby providing housing and employment for workers.

Eidlitz also pointed out that in contrast to labor, capital could not be stored for long periods of time: it must be converted into labor or its products because only labor could create commodities for consumption. He called capital and labor "the cause and effect of each other" and described their relationship as an "endless chain" that would maintain society "in life and comfort" if kept in motion.[88] Thus, when capital could not be invested (i.e., converted into labor) during strikes, employment, income, and production would decline and prices would rise. For this reason, Eidlitz was not sympathetic to charges that capital always attempted to lower wages and raise prices. By his logic, even if the charge were true, prices would necessarily fall in response to reduced wages resulting from the competition of capital against itself. While acknowledging that capital always attempted to buy cheap and sell high, he pointed to then-current interest rates of three to five per cent

[87] Eidlitz, *Big Wages*, pp. 23-24.

[88] Eidlitz, *Big Wages*, p. 27.

said to be indicative of the low "quantitative expression of current oppression"[89] of labor and responsible for keeping competition high.

After establishing his positions on what most would consider to be the conventional domain of labor, Eidlitz turned his attention to "the large number of persons [who] have been set aside to do our thinking"[90] he mentioned earlier.

> In the process of producing commodities, the building of houses, railroads, and ships, the construction of machinery, and the like, the most important function is performed by professional men who, by their technical education, are fitted to invent, design, and direct the work; such as civil and naval architects, chemists, shipmasters and their subordinate officers, etc., etc. All of these perform labor of the highest order, which is paid by salaries or commissions.[91]

Because their wages, like those of "crude and skilled labor" fluctuated, Eidlitz called such workers "laborers" although he acknowledged that his use of the term was unusual. While a laborer's value might be based on physical strength or knowledge obtained on the job, Eidlitz claimed that that the importance of "professional men" (he referred to them as "the most important element of profit in an investment)"[92] was based on technical skill obtained through formal education.

> It insures economy and efficiency in the work; it affects the cost of maintenance, wear and tear, and running expenses in a railroad; comfort, light, air, and ventilation in a dwelling; durability, speed, and consumption of fuel in a vessel, to say nothing of security to life and limb of the occupants and passengers, and the safety of freight, etc. To secure the best professional skill even at a high price, means to reduce cost of construction to a minimum, and to raise efficiency and income to a maximum.[93]

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[89] Eidlitz, *Big Wages*, p. 27.

[90] Eidlitz, *Big Wages*, p. 23.

[91] Eidlitz, *Big Wages*, p. 27.

[92] Eidlitz, *Big Wages*, p. 28.

[93] Eidlitz, *Big Wages*, p. 28.

Although *Big Wages* can be seen as an anti-union diatribe that was likely influenced by the experiences of his brother Marc, this passage contains the core message of the book, and it is consistent with one of the main ideas expressed in *The Nature and Function Art*, namely, that the role of the architect is social as well as artistic and technical, and that such a position can only be acquired through rigorous training. This view of the architect as a professional rather than a tradesman had become an issue of ever-increasing personal and professional concern to Eidlitz ever since his failed attempt to convince the American Institute of Architects to establish a polytechnical school for the training of architects.

## 10. FINAL PROJECTS: 1877-1903

After the problems at the New York State Capitol and "Tweed" Courthouse, the number of new commissions received by Leopold Eidlitz decreased sharply and he increasingly relied on competitions and old clients. Perhaps assuming that private work was closed to him, he also sought publicly-funded projects and used his knowledge of governmental procedures and contacts to obtain consulting work. It is also likely that he finally decided to retire from practice altogether. In 1903, he was asked if was interested in completing the tower and Narthex of Christ Protestant Episcopal Church in St. Louis, a building he had designed in 1859. He agreed to take on the job, if selected, but stated that he no longer had the original drawings and could not estimate the cost of the work.[1]

### *After the Capitol*

Brooks and Erdmann claim that Eidlitz was responsible for additions to the New York City Union League Club made in 1880, but I have not been able to confirm this.[2] Intriguing and incomplete references to "Mr. Eidlitz, the architect" and "another architect, Mr. Prague" appeared in an article on the history of American yachting published in 1882.[3] Both of Eidlitz's sons were active in yacht racing, and "Mr. Eidlitz," who may have been Cyrus, was given credit for the interior of the *Oriva*, a cutter built for Commander C. Smith Lee of the Seawanhaka Corinthian Yacht Club, while "Mr. Prague," a possible pseudonym for Leopold, worked on the interior of the *Montauk*, a

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[1] Eugene L. Rodgers, *and then A CATHEDRAL, A History of Christ Church Cathedral, St. Louis, Missouri* (St. Louis, MO: Christ Church Cathedral, 1970), pp. 22-23.

[2] Brooks, p. 35; Erdmann, p. 161. At the time, the Club was located in the former house of Leonard J. Jerome (26th Street and Madison Avenue, Thomas R. Jackson, 1859; demolished). It was rebuilt after a fire that occurred on 25 April 1875. In 1881, the Club moved to a purpose-built facility located at Fifth Avenue and 39th Street. It was designed by the Boston firm of Peabody & Stearns, the winner of an invited competition. Stern *et al*, *New York 1880*, pp. 204-13.

[3] S. G. W. Benjamin, "The Evolution of the American Yacht," *The Century*, vol. 24, no. 3 (July 1882), pp. 365-66.

schooner built for Samuel R. Platt of the New York Yacht Club.[4] Aside from that work, the Harris Building (1884, 165 State Street, New Haven, CT),[5] and a chapel for the 86th Street Presbyterian Church (1884, New York City), there is little else to show for the decade.

*Long Island Historical Society and Produce Exchange Competitions*

A limited competition for a new building for the Long Island Historical Society was held in 1877. The new structure was to be located at the corner of Clinton and Pierrepont, next to the Church of the Holy Trinity and on the site intended for an unbuilt building designed for the Society by Eidlitz ca. 1870-71. J. C. Cady, Richard M. Upjohn, Lawrence B. Valk,[6] and a "Messr. Moore" had been asked to provide designs for a $70-90,000 building.[7] George B. Post, Alexander Jackson Davis, Richard Michell Upjohn, and several other architects from New York, Philadelphia, and Boston were subsequently invited to participate in the competition, and Eidlitz was added to the group by a special vote of the competition committee despite his initial lack of interest in the building's program.

*The American Architect and Building News* noted the discrepancy between the ordinariness of the project and the need for the "irregular closed competition." Describing the proposed building as "a small meeting hall, a library, and a museum with the necessary ante-rooms, [such as] are to be provided on a 70 x 90 feet plat of ground," the author chastened the participants for their

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[4] "Oriva," *Forrest and Stream*, vol. 19, no. 8 (17 August 1882), p. 56; "Launch of the Montauk," *New York Times*, 25 April 1882, p. 8. Both owners were financiers and yacht club officers.

[5] The Harris Building was a $75,000 four-story Romanesque-revival retail and office structure built for Jonathan Newton Harris, a banker and politician for whom Eidlitz had previously built a residence in New London. The U-shaped "brick block" was 125 long by 87 feet deep. "Building Intelligence," *Manufacturer and Builder*, vol. 16, no. 9 (September 1884), p. 214. The structure is extant although substantially altered at the ground floor and interior.

[6] Valk appeared in Brooklyn and New York City directories from 1859 through 1900 and was joined in practice by his son, Arthur; Francis, p. 77. His work in Brooklyn included the First Baptist Church (1877-78), a chapel for St. Mark's Protestant Episcopal Church (ca. 1887), the Sixth Avenue Baptist Church (1880), and as a four-unit row of houses (1887); Stern *et al*, *New York 1880*, pp. 875-77, 887, 935, 923.

[7] "Long Island Historical Society," *New York Times*, 2 January 1870, p. 6; "Brooklyn," *New York Times*, 13 May 1871, p. 8; "The New Building of the Historical Society," p. 4.

involvement and concluded that "one step further, and competitions for a row of brown-stone fronts or possibly a tenement house may be met," a situation that he believed would reduce the significance of competitions and drive down architects' fees. The warning reflected the lingering consequences of the financial panic of 1873 in the architectural community, as the article noted that the competition committee was "clamorously besieged by a dozen or more aspirants, each anxious to submit his design on speculation."[8] The *Brooklyn Eagle* noted that almost every style of architecture was represented among the entries including, Florentine, Gothic, and Queen Anne.[9] Post's "modern Greecian [*sic*]" design won; the building (1878-81, 128 Pierrepont Street, Brooklyn) is extant.[10]

Eidlitz competition entry for a new Produce Exchange (2 Broadway, 1881-84; demolished 1957), a building intended to replace one that he had designed more than twenty years earlier, was equally unsuccessful. The earlier building was designed to support a spot market system in which commodity brokers based their transactions on a review of samples. However, a shift to a pit system replaced such reviews with previously inspected and graded commodities. This change, and the increased size of the commodity market, made the old building obsolete and led to demands for relocation and a larger facility.

A limited and paid competition for a new building was announced in October 1880.[11] Ten submissions were solicited and seven more were made voluntarily. The invited competitors included Eidlitz, Frederick Clarke Withers, Richard Michell Upjohn, Charles B. Atwood, Edward T. Mix, and George B. Post; each was to receive $1,000. Four designs were selected for public

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[8] W., "Correspondence," *The American Architect and Building News*, vol. 2 (15 December 1877), p. 402.

[9] Work Begun," *Brooklyn Eagle*, 25 October 1878, p. 4.

[10] Landau, P. B. Wight, p. 28; Landau, George B. Post, Architect, p. 36; Stern *et al*, *New York 1880*, p. 866. *The American Architect and Building News* noted that Post was forced to make several changes to his design to satisfy the Building Committee including a demand for "a symmetrical structure," W. "Correspondence," *The American Architect and Building News*, vol. 3 (20 April 1878), p. 138.

[11] Morton Rothstein, "New York Produce Exchange" in *The Encyclopedia of New York City*, p. 840.

exhibition with the winner to be chosen by a vote of the members of the Exchange.[12] Neither *The American Architect and Building News* nor Montgomery Schuyler cared for any of the submissions. Because all were presented under pseudonyms, *The American Architect and Building News* claimed that aside from recognizable entries from Withers, Upjohn, Eidlitz, and Post, "It is not easy to find out whom else they did include, as the committee in charge has made a secret of it, for the sake, it is said, of preventing a 'combination' among the competitors."[13] Post won again; Mix was the runner-up.

*Eighty-Fourth Street Presbyterian Church*

Schuyler did not mention the brownstone chapel built for the Park Presbyterian Church (Amsterdam Avenue and 86th Street, 1884), or its predecessor, a wood chapel built more than thirty years earlier in his posthumous appreciation of Eidlitz. Both buildings were designed by him and situated close to his house on the upper West Side of Manhattan. They served a congregation, initially called the "Eighty-fourth Street Church," whose first services were held in a private residence in December 1852. Design and construction of the wood chapel proceeded quickly. Property was purchased at 84th Street and Bloomingdale Road (now West End Avenue) in April 1853, a building committee was appointed in July, and the dedication took place in December.[14] Nothing is known of the building's appearance, and a newspaper article written ten years later noted only it cost $6,000 and was situated in a grove of trees.[15] By the mid-1870s, the area was regraded to accommodate new streets and avenues, and the chapel ended up on sunken plot that could only be reached by a wood staircase. Because the village of Bloomingdale in

[12] Montgomery Schuyler, "The New Produce Exchange," *New York World*, 1 March 1881, p. 4.

[13] Landau and Condit, p. 118; "The New York Produce Exchange Competition," *The American Architect and Building News*, vol. 9 (12 March 1881), pp. 123-24.

[14] "Moving into a New Chapel, *New York Times*, 10 November 1884, p. 8. For a history of the congregation, see Anson Phelps Atterbury, *A Story of Life, A Record of the Beginning and Growth of the Park Presbyterian Church of New York City* (New York and London: G. P. Putnam's Sons, 1920).

[15] New York *Observer*, 15 July 1854, quoted in Atterbury, pp. 8-9.

which it was located had been effectively destroyed by the imposition of the new street system, church membership declined precipitously.[16] A series of part-time ministers compounded these problems, however, interest and growth in the congregation resumed in 1879 after the arrival of Anson Phelps Atterbury (1855-1931), an ambitious, dedicated, and socially well-connected member of the Phelps-Dodge mining family who recognized the importance of the recently completed Columbus Avenue elevated railway for the future growth of the area.[17] By that time, the shortcomings of the former "country church" were obvious, and in 1882, $70,000 was raised to purchase four adjacent lots located at the intersection of what is now 86th Street and Tenth Avenue. On 19 November 1884, a procession bearing the congregation's organ moved from the old wood building to the new 85-foot by 85-foot brownstone-faced chapel that faced south on 86th Street.[18]

Thoroughly Romanesque and luxuriously ornamented with foliate carving, its main façade featured a large Serliana above a band of square-headed windows and a stairtower lit by round-headed windows. Tall pyramidal roofs capped the main block and tower. The *New York Times* noted that the interior walls were colored in terra cotta and bronze.[19] A cherry-trimmed Sunday school occupied the ground floor while worshipers attended services on the second floor and sat in oak pews; the third floor was unfinished. As directed by the congregation, Eidlitz left the corner of the site open for a larger structure, and four and a half years later, cornerstone laying ceremonies were held for a new $100,000 building (1889-90) designed by Henry F. Kilburn[20] that

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[16] Atterbury, pp. 9-14.

[17] "Rev. Dr. Atterbury, Noted Pastor, Dies," *New York Times*, 5 January 1931, p. 19; Christopher Gray, "An 1890 West Side Church Fighting Landmark Status," *New York Times*, 10 January 1988, p. R11.

[18] Atterbury, pp. 25, 27.

[19] "Moving Into a New Chapel," p. 8. The Eidlitz-designed chapel is in poor condition and retains few of its original finishes except for the staircase balustrade and roof trusses. It has been divided into small rooms at the first and second floor; the attic remains open.

[20] Atterbury, pp. 25, 39. Kilburn (1844-1905) was born and trained in Ashfield, MA, the birthplace of Eidlitz's father-in-law. After establishing a practice in Northampton, he moved to New York City where he maintained an office from 1868 to 1905. Stern *et al*, *New York 1880*, pp. 770, 772; *King's Handbook of*

emulated nearly all of the earlier building's exterior details. The congregational history gave no explanation for the change of architect, but Eidlitz had taken on no new church commissions during the intervening period except for St. George's Memorial House, a project that was in construction at the same time as the chapel.

In 1888, Eidlitz completed a pair of adjoining brownstone row houses ornamented with vigorous Romanesque detailing (64-66 East 80th Street). They were occupied by Isidor Kaufman, a clothing manufacturer, and Sigmund Oppenheimer, who was in the meatpacking business, respectively. The exterior of the Kaufman house survives relatively intact except for the loss of its front stoop. It is a three-story structure with raised basement and is most notable for its two-story projecting bay, arched windows with foliated capitals, and pedimented cornice. The Oppenheimer house was enlarged and extensively altered in 1956 and is presently concealed by scaffolding.[21]

Schuyler called Eidlitz's commissions of the mid-eighties and early nineties "very minor, and they were of so bald an austerity that they might be challenged as not 'architecture' at all."[22] These projects included work at mental asylums on Ward's Island and in Central Islip, Long Island, and alterations to the Cooper Union Building in New York City. He also quoted Ralph Waldo Emerson's description of the elderly Goethe to describe Eidlitz's demeanor at the time ("He had an extreme impatience of conjecture and of rhetoric."[23]), but did not say whether misanthropy or lack of work was the cause. The passage may have been intended to reinforce Schuyler's often-stated notion of Eidlitz's "German-ness," however, the sentence is preceded by a

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*New York City*, p. 370; "Henry F. Kilburn" in *Biographical Dictionary of American Architects (Deceased)*, p. 342; Francis, p. 46; Ward, p. 42.

[21] Christopher Gray, "A Block with Rare Windows and Unusual Statues," *New York Times* 7 March 2004, pp. R 1, 5.

[22] Leopold Eidlitz III, p. 375.

passage (said to have been written by Goethe) that may have been even more descriptive of Eidlitz for Schuyler.

> He writes in the plainest and lowest tone, omitting a great deal more than he writes, and putting ever a thing for a word. He has explained the distinction between the antique and the modern spirit and art. He has defined art, its scope and laws. He has said the best things about nature that were said.[24]

In any case, Schuyler attributed the success of Eidlitz's late work to its budget-driven simplicity: "the work had to be done at the absolute minimum of cost and thus was reduced to the absolutely indispensable."[25]

*Cooper Union*

Eidlitz's work at the Cooper Union Building (1884-85, Third and Fourth Avenue and 7th Street) is the last project that Schuyler mentioned. The Cooper Union for the Advancement of Science and Art dates from 1859, when the New York state legislature passed "An Act to Enable Peter Cooper to Found a Scientific Institution in the City of New York."[26] The school opened on 1 July of that year to provide working-class men and women with free day and evening classes, lectures, concerts, a museum, and a library. Inspired by the Paris École Polytechnique, Cooper dedicated much of his time and fortune to the project during the last thirty years of his life (the endowment

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[23] Leopold Eidlitz III, p. 375. The quotation appears in Ralph Waldo Emerson, "Goethe; or, the Writer" in *Representative Men, Seven Lectures by Ralph Waldo Emerson* (Boston and New York: Houghton Mifflin Company, 1903), p. 274. This is the only reference to Emerson in Schuyler's writings on Eidlitz.

[24] Emerson, p. 274.

[25] Leopold Eidlitz III, p. 375.

[26] The building was erected by Peter Cooper (1791-1883), a workingman's son who was born in New York City and apprenticed as a coach maker. With less than a year of schooling, he made his first fortune in the glue businesses and subsequently pursued ventures in real estate, iron, insurance, and railroads. In 1830, he designed and built the "Tom Thumb," the first successful steam engine in America, achieved the first successful transatlantic telegraph cable in 1856, and was the 1876 presidential candidate of the Independent Greenback Party.

was said to be $150,000) and his example motivated other industrialists, such as Andrew Carnegie, Ezra Cornell, and Matthew Vassar, to initiate similar projects.[27]

The building that housed the Cooper Union was begun in 1853 and completed six years later; it was said to cost $650,000. A five-story structure designed by Frederick A. Petersen, its Romanesque façades were faced with smooth Portland Connecticut brownstone and terra cotta trim, and its floors were supported on wrought iron tee beams produced at Cooper's Trenton, New Jersey mill which, when it opened in 1850, was the largest manufacturer of its kind in America. Always the businessman, Cooper began construction of the school in 1853, but stopped work the following to work on two income-producing projects: a production lot of 7-inch T-shaped deck beams and ornamented cast-iron beams with tie-rods to be used in the second Harper & Brothers printing plant (John B. Corlies and James Bogardus, 1854-55; demolished 1920) and an extension to the New York Assay Office (originally built as a branch of the Bank of the United States by Martin Thompson, 1823-24; demolished 1915; façade re-erected 1924 in the American Wing of the New York Metropolitan Museum of Art).[28] Cooper regarded the beams to be part of the first manufacturer-tested fire-resistant assembly, and Peter B. Wight called them "the father of the truss beam, now so extensively used for supporting the rear wall of stores."[29] Work on the Cooper Union resumed in 1856, and the building quickly became known for its ground floor shops, round elevator shaft, and large basement auditorium (the "Great Hall") that could seat 3,000 and was frequently used for public meetings.[30] A partial sixth story was added in 1861 (it was subsequently removed); two more stories and an iron clock tower were added in 1880-01.

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[27] "Death of Peter Cooper," *New York Times*, 5 April 1883, pp. 1-2; *King's Handbook of New York City*, pp. 290-91; McCabe, pp. 308-10. The standard biography is Edward C. Mack, *Peter Cooper, Citizen of New York* (New York: Duell, Sloan and Pearce, 1949).

[28] Margot Gayle and Carol Gayle, pp. 142-45; Edmond Shaw, *Peter Cooper and the Wrought Iron Beam* (New York: The Cooper Union School of Art and Architecture, 1960), p. 30; "Wall Street from the corner of Broad Street, ca. 1865; E. & H. T. Anthony & Co.," *Nineteenth-Century New York in Rare Photographic Views*, No. 12; Silver, pp. 98, 167.

[29] Wight, "Fire-Proof Construction," pp. 59-60.

All of this work attempted to continue the Romanesque quality of the original building, although the scale of the additions was considerably smaller. The loads imposed by the additions caused the building's terra cotta lintels and windowsills to become "partially crushed."[31]

In 1886, Eidlitz prepared construction documents for repairs to the building's foundations, basement auditorium, first- and second-story exterior walls, and interior columns. The work also included the addition of several rows of plain-faced, shed-roofed, drafting rooms with triple flat-headed sash windows on the roof.[32] Eidlitz later wrote of the project

> This building was defective in its construction, although its cost exceeded three quarters of a million dollars. So the children of its founder quietly proceeded to remedy its defects by spending an additional sum of three hundred thousand dollars, and now this great institution promises to continue for the next century.[33]

Eidlitz may have met Cooper at meetings of the Polytechnic Club held at the building[34] and the seats used in the third floor lecture rooms came from the first Brick Presbyterian Church and the first Broadway Tabernacle, the successors of which were designed by Eidlitz around the time he was working at Cooper Union.[35]

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[30] "The Cooper Institute," *New York Times*, 4 November 1857, p. 4.

[31] "Terra Cotta in Architecture," *Manufacturer and Builder*, vol. 4, no. 11 (November 1872), p. 250.

[32] For a history of the design and construction Cooper Union Building and subsequent alterations, see "The Cooper Union (1853-59) compiled by William Rowe, III" in John G. Waite, ed. *Iron Architecture in New York City; Two Studies in Industrial Archeology* (Albany, NY: The New York State Historical Trust, 1972), pp. 43-83 and "Repairing the Cooper Institute Building, New York City, *Scientific American*, n.s., vol. 62, no. 23 (5 December 1885), p. 357; illustrations of the repair process also appeared on the cover of that issue.

[33] *Eidlitz, Big Wages and How to Earn Them*, pp. 124-25.

[34] "The Polytechnic Club," *Manufacturer and Builder*, vol. 7, no. 12 (December 1875), p. 267. The organization met as early as 1860.

[35] "The Cooper Institute," p. 4.

*St. George's Church Memorial House*

Eidlitz's last major project was designed for his first client: St. George's Church. It was a parish house (1886-88, 207 East 16th Street).[36] The building was intended to implement the views of the current rector, William Stephen Rainsford (1850-1933), on the relationship of the modern church to its surrounding community. Rainsford was born in Dublin and preached in England, Canada, and several American cities before coming to St. George's. He spent the summer of 1876 in New York City preaching in a tent at the Church of the Holy Trinity as an assistant to Dr. Stephen Higginson Tyng, Jr. When he arrived at St. George's in 1883, Stuyvesant Square had become squalid despite the presence of the Hamilton Fish mansion at Second Avenue and 17th Street. The formerly well-to-do parish had been without a rector for two years, attracted only twenty families on a somewhat regular basis, and struggled to survive in its rapidly declining neighborhood.

With the help of a $10,000 three-year grant from long-term parishioner John Pierpont Morgan, Rainsford quickly cleaned up Stuyvesant Square (a courtesy extended by the Tammany Hall-connected son of an aged parishioner in exchange for an unsolicited pastoral visit to his mother), abolished pew rents, repaired the rectory, took on assistant clergy, and rented a clergy house. Rainsford also requested alterations to the church's chancel. This request had several causes, and in his autobiography, Rainsford noted that

> The building itself, while impressive outside... was sadly ugly and depressing inside; and, in addition to this, was about as hard a building to hear in as an architect has ever devised. Its great flat stone wall spaces made the voice of the preacher rattle from side to side like peas in a shaken bladder. The effect when the congregation sang was fine. The resonance helped the music, but when the preacher spoke from the low pulpit, near the Holy Table, the echo was baffling.[37]

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[36] Leopold Eidlitz III, p. 168. Eidlitz did not receive credit for the design in the parish history and Schuyler mentioned only in passing although he illustrated it.

[37] William Stephen Rainsford, *The Story of a Varied Life, An Autobiography* (Garden City, Long Island and New York: Doubleday, Page & Company, 1922), p. 209.

He also wrote, "The next change I strove for was in church music.... My plans were revolutionary – nothing less than a new organ, new organist, new choir, and a complete change to the west end, where stood the Communion Table."[38] These interventions would allow him to replace small ensembles of professional singers and emphasize congregational participation supported by a robed choir. The latter idea was a particularly radical notion for a Low Church congregation,[39] nevertheless, in March 1883, the rear organ and choir loft were abandoned and Eidlitz prepared drawings for a new choir situated just outside of the chancel and a new organ located beside the choir. The project required substantial "material alterations both at the east and west ends of the church" and was completed during the summer of that year.[40]

Rainsford's changes were consistent with his development of the concept of the "Institutional Church," a facility intended to offer spiritual and social services to parishioners and non-parishioners as a form of ministry and as way to increase membership. His emphasis on social service spawned sewing classes, soup kitchens, fitness, and health programs as well as more traditional activities.[41] As attendance increased, it became clear that not all of these programs could be accommodated in existing church-owned buildings, and in October 1885, Morgan offered to fund a way to achieve these goals. It was to be a memorial to his father-in-law, Charles Tracey, a recently deceased senior warden, and would consist of a five-story building that would include a chapel and Sunday school rooms for 1,500 children, apartments for resident clergy,

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[38] Rainsford, *The Story of a Varied Life*, p. 213.

[39] Moulton, pp. 74-75; Rainsford, *The Story of a Varied Life*, p. 213-14.

[40] Anstice, p. 233-34.

[41] *King's Handbook of New York City*, pp. 350-51; Robert Bruce Mills, "St. George's Episcopal Church" in The Encyclopedia of New York City, p. 1034; George Hodges and John Reichert, *The Administration of an Institutional Church, A Detailed Account of the Operation of St. George's Parish in the City of New York* (New York and London: Harper & Brothers Publishers, 1906), xix-xxiii; "Welcome to our Parish!" Parish of Calvary/St. George's [Church], undated brochure. See also William Stephen Rainsford, *A Preacher's Story of His Work* (New York: The Outlook Company, 1903).

offices, club and meeting rooms, bathrooms, and a gymnasium.[42] It would be paid for by Morgan and built on ground owned by the church but transferred to him for that purpose and then returned to the church.[43] Rainsford had received a similar offer from another congregant but turned it down because the donor wanted the congregation to return to the use of professional musicians.[44] On the day the building was dedicated in June 1888, Morgan donated three adjoining houses to the congregation as part of an endowment.[45] By this time, Rainsford's fortunes, as well as those of St. George's, had improved substantially and he joined several private clubs including the Century Club of which Eidlitz was also a member.[46]

The facade of brownstone Romanesque-revival building was divided into two parts: a four-story, flat-roofed residential wing and a five-story, gable-roofed central bay that contained the building's largest spaces and was adjoined by a four-story corner tower. Entrances to the building and stairhalls were located in the flat-roofed wing and the corner tower. Fenestration in each portion of the structure varied, with the four-story wing using mainly flat-headed openings while the central bay and tower used a combination of segmental, pointed, and flat-headed-openings. As with many of Eidlitz's designs, the building's appearance may not have pleased everyone but it seems to have fulfilled its purpose. Rainsford concluded a descriptive essay on the building by noting

> After all, the Memorial House is not a thing to be described but to be seen. Wise men tell is that life is indefinable. Well, this

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[42] Anstice provided a lengthy description "prepared before [the building was completed], but [that] gives a fair idea of what it proved to be," pp. 315-16. A similar account appeared in "St. George's Headquarters," *New York Times*, 8 June 1886, p. 8. Hodges and Reichert contain floor plans and a detailed description of the completed building; pp. 16-24.

[43] Anstice, p. 304; Rainsford, *The Story of a Varied Life*, p. 218. Morgan also paid for alterations made in 1891 that included improvements to electrical and heating equipment and reconstruction of the roof; Anstice, p. 323.

[44] Rainsford, *The Story of a Varied Life*, p. 216.

[45] Moulton, pp. 78-79.

[46] Moulton, pp. 62-63.

> building is alive. It looks like nothing so much as a big hive. So it has been described, and the name fits it.[47]

The condition of the church's spires became suspect the next year, probably as a consequence of damage from the 1865 fire. They were examined "by the architect," presumably Eidlitz, who ordered them demolished in 1860, concurrent with an exceptionally early installation of electric lighting.[48] By 1904, a rood screen designed by congregant I. N. Phelps Stokes was installed, the organ was raised from its position on the floor to the gallery level, and a Sixteenth Street vestibule was built.[49] Up to this time, Eidlitz had been the only architect employed by the congregation. However, in 1912, a Byzantine-Romanesque Revival Centennial Chapel (1912) adjoining the north wall of the church was built to the designs of Marshall L. and Henry G. Emery. Like the Memorial House, it was funded by Morgan.[50]

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[47] W. S. Rainsford, "A Pen Picture of the Memorial House and its Activities," *1894 Yearbook of the Church of St. George in the City of New York*, quoted in Anstice, p. 332. Perhaps he was referring to the unusually large pyramidal roof located above the corner tower.

[48] Anstice, p. 316

[49] Moulton, photo, p. 89.

[50] "$163,197,125 Given in 1910 for Philanthropy," *New York Times*, 1 January 1911, p. SM13; "Bishop Consecrates St. George's Chapel," *New York Times*, 11 November 1912, p. 8. Marshall Emery (d. 1921) appeared in New York City Directories from 1894 to 1899 at which time Henry (1871-1956) joined him. Their practice concentrated on institutional, educational, and religious work in Albany and the South Mohawk Valley of New York State. It existed under the name of M. L. and H. G. Emery until 1925 and under the name of Henry G. Emery until 1929, although Henry's practice continued after he left New York City. Francis, p. 29; Ward, p. 23; "Henry G. Emery, 85, Architect in Nyack," *New York Times*, 22 May 1956, p. 31.

Few additional changes were made to the church until 1948 when a series of repairs including structural reinforcement of the galleries, covering interior wall surfaces with burlap, and installation of new heating, lighting, and electrical systems was completed in response to condemnation proceedings initiated by the City of New York. Similar renovations began in the Parish House during the same year. In July 1963, a portion of the church's 110-foot high ceiling fell and the building was closed for a nine-month repair project. During that period, the Christmas Carol Service for the Sunday before Christmas was held at the second Temple Emanu-el. Moulton, pp. 142-44., 162-63. The church was designated a National Historical Landmark in 1978.

*Union Square Theatre*

The Union Square Theatre (58 East 14th Street; altered) was originally located within a space that had served as the dining room of the Morton House Hotel. In its first configuration (H. M. Simons, 1871), the richly decorated auditorium held 1,200 and was intended to be a venue for "reputable burlesque and vaudeville." After loosing money during the first season, it was transformed into a house for legitimate drama and was the home of the Union Square Theatre Stock Company from 1872 to 1883. The company disbanded in 1885 and a fire destroyed the roof and portions of the interior on 28 February 1888. Initial reports suggested that the theatre would be demolished because it could not be rebuilt to comply with the most recent ventilation, fireproofing, and egress requirements.[51] Eidlitz became involved with the reconstruction of the theatre in 1899 and the *New York Times* wrote that he was assisted by another architect, John E. Terhune.[52] Eidlitz may have been brought into the project because of his familiarity with Albert F. D'Oench, the New York City Superintendent of Buildings and a former employee.[53] Stern

[51] "Burning of a Playhouse," *New York Times*, 29 February 1888, p. 1; "The Union Square Theatre," New York *Evening Post*, 7 March 1888, n.p., in AIA Archives, Scrapbook of New York State Chapter 1887-1889, RG 801, SR 1.2, Box 8L, Folder 5; "It May Never Be Rebuilt," *New York Times*, 8 March 1888, p. 8.

[52] "Mr. Hill's New Theatre," *New York Times*, 25 April 1888, p. 8. Terhune appeared in New York City directories 1887-95; Francis, p. 74. Stern described a pair of 13-foot wide row houses designed by him located at 28-30 West 123rd Street in Harlem; Stern *et al*, *New York 1880*, p. 793.

[53] D'Oench (1852-1918) was born in St. Louis and received a degree in mechanical engineering from Washington University in 1872 after which he studied architecture for three years in Stuttgart and at the Royal Polytechnical Institute in Würtemberg and traveled through Europe. He began working for Eidlitz in 1875 as a draftsman and superintended the New York State Capitol and the Tweed Courthouse. He subsequently worked for William Morris Hunt and Edward E. Raht before opening his own office in 1882; Raht appeared in New York City directories between 1871 and 1892. D'Oench became Superintendent of Buildings in 1884 but retired from the position in five years later to return to the practice of architecture. During the same year, he replaced George B. Post as a member of the Board of Examiners of the Building Department (Francis gives slightly different dates). He appeared in New York City directories from 1882 to 1918 including those years during which he worked for the Building Department. "Mr. Esterbrook's Place Filled," *New York Times*, 17 February 1885, p. 8; "Mr. D'Oench Retires," *New York Times*, 30 May 1889, p. 5; "New Building Examiner Appointed," New *York Times*, 30 August 1899, p. 12; Francis, p. 27; Ward, p. 21.

claimed that the work was actually done by Charles E. Palmer, the property manager who oversaw the insurance settlement that funded the work and whose family owned the theatre.[54]

The interior of the refurbished auditorium was painted in gold and ivory and its proscenium arch featured a large portrait medallion of Shakespeare. The design seems to have been intended to address fire code concerns and, in addition to commenting on the richness of its finishes, the *Times* noted that the orchestra was to be located under and separated from the back of the stage by a brick wall, and while the depth of the theatre would remain unchanged, it would be 33 feet wider than its predecessor and its seating capacity reduced from 1,200 to 1,078.[55]

In 1893, after taking a ten-year lease on the property, impresario B. F. Keith completely rebuilt it over a three-month period and spent "nearly $60,000." The changes, described as "complete and costly," included an illuminated façade made of cast-iron and leaded glass as well as a new lobby and foyer.[56] It was converted to a film theatre in 1908. None of the earlier alterations were said to have been retained although fragments of the 1893 work were observed in 1989.[57]

*Ward's Island and Central Islip*

Eidlitz's success at the Cooper Union Building and St. George's was not repeated on Ward's Island. Prior to the opening of Ellis Island in 1892, immigrants arriving in New York City disembarked at Castle Garden. Between 1860 and 1892, those judged too ill or poor were ferried to Ward's Island where they were housed and worked in dairies and farms until they could earn enough money to leave. With the opening of Ellis Island, Ward's Island became dedicated to the care of indigent patients, especially those with mental illnesses. Located in the East River

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[54] Stern *et al*, *New York 1880*, p. 665. The theatre had been commissioned by brewer-politician Sheridan Shook, partner of theatre manager A. M. Palmer, who developed the concept of the traveling theatrical stock company.

[55] "Mr. Hill's New Theatre," p. 8; *King's Handbook of New York*, p. 602.

[56] "Union Square Theatre," *New York Times*, 17 September 1893, p. 16

between 99th and 115th Street, Ward's Island was acquired by the city in 1843 and its 200 acres were successively used as a potter's field, a hospital for destitute immigrants, an auxiliary immigration station, a homeopathic hospital, inebriate and mental asylums, and a rest home for Civil War veterans.

Use of the island as a dumping ground for the socially unacceptable began in 1847 when the Board of Commissioners of Emigration established a State Emigrant Refuge and Hospital in temporary buildings; by the mid-1850s, it was the largest hospital complex in the world. However, in addition to housing patients with physical illnesses, the growing number of patients with mental problems led to construction of a mental asylum in 1862. That facility was superseded by a 600 patient Inebriate and Lunatic Asylum (James Renwick, Jr., 1869-71).[58] By 1880, the asylum housed 700 patients. The *New York Times* called it "one of the ornaments of the City" and remarked "it looms up like a mountain. It is built of brick, with stone trimmings, and has a great many wings all highly ornamented."[59]

By 1887, a state investigation found that the asylum was operating at twice its rated capacity of 1,000 patients and called for condemnation.[60] During the same year, the City allocated $59,700 for the establishment of a new facility, and during the following year, it purchased a 960-acre site in rural Central Islip, Long Island, for $22,000 and spent an additional $137,500 to build a farm colony intended to house 300 patents, thereby relieving the overcrowding on Ward's Island.[61]

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[57] Christopher Gray, "The Ghost Behind a Huge Sign, " *New York Times*, 29 January 1989, p. R12

[58] "The New State Emigrant Hospital [at] Ward's Island," *Manufacturer and Builder*, vol. 1, no. 5 (May 1869), p. 145; "Local News in Brief," *New York Times*, 8 July 1871, p.8.

[59] "Islands About New-York," *New York Times*, 21 November 1880, p. 10.

[60] Burrows and Wallace, p. 738; Sharon Seitz and Stuart Miller, *The Other Islands of New York City: A History and Guide*, second ed. (Woodstock, VT: The Countryman Press, 2001), pp. 166-68; "Nice School for Nurses, "*New York Times*, 10 July 1887, p. 8. In the summer of 1841, Edgar Fenn Peck, a New York City medical doctor, became convinced the pine barrens of Central Islip was suitable for development. One year later, the Long Island Rail Road arrived in the area.

[61] "Insane on Long Island," *New York Times*, 21 December 1888, p. 6.

Followers of Dorthea Lynde Dix (1802-87) and other reformers came to believe that the mentally ill would have a better chance at recovery in an environment where more open space and fresh air was available. Their recommendations culminated in the development of a "moral" method of treatment that advocated separation of patients and felons and performance of meaningful work followed by periods of relaxation in pleasant surroundings.

The Branch Lunatic Asylum in Central Islip opened on 6 May 1889 with 49 male patients transferred from Ward's Island; 40 women arrived the next year.[62] The *New York Times* described the new facility, designed by the State Architect Isaac G. Perry, as

> a collection of tasteful-looking frame buildings, nearly all of but one storey, having steep shingle roofs and sheltered porches, with enclosed galleries communicating between those of the respective groups. There are three groups of ward buildings, or pavilions, each group consisting of three dormitories and a dining hall. There is also an administration building of two stories, in which Dr. [A. E.] Macdonald [the General Superintendent of the City Asylum for the Insane] resides with his family, a bakery and a cookhouse, storehouse, laundry and tailor's shop, boiler house – where steam for heating, cooking, and the laundry and for the pumping works is generated – a water tower, stable, icehouse, and in course of construction a blacksmith and carpenter's shop. In all, there are twenty-one frame buildings of variable size on the ground, the entire plant representing an outlay to date of $244,200.[63]

Eidlitz became involved as the Supervising Architect for the Department of Charities and Correction after work at both locations was funded in 1892 by a common $500,000 appropriation intended to relieve overcrowding authorized land acquisition and new construction at Ward's Island and new construction at Islip.[64] The work at Ward's Island was to include two new two-story pavilions and a residence for the General Superintendent of the Pauper Insane Asylums of New York City, while at Islip three groups of buildings were planned, each containing three

[62] "Care of the Insane," *New York Times*, 4 December 1889, p. 8.

[63] "Care of the Insane," *New York Times*, 4 December 1889, p. 8.

residential pavilions and a dining room.[65] Eidlitz's original estimate of $108,419 included structural repairs to several buildings at both locations and proposed conversion of an existing Ward's Island building into the General Superintendent's residence in lieu of new construction. The project was subsequently expanded to include electrification at both sites and construction of a new residence for the General Superintendent.

Things did not go as expected, however, and Eidlitz was called to testify before the State Commission in Lunacy concerning charges of impropriety associated with delays and cost overruns. Most of the charges involved the house built for the General Superintendent on Ward's Island. During the hearing, Eidlitz stated that while he initially believed that an existing building intended for rehabilitation as MacDonald's residence was in acceptable condition, he ordered it taken down based on the judgment of an unidentified man who examined it and pronounced it "badly cracked." Eidlitz subsequently recommended construction of a new house, a notion that he claimed was verbally accepted by the Commissioners of the Department of Charities and Correction and authorized by the Board of Estimate. The subsequent dispute may have reflected a feud between the Commissioners of Public Charity and the Commissioners of Emigration who shared responsibility for the Island.[66] The new residence, described as a "cottage," contained five bedrooms on the first floor, six on the second, and a guest chamber and accommodations for three servants on the third that was said to be "only half a story high." Eidlitz testified that the General Superintendent did not want to occupy the building and found fault with every aspect of it. Eidlitz also refused to assign a value to it, although at one point he estimated its cost at $22,000 to $24,000 (he later denied the accuracy of the statement) and refused to produce his financial

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[64] "Overcrowding of the Insane," *New York Times*, 27 June, 1893, p. 10. The funding was allocated after a grand jury review of overcrowding.

[65] "Overcrowding of the Insane," p. 10.

[66] "Islands About New-York," p. 10.

records or construction documents, claiming that they were too bulky to carry.[67] He was also questioned on his work at a Ward's building intended for conversion into a residence for female inmates.[68]

Although no charges were brought, the hearing did not go well for Eidlitz.[69] The State Commission in Lunacy found that while the Commissioners of the Department of Charities and Correction admitted to unlawfully diverting funds for the construction of the house, "there was nothing in the personal testimony that reflected upon the personal honesty of the Commissioners."[70] Nevertheless, Eidlitz's argumentative responses led court officials to question his integrity, and members of the asylum staff provided harrowing accounts of conditions on the Island said to be related to lack of funds related caused by the unauthorized expenditures.[71] By 1896, 1,000 patients were housed at the facility and during that year, the state Legislature put all New York City asylums under the control of the New York City State Hospital of Central Islip.[72]

The Central Islip project seems to have gone somewhat better. It involved construction of three 50-patient wards, several dinning halls, and a stable.[73] Schuyler wrote that the new wards, "the irreducible 'accommodation' in plain brick and yellow pine" were

> prescribed to be built on the "pavilion system," whether in mere analogy to ordinary hospitals or out of some belief that lunacy

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[67] "Did not Produce His Books," *New York Times*, 27 June 1894, p. 9; "Called the Lawyer a Liar," *New York Times*, 28 June 1894, p. 9. MacDonald was also unwilling to produce his records, claiming that some of them referred to "private matters," "Care of the Insane by the City," *New York Times*, 7 September 1894, p. 9.

[68] "Buildings in Bad Condition," *New York Times*, 18 July 1894, p. 5; "Food and Air for the Insane," *New York Times, 19 July 1894*, p. 9.

[69] Schuyler never mentioned the Wards Island work and Jordy and Coe could not trace it; Jordy and Coe; vol. 1, p. 182 n. 97.

[70] "Ought to be Under State Care," *New York Times*, 28 December 1894, p. 9.

[71] "The State Lunacy Commission Resumes Its Investigation," *New York Times*, 18 July 1894, p. 5.

[72] "Have the Mayor's Approval," *New York Times*, 24 January 1896, p. 14.

[73] The dining halls were not included in the list of contracts identified by Eidlitz in his court testimony. One of the dining halls and all of the brick buildings were extant in the early 1960s.

> was infectious and that its abodes might require to be destroyed to rid them of the "bacillus lunaticus" I do not know.[74]

Aside from a terra cotta panel on the administration building, no ornament was used, and Schuyler extolled the result for being "immensely impressive by dint of its austerity."[75] One of the dining halls, "merely a four hipped steep roof standing on the ground, or with a wall no more than man high" impressed him most of all, and he attributed its lineage to a temporary structure, "a nine day's wonder... elaborated with much moulding and copiously decorated with much jig sawyery and pigment," built in October 1860 for an official breakfast given by Fernando Woods, Mayor of New York, for the Prince of Wales.[76] Claiming to see a quality that surpassed mere craft, he wrote

> The [breakfast pavilion] was the absolute "bones," even the pine timbers, left simply oiled, not such in size and shape and spacing as an architect would have chosen, but merely the "stock sizes" the market afforded at the cheapest rate. A mere piece of carpentry, you would say. Is it an example of architecture at all, with this rigid restriction of it to the full necessities of the case? Certainly not a piece of architecture in the Ruskinian sense in which architecture is "the addition of unnecessary features." But yet the mere layout is such that the spectator cannot help seeing that it was not devised by the common carpenter, nor saying to himself "an architect has been here."[77]

The passage refers to "The Lamp of Sacrifice" in Ruskin's *The Seven Lamps of Architecture* [78] in which the author distinguished between building and architecture. The former was limited to the

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[74] Leopold Eidlitz III, p. 376. An earlier newspaper article noted "This plan is the same as adopted in Holland and Saxony, and has met there with much success." "Wise Treatment of the Insane," *New York Times*, 3 November 1892, p. 9.

[75] Leopold Eidlitz III, p. 376.

[76] Leopold Eidlitz III, p. 376; also see Jordy and Coe, vol. 1, p. 182 n. 99. The Prince was traveling incognito as "Baron Renfrew." Several accounts of the visit appear in *Harper's Weekly*, vol. 4 (20 October 1860), pp. 658-59. Eidlitz's "interesting, but impractical Dining Room F" was converted into storage room ca. 1955; Jordy and Coe, vol. 1, p. 182 n. 97. Eidlitz may have been associated with Woods on a more personal basis. A ca. 1860-65 pencil drawing of Woods' parlor made by Alfred Rudolph Waud and inscribed "Leopold Eidlitz / 128 Broadway" is on file at the Library of Congress Prints and Photographs Division (1997000038/PP). Woods' house was located at Broadway and 77th Street.

[77] Leopold Eidlitz III, p. 376.

[78] New York: John Wiley & Sons, 1885.

assembly and adjustment of the components of an "edifice or receptacle of a considerable size," while the latter dealt with "certain characters venerable or beautiful, but otherwise unnecessary."[79] In this sense, architecture was supplementary to structure and function. Ruskin defined the "Lamp of Sacrifice" as "the offering of precious things, merely because they are precious, not because they are useful or necessary" and claimed to take this position in response to the meanness and cheapness of contemporary construction.[80] However, as if in recognition of the implicit irrationality of his argument, he modified it to exempt "useless expense in unnoticed fineries or formalities; ...things that cause half the expense of life, and destroy more than half of its comfort, manliness, respectability, freshness and facility."[81] While things intended only for show do not imply sacrifice, the use of fine materials in a manner unnoticed by most did meet his approval, as did the visible use of lesser materials if they were of the highest quality of their kind. However, if sacrifice was related to construction materials rather than ornament, his distinction between building and architecture was no longer very clear. Schuyler made similar comments about the structural expression of wood, metal, and masonry in Eidlitz's replacement of the Tompkins Market/Seventh Regiment Armory roof and in the design of the Hamilton Avenue Ferry House, all of which were built around 1860.[82]

Ruskin attempted to resolve this conundrum with the "Lamp of Truth," an extension of the "Lamp of Sacrifice." It was concerned with "falsity of assertion respecting the nature of material, or the quantity of labor."[83] For Ruskin, good architecture avoided false representation of structure, materials, and the use of deceptive, cast, or machine-made ornament. Ornament contradicted structure when it was intended to obscure it, but wall facings made of precious stone

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[79] Ruskin, *The Seven Lamps of Architecture*, pp. 7-8.

[80] Ruskin, *The Seven Lamps of Architecture*, p. 9.

[81] Ruskin, *The Seven Lamps of Architecture*, p. 16.

[82] Leopold Eidlitz I, p. 170.

[83] Ruskin, *The Seven Lamps of Architecture*, p. 31.

were permissible since they did not "pretend" to be anything but facings. Even so, Ruskin stated a preference for design based on less, rather than more, decoration, and proclaimed his love for plastered rather than stone surfaces. His aversion to machine-made ornament derived from its lack of connection with the human labor that produced traditional ornament. While ornament on Gothic churches was seen as a reflection of religious devotion, machine-made ornament was a sham, and the use of historic ornament in modern constructions such as shop fronts or railway stations reflected a bad habit of trying to disguise disagreeable necessities. However, facing one material with another such as non-representational painting, gilding, stucco, and veneers of precious stone could be permitted because "the evil of them consists always in definitely attempted deception, and that it is a matter of some nicety to mark the point where deception begins or ends."[84] Thus, a surface of one material painted to look like another was unacceptable, while a marble facing on brick building was permitted because it was an obvious veneer.

Near the conclusion of his memorial series on Eidlitz, Schuyler attempted to refute Ruskin's somewhat inconsistent position by returning to Eidlitz's Cooper Union alterations and linking them to the Central Islip pavilions through what he saw as a desirable conflation of art, engineering, and architecture.

> The second story of segmental arches [at Cooper Union], substituted for a pilastered colonnade which had broken down is "clearly architecture," and a dignified range of openings. But those strange, uncouth erections on the roof are questionable, are puzzling, until you come to perceive, or to be told, that it was merely a question of making three rows of drafting rooms with the utmost advantage that could be taken of the North light. And the basement, that Hall which is the civic forum of New York City, those absolutely plain cast-iron columns and those absolutely plain granite arches? You perceive that they are the mere underpinning of a precarious structure. You cannot help finding them impressive. Even while you question whether they are architecture, you perceive that they are as much beyond the reach of the common stonemason as the dining hall at Islip of the common carpenter. Well, then, you might conclude, the work of

[84] Ruskin, *The Seven Lamps of Architecture*, p. 41.

> an engineer, an artistic engineer. There the designer would have been with you. "Artistic engineering," he would have said, "Why, that is architecture."[85]

*Riverside Drive*

Eidlitz apparently designed no new buildings after the Ward's Island and Central Islip work, although he may have been consulted on an addition to the Bulkeley School (Huntington Street, New London, CT) in 1890.[86] During the same year, Peter B. Sweeny, still connected with Tammany Hall that was now under the control of Richard Croker, proposed a project that attracted Eidlitz's interest, possibly as much because of its proximity to his house as its scale and content. Sweeny offered Eidlitz a part of the Riverside Park project, a large undertaking designed by Frederick Law Olmsted.[87] Occupying a narrow strip of land east of Twelfth Avenue from 72nd to 125th Street, Riverside Park was within a planned "mansion district" that was intended to compete with Fifth Avenue.[88] New construction was sparse, however, because of rocky terrain, steep cliffs, and an active stretch of railroad tracks that ran from 72nd to 98th Street. In addition to the presence of the railroad, development located at the top of the cliffs was threatened by riverfront industry. The New York Central and Hudson River Railroads who owned steam-powered freight hauling operations and development rights to the river shorefront between 72nd and 76th Street could also build a dock and freight depot. Just to the north, plans were being made to dump the earth and rock removed during West Side regrading operations, and similar landfills

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[85] Leopold Eidlitz III, p. 376-77.

[86] A former headmaster recalled "the school was a little gem architecturally, but, in light of subsequent events, it showed small vision of the demands that would soon be made upon it." The addition was carefully matched to the existing building by the original contractor; a second addition (1912) was similarly treated. Additional extensions designed in 1922 and 1934 were less sympathetic. Dale S. Plummer, *National Register of Historic Places Inventory – Nomination Form, Bulkeley School, Huntington Street, New London, Connecticut*, 1980, Item no. 8, pp. 1-3. The exterior of the first three sections of the building were recently been restored and incorporated in a new high school building.

[87] It was and funded along with Manhattan Square (Central Park West to Columbus Avenue, West 77th to West 81st Street), and Morningside Park (Cathedral Parkway [110th Street] to West 123rd Street, Manhattan and Morningside Avenues and Morningside Drive), both of which were also designed by Olmsted.

[88] "West Side Is Itself A Great City," *New York Times*, 10 March 1895, p. 20.

were proposed at 79th and 96th Street. Additionally, an absence of transverse roads to connect the proposed park to elevated railway stations and Central Park would have made it nearly inaccessible. Only the few boathouses located between 75th and 102nd Street seemed to recognize the potential of their surroundings.[89]

Nevertheless, in 1865 Central Park commissioner William R. Martin wrote a pamphlet, *The Growth of New York* in which he proposed to construct a scenic drive and park in the area[90] and Andrew H. Green introduced a bill in the state legislature during the following year that allowed the city to acquire land located between the cliffs and the railroad tracks by condemnation. The bill passed in 1867, and a $6 million acquisition program began in 1871.[91] Olmsted worked on a conceptual design for the new park from 1872 to 1873 that did not address treatment of the cliffs and assumed continued commercial development along the shoreline.[92] He pointed out the problems inherent in the approach to the Department of Pubic Parks

> the imaginary line by which the site for the avenue [i.e., the scenic drive that was to become the park's spine] was divided from the site for the park should be disregarded, and a plan prepared, with a view to utilize, in the greatest degree practicable, the advantages offered by the territory, *as a whole*, for the several purposes – first, of a means of access to the property on its east side; second, of a pleasure drive, commanding a fine view over the river, airy and shaded; third, of a foot promenade, commanding the same view, and also airy and shaded.[93]

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[89] Stern *et al*, *New York 1880*, p. 744.

[90] New York: George W. Wood, 1865.

[91] Stern *et al*, *New York 1880*, p. 742; "The West Side," *New York Times*, 4 February 1872, p. 6; "The West Side," *New York Times*, 5 February 1872, p. 2.

[92] Frederick Law Olmsted and Calvert Vaux, "Document No. 50 of the Board of the Department of Public Parks: A Preliminary Study by the Landscape Architect of a Design for the Laying Out of Morningside Park," submitted to the Department of Public Parks, Office of Design and Superintendence on 11 October 1873; reprinted in Frederick Law Olmsted, *Landscape into Cityscape, Frederick Law Olmsted's Plans for a Greater New York City*, Albert Fein, ed. (Ithaca, NY: Cornell University Press, 1968), pp. 333-41.

[93] Frederick Law Olmsted, "Document No. 60 of the Board of the Department of Public Parks" reprinted in Olmsted, *Landscape into Cityscape*, pp. 345-46.

His final version was issued in 1876.[94] By that time, the city had imposed more than $4 million in taxes on members of the West Side Association, an organization of local realtors and property owners, to pay for it. Few improvements had been made in the area, however, because of the financial crash of 1873, litigation, and the aftermath of the Tweed corruption scandals.[95] Construction finally began in 1877, and although he was not yet connected with the project, Eidlitz, had ample opportunity to observe the slow progress of the work and complain to the Mayor's office about poor workmanship, materials, and failure to adhere to specifications.[96]

In 1891, Sweeny proposed construction of a limited access elevated highway above the tracks and over the landfill. This would free the scenic drive from its problematic topographic connection to the site and provide additional buildable land. Eidlitz's recommendation for the use of arched masonry viaducts to carry the elevated highway was reminiscent of the unexecuted Viaduct Railway scheme in which he and Sweeny were involved two decades earlier. A report prepared for a commission responsible for reviewing the project noted

> The purpose is the improvement of the Hudson River front north of Seventy-second Street by providing for building of a sea wall or bulkhead from Seventy-second Street to Ninety-sixth Street, the reclaiming of the land under water, and the establishment along its entire length – ten feet above tidewater – of a traffic road or avenue for commercial and general business purposes. Adjoining this avenue there is to be built a terrace thirty feet

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[94] Frederick Law Olmsted and J. James Croes, "Document No. 72 of the Board of the Department of Public Parks: I. Preliminary Report of the Landscape Architect and Civil and Topographical Engineer, upon the Laying Out of the Twenty-third and Twenty-fourth Wards; II. Report Accompanying a Plan for Laying Out That Part of the Twenty-fourth Ward, Lying West of Riverdale Road," submitted to the City of New York, Department of Public Parks, on 15 November 1876; reprinted in Olmsted, *Landscape into Cityscape*, pp. 349-73; Elizabeth Barlow, *Frederick Law Olmsted's New York* (New York, Washington, DC, London: Praeger Publishers, 1972), p. 133.

[95] "The West Side," p. 6; "The West Side Parks," *Real Estate Record and Builders' Guide*, vol. 25 (10 January 1880), p. 24; Eidlitz, *Big Wages and How to Earn Them*, p. 202.

[96] "The Riverside Park Job," *New York Times*, 1 July 1879, p. 1. It is difficult to tell how much of Eidlitz's concern reflected civic duty or self-interest. In 1885, he and several other property owners filed an injunction against the installation of railroad tracks on 86th Street between Tenth Avenue and Riverside Drive to accommodate visitors to Grant's Tomb. "Tracks in Eighty-Sixth Street," *New York Times*, 7 August 1885, p. 8. The appeal was dismissed; "Qualified to Build Its Road," *New York Times*, 4 September 1885, p. 8.

> above tidewater and one mile and a quarter long, under which the two intersecting streets – Seventy-ninth and Ninety-sixth Streets – are to be carried by double arched viaducts. Upon this terrace a perpetual road for unrestricted driving as to speed, 80 feet wide, is to be established, divided so as to admit of driving in different directions and practically affording two miles and a half of unobstructed course, also a permanent equestrian promenade road at least 50 feet wide, together with adjoining walks and spaces for the accommodation of pedestrians and the general public. The adjacent railroad tracks are to be secluded by a wall sufficiently high and by trees and shrubbery artistically placed. The terrace is to be connected with Riverside Drive at Seventy-second Street and Ninety-eighth Street – the whole thus forming a circuit relation to Central Park.[97]

Eidlitz, described as the "the engineer who has made the plan for this giant scheme of improvement," estimated that the project would cost $3,767,902.[98] Endorsed by Olmsted[99] and the Municipal Improvement Association, it was presented to a special commission appointed by Mayor Grant on 21 November 1890. However, the commission deferred action until the scheme was shown to the Dock Commissioners and the Harbor Commissioners.[100] Costs were capped at $4 million in an authorizing bill that was to be sent to the state legislature, but testimony before the Board of Estimate and Apportionment suggested that the retaining wall alone would cost $3.5 million, exclusive of "the driveway, terraces and marginal streets" included in Eidlitz's design. The mayor responded by promising that the authorization measure would contain no funding limits, but the project was not approved.[101] The park and drive were completed by Olmsted's son between 1880 and 1890 based on designs by Calvert Vaux, landscape architect Samuel Parsons,

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[97] "A Great Driveway Plan," *New York Times*, 28 January 1891, p. 8.

[98] "A Great Driveway Plan," p. 8.

[99] Olmsted, "Document No. 60 of the Board of the Department of Public Parks" reprinted in Olmsted, *Landscape into Cityscape*, p. 347. Olmsted concurred with Eidlitz and wrote "instead of filling up with earth the great space over which the avenue would need to be constructed, it should be utilized as a building suitable for a market or other public purpose, the walls of which would thus have at this point the character of a terrace, commanding fine views of the river."

[100] "American Notes," *The Studio*, n.s., vol. 5 (22 November 1890), p 505.

[101] "The West Side Driveway," *New York Times*, 31 March 1891, p. 9

Jr., and architect Julius Munkowitz.[102] Riverside Drive was substantially altered when Robert Moses incorporated it into the Henry Hudson Parkway during the 1930s.[103]

*Rev. Charles Loring Brace Memorial*

In 1895, the *New York Times* described a bronze tablet designed by him and commissioned as a memorial to the Rev. Charles Loring Brace (1826-1890), the founder of the Children's Aid Society. It was located on the second story of a corner pier of the organization's first freestanding Newsboy's Lodging House (244 William Street, 1874; demolished).[104] The tablet was said to be the largest ornamental bronze casting ever made in the United States up to that time. Its was to be 5'-6" wide, 10'-6" high, 1-foot thick, incorporate three thousand pounds of metal, and weigh two thousand pounds when completed, although a newspaper description of its dedication only noted that it was "over six feet high." Consisting of a pedimented semi-circular arch supported on Romanesque pilasters, the spandrels of the arch were enriched with linear panels and roundels of foliated ornament. The area below the arch contained an elliptical white marble bas-relief of Brace above a memorial inscription. It was produced at the foundry of A. T. Loome, 211 Forsyth Street. The location of the tablet is unknown.[105]

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[102] When Vaux became Landscape Architect for the Department of Parks of New York City in 1881, Parsons (1844-1923), a third-generation horticulturalist, joined him as Superintendent for Planting and was his partner from 1887 to 1895, the year that Vaux died. Parsons served as Superintendent of Parks from 1894 to 1897 and as Landscape Architect for Greater New York from 1901 to 1911. "A Landscape Master Who Left His Mark," *New York Times*, 26 May 1995, p. WC20.

[103] "Riverside Plans put before City," *New York Times*, 11 January 1936, p. 17; Willensky and White, *AIA Guide to New York City*, p. 330.

[104] The building is attributed to Eidlitz by Brooks and Erdmann; I could not confirm it.

[105] "A Memorial to Charles L. Brace," *New York Times*, 20 May, 1895, p. 9; "Brace Tablet Unveiled," *New York Times*, 9 December 1895, p. 3. A photograph of the Newsboy's Lodging House appeared in *King's Handbook of New York City*, p. 427; a photograph of the tablet taken at the foundry is in the Leopold Eidlitz Architectural Drawings and Papers collection at the Avery Library. The tablet also appears on a photograph of the building in *The New Metropolis: Memorable Events of Three Centuries, 1600-1900, From the Island of Mana-Hat-Ta to Greater New York at the Close of the Nineteenth Century*, plate 196.

Eidlitz's public appearances were few during this period. He attended a New Year's Ball at the Metropolitan Opera House in 1890,[106] but his wife died the following year. He quickly re-embraced the persona of the acerbic humorist apparent in his early writings and published three transparently autobiographical pieces in 1892 and 1894.[107] His last known speaking engagement was a lecture on church architecture given in 1896.[108]

*The Cooper Union, again*

The *New York Times* reported that Eidlitz obtained a permit for a $600 alteration project at the Cooper Union building in 1902 although I was unable to confirm it.[109] In 1903, he testified for the Cooper Union in a suit alleging damage caused by elevated trains owned by the Manhattan Elevated Railroad Company. An award of $130,000 was made and the plaintiffs requested additional compensation to repair damage to the foundations of the building.[110]

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[106] "Dancing in a Vast Bower," *New York Times*, 3 January 1890, p. 1.

[107] Leopold Eidlitz, "The Vicissitudes of Architecture," *Architectural Record*, vol. 1, no. 4 (April-June 1892), pp. 471-84; "The Architect of Fashion," *Architectural Record*, vol. 3, no. 4 (April-June 1894), pp. 347-53; "Competitions – The Vicissitudes of Architecture," *Architectural Record*, vol. 4, no. 2 (October-December 1894), pp. 147-56.

[108] "An Exhorter's Work Criticized," *New York Times*, 17 December 1896, p. 2.

[109] "The Building Department," *New York Times*, 29 August 1902, p. 12.

[110] "Cooper Union Wins Suit," *New York Times*, 25 December 1903, p. 12.

## 11. EDUCATIONAL TRAINING OF ARCHITECTS II, ON LIGHT: 1896-99

Eidlitz's penultimate written work was concerned with architectural education, an interest first expressed in 1867 in when he was part of an unsuccessful attempt to establish a polytechnical school to be operated by the American Institute of Architects. The issue was also as an important theme in his 1881 book, *The Nature and Function of Art, More Especially of Architecture*,[1] and it is likely that accounts of the protracted dispute within the Royal Institute of British Architects that began in 1884 over the desirability of professional registration in American and English journals encouraged him to enter the discussion. In 1899, Eidlitz published his last work: a short pamphlet on an entirely different topic. Although he had referred to scientific issues throughout *The Nature and Function of Art*, perhaps in agreement with a claim attributed to Helmholtz that such concerns are as important to society as their artistic counterparts,[2] it seemed to have little to do with his earlier writing. It can be read, however, as demonstration that science could provide answers to issues of cosmic scale without resorting to opinion or "taste," and that the implications for matters of lesser scale, such as art and architecture, were obvious.

### *The Educational Training of Architects*

Eidlitz seems to have written little new on the topic of architectural education[3] until he presented "The Educational Training of Architects" to the 1 March 1897 General Meeting of the Royal Institute of British Architects. Published in the RIBA's *Journal* and accompanied by an account of the

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[1] Leopold Eidlitz, *The Nature and Function of Art, More Especially of Architecture* (New York: A. C. Armstrong & Son; London: Sampson Low, Marston, Searle & Rivington, 1881).

[2] Eidlitz, *On the Nature and Function of Art*, p. 178. Eidlitz directs the reader to "Helmholz [sic] on Classical Education, for instance," but does not otherwise identify the reference.

[3] He had written a letter to *The American Architect and Building News* in 1886 attacking the published views of Sir Edmund Beckett (1816-1905), lawyer, horologist, and architect, on the relationship of science, art, and architecture; Leopold Eidlitz, "A Word to Sir Edmund Beckett," *The American Architect and Building News*, vol. 19 (26 June 1886), p. 311. Beckett did not see much of a connection and he did not consider an architect to be an artist ("he merely makes drawings and tells other people how they are to do the work"). Eidlitz responded by stating that architecture was an art that employed the science of construction, and that a master of such a science was as much an artist as any musician.

discussion that followed,[4] the paper and his responses to its critics contain the clearest and most evolved account of his ideas on the subject. It was his last known published statement on an architectural topic and it initiated a transatlantic debate that exposed wide disparities among French German, English, and American views on the nature of architecture and architectural education at the end of the nineteenth century.

The RIBA's dispute over architectural registration remained unresolved for nearly fifty years. While initially limited to the registration issue, it soon moved on to a much broader discussion of the relationship of artistic and technical education.[5] The dispute originated in seemingly an unrelated issue when Fellows of the RIBA refused to grant a request from a group of Associate members for permission to vote on RIBA issues. The disaffected Associates formed a splinter group, the Society of Architects, and three years later supported a bill written by the Architects and Engineers Registration Act Committee, an independent RIBA body, that advocated registration for architects, engineers, and surveyors. The bill and was withdrawn after professional engineering groups petitioned against it and it was opposed by the Royal Academy of Arts,[6] an organization that offered night classes in architecture but whose claim on the profession was increasingly challenged by the RIBA despite offering no training of any kind.[7]

Similar bills were prepared in 1888 and 1891 by the renamed Architects Registration Bill Committee. Supported by the Society of Architects and opposed by the RIBA, and neither passed. The controversy became more public in 1892 when several RIBA members led by Richard Norman Shaw and T. G. Jackson published a collection of papers in which they claimed that architecture was an

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[4] Leopold Eidlitz, "The Educational Training of Architects"; "Discussion of Mr. Eidlitz's Paper, The President, Professor Aitchison, A.R.A., in the Chair," *Journal of the Royal Institute of British Architects*, vol. 4 (November 1896-October 1897), pp. 213-22.

[5] See Royal Institute of British Architects, "Appendix 2 – Historical Background to Architect's Registration," Report to Council prepared by the ARB Review Group, 29 September 2004.

[6] The Academy was established in 1768 by Sir Joshua Reynolds.

artistic pursuit that was necessarily different from "examinable professions" such as law or medicine.[8] It is likely that Eidlitz became aware of the controversy through accounts published in the RIBA *Journal* and the Shaw-Jackson book; however, they did not address issues of more practical concern such as how to define artistic ability, determine its presence without examination, and establish an architectural education program.

I found no indication that Leopold Eidlitz had ever been to England, and because he did not attend the meeting at which the paper was read, the task fell to John F. Slater, a Fellow of the RIBA who cautioned his audience that "in consenting to be the foster-father to the Paper, I must not be understood to accept the bantling as my own."[9] Slater called it "characteristically and essentially American," a quality he disapprovingly associated with utilitarianism, contempt for tradition, and unusual methods of construction.[10] The piece began with two questions: "How are architects to be

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[7] Andrew Saint, *Richard Norman Shaw* (New Haven: Published for the Paul Mellon Centre for Studies in British Art [London] by Yale University Press, 1976), p. 317.

[8] *Architecture a profession or an art, thirteen short essays on the qualification and training of architects*, Richard Norman Shaw and T. G. Jackson, eds. (London: J. Murray, 1892. The book contained an Introduction by Jackson, an article reprinted from the London *Times* of 3 March 1891 ("The protest against examination and registration of architects"), and the following essays: Richard Norman Shaw, "That fallacy that the architect who makes design his first consideration, must be unpractical"; J. T. Nicklethwaite, "Architecture and construction"; R. Blomfield, "Architecture and the Royal institute of British architects"; G. F. Bodley, "Architectural study and the examination test"; M. Macartney, "The protection of the public"; E. Newton, "Architects and surveyors"; E. S. Prior, "The 'profession' and its ghosts"; J. R. Clayton, "On the isolation of 'professional' architecture from the other arts"; B. Champneys, "On the relation of general to technical education in the training of an architect"; W. R. Lethaby, "The builder's art and the craftsman"; W. B. Richmond, "Thoughts on three arts and the training for them"; G. C. Horsley, "The unity of art"; and, T. G. Jackson, "On true and false ideals in the education of an architect."

William Henry White, secretary of the RIBA, published a similar work, *The architect and his artists, an essay to assist the public in considering the question 'Is architecture a profession or an art?' With an appendix containing extracts from the addresses of the presidents of the Royal Institute of British Architects and from correspondence recently published in the Times* (London: Spottiswoode & Co., 1892). The volume contains the main portions of an essay he read before the Sheffield Society of Architects and Surveyors on 8 December 1891 at the Sheffield School of Art, and pieces published in *The Builder* and other journals.

[9] "Discussion of Mr. Eidlitz's Paper," p. 217. Slater (1847-1924) trained in several London offices and attended University College, London. He began independent practice in 1871 or 1872 and was appointed surveyor to a private estate in London 1891. He designed several electric generating stations in that city and large commercial projects in a partnership that included his son. *Directory of British Architects 1834-1914*, vol. 2, p. 627; A. Stuart Gray, *Edwardian Architecture, A Biographical Dictionary* (London: Gerald Duckworth & Co. Ltd., 1985), p. 333.

[10] "Discussion of Mr. Eidlitz's Paper," p. 217.

educated?" and "Are we ever to have a new style?"[11] While both were of concern to Eidlitz's audience, the relationship between them, if any, was not obvious. He acknowledged that while the questions could provoke a good discussion, they usually resolved little except that "students of architecture shall learn something of the technique of building, if this can be done without the suppression of inherent genius."[12] "Genius" in this sense was said to be "a lively poetic imagination, capable of remembering, selecting, and combining existing forms into a whole, which shall be picturesque."[13] He pointed out that "practical architects" believed that "extended mathematical and scientific training" adversely affected the quality of genius in students of architecture, although such instruction was said to benefit "able constructors (engineers)."[14]

This paradox reflected a mistaken notion for Eidlitz, because, for him, new forms could never develop from the recombination of existing ones: they could only arise from "new functions logically developed."[15] To make the point, he used an analogy from music[16] and suggested that while a musician might play existing works with feeling and skill, such ability did not necessarily indicate compositional skill because writing new pieces required more than mere repetition or combination of known themes. From this, he concluded, "The basis of musical composition is the knowledge of the

[11] Eidlitz, "The Educational Training of Architects," p. 213.

[12] Eidlitz, "The Educational Training of Architects," p. 213.

[13] Eidlitz, "The Educational Training of Architects," p. 213.

[14] Eidlitz, "The Educational Training of Architects," p. 213.

[15] Eidlitz, "The Educational Training of Architects," p. 213.

[16] Comparisons of architecture and music are common and can be said to begin with Platonic/Pythagorean cosmological speculations on universal proportion and end with Claude Perrault's seventeenth-century rejection of the notion as a plausible or practical basis of architecture because he believed that musical harmony was based on invariable mathematical ratios while architectural proportions were mutable and, therefore, seemed to respond to something else. See Claude Perrault, *Ordonnance des cinq espèces des colonnes selon la méthode des anciens* (Paris: Baptiste Coignard, 1683), Indra Kagis McEwen, trans. (Santa Monica, CA: The Getty Center, 1993), p. 48. Closer to Eidlitz's time, Goethe (in Johann Peter Eckermann, *Beyträge zur Poesie: mit besonderer Hinweisung auf Goethe,* Stuttgart, 1824) and Schelling (in *Philosophie der Kunst*, Darmstadt, 1859) described architecture as "frozen music" ("Gefrorene Musik").

nature of sound, and of possible combinations of it which shall be harmonious and expressive. This knowledge is purely mathematical."[17]

Returning to architecture, he traced its reliance on mathematics to pre-thirteenth-century builders who were said to be equally aware of rational constructional rules of thumb and "matters of feeling"[18] in modeling and decoration. By the end of the nineteenth century, rules of thumb had been replaced by mathematical knowledge and computational techniques sufficient to evaluate the structural qualities of each element of a building. For many, however, something seemed to have been lost, and Eidlitz summarized their concerns as follows:

> Now, we are all ready to admit that this knowledge is useful, and perhaps necessary to the student of architecture, to enable him to construct buildings that shall be stable and enduring; but many of us doubt that it has anything to do with architecture as a fine art, which means with the composition of architectural monuments which shall be beautiful to look at, and expressive of their purpose and meaning.[19]

He began his refutation of the argument by stating that the chief elements of architectural beauty and expression were form, modeling, and decoration, and of these, form was the most important. Referring to Amiens Cathedral,[20] Eidlitz suggested that even if all of its sculpture, carved decoration, and mouldings were removed, the ruined structure would still express "a Christian monument of great beauty."[21] This was because its "ecclesiastical expression," said to be comparable to a *motif* in music ("Christian in character, lofty in its conception for a house of God"[22]) and the *grouping* of its parts ("which designate worship in the chevet [*sic*], the presence of the officiating priests in the transept,

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[17] Eidlitz, "The Educational Training of Architects," p. 213.

[18] Eidlitz, "The Educational Training of Architects," p. 213.

[19] Eidlitz, "The Educational Training of Architects," p. 214.

[20] The cathedral of Notre-Dame at Amiens (ca. 1220 – 1247) is the tallest complete Gothic cathedral in France and its construction is perhaps the finest among French Gothic churches. Viollet-le-Duc was involved in its restoration.

[21] Eidlitz, "The Educational Training of Architects," p. 214.

[22] Eidlitz, "The Educational Training of Architects," p. 214.

the people in the nave, the aisles with their processions, chapels, and confessionals"[23]) were in harmony with "a just and accurate treatment of structural parts and their mechanical value." Moreover, a "just and accurate treatment" could be determined scientifically as well as aesthetically through an appropriate response to the presence of "local strains."[24] Returning to musical analogy, Eidlitz concluded

> In music, neglect of a strict mathematical relation of sounds results in discord. So, in architecture, harmony of form can be attained only by a strict observance of the mathematical relation of strains.[25]

Using a cathedral to demonstrate his ideas suggests that for Eidlitz, a building's structure possesses transcendent as well as quantitative qualities. Furthermore, because the latter are governed by scientific laws that exist independently of the senses and societal custom, they can liberate architecture from the "tyranny" of taste-based genius.

These views suggest that Eidlitz was familiar with Schopenhauer's well-known pronouncement that the "constant theme" of architecture is load and support.

> ...architecture affects us not only mathematically but dynamically and that what speaks to us through it is not mere form and symmetry but rather those fundamental forces of nature, those primary Ideas, those lowest grades of the will's objectivity.[26]

The architect's role was to transform lifeless matter into a structure in which gravitational forces could travel, the aesthetic effect being dependent on the amount of separation of the two.[27] Architecture occupied the lowest position of in his taxonomy of art because of this limitation while music occupied the highest because it did not require physical means to achieve its end.

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[23] Eidlitz, "The Educational Training of Architects," p. 214. The italics are Eidlitz's.

[24] He defines strain as "the sum of weight, its direction, and resulting bending moments." Eidlitz, "The Educational Training of Architects," p. 214.

[25] Eidlitz, "The Educational Training of Architects," p. 214.

[26] Arnold Schopenhauer, *The World as Will and Representation*, E. F. J. Payne, trans., 2 vols (Colorado: 1958) trans. of *Die Welt als Wille und Vorstellung* (Leipzig, 1819, rev. 1844), vol. 1, p. 215.

Eidlitz distinguished valid from false architectural forms by insisting that the former were determined by artistic response to the imposition of gravitational loads while the latter were based on mere visual preference: "Harmony of strain means that stress should always be resisted by a proportionate amount of material, no more, no less."[28] However, his view was not that of the engineer, and he added

> This does not mean that there should be no more material than is absolutely necessary to perform a given amount of mechanical work... but whatever the amount of material used in a given architectural monument, which, in the opinion of the architect, is commensurate to its character of stability, dignity, and elegance, [it] shall be proportionate to the actual strains throughout the whole design.[29]

Eidlitz's use of the term "proportionate" here is not strictly computational and has implications that go well beyond the reductive use of mathematical relationships to determine form. In his examination of proportion in *The Nature and Function of Art* he portrayed the essential quality of Greco-Roman classicism as relatively unimportant and defined it as "the relation of the parts of a structure as expressed in magnitude (extension, mass)."[30]

> It means: given a temple of a certain length, what is to be its breadth and height, and what the respective dimensions of its columns, bases, capitals, entablature, etc., in order to respond to the laws of beauty?[31]

Although such a definition relied on mathematics, he did not believe that it provided adequate insight into other aspects of art and architecture.

> This is the popular way of stating it, and there is a decided infelicity in it, because the laws of beauty are unwritten laws; they

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[27] Schopenhauer, *The World as Will and Representation*, vol. 2, p. 411.

[28] Eidlitz, "The Educational Training of Architects," p. 214.

[29] Eidlitz, "The Educational Training of Architects," p. 214.

[30] Eidlitz, *The Nature and Function of Art*, p. 292.

[31] Eidlitz, *The Nature and Function of Art*, p. 292.

> are not laws demonstrated or tested in the same way as judicial, scientific, or moral laws, before they are recognized as valid.[32]

The common notion of "laws" as they apply to beauty seem, in this sense, to have little to do with what appear to be eternal and unchangeable qualities. This is because such "unwritten laws" are based on the opinions of authorities whose taste changes over time. Similarly, proportion varies with style and, therefore, neither it nor taste-based opinion can serve as the basis for "true" laws. Eidlitz added, "The only theory by which the judgment of the leading minds of the various schools can be shown to be consistent is, that when beauty is spoken of, they mean expression as well."[33] "Expression" here is the "mental effort" required to determine a building's "relations of matter, [and] the proportion of [its] parts," and he notes that it is easy for him to appreciate Greek and Roman structures because "they are to my mind the exact proportions that should be employed in producing the expression which I admire so much."[34] Gothic architecture, however, is another matter, and he describes how "an art effort" can produce beauty that is neither responsive to proportion nor attractive.

> When I contemplate a medieval monument, I am displeased with its expression; if, however, it is the problem to produce just this sort of expression, which is possible, though inconsistent with good taste (my taste), then the problem has been solved with success, and I may recognize it as an art effort which results in beauty. I do not admire the proportions of matter employed, because they do not lead to an architectural expression which is acceptable to me. Considered in this light, there is nothing inconsistent in the argument; it proves that one of the conditions of the proportions desirable in a monument must be the ultimate expression aimed at. We are also enlightened upon another point, viz.: That taste is not a trustworthy standard applicable to the abstract consideration of the nature of proportions.[35]

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[32] Eidlitz, *The Nature and Function of Art*, p. 292.

[33] Eidlitz, *The Nature and Function of Art*, p. 293.

[34] Eidlitz, *The Nature and Function of Art*, p. 293.

[35] Eidlitz, *The Nature and Function of Art*, pp. 293-94.

This notion of proportion is very different from where he began and he tells us that it can be considered "independently of the properties of strength and elegance."[36] A weak and inelegant structure (Eidlitz also uses the word "organism") can possess good proportions if all of its elements are weak and inelegant to the same degree and if each falls short of its intended performance to the same degree. The opposite is also true if all of the elements of an organism perform their function abundantly and the abundance is manifested in the massing of those elements to an extent that exceeds sufficiency. In what is probably the most unusual part of his argument, he claims

> The function of an architect in expressing an idea in matter is to determine the degree of strength and elegance which should be the attribute of a given monument; therefore, as soon as the masses necessary to meet the mechanical laws of construction are arrived at, he may direct how much stronger the whole or a part of the structure shall be made... The small quantity which needs in fact to be added to the mass of a structure to make it aesthetically effective, it will be found, upon close examination, must be added *pro rata*; or, in other words, the safe load which our material is to sustain must be reduced according to a certain standard, and this reduction constitutes the intended addition.[37]

Exercising "the opinion of the architect" in this manner requires two judgments. First, the designer must select a material and determine its "factor of safety," i.e., the ratio of the ultimate breaking strength of a member or piece of material to the actual working stress or safe load when in use.[38] Eidlitz noted that factors of safety vary and are dependent on things such as a material's limit of elasticity, methods of construction, and the effects of weather and corrosion.[39] He also noted that factors of safety cannot not be expressed as simple arithmetic ratios, a situation that makes a purely visual approach to design impossible.[40]

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[36] Eidlitz, *The Nature and Function of Art*, p. 294.

[37] Eidlitz, *The Nature and Function of Art*, p. 295.

[38] *Dictionary of Architecture & Construction*, Cyril M. Harris, ed., third ed. (New York: McGraw-Hill, 2000).

[39] Eidlitz, "The Educational Training of Architects," p. 214.

[40] Eidlitz, *The Nature and Function of Art*, note, p. 295; pp. 297-300.

Next, the designer must select a factor of safety appropriate for the building itself. A factor of safety is usually expressed as a single numerical value because, in addition to assuring stability, it is intended to determine the most efficient, and, therefore, the most economical use of a material for a given set of conditions. Because Eidlitz considered efficiency to be only one of many possible responses to design, he saw factors of safety as a range of values, any one of which could be used depending on its relationship to criteria such as "dignity" and "elegance." He may have gotten the idea from Fergusson who wrote that "an architect ought always to allow himself such margin of strength that he may disregard or play with his construction."[41] Thus, Eidlitz could write, "the factor of safety... should, for the same material, vary in different buildings according to their purpose."[42] Using schools, libraries, and churches as examples, he concluded, "The factor of safety so chosen becomes the keynote of [the architect's] design, and a constant reference to it insures harmony."[43]

Iron showed great promise as a structural material according to this logic and, pointing out the impressive relationship between its ultimate resistance and maximum allowable strain, he acknowledged its potential for its "more elegant structural forms."[44] This represented a remarkable change of mind for Eidlitz, who had written in 1858

> iron *never can*, and *never will* be, a suitable material for forming he main walls of architectural monuments. The only material for *that* purpose always has been, and now is, *stone*; and I believe that it *always* will be.[45]

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[41] James Fergusson, *A history of architecture in all countries, from the earliest times to the present day*, vol. 1 (London: J. Murray, 1865-67), p. 22.

[42] Eidlitz, "The Educational Training of Architects," p. 214.

[43] Eidlitz, "The Educational Training of Architects," p. 214.

[44] Eidlitz, "The Educational Training of Architects," p. 214.

[45] Eidlitz, "Cast Iron and Architecture," *The Crayon*, vol. 6 (January 1859), p. 21; the italics are his. Eidlitz's paper was read at the 21 December 1858 meeting of the American Institute of Architects in response to "Cast Iron and Decorative Architecture," a paper read by Henry Van Brunt at the 7 December 1858 meeting. Both were published in the same issue. The issue was also discussed in "Architecture and Building Materials," *Scientific American*, vol. 1, no. 22 (26 November 1859), p. 353, and in the *Architects and Mechanic's Journal*, 3 December 1859, pp. 51-52 and 31 December 1859, p. 83. A rejoinder from "Vindex" that was probably written by James Bogardus appeared in the 24 December 1859 of the *Architects and Mechanic's Journal*;

He now speculated that iron could be used to produce forms that could be attenuated well beyond the limits of convention and quoted Ruskin who seemed surprisingly enthusiastic about the possibilities: "There is no law, no principle based on past practice, which may not be overthrown in a moment by the arising of a *new condition*, or the invention of a *new material*."[46] Eidlitz had the last word, however, and replied "We must answer this despondency by stating that there is still the law of mechanics which cannot be overthrown by new conditions or new materials."[47]

The next part of Eidlitz's paper was concerned with the consequences of disobeying "the law of mechanics." He began with an example of "gross discord in the formation of architectural masses"[48] and showed how, in one building, a contemporary architect in "correctly" applied classical details to stone columns that carried relatively small loads while applying similar details to the stone cladding that encased iron columns that carried much greater loads.

> It may be asked here... what the author could have done with an ugly iron or steel pillar riveted up of rolled material. Without discussing that question at this time – although it may be asserted with confidence that a post of that description is not at all outside the pale of aesthetic possibilities – it may be suggested that a cast bronze column was perfectly practicable, so was a granite column of sufficient diameter to carry the load. What the architect had in mind, however, was not the question of the mechanical work to be done, nor the question of relative strains and an harmonious development of forms, but the beauties of the Greek portico, which must be preserved in spite of new conditions and the invention of new material. Of course, no new style of architecture can be expected when new conditions, such as a twenty-five-storey office building – or the invention of a new material, such as rolled steel – are referred to the Greek portico, instead of the law of gravitation.[49]

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Turpin C. Banister, "Bogardus Revisited: Part I: The Iron Fronts," *Journal of the Society of Architectural Historians*, vol. 15, no. 4 (December 1956), p. 21, n 45.

[46] John Ruskin, *Modern Painters*, vol. II, p. 21; the italics are Eidlitz's. In his *Crayon* article, Eidlitz referred disapprovingly to Ruskin's opposition to the use of iron because it reflected his "purely artistic" view rather than recognition of the "practical unfitness" of the material. Eidlitz, "Cast Iron and Architecture," p. 22.

[47] Eidlitz, "The Educational Training of Architects," p. 214.

[48] Eidlitz, "The Educational Training of Architects," p. 215.

[49] Eidlitz, "The Educational Training of Architects," p. 215.

According to Eidlitz, errors of this kind originated in

> the constant and exclusive reading of its history, which is tacitly presented by schools, and avowedly accepted by students as a system of building which serves all the purposes of a philosophy – or a science and art – competent to teach building scientifically and artistically under conditions which never occurred in the history of the past.[50]

He described a situation in which students received mathematical training that enabled them to "devise methods of construction and, when devised, to compute with accuracy the resulting strains."[51] However, they were subsequently turned over to "a special teacher of architecture"[52] who encouraged them to design according to Greek and Roman methods rather than in conformance with their previous training. The situation was made worse because most of the students had no practical building experience before they began their studies and, because they were not taught how to use their mathematical training to develop forms, they disregard it because its relationship to design was unclear. Consequently, form was only studied in the abstract as it was presented in history, a particular failing of the Beaux-Arts method, according to Eidlitz. Although not totally opposed to acquainting architects with history, he felt that it should be presented in a post-graduate course or private reading after academic training was complete.

To achieve his ends, Eidlitz proposed a new "text-book" that he would title *The Theory, Practice, and Art of Building*. He suggested that it could be used in "universities, polytechnic schools, and academies of the art of architecture" and claimed that it would be suitable for all students with a reasonable level of mathematical training.[53] The first part of the book would contain essays on

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[50] Eidlitz, "The Educational Training of Architects," p. 215.

[51] Eidlitz, "The Educational Training of Architects," p. 215.

[52] Eidlitz, "The Educational Training of Architects," p. 215.

[53] He defined that level as comfort with and the ability to refer to Thomas Alexander, William John Macquorn Rankine, and Arthur Watson Thomson, *Elementary Applied Mechanics. Being the simpler and more practical cases of stress and strain wrought out individually from first principles by means of elementary mathematics*, 2 vols. (London, Macmillan and Company, 1880-1883) or comparable books "at least as far as statics are concerned." Rankine (1820-72) was a mathematical physicist who introduced the B.Sc. degree in engineering

modeling structural components with reference to mechanical work done and context. Other essays would address carved ornament and color decoration and their relation to mechanical function. It would also include a selection of what he called "architectural scales," a series of graded exercises comparable to the musical scales used to train students of composition. The second part of the book would address the construction of what he referred to as "single cells" and their combination into "piles."[54] Although students would attend lectures on the rationale of structural elements and composition, they would spend most of their time drawing the elements and, ultimately, complete buildings and monuments. Drawings would not be copied from the book and would require individual responses to the subjects presented in it, developed with the assistance of a teacher and assistant(s), the latter assuring that "adherence to strain is strictly pursued."[55] He noted that this approach would assure that students would receive assistance and correction on a daily basis and develop "the habit of referring design to building, with its mechanical import."[56]

> That monuments thus conceived and designed will be expressive of their meaning, and the individuality of their author, cannot be doubted; nor that they will be harmonious in themselves, and will vary from the forms of the past in the degree as new wants, new material, new methods of construction vary and excel those handed down in history.[57]

Eidlitz concluded his article with a shift from musical to biological analogy.

> When a natural organism decays and dies, it still exists in its elements, though not in its original form. These elements under different environments combine again into new organic forms of different functions. Science and art obey a similar law. Principles

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at Glasgow University. His textbooks include the *Manual of Applied Mechanics* (1858), *Manual of the Steam Engine and other Prime Movers* (1859), *Manual of Civil Engineering* (1862), and *Machinery and Mill Work* (1869). The *Manual of Applied Mechanics* influenced most introductory books on the subject. Alexander and Watson were students of Rankine.

[54] These terms were used by Eidlitz throughout his writing and are best explained in *The Nature and Function of Art*, chap. xix, "Form and Construction, pp. 271-72; chap. xxiii, "Style," p. 338, and chap. xxv, "Analysis," pp. 404-407.

[55] Eidlitz, "The Educational Training of Architects," p. 216.

[56] Eidlitz, "The Educational Training of Architects," p. 216.

[57] Eidlitz, "The Educational Training of Architects," p. 216.

> established by experience continue to live as accepted truths, when the forms of artificial organisms which they originally developed have ceased to be fitting or useful to human needs, more especially when that principle first crudely announced has become accurately determined by quantitative analysis.[58]

He compared this process to the development of the rifle from the crossbow, textile machinery from the spinning wheel, and the steamship from the galley. Only architecture, he claimed, continued to retain obsolete forms and neglected "underlying principles and organic laws."[59] He was not despondent, however, because although the situation had persisted for five hundred years, the pace of events during the nineteenth century suggested that a renewal of progress in architecture could be made within a single generation "provided that we are ready and willing to refer to its true and fundamental principles and teach it rationally."[60]

*Immediate Response*

Slater had made some preliminary comments before presenting the paper and stated that although he had not read *The Nature and Function of Art,* he was aware of its presence in the RIBA library. He called it "full of suggestive material" and applied the same words to Eidlitz's paper.[61] His main disagreement with Eidlitz was on the issue of postponing the study of architectural history and he claimed that few in England would support the idea. He agreed with Eidlitz on the importance of the relationship between form and structural support ("No doubt a great truth underlies this statement"), and, like Eidlitz, disparaged the use of stone veneers to conceal the iron frames of tall American buildings because the practice contradicted the underlying forces. However, he did not believe that

[58] Eidlitz, "The Educational Training of Architects," p. 216.

[59] Eidlitz, "The Educational Training of Architects," p. 216.

[60] Eidlitz, "The Educational Training of Architects," p. 216.

[61] "Discussion of Mr. Eidlitz's Paper," p. 217.

an approach based on what he called "the mere mechanical formula of proportion of weight to strains" could produce buildings "with any architectural life at all."[62]

Henry Heathcote Statham, another RIBA Fellow and editor of *The Builder*, was the first to speak after Slater's presentation.[63] He claimed to know something of Eidlitz's writing but was dubious that the paper would go very far towards evolving a new style of architecture, a point he would revisit in later comments. While he felt positive toward Eidlitz's "architectural scales," he was not sure about the effect such exercises would have on the design of mouldings and carved ornament. Returning to the notion of a new style of architecture, Statham took great exception to what he called "that old fallacy that we have heard again and again during the last twenty years or so,"[64] namely that architecture should be carried out as it was prior to the fourteenth century, i.e., without reference to precedent. He claimed that while such an approach might be desirable, it was unrealistic. He also noted that despite Eidlitz's dislike of the educational methods used at the École des Beaux-Arts, a friend who was also an art critic and had spent many years in France claimed that architecture there was "more a living art" than any other country in the world and that recent shows of student work demonstrated that technical considerations were not ignored. While Statham did agree with Eidlitz that students should be directed to consider technical considerations in their designs, he felt that it would be impossible to remove them entirely from the influence of architectural precedent: "...if shut out from it in the school, they will get it out of doors; and if one tries to keep them from all books and knowledge of architectural history, they will have nothing to go upon as a basis for designing at all."[65] In conclusion, Statham linked Beaux-Arts architecture to classical design and two- or three-storey structures. American architecture, on the other hand, was said to be solely concerned with

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[62] "Discussion of Mr. Eidlitz's Paper," p. 217.

[63] Statham (1839-1924) was trained in Liverpool and moved to London. He began independent practice in 1871 but was mainly a writer, serving as editor and controller of *The Builder* from 1884-1909 and the author of more than a dozen books on architecture, music, and literature. *Directory of British Architects 1834-1914*, vol. 2, pp. 686-87; Gray, *Edwardian Architecture, A Biographical Dictionary*, p. 336.

[64] "Discussion of Mr. Eidlitz's Paper," p. 218.

much taller structures and, despite any evidence to support his statement, he ascribed the view to Eidlitz.

> That seems to me, is the sole architectural problem in this world he thinks worthy of solution. In a building in America twenty-two stories high, naturally, it comes to construction of steel or iron, which I think I heard you say, Sir, is the architecture of the period, and which we ought to study at the present time.[66]

George Aitchison, President of the RIBA and moderator of the session,[67] took the floor after several additional comments and described his own reaction to *The Nature and Function of Art.* He had read it seven years earlier after finding it in a second-hand bookshop and considered Eidlitz's advocacy of art as a means of education to be its main and strongest point. While he did not agree with some of the notions in the paper, particularly the suggestion that the practice of architecture could be changed in a single generation, he called it one of the most important given at the Institute during his membership. Aitchison was in full agreement with Eidlitz's desire to tie architectural proportion to structural considerations and he did not see much of a difference between Statham and Eidlitz in their views on the relationship of architecture to contemporary expression, usefulness, construction, and legibility. However, he disagreed that such qualities could be achieved solely through structural considerations and did not see how the emotional aspect of building could evolve from such an approach.

After he finished his remarks, Aitchison read the evening's final comments submitted by another RIBA Fellow, Arthur Cates, Chairman of the Board of Examiners in Architecture.[68] Cates was extremely unsympathetic to Eidlitz's arguments and claimed that British architectural education did

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[65] "Discussion of Mr. Eidlitz's Paper," p. 219.

[66] "Discussion of Mr. Eidlitz's Paper," p. 219.

[67] Aitchison (1825-1910) was the President of the RIBA from 1896 to 1899. He received a Royal Gold Medal in 1898 but refused a knighthood; *Directory of British Architects 1834-1914*, Antonia Brodie, Alsion Felstead, Jonathan Franklin, Leslie Pinfield, Jane Oldfield, eds. (London and New York: Continuum, 2001), vol. 1, p. 17.

not intend to teach architects everything or contribute to the evolution of a new style. Instead, he stated that training, as it existed, was directed toward enabling students to obtain knowledge necessary for satisfactory professional practice and development of artistic and scientific ability applicable to design and its realization. Cates firmly advocated the study of architectural history, beginning with classical and medieval work and proceeding to Renaissance, as well as sketching from example and memory. He read an extract from a paper written by William Robert Ware, a member of the AIA's Committee on Education, to the effect that historical study would not "enervate the powers, instead of stimulating, and, as in a hot-bed, bury or burn out all seeds of originality through too rich a culture."[69] Cates also expressed little appreciation for Eidlitz's proposed "text-book" and failed to see how its methods and content would achieve its goals. Ware was particularly antagonistic to Eidlitz's "factor of safety" notion and stated that considerations such as form, mass, stability, materials, artistic expression, scientific knowledge, and "the divine inspiration of artistic genius" must necessarily precede "architectural scales," "text-books," and "combination of single cells into piles."[70] Cates closed his remarks by quoting Ware on the "text-book" issue and agreeing with him that little change was necessary in educational methods for architects because the existing approach worked well and it was impossible to see into the future. He concluded

> An architect will then so far as personal characteristic may permit, in some degree combine the imagination of the artist, the intellectual clearness and precision of the mathematician, and the experience and readiness of the practical man with the culture and refinement of the educated gentleman.[71]

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[68] Cates (1829-1901) was born in London and trained with Sidney Smirke. He worked in private practice and for the Crown and was Chairman of the Board of Examiners in Architecture from 1882 onward. *Directory of British Architects 1834-1914*, vol. 1, p. 345.

[69] William Robert Ware, *The Study of Architectural History at Columbia University* quoted in "Discussion of Mr. Eidlitz's Paper," p. 221.

[70] "Discussion of Mr. Eidlitz's Paper," p. 221.

[71] "Discussion of Mr. Eidlitz's Paper," p. 221.

*The "Rejoinder"*

Eidlitz responded to his critics several months later in the RIBA *Journal.*[72] Prefacing his remarks with a quotation from Carlyle that implied progress was limited only by flaws in human character,[73] he moved directly to a blast at professional architects. Among that group, he wrote, discussions of science and art in were subordinated to the "supposed immediate interest of the architect as a genius" and were, therefore, "mainly commercial."[74] He called the methods used to achieve such ends "purely political, in that modern sense of the word which means the pursuit of temporary expedience" and called the result "disastrous to the profession."[75] Because of the arbitrariness associated with genius, the judgments of architects were frequently discounted by governmental agencies and politicians. The public had also lost faith in the authority of architects compared to that of other professionals and the opinions of "competent mechanics and artisans in their own specialties" were considered more reliable.[76]

Despite claims for possessing scientific and artistic skills, architects had been reduced to advocating taste as the primary measure of their worth. However, because everyone claimed to have taste, architects attempted to distinguish their own by emphasizing their knowledge of art history. Eidlitz was sure that this was not a sufficient basis for a profession and wrote

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[72] Leopold Eidlitz, "The Educational Training of Architects. A Rejoinder," *Journal of the Royal Institute of British Architects*, vol. 4 (November 1896-October 1897). The remarks were dated 31 July [1896].

[73] "O heaven, and are these things forever impossible, then? Not a whit. To-morrow morning they might all begin to be, and go on through blessed centuries realizing themselves, if it were not that – alas, if it were not that we are most of us insincere persons, sham talking-machines and hollow windy fools! Which it is not "impossible" that we should cease to be, I hope?" Thomas Carlyle, *Latter Day Pamphlets*, No. IV, "The New Downing Street" (1850). The lines that preceded the quotation may have been even more appropriate. They expressed Carlyle's concern for the low state of the English educational system and his belief that government was unwilling to do much about it.

[74] Eidlitz, "A Rejoinder," p. 462.

[75] Eidlitz, "A Rejoinder," p. 462.

[76] Eidlitz, "A Rejoinder," p. 462.

> This is the last tangible position taken to explain to logical trained minds that there is an actual science and artistic foundation to the otherwise patently dilettante talk of taste and genius.[77]

As he had mentioned in his paper, the problem was not the study of history but the imposition of inappropriate expectations upon it.

> Let me admit broadly that the history of any science or art is an essential appendix to the study of it, provided it be accompanied by a philosophic scheme of education, comprising all the requisite knowledge now attainable. Alone, without connection with such a scheme of education, the reading of the history of architecture may also become valuable to the extent in which it is treated analytically; but when not so treated, it becomes misleading.[78]

As an example of the problems created by studying architectural history without competence in the fundamentals of design and construction, Eidlitz referred to a comment in which Slater disapproved of the use of stone cladding for iron supports because it masked the magnitude of underlying forces. A respondent who disagreed with the Slater justified his own use of brick to clad a cast-iron stanchion by claiming that "so long as the work is in proportion, I maintain that its employment in that form is a thoroughly defensible and excellent form of design."[79] Eidlitz was outraged and wrote that the respondent saw the history of architecture as "a collection of designs, not buildings" despite the inescapable presence of what Eidlitz referred to as "*the mechanical relation of matter*" revealed by the slenderness of the stanchion.[80] He was equally troubled by the respondent's misunderstanding of proportion.

> It would be interesting to learn where, in what book, [the respondent] found the authority for the size of his brick column. I never met with such a book. I fear that he refers to the proportions of columns as laid down in *Vitruvius*, or perhaps deduced from Stuart and Revett, or some more recent measurements of the structural parts of Greek temples. He seems quite to overlook the

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[77] Eidlitz, "A Rejoinder," p. 462.

[78] Eidlitz, "A Rejoinder," p. 462.

[79] "Discussion of Mr. Eidlitz's Paper," p. 219.

[80] Eidlitz, "A Rejoinder," p. 462. The italics are Eidlitz's.

> fact that Greek architects in using these proportions were governed by mechanical reasoning derived from practical experience. Furthermore, he has evidently omitted to observe that these proportions are necessarily modified by the nature of the load, and the resisting capacity of the material. Greek temples were built of marble; his column was built of brick.[81]

He was less harsh with Slater's contention that a building's structural components should be visually proportioned to reflect the loads they carry, but disagreed with the conclusion that "the mere mechanical proportion of weight to strains" was inadequate to give "architectural life" to the "dead bones of building."[82] "Do not be afraid," he told Slater, and reminded him that Nature relied on "the formula of weights, statics, and dynamics" to clothe "the bones of her animal and vegetable creations" with great success. "I know this to be true," Eidlitz continued,

> because these formulae have been deduced from the phenomena observed in nature; and it is universally conceded that art is the human effort at creation in imitation of nature, [therefore] the neglect of these formulae denotes misconception of the nature of art."[83]

Henry Heathcote Statham's remarks initially drew little response from Eidlitz other than a disavowal of the possibility of progress in architecture or any other art that was not based on conformance to the laws of nature.[84] However, he quickly turned to Statham's comments on the relationship of the study of history to the education of architects. Eidlitz expressed a desire to see "the noun architect and all its derivatives" abandoned[85] because the word had lost its original association with medieval master masons and had come to designate beautifiers rather than constructors of buildings. Because there was little agreement on beauty, if an architect – such as Statham – were asked to define it, it was likely that the answer would involve historical examples. Eidlitz claimed that the "why and

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[81] Eidlitz, "A Rejoinder," p. 463.

[82] "Discussion of Mr. Eidlitz's Paper," p. 218.

[83] Eidlitz, "A Rejoinder," p. 463.

[84] Eidlitz, "A Rejoinder," p. 463.

[85] Eidlitz, "A Rejoinder," p. 463.

wherefore" would be missing from such a definition and the services of an archeologist or an engineer would be required to show how a structure was made and why it endured. He also claimed that most practitioners would not pursue the additional information to spare themselves "the tiresome process of mathematics."[86] Consequently, certain buildings were deemed beautiful and suitable for emulation without critical examination or full understanding of the reasons behind such judgments.

Eidlitz then turned to a more contentious topic: what he took to be Statham's implicitly condescending assessment of American architects and architecture. He began by dismissing the indefinable notion of genius as a useful subject in a discussion of architectural education and noted that other criteria, such as "history, time-honored tradition, and the like"[87] seemed more appropriate for the RIBA. Referring to himself "an American from America, a man without traditions or proper respect for antiquity," he repeated his claim that cursory exposure to architectural history without substantial instruction in mechanical and aesthetic analysis would provide "indigestible mental food" for young, unsophisticated students.[88] He also claimed to see a conspiracy among practitioners and teachers who saw history as a library of equally valuable forms rather than a record of progressive developments. Such hegemony could only be maintained if these practitioners and teachers forbade students to make the kind of investigations that would reveal the truth of Eidlitz's claims.

> But the practitioners and professors might tell [a questioning student]: "This is rank heresy. You see this history is wisely divided into books and chapters. Any one of these books contains a history of a period and of a style complete within itself. Follow whichever you please, and you will become a great architect. But do not argue; do not analyze; do not talk of progress, of the relation between mechanical development of the masses and their decoration and the like."[89]

Thus, he could conclude

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[86] Eidlitz, "A Rejoinder," p. 463.

[87] Eidlitz, "A Rejoinder," p. 464.

[88] Eidlitz, "A Rejoinder," p. 464.

> I say, when the American from America talks thus in the citadel of learning, no wonder Mr. Statham is indignant, though as host of the occasion his politeness curbs his indignation. He admits that his guest may be right philosophically, but insists that practically he is wrong. And this is strange, for usually Americans are practically right and philosophically wrong.[90]

Eidlitz next attempted to refute Statham's contention that architectural education must be based on history and style because there was no other alternative. In conformance with much mid-nineteenth century thinking, Eidlitz claimed that antique and medieval monuments demonstrated "continual progress in art development" in the areas of construction and treatment of materials, conventionalization of natural organic forms for decoration, and adaptation of such decoration to and as an expression of constructional conditions. Thus, rather than being an expression of "genius" that did not require a thorough knowledge of earlier structures, progress in architecture represented "a continuous mental effort to improve and add to them."[91] As an example of a misreading of the process, Eidlitz recalled the problematic relationship of Roman architects to their Greek predecessors and claimed that because the Romans merely changed Greek forms to adapt them to Roman uses, they denied the possibility of real progress in "the art of architecture."

His attack on Statham's position continued with a list of seven assertions.[92]

The teaching of architectural history was not preceded or supplemented by "mathematical reasoning," the governor of "the relation of matter in an architectural organism when created by man in imitation of nature." The "science of mechanics" is the sole guide to "a proper relation of masses" and must take into account the "mechanical function" of the masses involved and the "resistance to external force" of material of which they are made.

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[89] Eidlitz, "A Rejoinder," p. 464.

[90] Eidlitz, "A Rejoinder," p. 464.

[91] Eidlitz, "A Rejoinder," p. 464.

[92] Eidlitz, "A Rejoinder," pp. 464-65.

Because of differences in "materials and magnitudes," accounts of the "arithmetical relations of structural parts" of historical buildings were mere surveys that were of no use in the design other structures without reference to "the laws of mechanics."

The empirical methods used to determine the mechanical properties of earlier structures should be reconsidered in light of modern knowledge and methods.

Mouldings, decoration, and color are "the means of accentuating these structural elements in their mechanical functions." Eidlitz referred to his own writing as proof of the statement.[93]

In all sciences and arts except architecture, history is taught as a chronological review of "the development and progress of the past" with the understanding that the review extends to the present time and can be used "*in its totality*" (Eidlitz's italics) to inform new work: "To add to past experience by present action, to group and to deduce general laws from isolated historical facts, and to extend recognized laws over recent experience, is the aim and pride of every student." Students of architecture, however, were taught that forms were a product of fashion and, therefore, were complete within themselves, unrelated to any fundamental system of science or art, and indifferent to changing conditions. Under such conditions, decadence sets in and progress in architecture becomes impossible. Eidlitz claimed that architects had "lost the meaning of functional members of structures" at the end of the Gothic period, and he referred to William Hosking's account of the transformation of wall buttresses from structural into decorative features.[94]

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[93] "I can only refer to chapter xxii, p. 316, of the *Nature and Function of Art*, where I have cursorily touched on this." The referenced chapter is titled "Carved Ornament and Color Decoration."

[94] The reference is to *The Nature and Function of Art*, chapter iv, p. 51. The cited chapter is titled "Architecture" and the discussion that appears on p. 55-56 quotes from Hosking's entry for "Architecture" in the *Encyclopedia Britannica,* eighth ed. (1856). Hosking (1800-61), an architect and a prolific writer, was also a professor of architecture at King's College, London. *Directory of British Architects 1834-1914*, vol. 1, pp. 955-56.

Architectural forms once reflected specific materials and usage, however, when they are transposed to other materials and functions, "meaning and purpose" recede in favor of an emphasis on purely visual qualities.

The demand for a new style is a request made by "unwise men," and wise men deplore the absence of progress that could come from improved knowledge of construction and the use of new materials. Historical forms are misunderstood in modern attempts at imitation because the "motives and principles" upon which they were based are not seen as "a logical system, a philosophy of building, and an art development of expression."

Eidlitz summarized Statham's response to his paper as "it might be right from a philosophic point of view, but it cannot be done" and issued a strong challenge: "What cannot be done? That we should endeavor to carry out architecture as people carried it out before the fourteenth century, without reference to precedent."[95]

The focus of his next comments changed when he introduced several quotations from Statham's book, *Architecture for General Readers*.[96] In a passage that Eidlitz described as "the only point of view in which it is worth the regard of thoughtful people," Statham defined architecture as "the art of erecting expressive and beautiful buildings."[97] He also wrote that a building could not be beautiful in an architectural sense unless it was expressive, and because buildings are incapable of human expression and action, expression could only reflect the emotion of its designer or its internal structure and arrangement. Mainly interested in the second criterion, Statham told his readers that "a building may express [very definitely in its main] constructive facts, its plan, its arrangement, [to a

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[95] Eidlitz, "A Rejoinder," p. 465.

[96] Henry Heathcote Statham, *Architecture for General Readers; a short treatise on the principles and motives of architectural design. With a historical sketch* (London: Chapman and Hall, 1895). Eidlitz's quotations are from this edition. I have used the second edition (New York: Charles Scribner's Sons, 1896). Changes made to the text in the later edition are enclosed within brackets.

[97] Statham, *Architecture for General Readers*, p. 3, quoted in Eidlitz, "The Educational Training of Architects. A Rejoinder," p. 465.

certain extent] even its purpose. It [not only may, but it] ought to do this, unless the architecture is to be an ornamental screen for concealing prosaic facts."[98] He concluded

> Then a design is dependent on structural conditions also, and if these are not observed, the building will not stand, and hence it is obvious that the architectural design must express these structural conditions; it must not appear to stand, or be constructed, in a way it could not stand (like modern shop fronts [which appear to rest on sheets of plate-glass]), and its whole exterior appearance ought to be in accordance with, and convey the idea of, the manner and principle on which it is constructed. The [most important parts of the] interiors must be shown as such externally by [the greater elaboration and] emphasis of [their architectural] treatment.[99]

Although all of this sounds reasonably consistent with Eidlitz's positions, he could not accept Statham's "adumbrated notion" that architecture is a metaphysical art. Statham attempted to make the point by claiming that, as in music, there is something in architecture that defies analysis and appeals to our sense of delight although "we know not how or why, and probably do not want to know...."[100] Eidlitz sarcastically commended Statham for speculating "earnestly, and not without vivacity "on the nature of art and suggested that he addressed his thoughts to the "general reader" because he was unable to provide a definition of architecture that would be useful to a professional.

> And yet how near he comes to it, not in its entirety, but in its elements! How vividly he thinks of it, unfortunately not as a building, but as a design. The ground plan must be felt in the elevation, and so must methods of construction. As a whole, it is a species of music, imponderable, metaphysical. "We do not know how and why, and probably do not want to know." Thus the author abandons the idea of connecting the material in building with the spiritual, which he alone considers to be the art effort. He ascribes it [instead] to the inspiration of genius.[101]

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[98] Statham, *Architecture for General Readers*, p. 4, quoted in Eidlitz, "The Educational Training of Architects. A Rejoinder," p. 465.

[99] Statham, *Architecture for General Readers*, p. 5, quoted in Eidlitz, "The Educational Training of Architects. A Rejoinder," p. 465.

[100] Statham, *Architecture for General Readers*, p. 9, quoted in Eidlitz, "The Educational Training of Architects. A Rejoinder," pp. 465-66.

[101] Eidlitz, "A Rejoinder," p. 466.

Eidlitz compared Statham's reliance on metaphysics to explain certain aspects of art to similar views advocated during the early history of science.

> Light, heat, [and] electricity, remained inexplicable as phenomenal entities, other than imponderable matter, until they were demonstrated to be not matter at all, but conditions of matter. It is even so with architecture, and with all art. We find in it something imponderable, and we attribute its existence, as Mr. Statham has it, to "the spontaneous eruption of genius," to "a metaphysical similarity with music," to "something, the how and whereof we do not know."[102]

Nevertheless, Eidlitz was sympathetic to Statham's overall concerns and approvingly recognized his interest in "the subjective effect of architecture."

> He says, as it were, I do not know how architectural monuments acquire the spiritual property of art, but I know how we are affected by this spiritual property. I do not know why it is so much like music, but I do know what is our feeling when we behold it. Yes, architecture is the art of erecting expressive and beautiful buildings.[103]

Despite this brief respite, he concluded that Statham ultimately comes up short because "translating of an objective condition into its subjective results does not amount to a definition."[104] Using another example drawn from the history of science, Eidlitz contrasted Statham's willingness to accept an imprecise definition of art with Count Rumford's pursuit of quantitative knowledge using experimental methods that proved heat is a condition of matter rather than matter itself.

This all led up to Eidlitz's claim that a useful definition of architecture requires firm definitions of beauty and expression to understand "the extent to which function (ground plan) and construction enter into the erection of a true work of architecture."[105] He based his attempt to provide such definitions on the assumption that the works of nature are beautiful and expressive. However, he

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[102] Eidlitz, "A Rejoinder," p. 466.

[103] Eidlitz, "A Rejoinder," p. 466.

[104] Eidlitz, "A Rejoinder," p. 466.

[105] Eidlitz, "A Rejoinder," p. 466.

qualified the assumption by observing, "The degrees of beauty and expression realized by the observer vary with his capacity to observe."[106] As a demonstration of that qualification, he described the differences that could be expected in the response to the flight of a seagull by an ornithologist and a casual viewer. While both would find the bird beautiful, the ornithologist's notion of beauty would take into account knowledge of the bird's physiology, while the casual view would likely base his notion exclusively on visual impressions. Eidlitz concluded that "a vague conception of the beautiful is the alpha, and an intelligent realization of expression is the omega of one and the same impression"[107] and extended the notion into a definition of objective beauty as "form, expressive of function... depending entirely upon the perfection and accuracy of expressions attained."[108] He seemed to have arrived at the conclusion by conflating his earlier views on the role of emotion and perception in art[109] with a kind of biological proto-functionalism.

> In nature form betrays function, and our ideas of beauty are proportionate to the degree of this expression as realized by the subject. It stands to reason, therefore, that the degree of beauty realized is both subjective and objective – in all cases, however, our appreciation of the beautiful in nature, as well as in art, is nothing more than the surprise at the art force displayed by the author of a work of art, or by nature, and amounts more or less to the degree with which we are familiar with the object in question; hence it is that objects of great beauty often fail to excite admiration in the ignorant.[110]

Buildings, "works of human art in imitation of nature, not in imitation of forms existing in nature (for there are no such forms)," must be "modeled, in their organism" in accordance with the laws of nature. Beauty is related to the accuracy of the application of the mechanical laws that control the modeling process, and the greater the resultant expression of the underlying organism, the greater the

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[106] Eidlitz, "A Rejoinder," p. 466.

[107] Eidlitz, "A Rejoinder," p. 466.

[108] Eidlitz, "A Rejoinder," p. 466.

[109] Eidlitz, *The Nature and Function of Art*, Preface, iii-iv; chapter xxii, "Art," pp. 121-40.

[110] Eidlitz, "A Rejoinder," p. 466.

beauty, "if that is the ultimate object."[111] His distinction between a condition of matter and matter itself is particularly important, and he notes "When external strains are resisted by the internal atomic cohesion of matter, there ensues statical equilibrium, which in art forms is called repose – an essential element in producing satisfaction in the beholder."[112]

Eidlitz again returned to musical analogy, now using to promote his own views:

> The elements of expression, strains and space (dimension, mass), constitute structural form, the same as sound and time constitute music – hence their analogy. It is entirely physical, and not at all metaphysical, and we may know it.[113]

He also used musical analogy to counter Statham's assertion of the inevitability of the role of styles in architecture, claiming that "it is not strictly true that we work in styles." As an example, he compared the "certain simple tangible physical ideas" said to comprise Greek architecture and "the manner of simple tunes in music" said to correspond to architectural forms. He noted that modern imitation of these forms is no longer involves reference to the "score" upon which they were based, and that expression of complex "motifs" that might require a new score is met only by repetition of simple tunes rather than creation of a new symphony or opera. While architects such as Karl Friedrich Schinkel and Johann Heinrich Strack[114] realized the fallacy of this approach, they continued to work within its limits and, although skillful, they were only partially successful because "they did not write their new score in the light of musical progress since the days of Pericles."[115]

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[111] Eidlitz, "A Rejoinder," p. 466-67.

[112] Eidlitz, "The A Rejoinder," p. 467.

[113] Eidlitz, "A Rejoinder," p. 467.

[114] Johann Heinrich Strack (1805-80) was a German architect and teacher. A student of Schinkel, he continued his classicism and was involved in the construction of some of his teacher's work. His independent practice began in 1836 and by 1876, he was Architect to the Emperor and Oberbaurat (Head of Construction). In his designs and teaching at the Bauakademie from 1839 onward, he provided a link from Schinkel to the generation of architects that practiced in Berlin ca. 1860-80. His interest in Greek antiquity led him to archaeological research and in 1862, he went to Athens with Carl Boetticher where he discovered the Theatre of Dionysos. Eva Börsch-Supan, "Johann Heinrich Strack," *Grove Dictionary of Art*, vol. 29, p. 736-37.

[115] Eidlitz, "A Rejoinder," p. 467.

Eidlitz claimed that even practitioners of his favored Gothic architecture, "a symphony of many 'motifs,' physical and metaphysical," were equally complicit. Its metaphysical aspects had "frightened" the public and most architects "into the arms of the Renaissance," a style based on repetition of Greek elements and their Roman application that was unrelated to motif or construction. Even those who admired the "Gothic symphony" persisted in imitating its forms without reference to its by then anachronistic "spiritual expression." Thus, despite his acknowledgement of good Gothic Revival work in England and Germany, the underlying score had not been revised "in the scientific sense possible now," a process that would give access to "the scientific and artistic basis of all monuments of the past" as well as "the scientific and aesthetic elements as they exist at the present" and would not require adherence to "expressions peculiar to past period which are not in accord with the ideas of our own time."[116]

Eidlitz concluded his response to Statham with a critique of the architectural process used by his contemporaries. He claimed that it began with a design rather than a building and that the design had to please a broad constituency of which the architect was only a single party. Consequently, rather than conforming to the requirements of usage and construction, the design would inevitably and unfortunately be subject to "the dominating idea of style."

> Style, it must be remembered, as it exists in the brain of the author; not as a mechanical organism, but as a picture, the lights and shades of which are expected to produce effects judged as desirable, or, under the circumstances attainable, pleasing to the author, the proprietor, the public; not eminently something which grows out of environment, whether it be modern or ancient.[117]

In response to his own question about the criteria that should inform the design of a structure, Eidlitz replied "Let it suffice to say that next to a development of single cells and their connections which are to serve the ideal use of the person, or group of persons, who occupy the structure, the laws of

[116] Eidlitz, "A Rejoinder," p. 467.

[117] Eidlitz, "A Rejoinder," p. 467.

mechanics must be the sole guide in the development of its form." In addition, the laws of mechanics must be applied to resist stresses and strains in harmony and with "a vigor proportionate to the function of each part of the structure" rather than uniformly, an approach that would produce "monotony of expression."[118] Except for relatively minor buildings such as tenements and commercial properties, Eidlitz did not believe that conformance to the laws of mechanics could be determined by eye and he noted that mathematical investigation would often surprise the analyst and result in significant changes in form.

Eidlitz also responded to Arthur Cates' suggestion that he was advocating the evolution of a "new style" of architecture.[119] Eidlitz regarded that comment as a sign of resistance to change in architectural education, particularly change related to practice rather than "the way in which [students] should study their art."[120] Cates' felt that architectural training should provide the artistic and historical knowledge held by a typical client and a superior level of technical knowledge. Nevertheless, Cates also claimed that "the divine inspiration of artistic genius" and its cultivation and development through study could supercede technical knowledge which, in any, case, did not constitute the most important part of an architect's training.[121] Eidlitz angrily responded

> This means, whatever the architect's success, it will not depend upon his technical knowledge. What will it depend upon? Divine inspiration, by the study of history, mastery of drawing, &c. What will it produce?[122]

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[118] Eidlitz, "A Rejoinder," p. 467.

[119] "Discussion of Mr. Eidlitz's Paper," p. 221.

[120] Eidlitz, "A Rejoinder," p. 468.

[121] "Discussion of Mr. Eidlitz's Paper," p. 221.

[122] Eidlitz, "A Rejoinder," p. 468.

Although Cates' comments contained phrases such as "convenient and appropriate arrangement," "stable construction," and concluded with a reference to "suitable and beautiful design, both as regards masses form, and detail,"[123] Eidlitz was not swayed and thundered

> I am of opinion that mass and form are mechanical relations of matter, and detail like unto them, is expressive of those relations. Mr. Cates thinks not. How is this question to be decided? By history![124]

Eidlitz abandoned all pretenses of civility at this point. Recounting the inability of divine inspiration to provide new architectural forms during the preceding six centuries, the misuse of those forms and the misuse of materials, Eidlitz called Cates' notion of education as "a mere sham." In comparing the training of architects to lawyers, doctors, chemists, and electricians, Eidlitz claimed that none but architects relied on divine inspiration for their work. Instead, the others relied on knowledge of the history of their discipline and the "natural law" said to govern it.

> No matter what expression a monument conveys, the language in which it speaks is a relation of matter, just as in music the language is a relation of sounds. To those who do not understand either language, an approximate idea of its meaning is conveyed, which leaves a mental impression in the direction in which it is intended to convey thought of more or less intensity.[125]

For Eidlitz, the diminished state of contemporary architecture was a direct consequence of the inability of most practitioners to understand that its language was based on mathematics and statics rather than the visual forms emphasized in the study of history. He admonished Cates for not understanding the basis of his ideas and concluded

> When Mr. Cates hopelessly cries out: I cannot see how the future text-book on the theory, practice, and art of building will teach me the language of structural monuments, and how the facts of which govern resistance to mechanical strain form the keynote of architectural composition, it proves to me but one thing beyond

[123] "Discussion of Mr. Eidlitz's Paper," p. 221.

[124] Eidlitz, "A Rejoinder," p. 468.

[125] Eidlitz, "A Rejoinder," p. 468.

> peradventure – that this text-book should be written at once and that its use should be enforced in schools of architecture.[126]

*Response to the "Rejoinder"*

Eidlitz's "Rejoinder" drew responses from Statham and Cates, the primary objects of his comments, and Frank Caws, another RIBA Fellow.[127] Caws'[128] was the longest and most general and, in a witty but biting manner, it cast Eidlitz in the role of a modern Gnostic, "one of the *knowing ones* of their day."[129] Caws described the Gnostic tradition as heretical, although descended from Pythagoras and Plato. Forced into secrecy by the Church, its ideas came to be considered oppressive and fraudulent. Caws also claimed that modern opponents of Gnosticism could be found "instituted in a new sect of *Agnostics*, or *Know-nothings*, or *Nihilists*" and that Gnostic and Agnostic factions existed in all areas of human life, including architecture.[130] He personified Eidlitz as "the champion of the Gnostics on this architectural battle ground" by virtue of "his great volume of abstract philosophizing." Although un-named, the reference to *The Nature and Function of Art, More Especially of Architecture* was unmistakable and he sarcastically described how

> Not a few good-natured and healthy-minded British architects and philosophers toiled at this book with infinite humility, hoping it might prove the Klondyke which its title and pretensions seemed to promise. But, alas! they had to give up their delving, without realizing any better result than the strengthening of their own patience by its sustained and painful exercise.[131]

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[126] Eidlitz, "A Rejoinder," p. 468.

[127] Francis Edward Caws (1846-1905) was born on the Isle of Wight and established a practice in Sunderland in 1870; *Directory of British Architects 1834-1914*, vol. 1, p. 349. His paper, "On the Probable Influence of the Technical Education Movement Upon the Architect and His Work" followed Eidlitz's in the *Journal of the Royal Institute of British Architects*, vol. 4 (November 1896-October 1897), pp. 222-227.

[128] Frank Caws, "On Mr. Eidlitz's Science of Beauty" *Journal of the Royal Institute of British Architects*, vol. 4 (November 1896-October 1897), pp. 484-87.

[129] Caws, p. 484.

[130] Caws, pp. 484-85.

[131] Caws, p. 485.

He suggested that Eidlitz could not believe that the "overwhelming opposition"[132] to his paper was caused by its contents and, therefore, mistakenly attributed it to his self-proclaimed role as "an American from America, a man without traditions."[133] Caws agreed that nationalism did play a role in the reception accorded Eidlitz; however, he claimed that it was elicited by shortcomings in ideas and mode of presentation rather than the author's place of residence.

> Well, it must be admitted that John Bull, merchant, has always fought shy of traders who submit no samples; and John Bull scientist, has never tolerated theory without experimental proofs by way of samples; and John Bull, architect and engineer, has never done much in the way of transcendental castle building – he has been too busy with real bricks and mortar; and perhaps, if Mr. Eidlitz will consider how long John Bull has been addicted to these peculiar ways, he will not think it a cause of wonder that his Paper was received without enthusiastic appreciation. And perhaps he will now also understand that when he proposed to show his British audience the true Science of Beauty, and how they were to teach it to their sons, if he exhibited a few faithful photographs of his own most characteristic works of architecture, by way of samples of his doctrine, John Bull would not have cared whether they graced New York or Timbuctoo, so long as they were not "too utterly utter," and were real buildings, and not mere castles in the air.[134]

After approvingly recounting an incident in which Thomas Edison, "America's grandest son" and "a sample scientist who has passed muster before John Bull and the whole world," stunned a British court of law by claiming not to know the meaning of a simple technical term, Caws sarcastically agreed that Eidlitz's portrayal of himself as "an American practically right and philosophically wrong"[135] was at least partially correct.

Caws was particularly upset by Eidlitz's attack on Statham's book, especially the section on the relationship of architecture to music. He claimed that Statham was neither a Gnostic ("he does not profess or desire to know *the unknowable*") nor an Agnostic, but rather a supporter of "the dictum of

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[132] Eidlitz, "A Rejoinder," p. 468.

[133] Eidlitz, "A Rejoinder," p. 464.

[134] Caws, p. 485.

[135] Eidlitz, "A Rejoinder," p. 464.

Hamlet" ("there are in earth more things than are dreamed of in our philosophy"[136]) that Eidlitz, the ultra-Gnostic, ignored. The remainder of Caws' response was less significant and consisted of conventional arguments against establishing functionality as the prime criterion of beauty and reminders of the necessarily tentative status of scientific knowledge. He ended with another defense of Statham, whose attitude "leaves us free to obey and follow Science, while refusing to allow her to usurp the throne from old time and for all time sacred to Beauty and Art."[137]

Two short "Disclaimers" written by Statham and Cates followed.[138] Statham remained unconvinced by Eidlitz's arguments and accused him of manipulating his ideas and intentions. He also expressed doubt that changes in architectural education would result in significant improvements in the practice of architecture and suggested that such would come from giving "more thought to the architectural treatment of buildings"[139] and allocating more time for such thought. Cates' opinion remained equally unchanged. He also accused Eidlitz of misstating his ideas and vociferously restated his earlier conclusions.

> ...the skill and talent of the architect are displayed in his artistic and scientific use of such materials, in accordance with their qualities; and in their application to the best advantage for convenience, strength, and beauty: – no "text-book," no "architectural scales," no "combination of cells into piles," will enable the architect to effect this.[140]

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[136] Caws, p. 486, paraphrase of William Shakespeare, *Hamlet*, Act 1, scene 5: "There are more things in heaven and earth, Horatio, Than are dreamt of in your philosophy."

[137] Caws, p. 487.

[138] Henry Heathcote Statham and Arthur Cates, "Two Disclaimers," *Journal of the Royal Institute of British Architects*, vol. 4 (November 1896-October 1897), p. 487.

[139] Statham, "Two Disclaimers," p. 487.

[140] "Discussion of Mr. Eidlitz's Paper," p. 221.

*On Light*

Despite the rancorous reaction to his RIBA articles, Eidlitz was elected an Honorable Corresponding Member of the organization in 1898,[141] and in 1899, he published a short pamphlet on an entirely different topic: *On Light, An Analysis of the Emersions of Jupiter's Satellite I.*[142] It is likely that Eidlitz regarded *On Light* as a scientific work because it consisted of an examination of findings obtained by using the hypothetico-deductive ("scientific") method.[143] Although seemingly concerned with a narrow aspect of astronomy, the pamphlet was are also broadly concerned with the issue of sight, a subject of concern to Vitruvius[144] that had become of increasing interest to the emerging discipline of psychological aesthetics, then primarily a province of German-speaking researchers.[145]

Eidlitz believed that sight should be understood as a social phenomenon rather than the consequence of established scientific laws, and that this situation affected society's understanding of the universe.

> Accurate mental appreciation of the objects we see in space, of their position, motion, form, mass, and substance, is mainly cultivated, not at all spontaneous sensuous perception. It took thousands of years to discover the diurnal revolution of the earth is the cause of the seeming revolution of the firmament of stars. The motion of the earth in its orbit around the sun being in the concrete imperceptible to our senses, it naturally results in aberration, a seeming revolution of the sun and stars in small circles around their true places, just the same as the firmament seems to move around

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[141] "The late Leopold Eidlitz," *Journal of the Royal Institute of British Architects*, vol. 15 (November 1907-October 1908), p. 654.

[142] New York: Knickerbocker Press, n.p.

[143] The approach involves observation, hypothesis, prediction, and experiment. In it simplest and most common form, it denies any logic of discovery and allows that theories can be accepted or rejected only after being tested. Testing a theory requires deriving it from activities that can be compared with observations and experimental results. If the results support the predictions, the theory is inductively confirmed; if not, the theory is rejected or refuted. *Philosophy of Science: The Central Issues*, Martin Curd and J. A. Cover, eds. (New York and London: W.W. Norton & Company: 1998), p. 1298.

[144] "The fact is that the eye does not always give a true impression, but often leads the mind to form a false judgment." Vitruvius, *Ten Books on Architecture*, Morris Hicky Morgan, trans. (Harvard: Harvard University Press, 1914), reprint (New York: Dover Publications, 1960), VI,2,2.

[145].See *Empathy, Form, and Space: Problems in German Aesthetics, 1873-1893*, Harry Francis Malgrave and Eleftherios Ikonomou, trans., (Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1994), Introduction, pp. 1-85.

> the pole star. It doubtless is true that we see the so-called heavenly bodies in aberration of some visual angle.[146]

He proposed to test the validity of these ideas by investigating the work two astronomers, one who claimed that the apparent position of one of Jupiter's moons was affected by the amount of time light took to reach an observer, and the other who believed that the moon's apparent position was determined by aberration, i.e., the apparent movement of the stars in a small ellipse over the course of a year caused by the movement of the Earth.

> During the past two centuries, astronomers observed the periodic times of emersion and occultation[147] of Jupiter's satellites (mostly Satellite *I*, which normally revolves around Jupiter once in about 42.5 hours) to be decreasing and increasing, with the net result of an ultimate increase in time of about 1000 seconds when the earth has reached its greatest distance from Jupiter, and of a corresponding decrease when the earth is nearest to Jupiter. Roemer[148] construed this observed variation of periodic times to be cause by "the fact that light occupies a sensible time in traveling over celestial distances."
>
> It is proposed in the following pages to inquire whether or not the variations of time correspond with the progress of light.
>
> Bradley[149] defines aberration... to be the resultant of the velocity of light and the velocity of the motion of the earth in its orbit. His approximate success will be found in thus connecting aberration indirectly with the time variations of the emersions of Jupiter's satellites.[150]

While both explanations were "scientific" in the sense that they employed hypothetico-deductive methods to reach their conclusions, both could not be correct.

After reviewing the data, Eidlitz concluded, "The records of the observations of the revolutions of Jupiter's satellites... contain crucial proof that the excesses of time observed are due to aberration, and not to a retardation of light in space." He also claimed that light (and vision) were not physical

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[146] Eidlitz, *On Light*, p. 1.

[147] "Emersions" refers to the reappearance of celestial bodies after an eclipse; "occulation" refers to the interruption of the light between an object to an observer when a body is interposed.

[148] Ole Røemer (1644-1710), a Danish astronomer, made the first quantitative measurement of the speed of light in 1676 in conjunction with observation of eclipses of Jupiter's moon Io.

[149] James Bradley (1693-1762), an English astronomer, announced the discovery of stellar aberration in 1728.

[150] Eidlitz, *On Light*, p. 1.

entities: they existed only because the eye perceived them. Therefore, vision was inherently suspect because it existed independently of its material cause, i.e. matter.

> We habitually speak of light-giving, light-reflecting matter, bodies, and objects. We imagine it to be a *thing*, while in truth it is only an affection of the eye. Without an eye to see, there is no light. Light rays are imaginary geometrical lines to explain affections of the eye, and where they *seem* to exist, they are at once dissipated by a more perfect vision, with the help of optical instruments. The property of incandescent matter to affect the eye is imparted to matter not incandescent. This is termed reflection of light. Phenomena of sight are better understood if constantly referred to the conditions affecting the eye. The record of Jupiter's satellites do [sic] not warrant the conclusion that light is not instantaneous in acting upon the eye, but afford a qualitative analysis of aberration.[151]

Although the conclusion was incorrect (Einstein's description of light as a *thing* made of "light-quanta" particles was not published until 1905), Eidlitz's method appeared to confirm the validity of scientific investigation for topics of concern to artists and architects.

Leopold Eidlitz lived for nine years after *On Light* was published and removed himself from public view. At some point, he moved out of his 87th Street house; an obituary noted that he died "at his own residence, 309 West 89th Street."[152] His death came in the month that Frank Lloyd Wright published "In the Cause of Architecture."[153]

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[151] Eidlitz, *On Light*, pp. 6-7.

[152] "Leopold Eidlitz," *New York Times*, 24 March 1908, p. 7. The brownstone Gothic Revival row house (architect or designer unknown) is now a synagogue.

[153] *Architectural Record*, vol. 23, no. 3 (March 1908), pp. 155-222.

APPENDIX: BUILDINGS AND PROJECTS BY LEOPOLD EIDLITZ

| Date | Name | Location |
|---|---|---|
| 1846-48 | Saint George's Church | Rutherford Place and East 16th Street, New York City (with Charles Blesch) |
| 1846-47 | Shaarey Tefila Synagogue (with Charles Blesch) | 112 Wooster Street, New York City (with Charles Blesch) |
| c. 1847 | Temple Emanu-el (alterations to former Methodist Church) | 56 Christie Street, New York City |
| 1848 | Iranistan (P. T. Barnum House) | Bridgeport, CT, burned 1857 |
| 1849-51 | First Congregational Church | 66 Union Street, New London, CT |
| 1849-50 | Solomon Merrick House | 104 Maple Street, Springfield, MA |
| c. 1850 | William Gunn House (attributed by Hitchcock) | 146 Maple Street, Springfield, MA |
| 1850-51 | Leopold Eidlitz House | Riverside Drive and 86th Street, New York City |
| c. 1851 | St. George's Chapel of Free Grace | First Avenue and 19th Street, New York City |
| 1851-52 | St. George's Church Rectory and Parish House | 209 East 16th Street, New York City |
| 1852 | New York Crystal Palace competition (Georg Johan Cartensen and Karl [Charles] Gildemeister, winning entry) | Sixth Avenue between 40th and 42nd Streets, New York City |
| 1852-53 | Fifth Avenue [Presbyterian] Church | Fifth Avenue and 19th Street, New York City; rebuilt on 57th Street between Broadway and Seventh Avenue for Central Presbyterian Church, c. 1873 |
| 1853 | Eighty-fourth Street Presbyterian Church | 84th Street and Bloomingdale Road [now Broadway], New York City |
| 1853-55 | City Hall | Court Square, Springfield, MA |
| 1853-55 | St. Peter's Church | 2500 Westchester Avenue, Bronx, NY |
| c. 1854 | Temple Emanu-el (alterations to former Baptist Church) | 12th Street, between Third and Fourth Avenue, New York City |

| Date | Name | Location |
|---|---|---|
| 1856 | Jonathan Coit Monument | Cedar Grove Cemetery, New London, CT |
| 1856 | Saint George's Church (spires added) | Rutherford Place and East 16th Street, New York City |
| 1856-57 | Continental Bank | 5-7 Nassau Street, New York City |
| 1856-57 | Brick Presbyterian Church (second building, preliminary planning, completed by Thomas Thomas and Son 1857-8) | Fifth Avenue and West 37th Street, New York City |
| 1856-58 | Second Congregational Church | 139 East Putnam Avenue, Greenwich, CT |
| 1857 | American Exchange Bank | 126-8 Broadway, New York City |
| 1857 | William A. Booth Residence | 956 Broad Street, Stratford, CT |
| 1857 | North Congregational Church (project) | Hartford, CT |
| 1858-59 | First Congregational Church | 2301 Main Street, Stratford, CT |
| 1858-59 | Broadway Tabernacle Congregational Church (renovated 1872 by J. Stewart) | Sixth Avenue and West 34th Street, New York City |
| 1859 | Second Congregational Church (spire added) | 139 East Putnam Avenue, Greenwich, CT |
| 1859 | City Hall (reconstruction of fire-damaged cupola and attic) | New York City |
| 1859 | Plymouth Church competition (Joseph C. Wells, winning entry) | 75 Hicks Street, Brooklyn, NY |
| 1859-60 | Jonathan Newton Harris Residence | 130 Broad Street, New London, CT |
| 1859-60 | Christ Protestant Episcopal Church (construction interrupted by Civil War) | 13th and Locust Street, St. Louis, MO |
| 1859-61 | Brooklyn Academy of Music competition (winning entry) | 176-94 Montague Street, Brooklyn, NY |
| 1859-61 | New York Produce Exchange (with Henry G. Harrison) | Whitehall between Pearl and Water Street, New York City |
| 1860 | Hamilton Avenue Ferry House | Hamilton Avenue, Brooklyn, NY |
| 1860 | Tompkins Market/Seventh Regiment Armory (roof redesign) | Bowery between East 6th and 7th Street, New York City |

| Date | Name | Location |
|---|---|---|
| c. 1860 | Cottage (attributed by Schuyler) | Englewood, NJ |
| c. 1861 | Murray-Vermilye House | Englewood, NJ |
| 1861 | National Academy of Design façade competition (Peter B. Wight, winning entry) | Fourth Avenue and East 23rd Street, New York City |
| 1863 | Mutual Life Insurance Company Building competition (John Kellum, winning entry) | 140 Broadway, New York City |
| c. 1865 | Memorial Hall, Bowdoin College (project) | Brunswick, ME |
| 1865 | Brooklyn Mercantile Library competition (Peter B. Wight, winning entry) | 195-99 Montague Street, Brooklyn, NY |
| 1866 | Yale University Civil War Memorial competition (Fredrick Withers, unbuilt winning entry; new design by Russell Sturgis [Battell Chapel], 1874-76) | Yale University Campus, New Haven, CT |
| 1866 | Hinsdale Public Library | 58 Maple Street, Hinsdale, MA |
| 1866-67 | Saint George's Church (rebuilt after fire) | Rutherford Place and East 16th Street, New York City |
| 1866-68 | Temple Emanu-el (with Henry Fernbach) | 521 Fifth Avenue, New York City |
| 1867 | Christ Protestant Episcopal Church (construction resumed; damaged by fire 1871; tower and narthex by Kivas K. Tully, 1907-11; altar and reredos 1911) | 13th and Locust Street, St. Louis, MO |
| 1867 | New York Life Insurance Company competition (Griffith Thomas, winning entry) | 346-8 Broadway, New York City |
| 1867-68 | St. Peter's Church (Chapel and Sunday school) | 2500 Westchester Avenue, Bronx, New York |
| 1868-69 | Brooklyn Union Building | 2 Front Street, Brooklyn, NY |
| 1868-70 | Church of the Pilgrims, alterations and additions (with Louis H. Cohn) | 113 Remsen Street, Brooklyn, NY |
| 1869 | Saint George's Church (chancel alterations, with Louis H. Cohn) | Rutherford Place and East 16th Street, New York City |

| Date | Name | Location |
|---|---|---|
| 1869 | New York City Masonic Temple competition (Napoleon Le Brun, winning entry) | Sixth Avenue and West 23rd Street, New York City |
| 1869-74 | Church of the Holy Trinity competition (winning entry for church; Frederick Clarke Withers, winning entry for rectory) | 319 Madison Avenue (at 42nd Street), New York City |
| 1869-70 | Myron Decker Pianos Building | 33 Union Square, New York City |
| 1870 | Viaduct Railway Study (with John J. Serrell) | New York City |
| 1869-71 | Long Island Historical Society (project) | 128 Pierrepont Street, Brooklyn, NY |
| 1870-73 | Bulkeley School | Huntington St., New London, CT |
| 1871-72 | Troy Masonic Temple | Third Street, between Broadway and River Street, Troy, NY |
| 1872 | St. George's German Chapel and School | 420 East 14th Street, New York City |
| 1873-75 | Dry Dock Savings Bank competition (winning entry) | 337-43 Bowery, New York City |
| 1874 | Newsboy's Lodging House (attributed by Brooks and Erdmann) | 242-44 William Street (At Duane), New York City |
| 1875-85 | New York State Capital (with H. H. Richardson and Frederick Law Olmsted) | Albany, NY |
| 1876-81 | New York County ("Tweed") Courthouse (alterations and additions) | 25 Chambers Street, New York City |
| 1877 | Long Island Historical Society competition (George B. Post, winning entry) | 128 Pierrepont Street, Brooklyn, New York |
| 1880 | Produce Exchange competition (George B. Post, winning entry) | 2 Broadway, New York City |
| c. 1881 | Interiors of the yacht *Montauk* | Built by C. and R. Poillon, Brooklyn, NY |
| 1884 | Harris Building | 165 State Street, New London, CT |
| 1884 | Park Presbyterian Church (chapel; sanctuary by Henry F. Kilburburn, 1889-90) | Amsterdam Avenue and 86th Street, New York City |

| Date | Name | Location |
|---|---|---|
| 1884-85 | Cooper Union (alterations and additions) | Third and Fourth Avenue and 7th Street, New York City |
| 1886-88 | St. George's Church Memorial House | 207 East 16th Street, New York City |
| 1888 | Isidor Kaufman/Sigmund Oppenheimer Houses | 64-66 East 80th Street, New York City |
| 1890 | Saint George's Church (spires removed) | Rutherford Place and East 16th Street, New York City |
| 1889 | Union Square Theater, alterations and additions (with John E. Terhune and Charles P. Palmer) | 58 East 14th , New York City |
| 1890 | Mental Asylum Buildings | Ward's Island, NY |
| 1890 | Mental Asylum Buildings | Central Islip, Long Island, NY |
| 1891 | Riverside Drive (project) | New York City |
| 1895 | Charles L. Brace Memorial (Children's Aid Society Building) | 242-44 William Street, New York City |
| 1899 | Bulkeley School addition (?) | Huntington St., New London, CT |
| 1902 | Cooper Union (alterations and additions?) | Third and Fourth Avenue and 7th Street, New York City |

# ILLUSTRATIONS

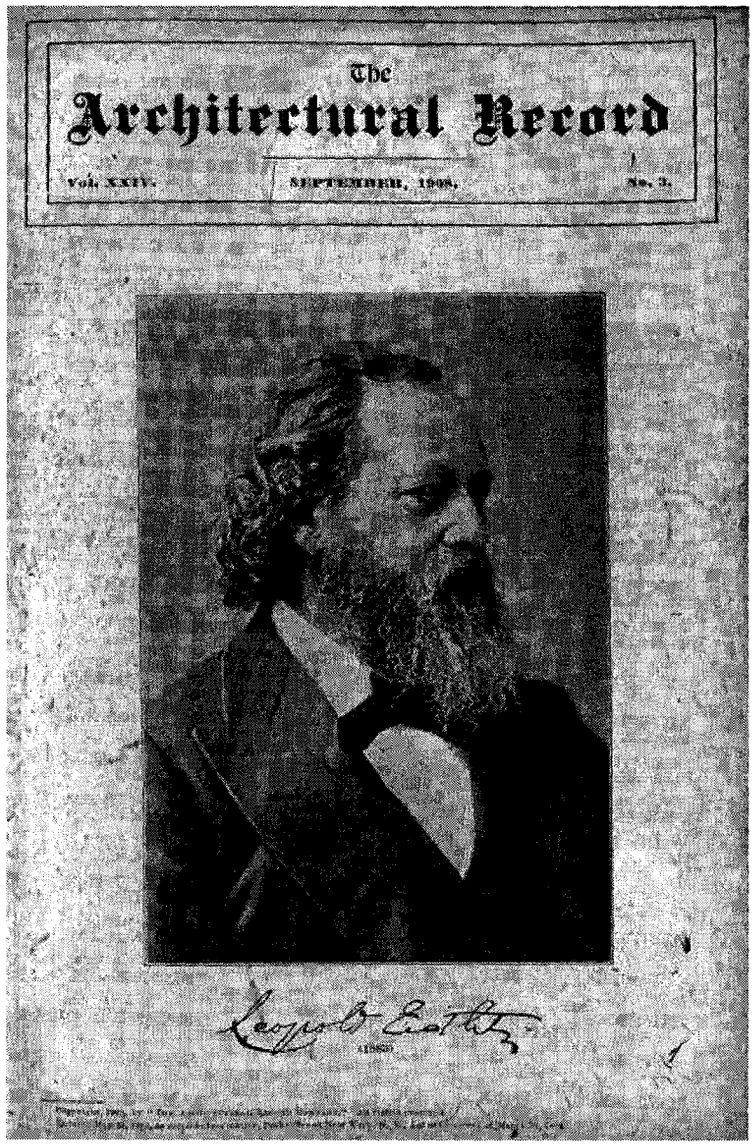


Figure 1: Cover of first portion of *Architectural Record* Leopold Eidlitz memorial series, 1908

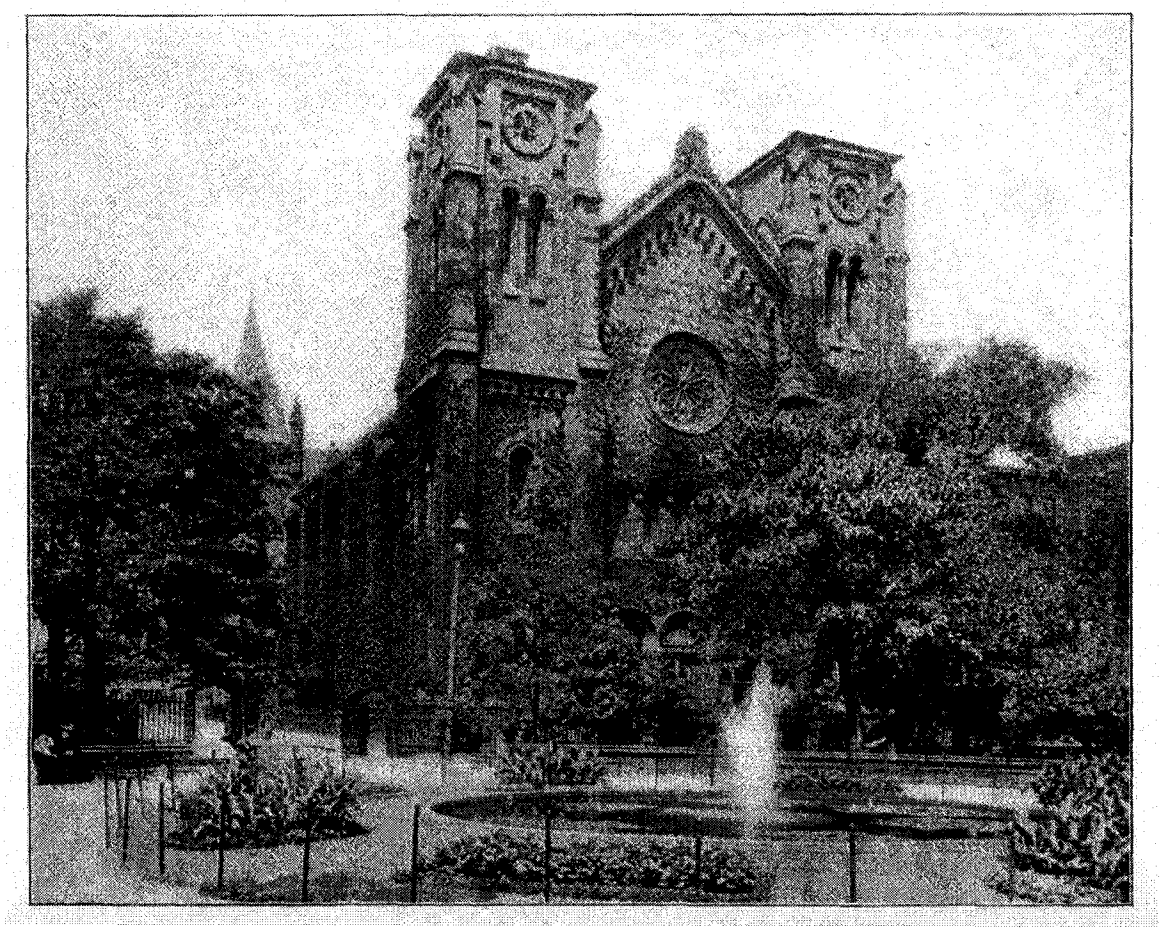

Figure 2: Saint George's Church (with Charles Blesch)
Rutherford Place and East 16th Street, New York City
1846-48

Figure 3: Shaarey Tefila Synagogue (with Charles Blesch)

112 Wooster Street, New York City

1846-47

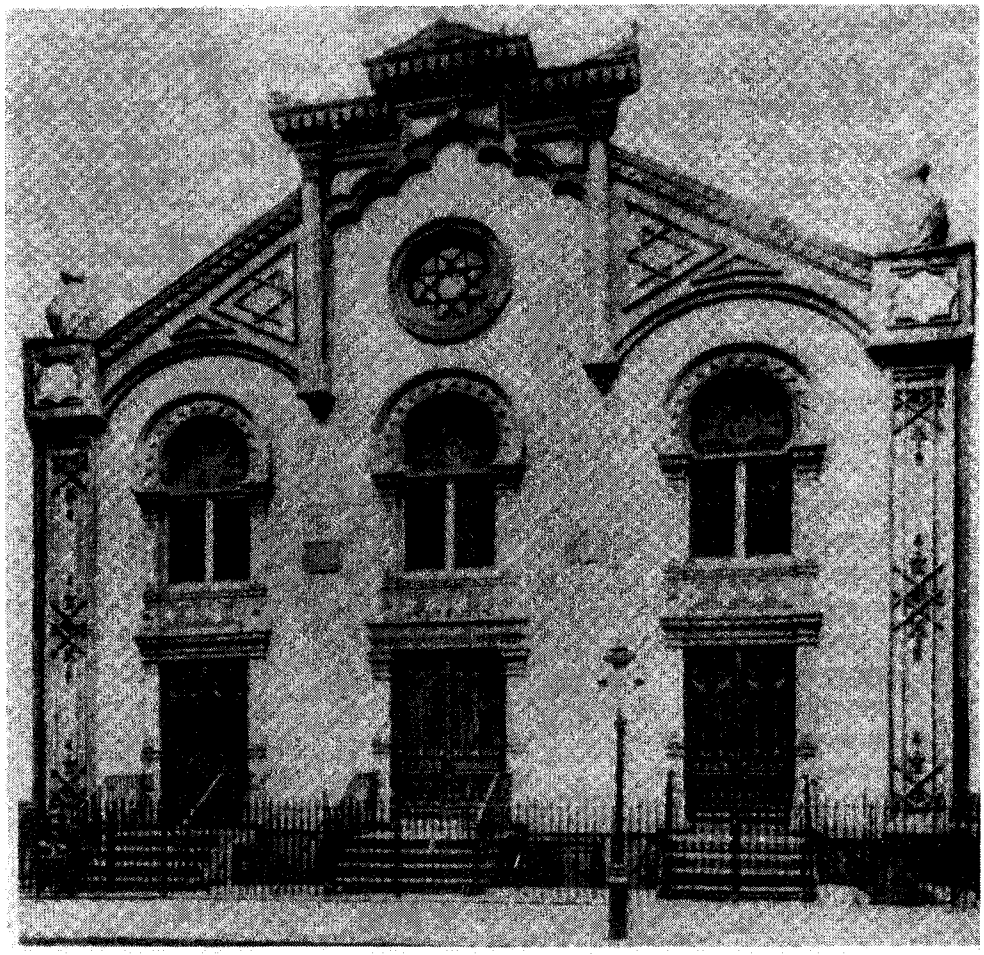

Figure 4: Temple Emanu-el (alterations to former Methodist Church)
56 Christie Street, New York City
c. 1847

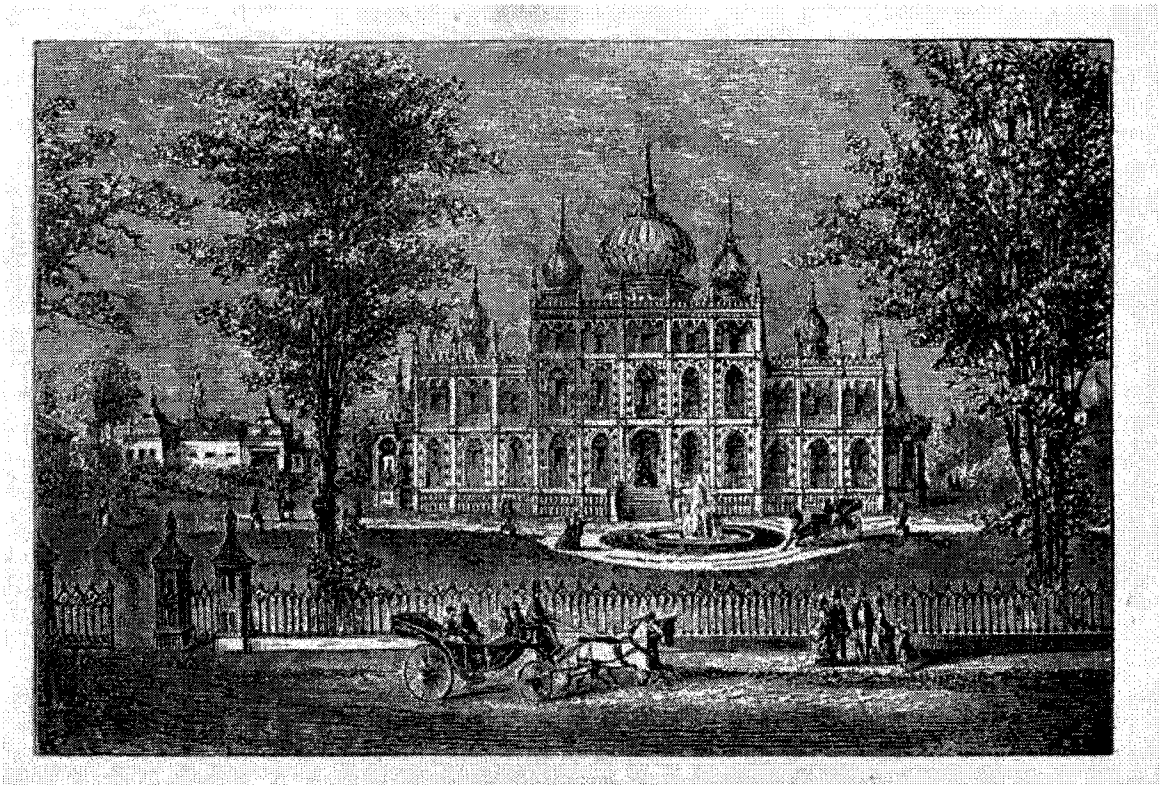

Figure 5: Iranistan (P. T. Barnum House)

Bridgeport, CT

1848, burned 1857

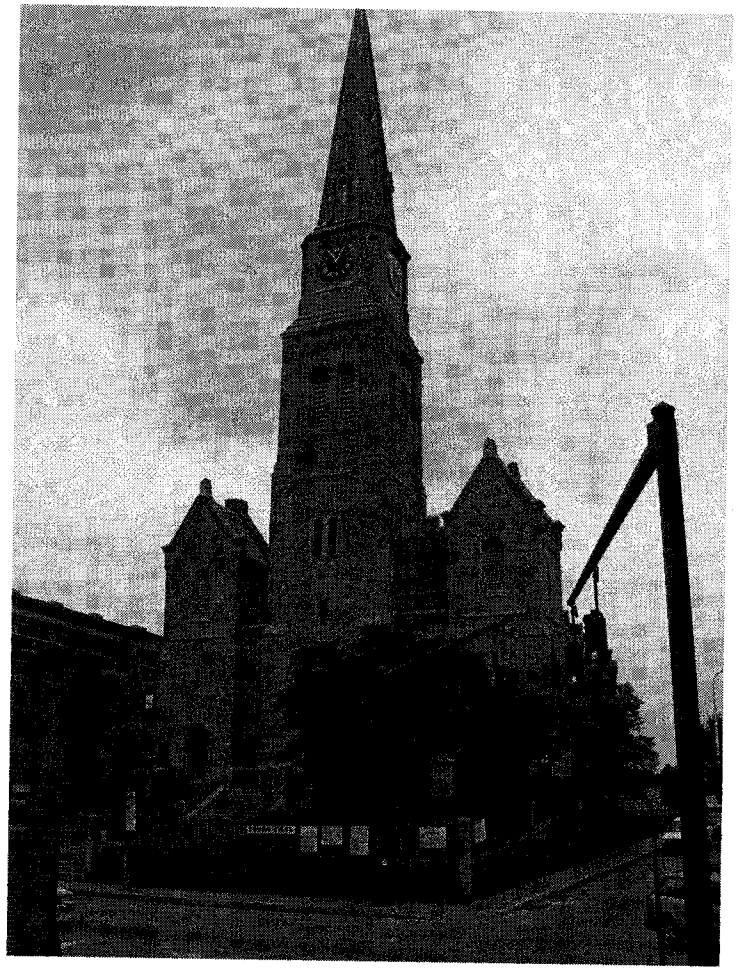

Figure 6: First Congregational Church
66 Union Street, New London, CT
1849-51

Figure 7: Solomon Merrick House
104 Maple Street, Springfield, MA
1849-50

Figure 8: William Gunn House (attributed by Hitchcock)

146 Maple Street, Springfield, MA

c. 1850

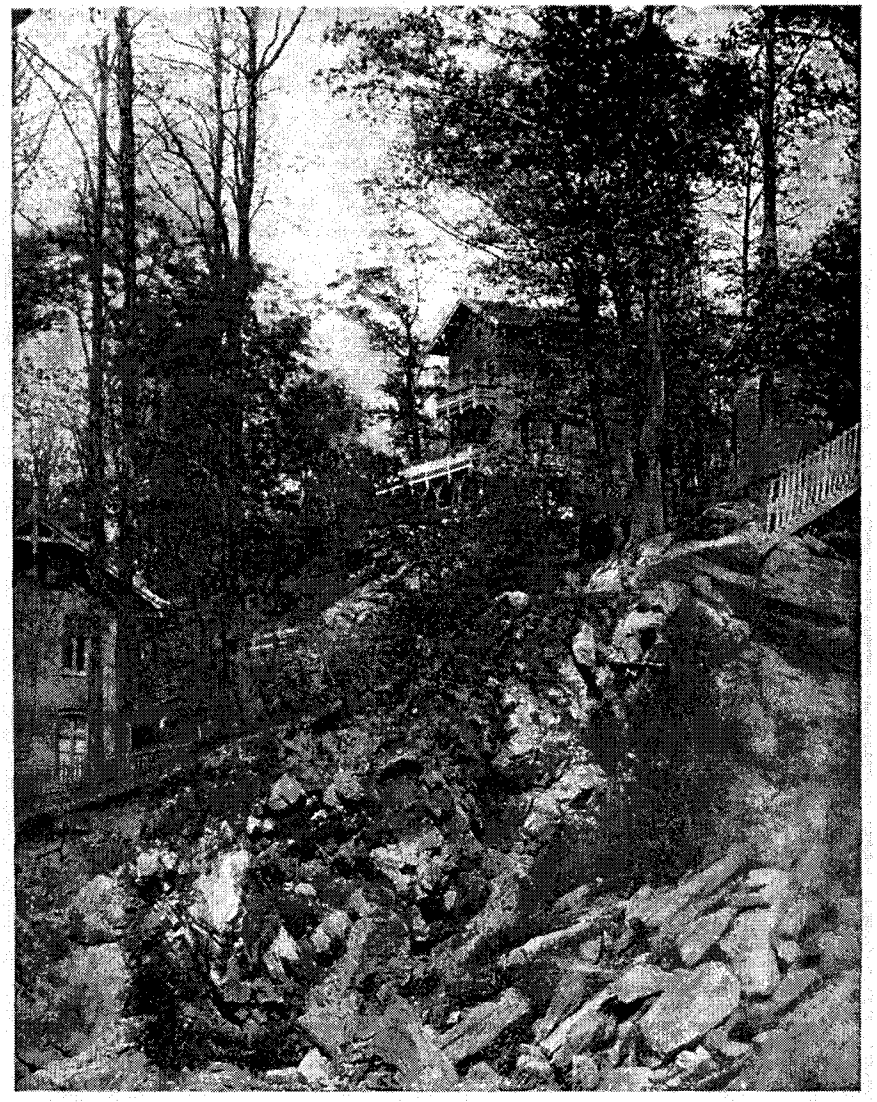

Figure 9: Leopold Eidlitz House
Riverside Drive and 86th Street, New York City
1850-51

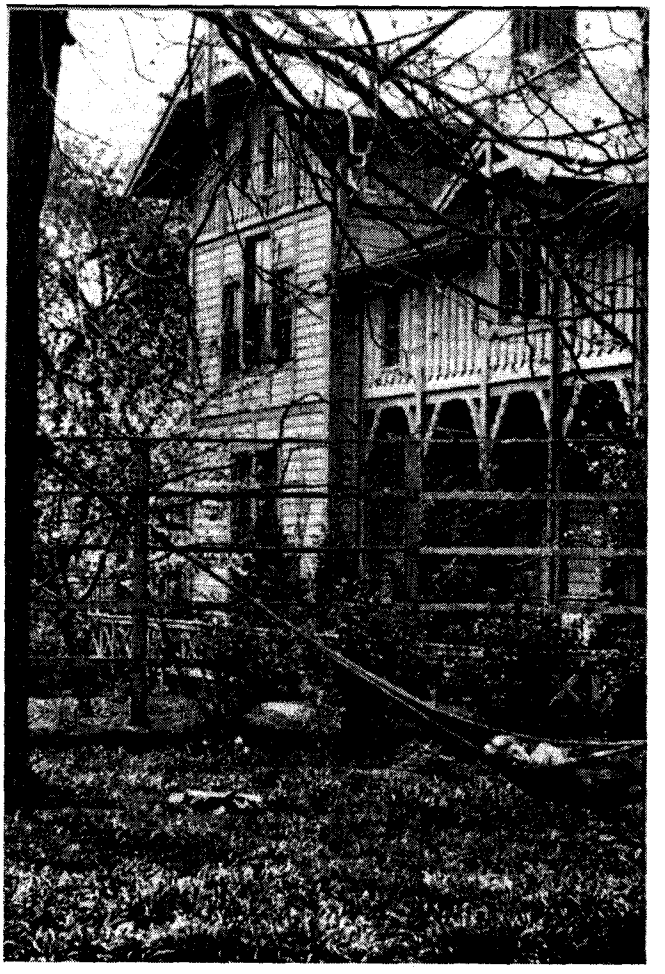

Figure 10: Leopold Eidlitz House
Riverside Drive and 86th Street, New York City
1850-51

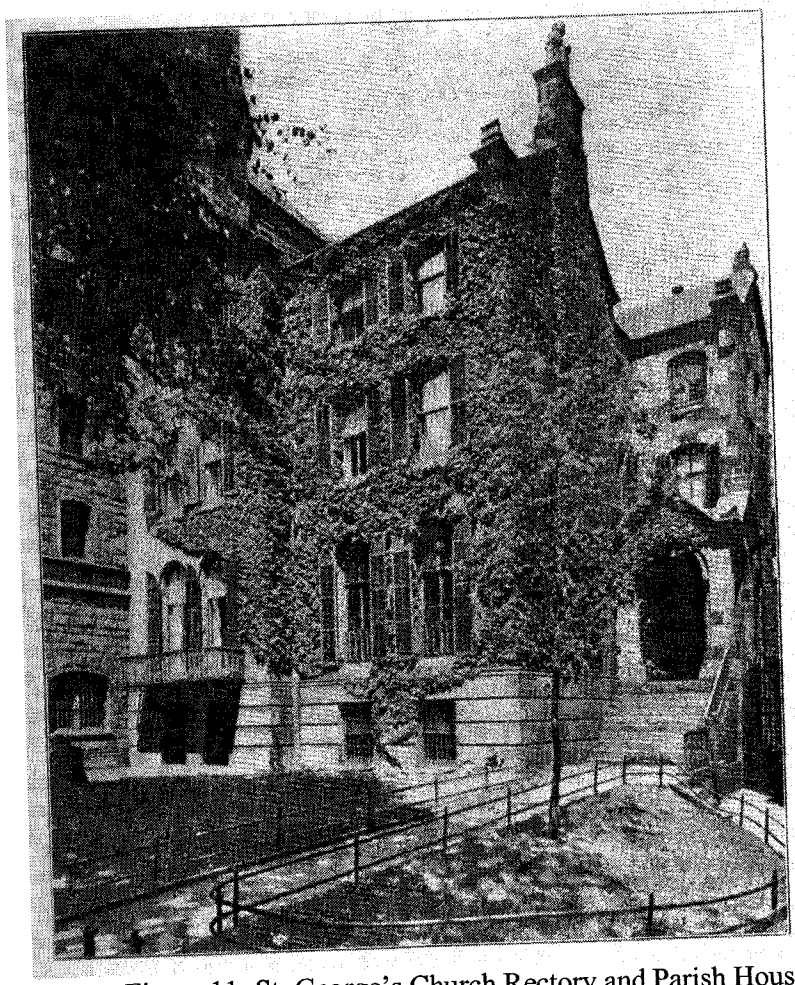

Figure 11: St. George's Church Rectory and Parish House
209 East 16th Street, New York City
1851-52

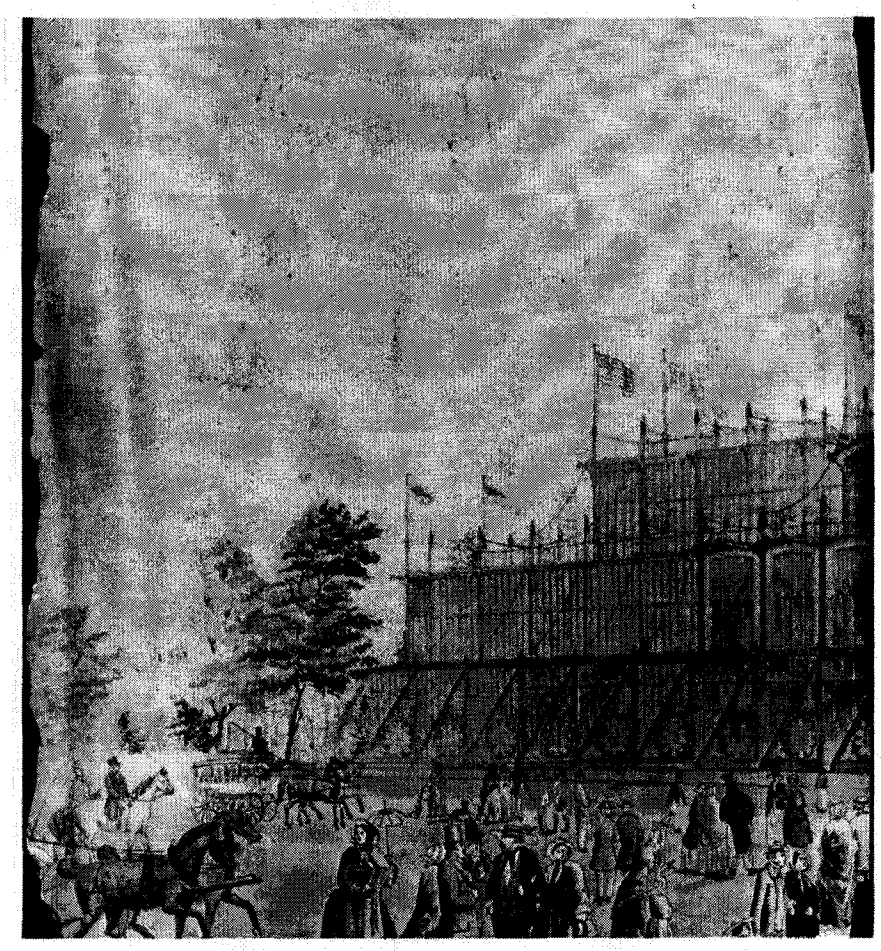

Figure 12: New York Crystal Palace competition
Sixth Avenue between 40th and 42nd Streets, New York City
1852

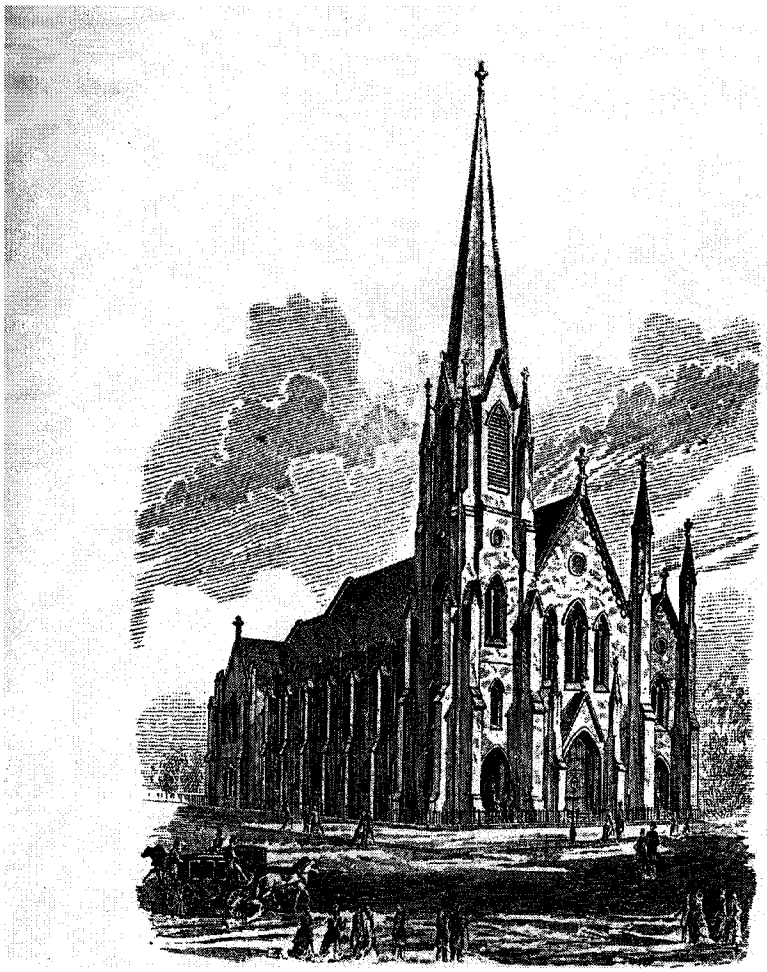

Figure 13: Fifth Avenue [Presbyterian] Church
Fifth Avenue and 19th Street, New York City
1852-53

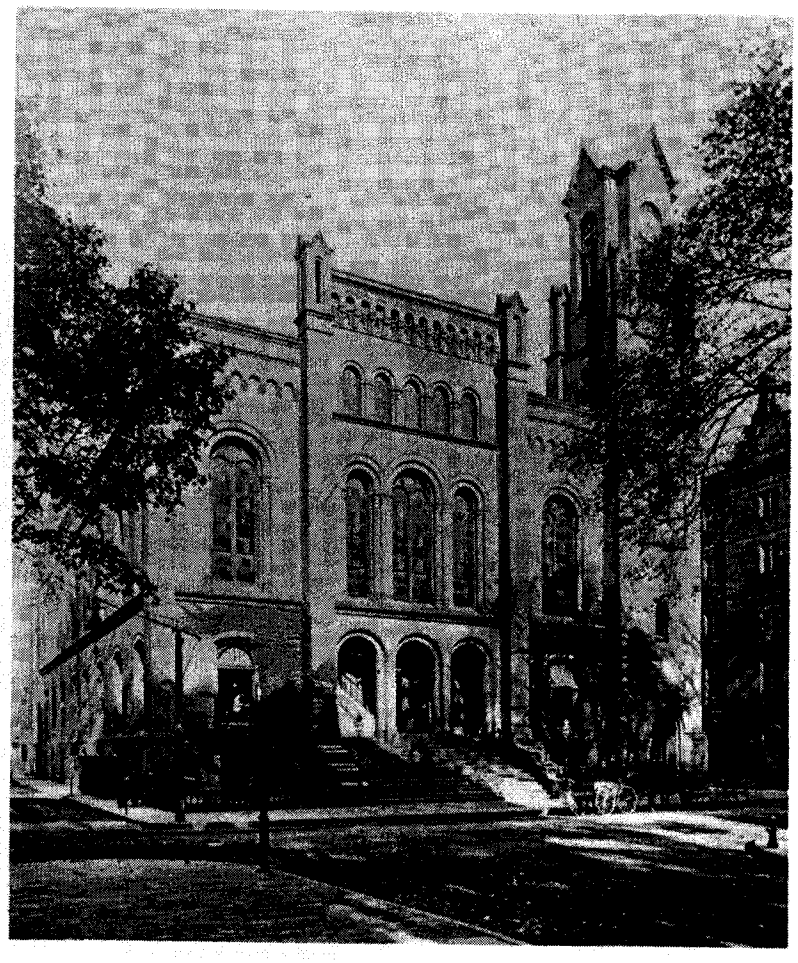

Figure 14: City Hall
Court Square, Springfield, MA
1853-55

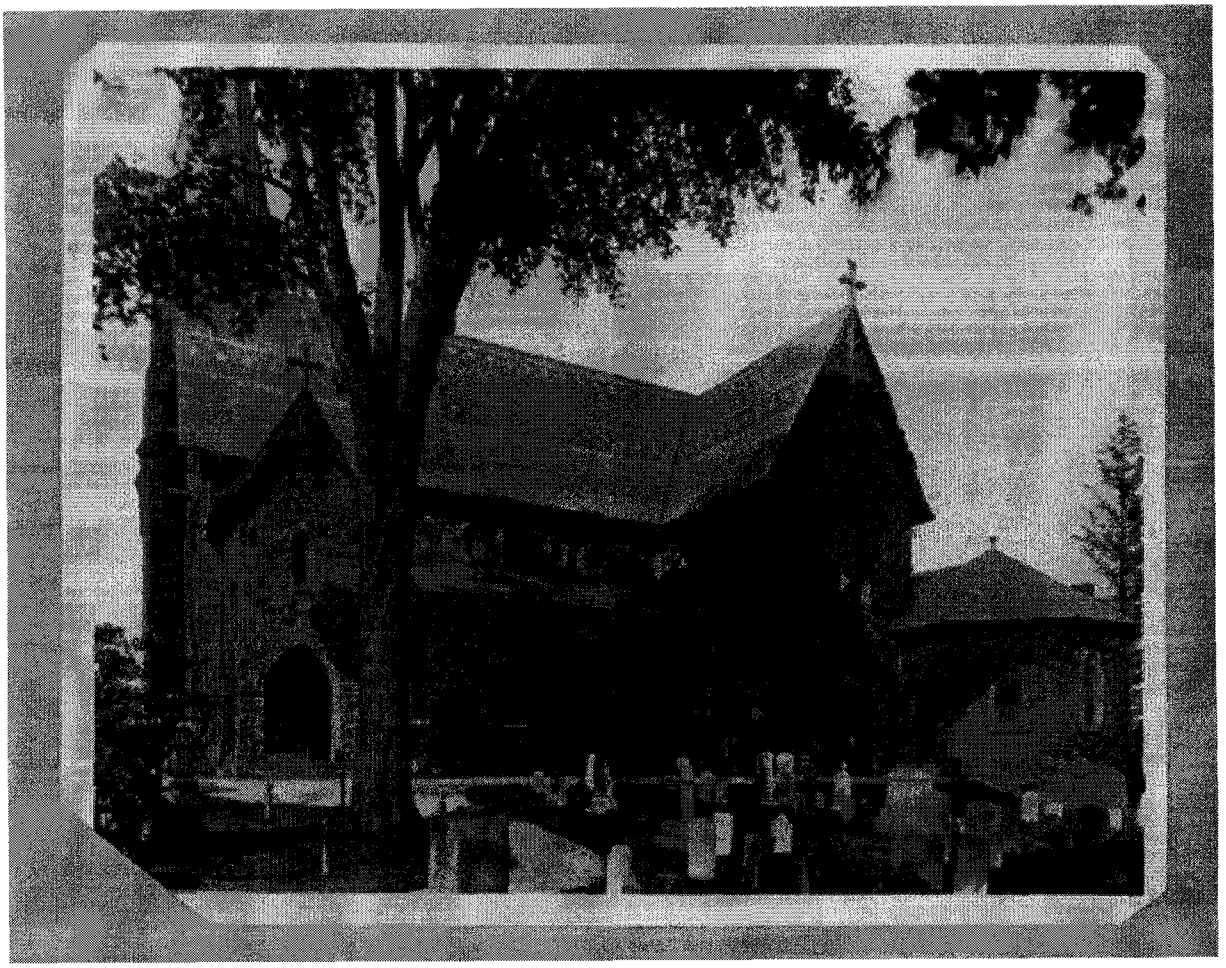

Figure 15: St. Peter's Church
2500 Westchester Avenue, Bronx, NY
1853-55

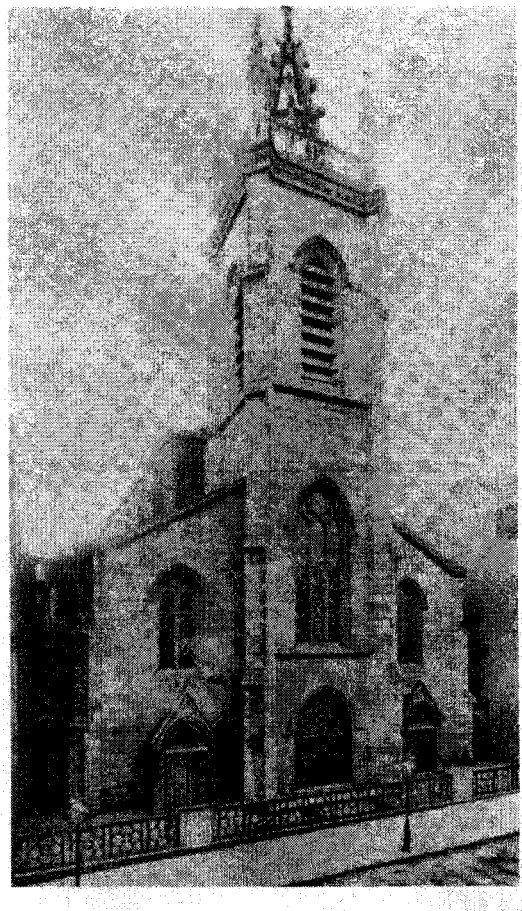

Figure 16: Temple Emanu-el (alterations to former Baptist Church)
12th Street, between Third and Fourth Avenue, New York City
c. 1854


Figure 17: Saint George's Church (spires added)

Rutherford Place and East 16th Street, New York City

1856

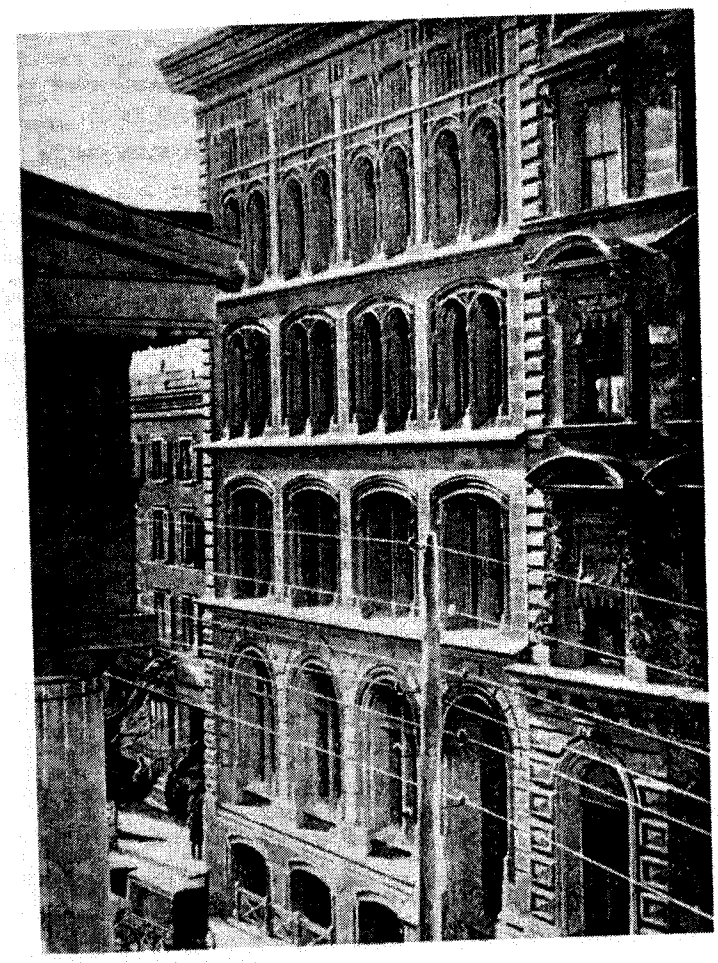

Figure 18: Continental Bank
5-7 Nassau Street, New York City
1856-57

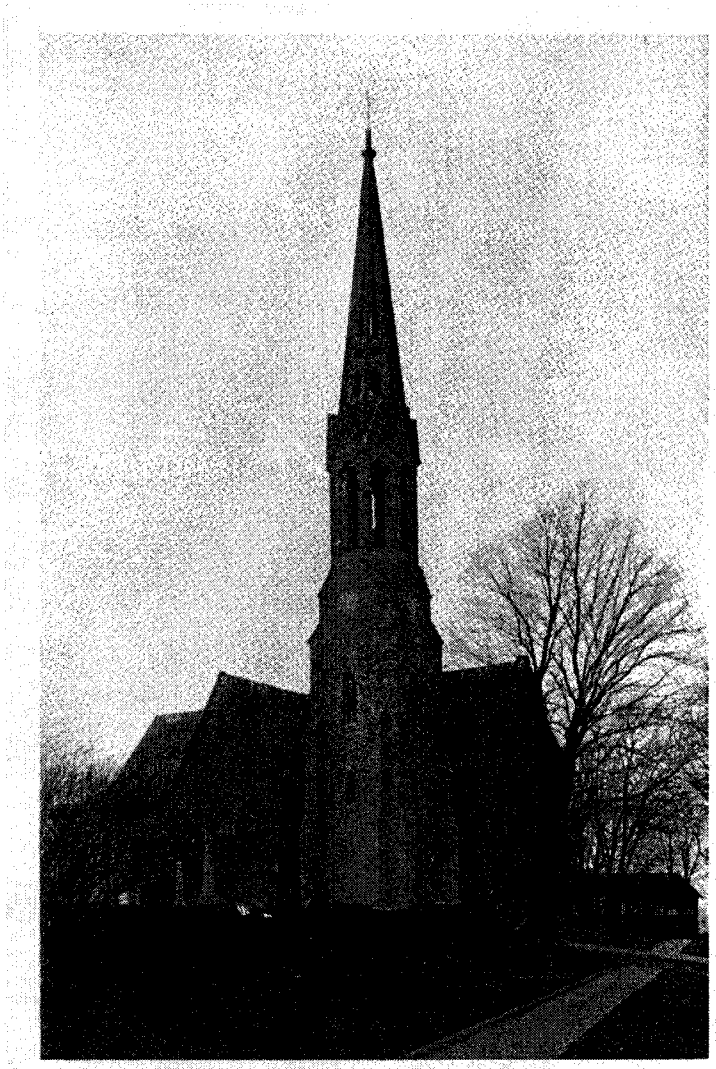

Figure 19: Second Congregational Church
139 East Putnam Avenue, Greenwich, CT
1856-58

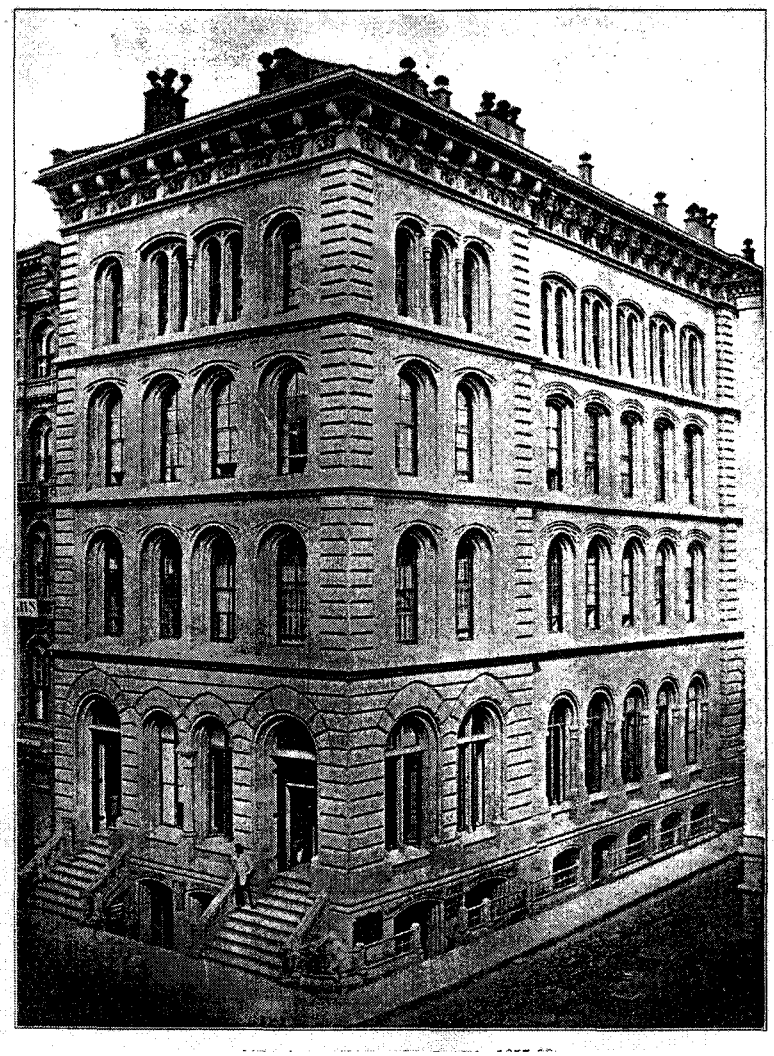

Figure 20: American Exchange Bank
126-8 Broadway, New York City
1857

Figure 21: William A. Booth Residence
956 Broad Street, Stratford, CT
1857

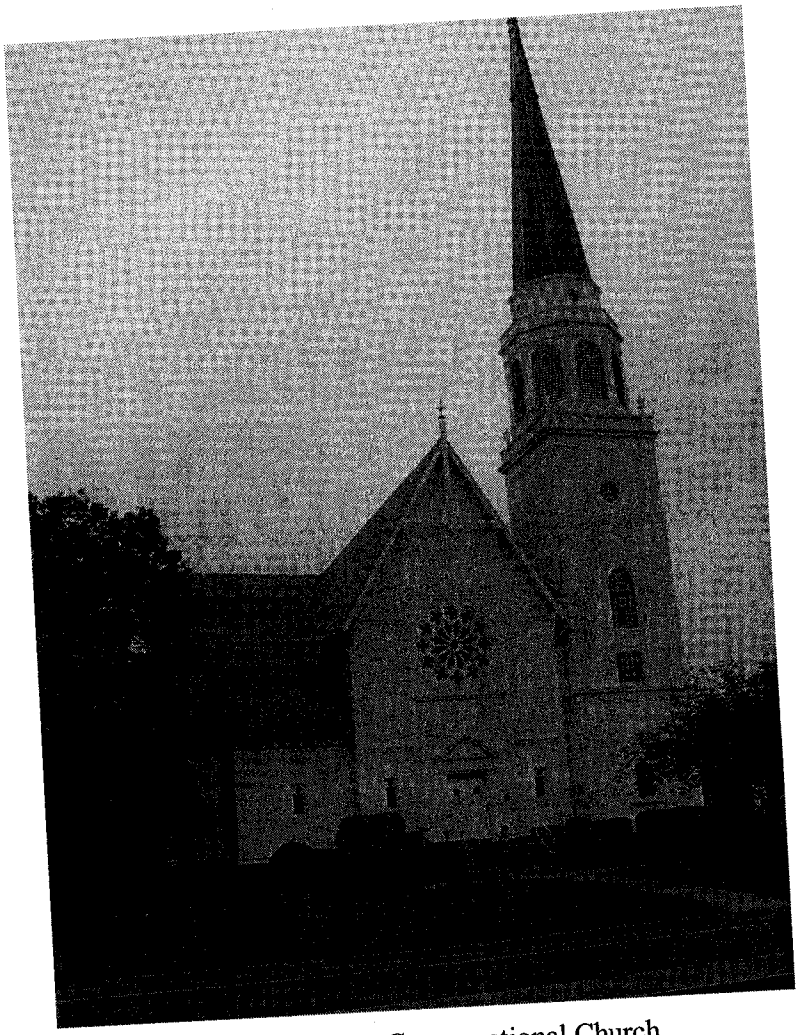

Figure 22: First Congregational Church
2301 Main Street, Stratford, CT
1858-59

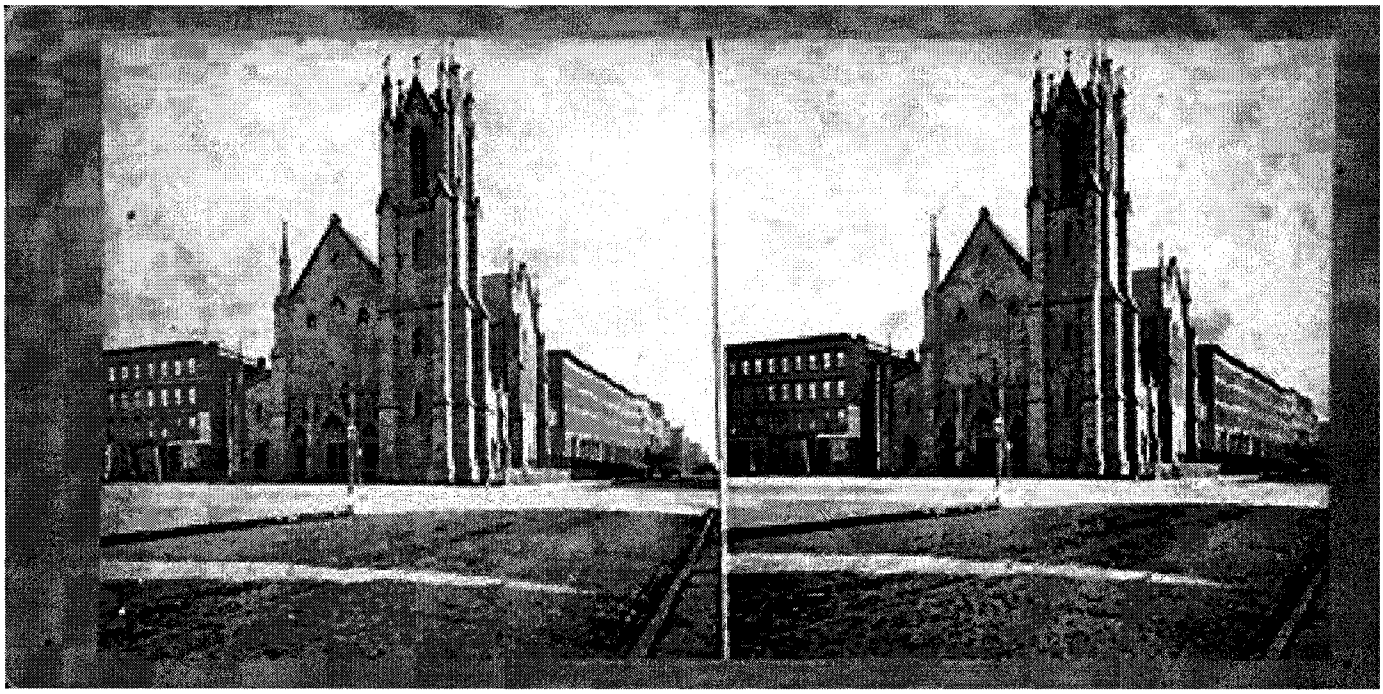

Figure 23: Broadway Tabernacle Congregational Church

Sixth Avenue and West 34th Street, New York City

1858-59

Figure 24: Jonathan Newton Harris Residence
130 Broad Street, New London, CT
1859-60

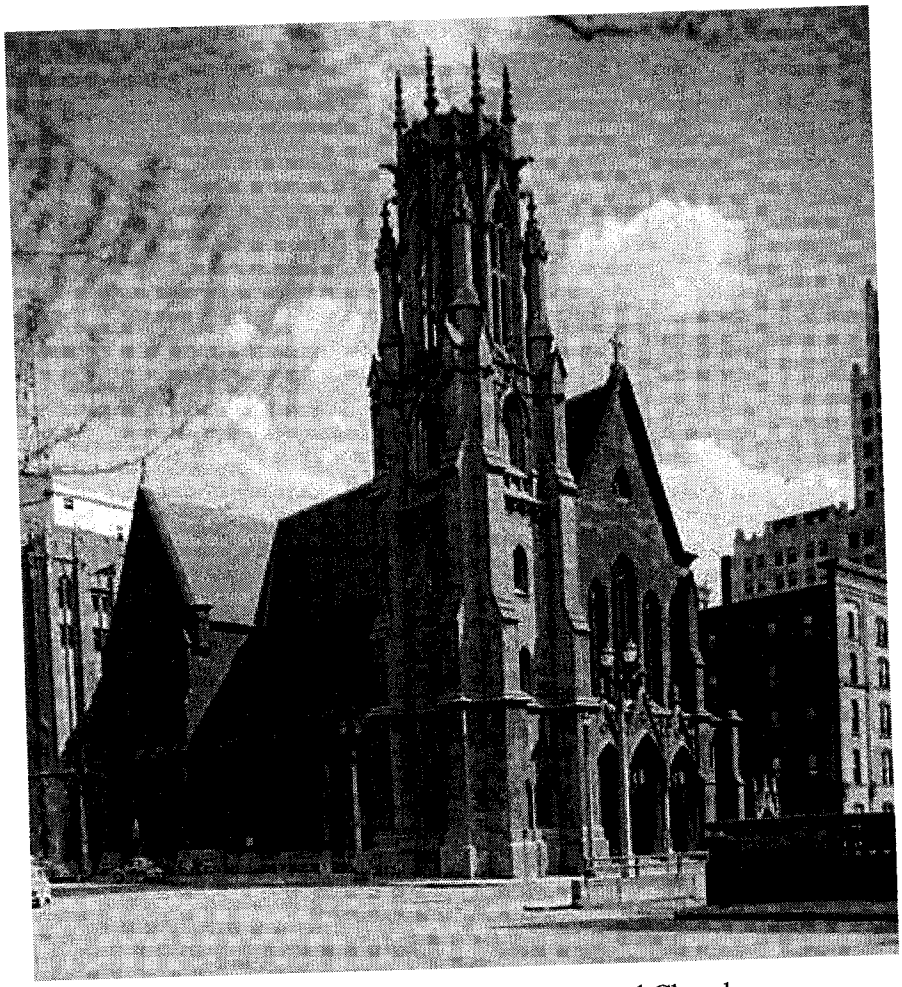

Figure 25: Christ Protestant Episcopal Church

13th and Locust Street, St. Louis, MO

1859-60; 1867; damaged by fire 1871; tower and narthex by Kivas K. Tully, 1907-11

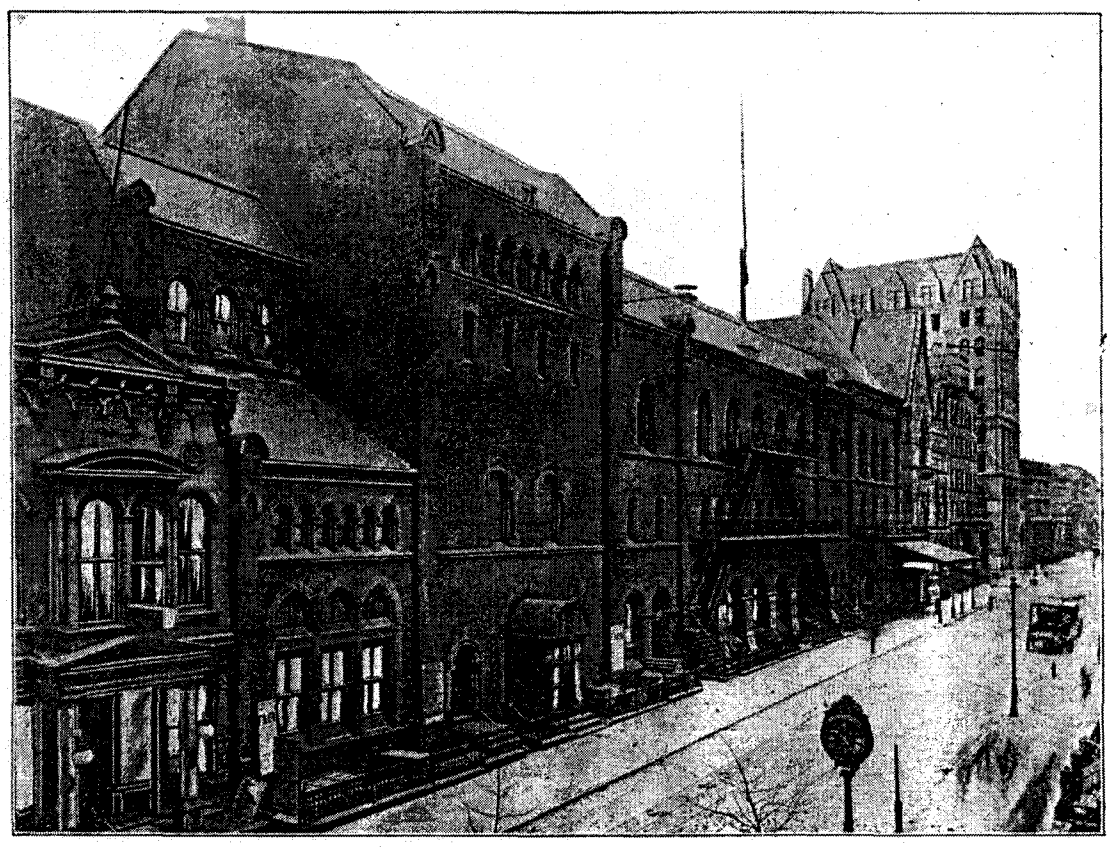

Figure 26: Brooklyn Academy of Music
176-94 Montague Street, Brooklyn, NY
1859-61

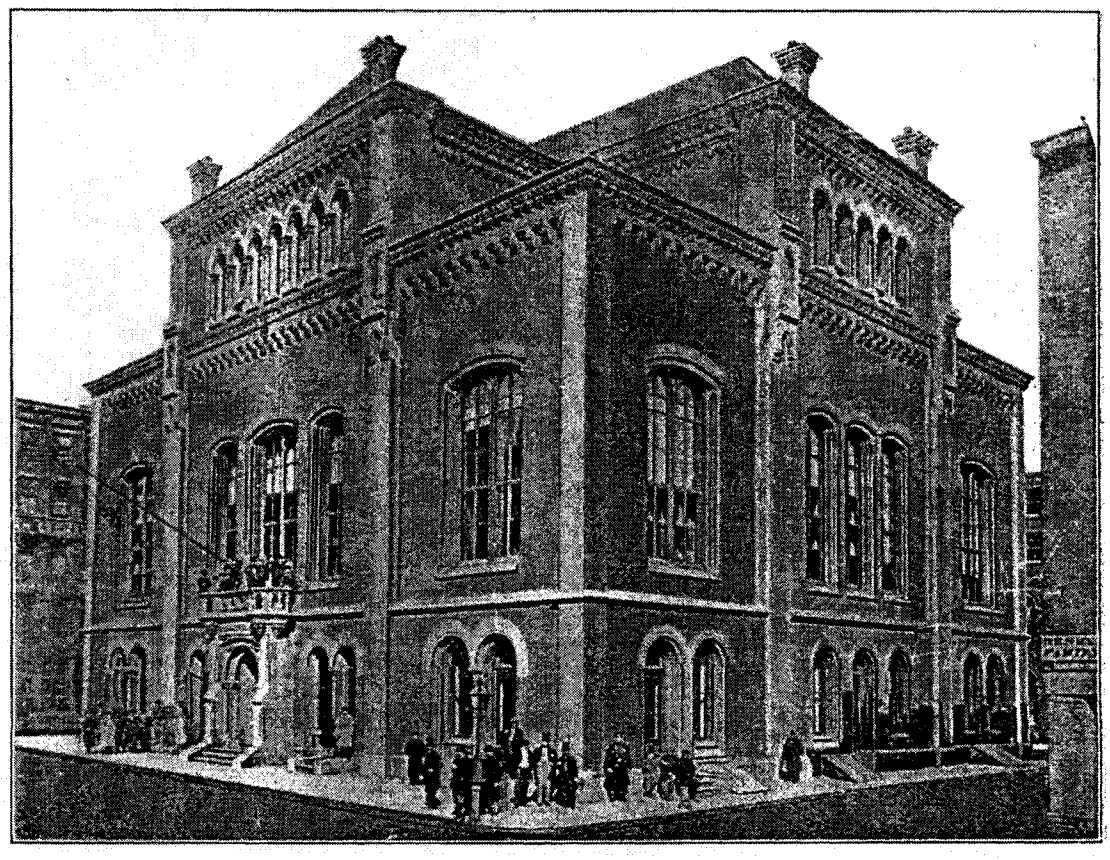

Figure 27: New York Produce Exchange (with Henry G. Harrison)
Whitehall between Pearl and Water Street, New York City
1859-61

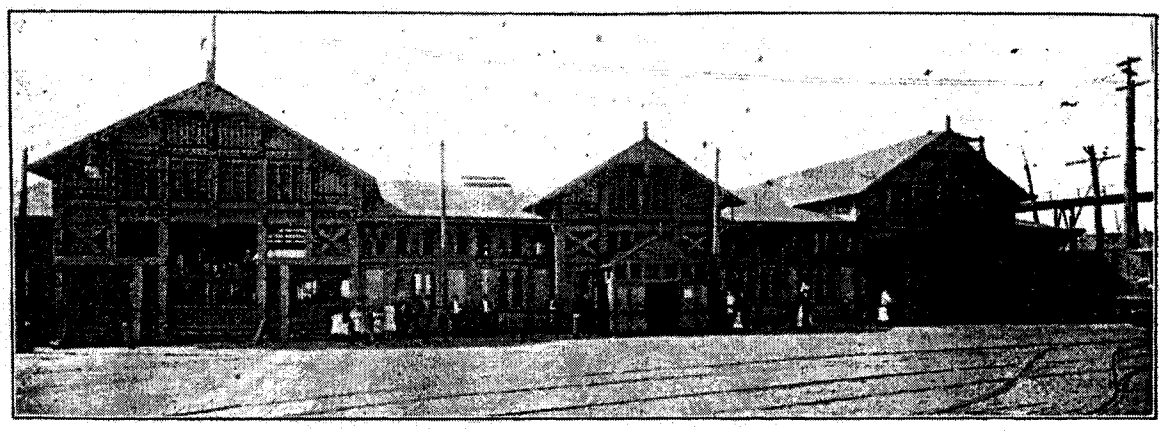

Figure 28: Hamilton Avenue Ferry House

Hamilton Avenue, Brooklyn, NY

1860

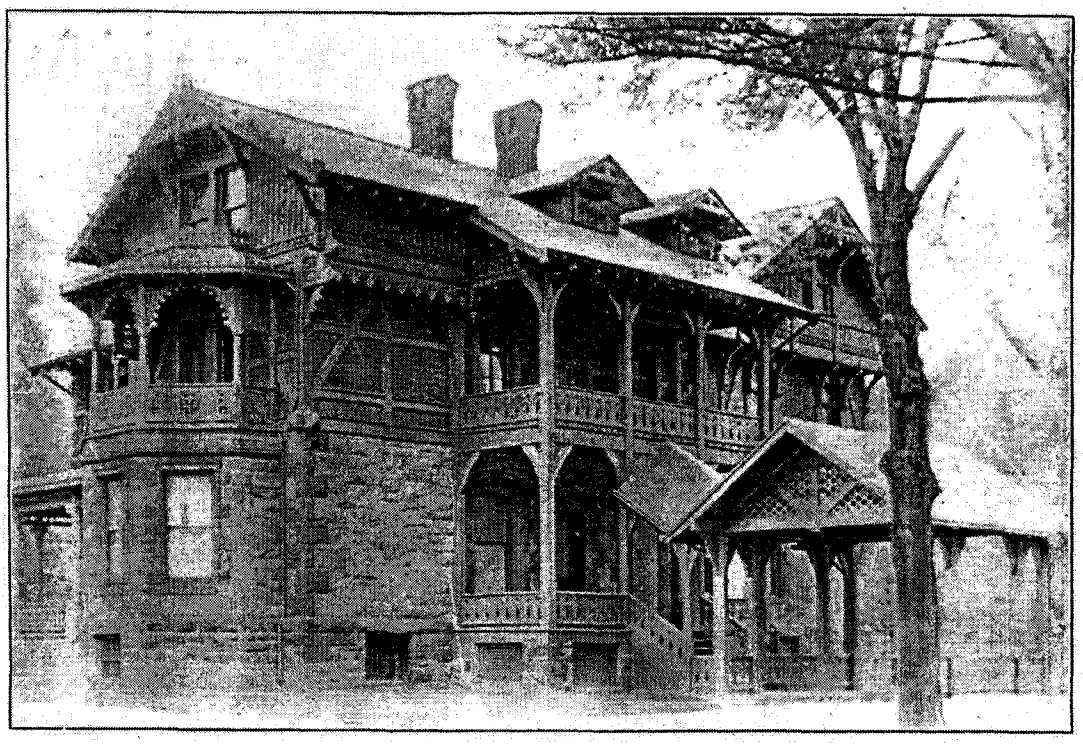

Figure 29: Cottage (attributed by Schuyler)

Englewood, NJ

c. 1860

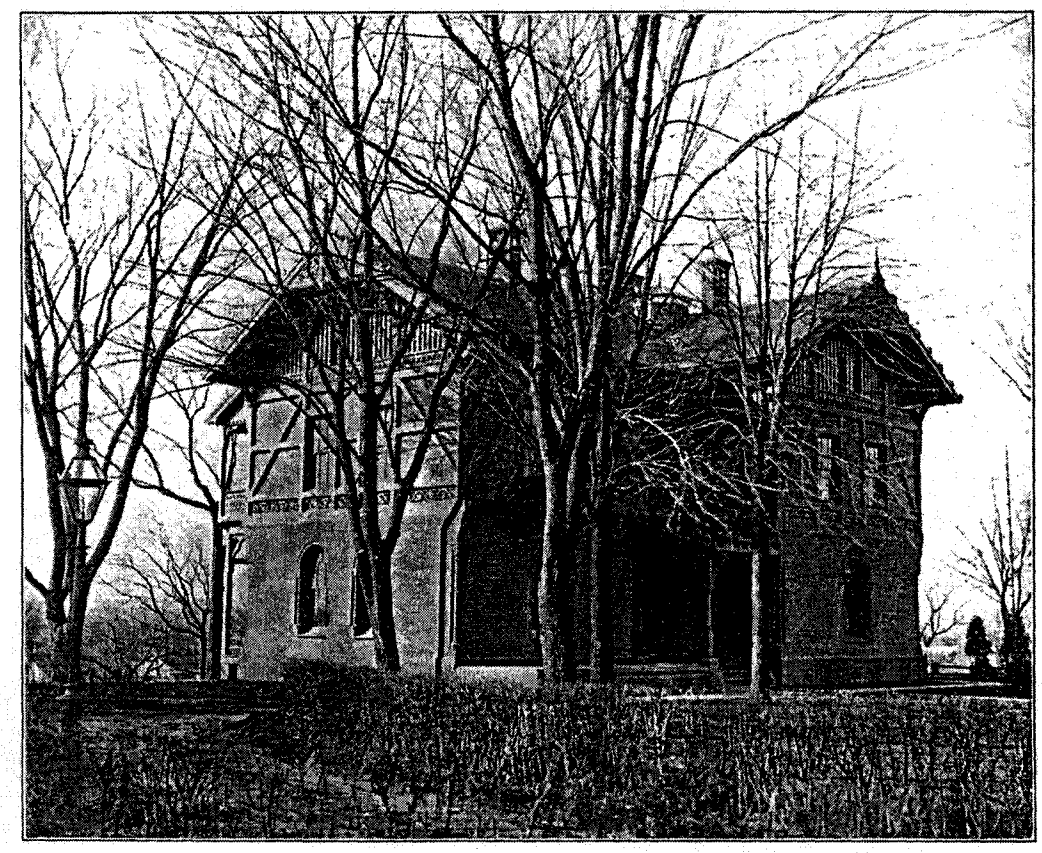

Figure 30: Murray-Vermilye House
Englewood, NJ
c. 1861

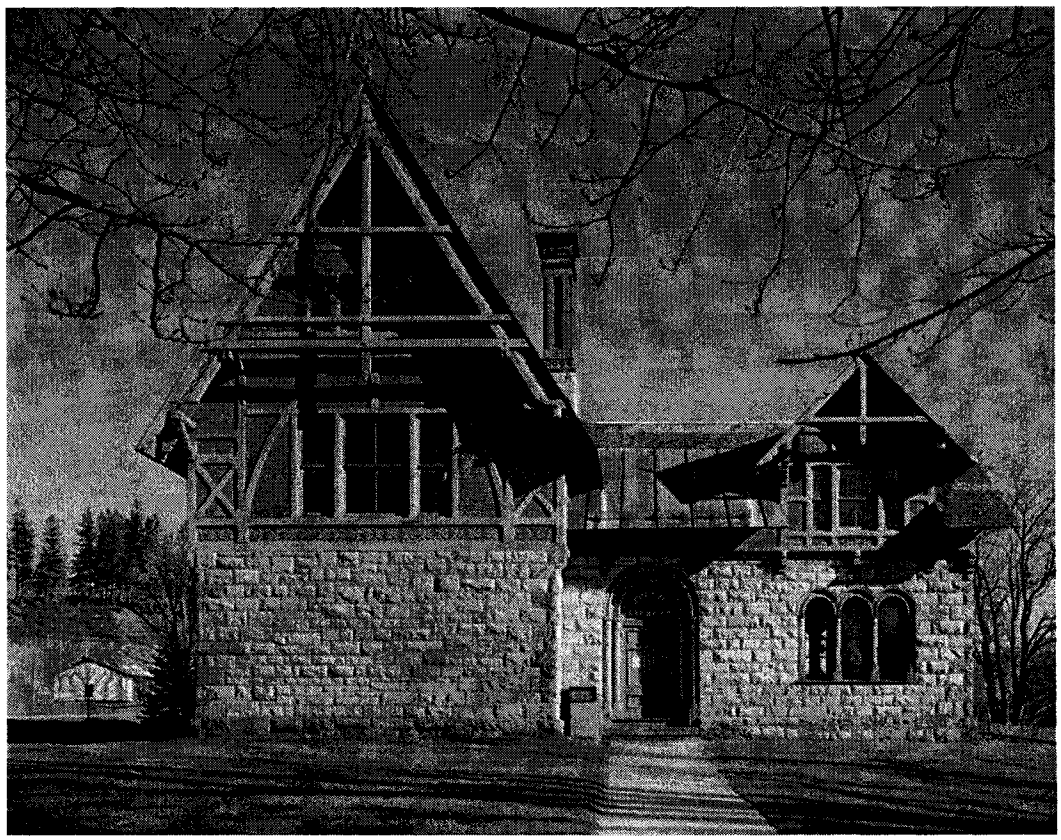

Figure 31: Hinsdale Public Library
58 Maple Street, Hinsdale, MA
1866

Figure 32: Saint George's Church (rebuilt after fire)

Rutherford Place and East 16th Street, New York City

1866-67

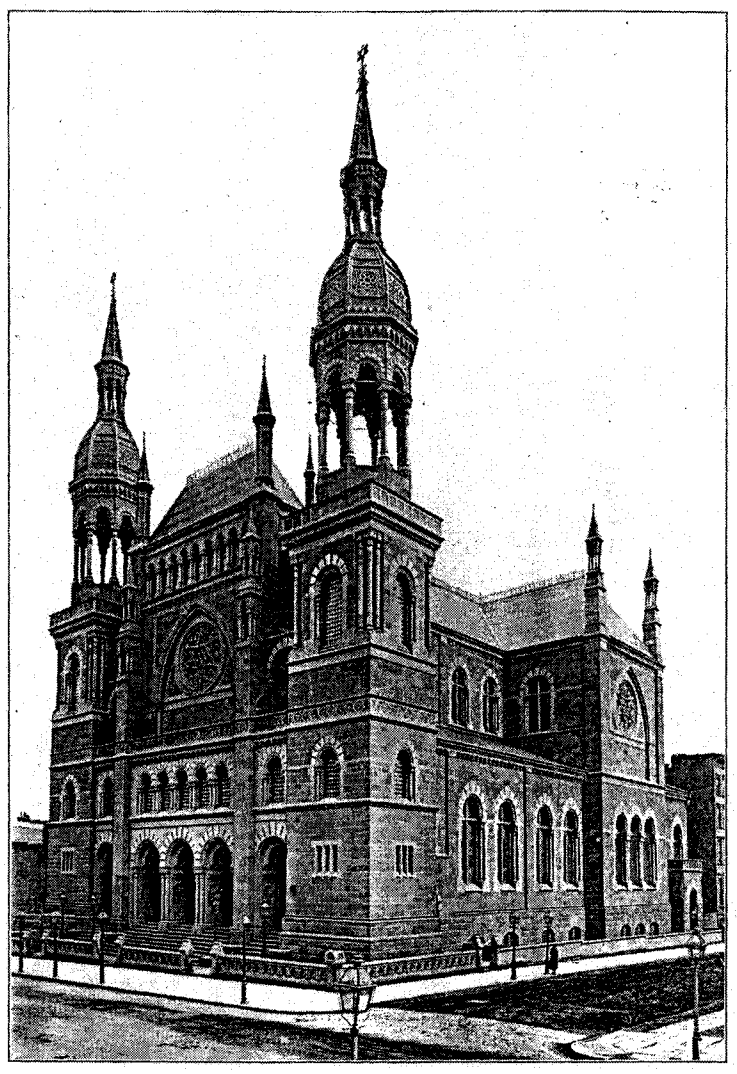

Figure 33: Temple Emanu-el (with Henry Fernbach)
521 Fifth Avenue, New York City
1866-68

Figure 34: Brooklyn Union Building

2 Front Street, Brooklyn, NY

1868-69

Figure 35: Church of the Pilgrims, alterations and additions (with Louis H. Cohn)

113 Remsen Street, Brooklyn, NY

1868-70

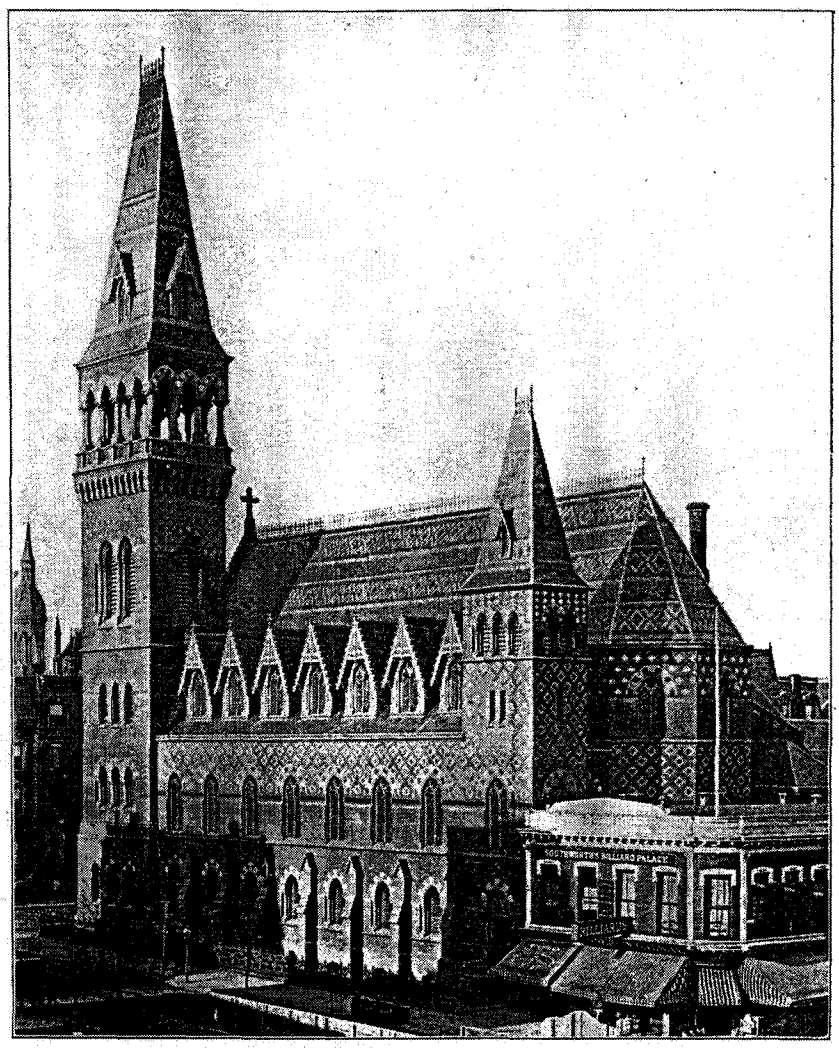

Figure 36: Church of the Holy Trinity
319 Madison Avenue (at 42nd Street), New York City
1869-74

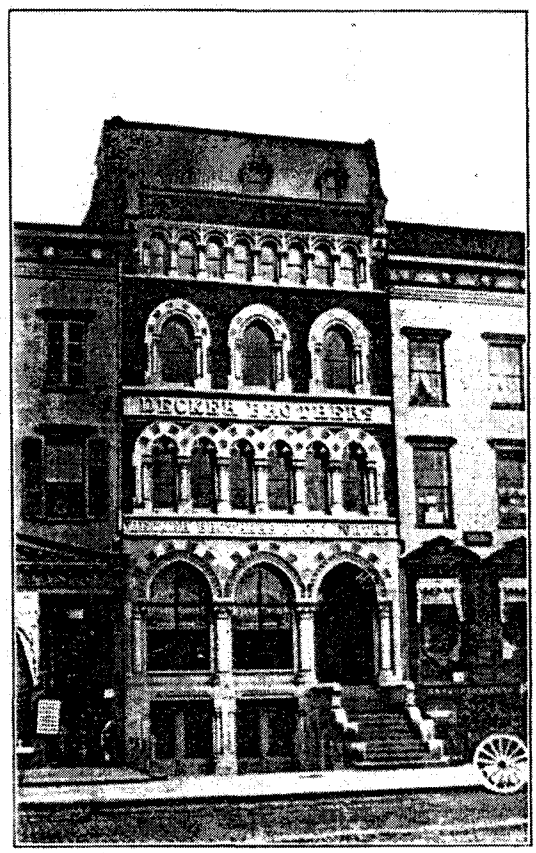

Figure 37: Myron Decker Pianos Building
33 Union Square, New York City
1869-70

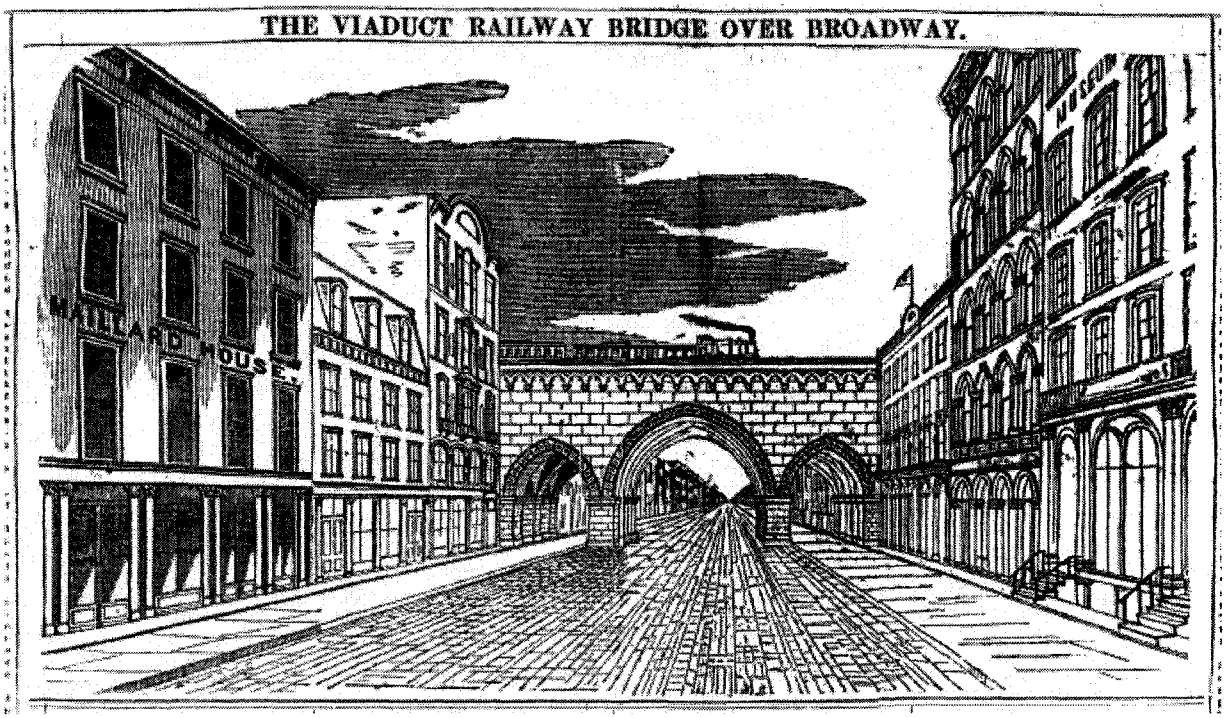


Figure 38: Viaduct Railway Study (with John J. Serrell)

New York City

1870

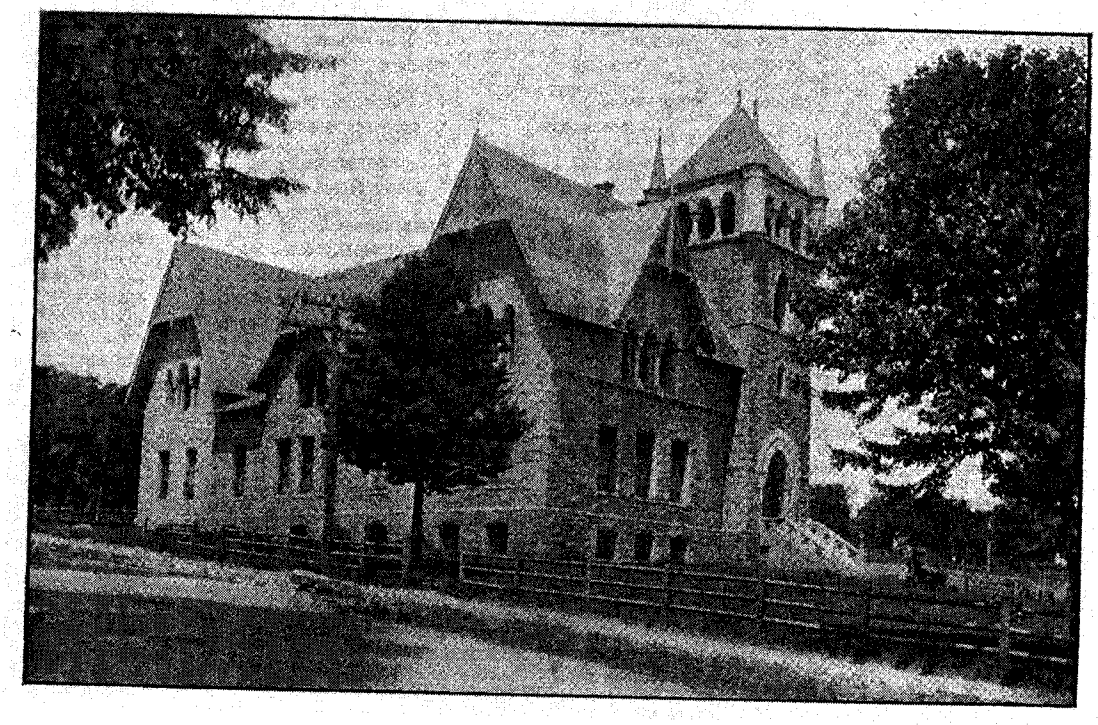

Figure 39: Bulkeley School
Huntington St., New London, CT
1870-73

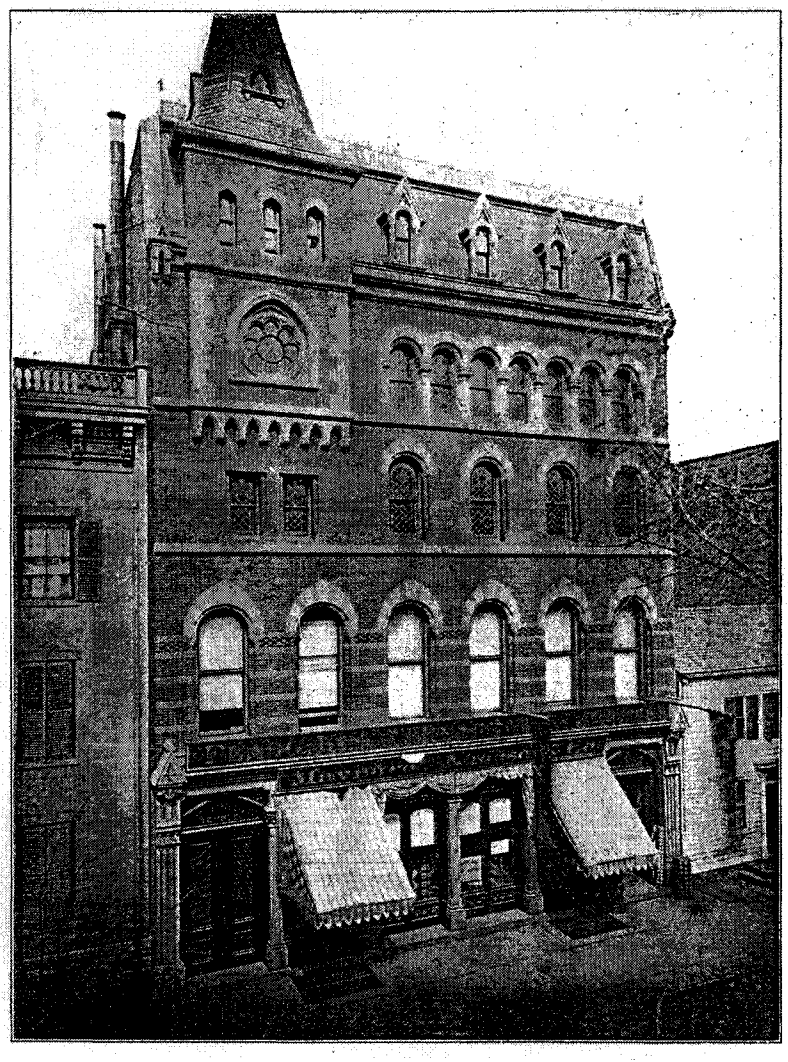

Figure 40: Troy Masonic Temple
Third Street, between Broadway and River Street, Troy, NY
1871-72

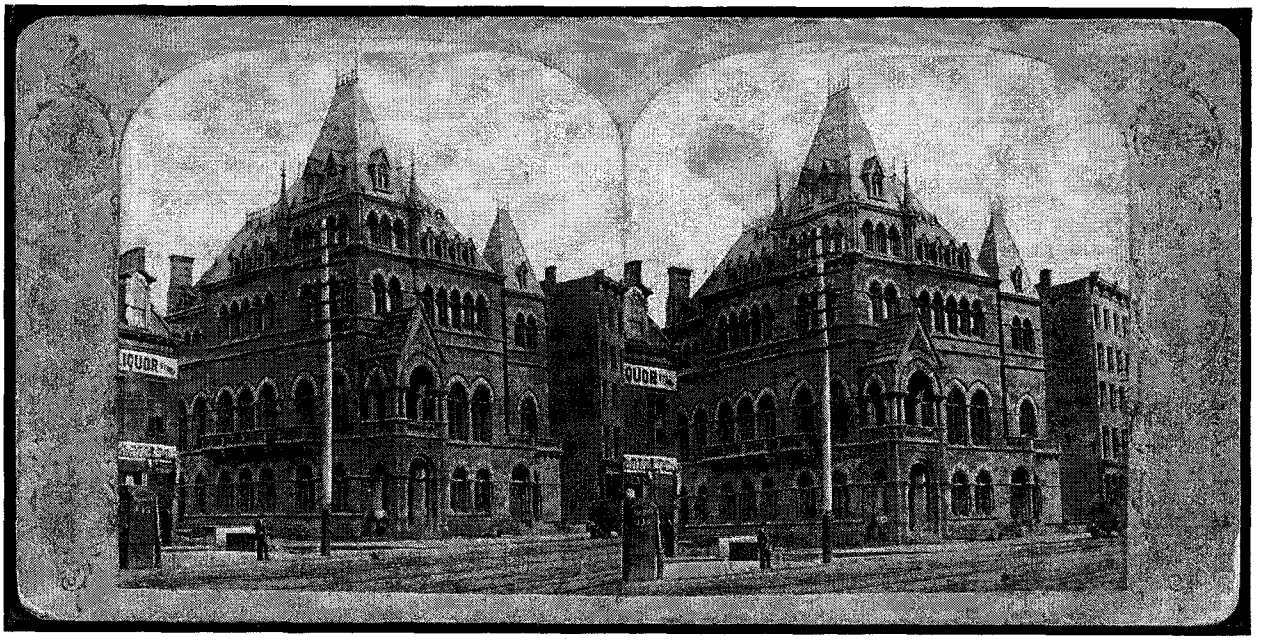


Figure 41: Dry Dock Savings Bank
337-43 Bowery, New York City
1873-75

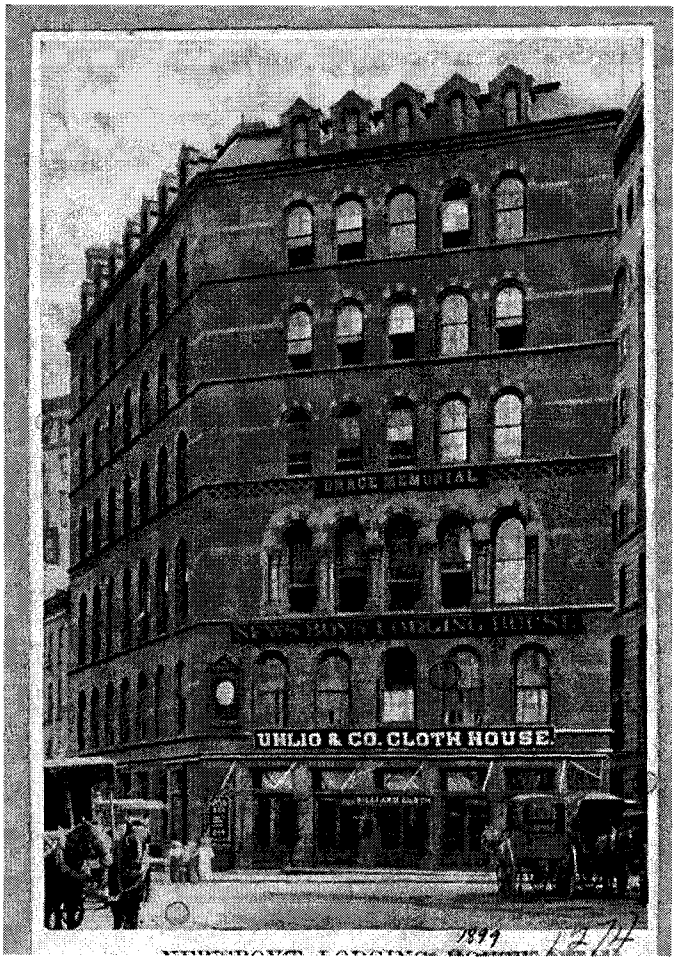


Figure 42: Newsboy's Lodging House (attributed by Brooks and Erdmann)
242-44 William Street (At Duane), New York City
1874

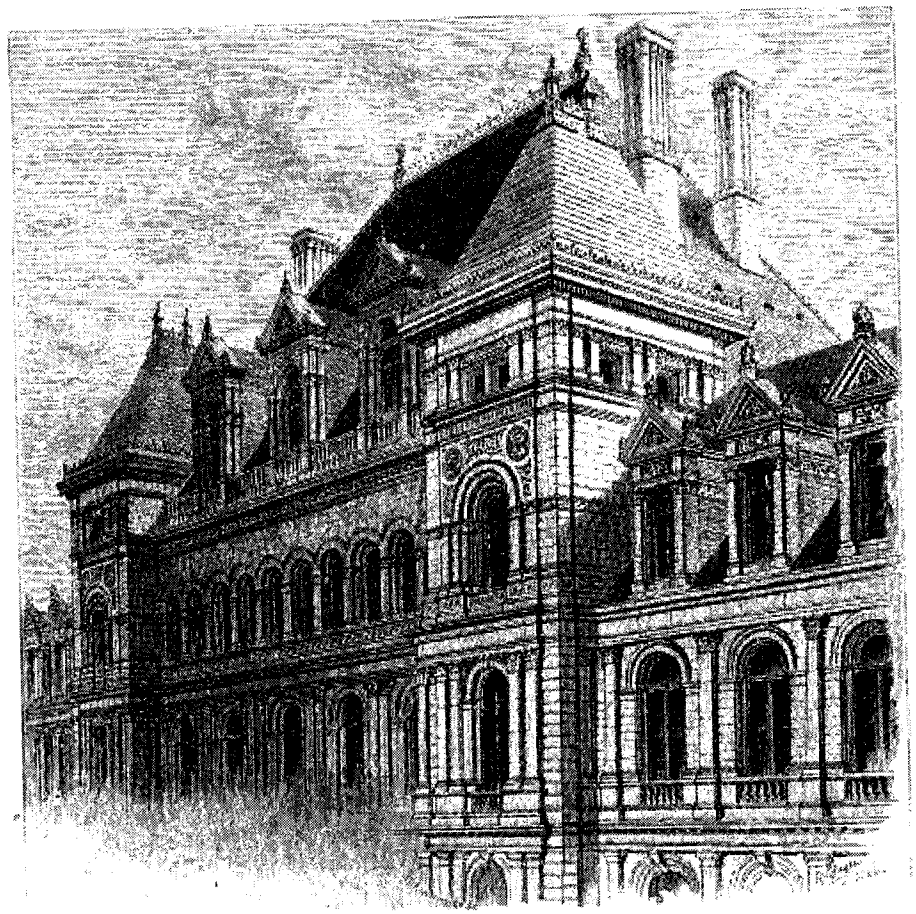

Figure 43: New York State Capital (with H. H. Richardson and Frederick Law Olmsted)
Albany, NY
1875-85

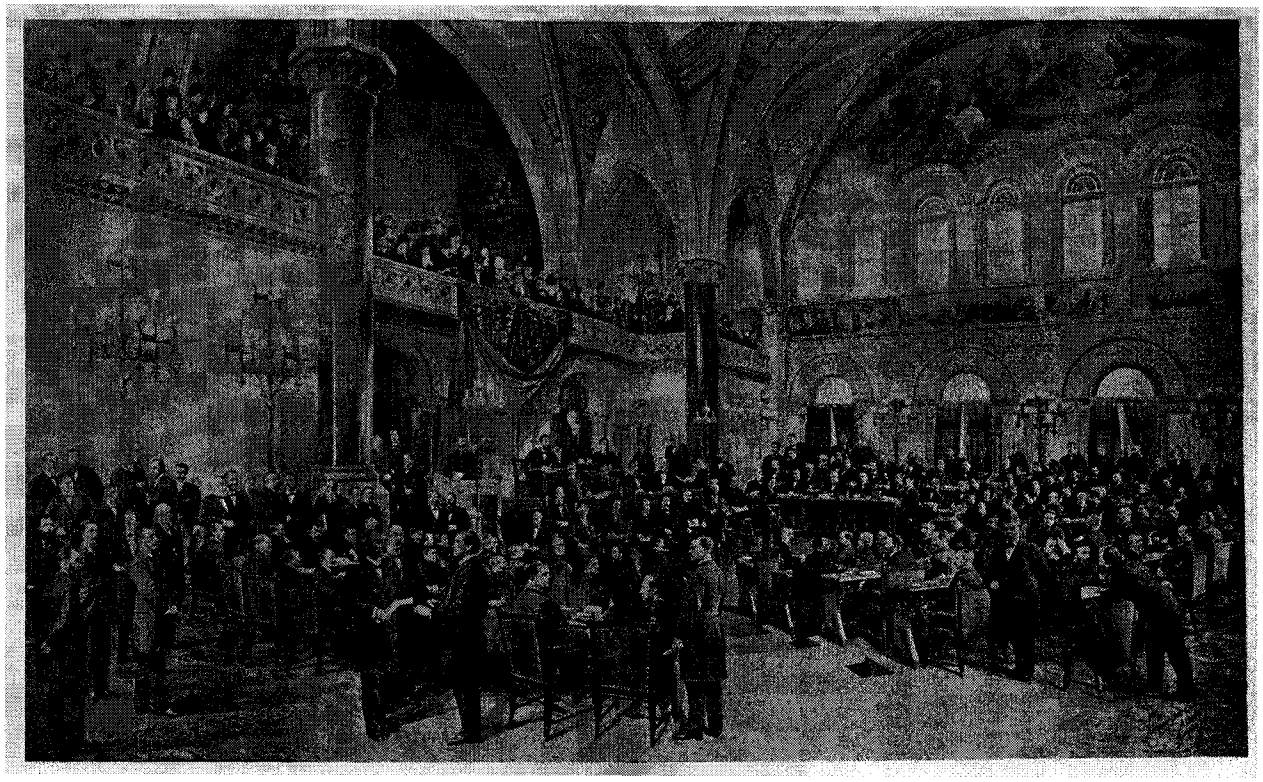

Figure 44: New York State Capital (with H. H. Richardson and Frederick Law Olmsted)

Albany, NY

1875-85

Figure 45: New York County ("Tweed") Courthouse (alterations and additions)
25 Chambers Street, New York City
1876-81

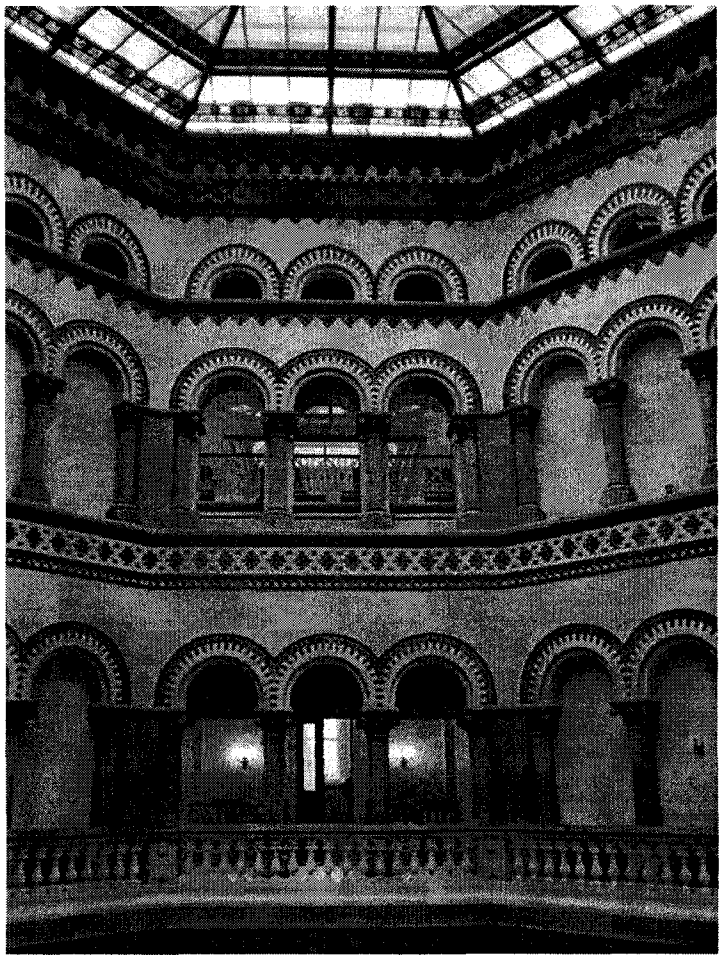

Figure 46: New York County ("Tweed") Courthouse (alterations and additions)
25 Chambers Street, New York City
1876-81

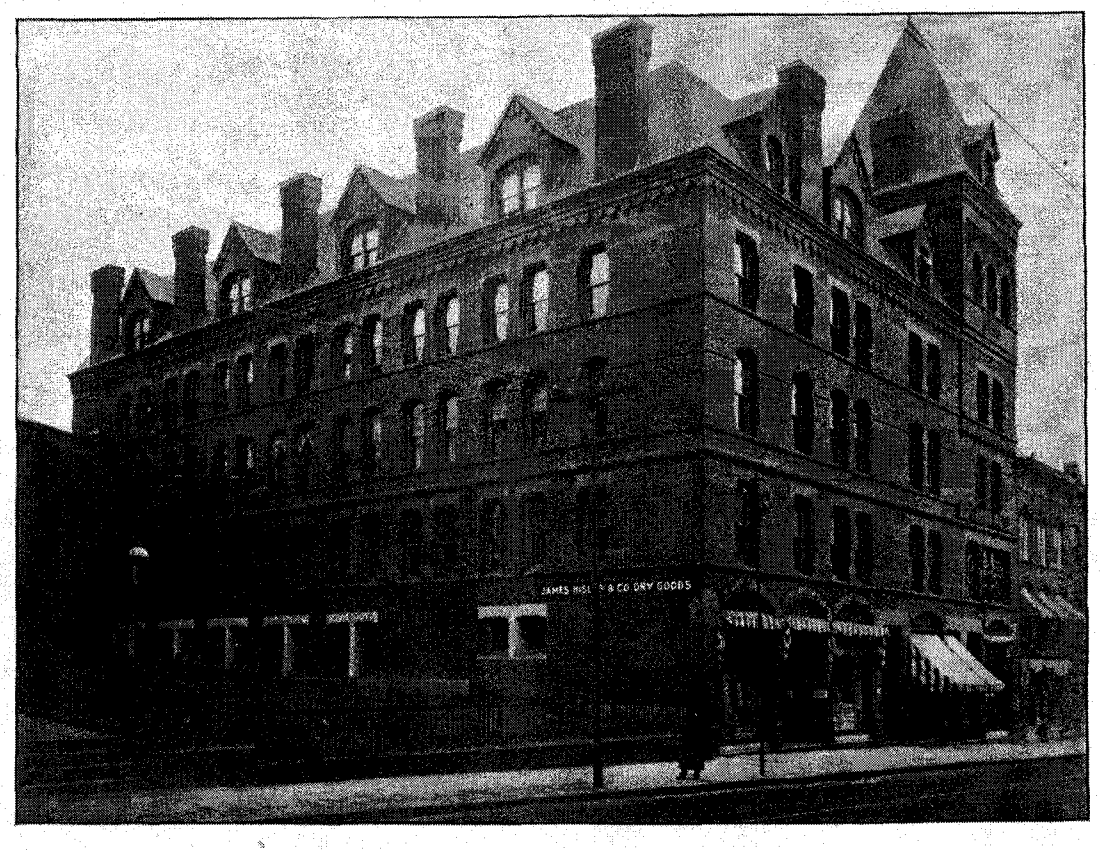

Figure 47: Harris Building
165 State Street, New London, CT
1884

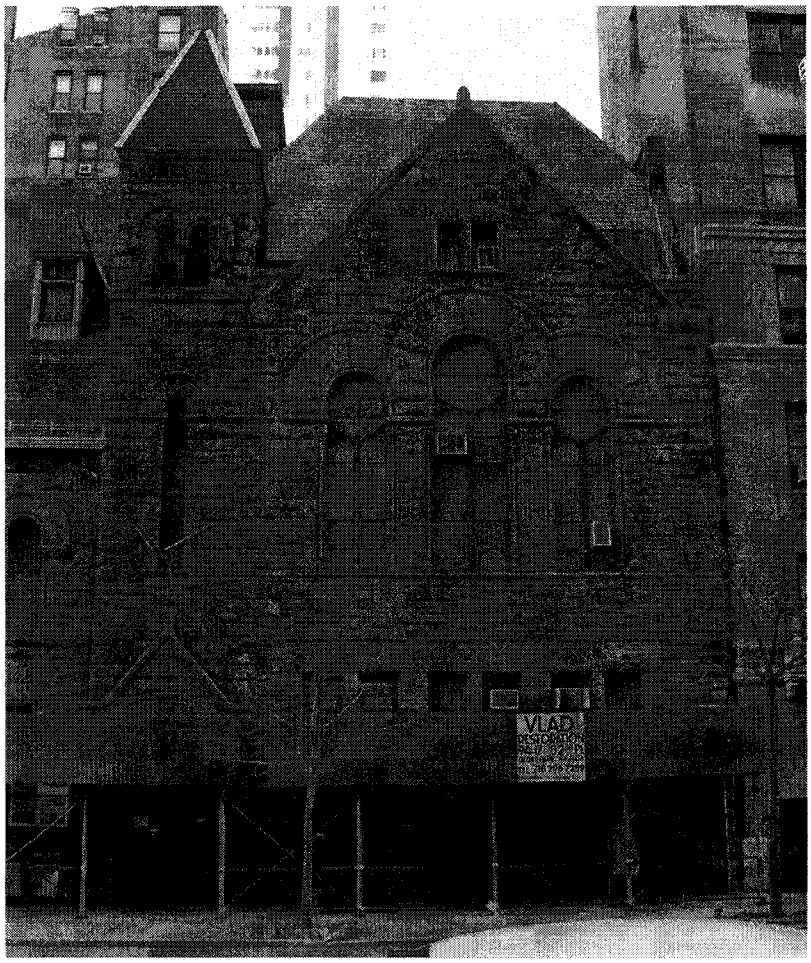

Figure 48: Park Presbyterian Church
Amsterdam Avenue and 86th Street, New York City
1884

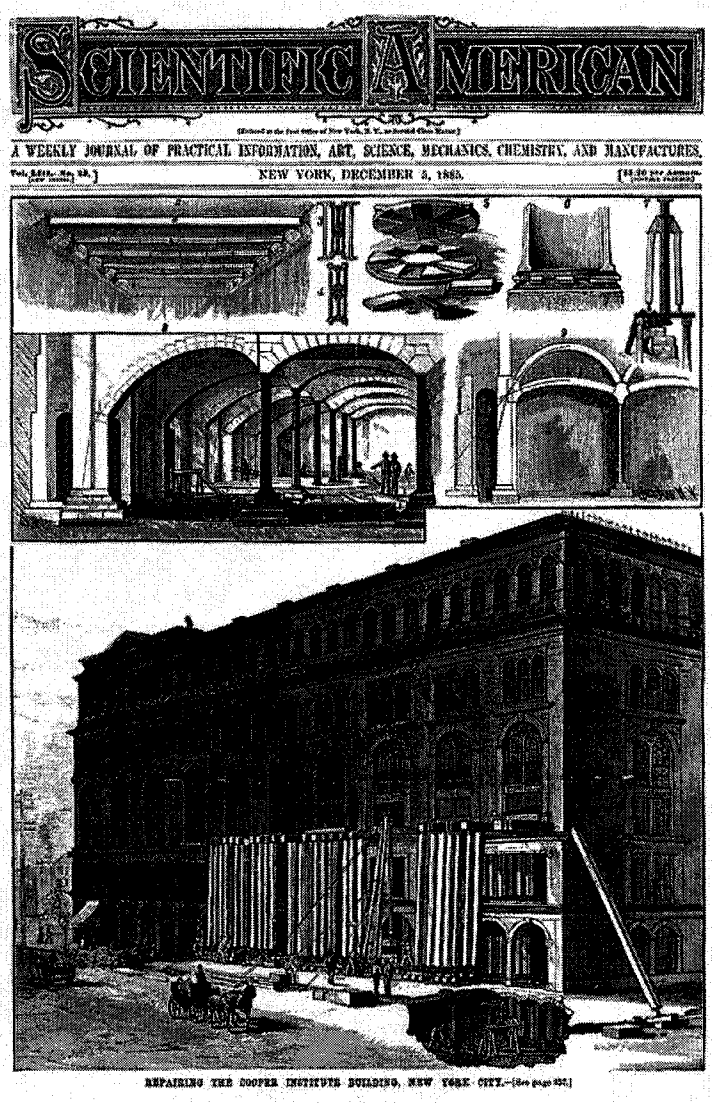


Figure 49: Cooper Union (alterations and additions)
Third and Fourth Avenue and 7th Street, New York City
1884-85

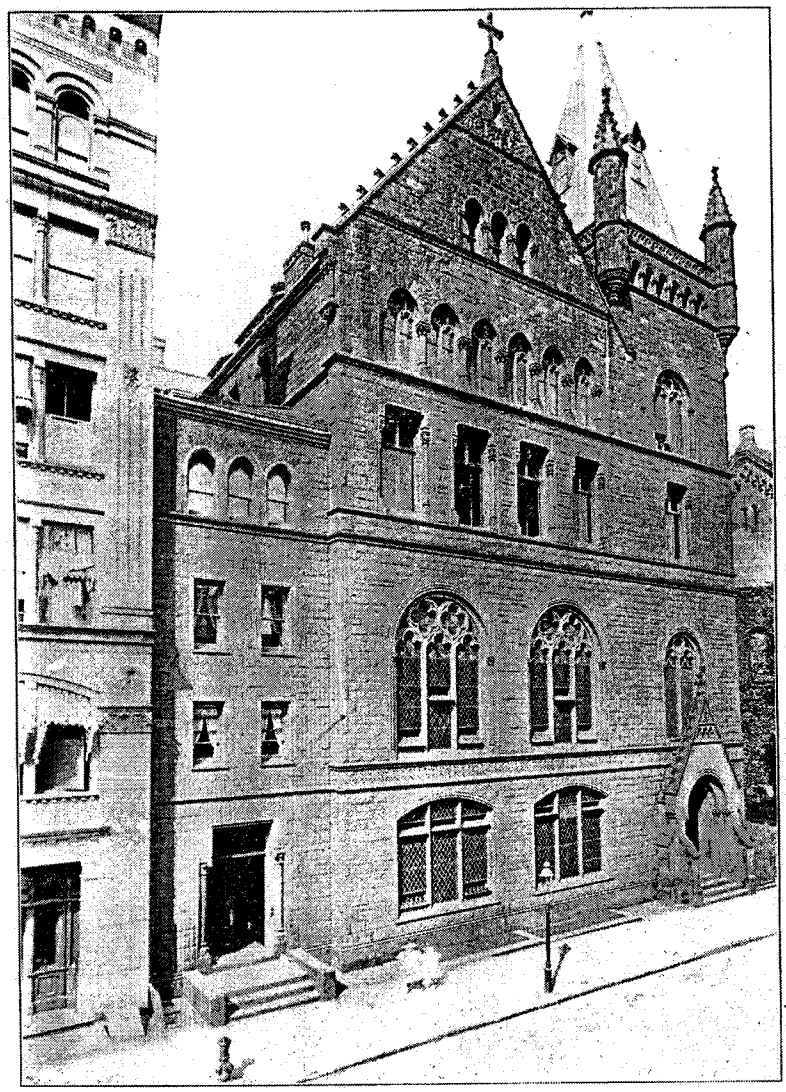

Figure 50: St. George's Church Memorial House

207 East 16th Street, New York City

1886-88

Figure 51: Isidor Kaufman/Sigmund Oppenheimer Houses
64-66 East 80th Street, New York City
1888

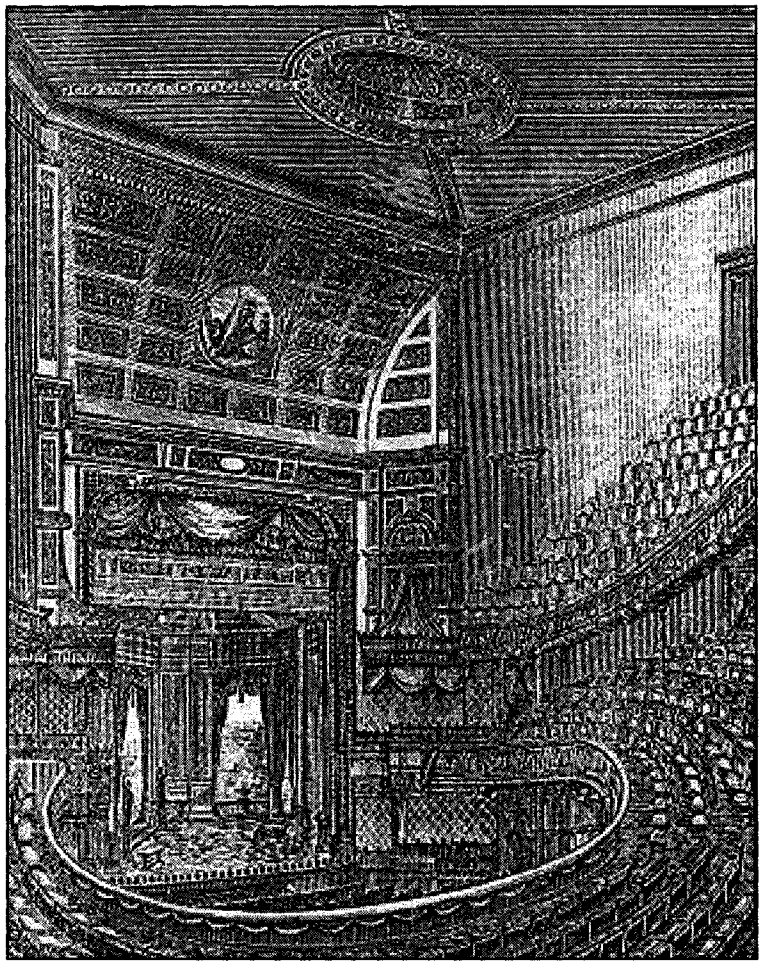

Figure 52: Union Square Theater, alterations and additions

(with John E. Terhune and Charles P. Palmer)

58 East 14th , New York City

1889

Figure 53: Mental Asylum Building (Dining Hall)

Central Islip, Long Island, NY

1890

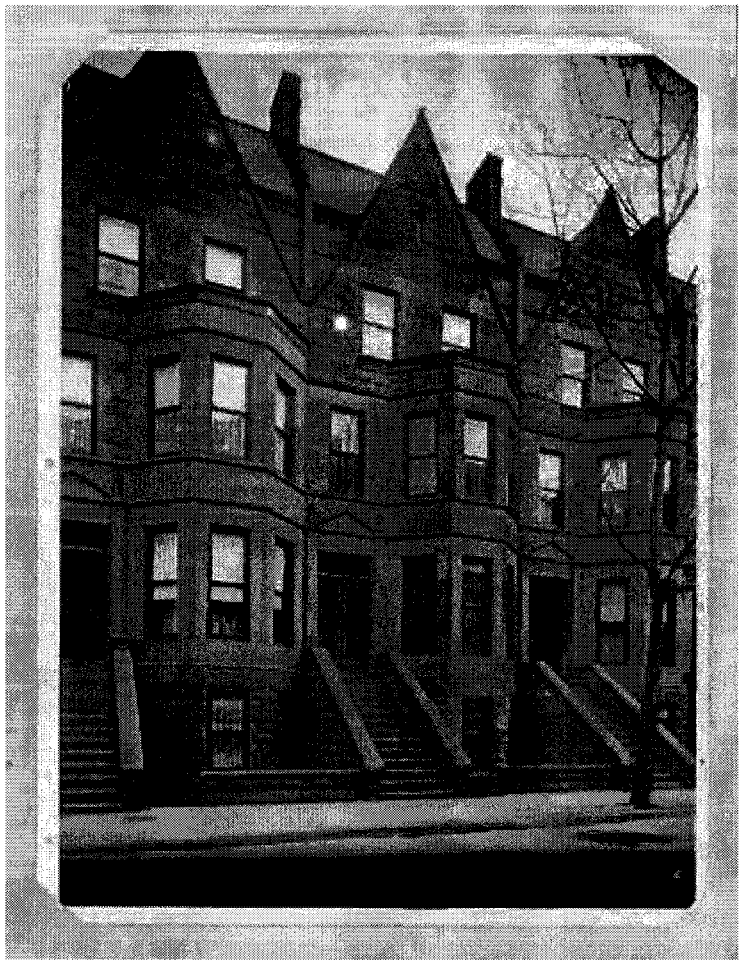

Figure 54: House in which Leopold Eidlitz died
309 West 89th Street (center), New York City

# BIBLIOGRAPHY

Archives and Repositories

Avery Library, Columbia University, New York City.

Leopold Eidlitz Architectural Drawings and Papers, ca. 1852-1895.

*Photographs*

The collection is stored in three archival boxes. The smallest contains approximately sixty photographs, half of which are of architectural drawings and models of the New York State Capitol at Albany and views of the Capitol under construction, ca. 1860-80. Photographs of drawings made by Thomas Fuller and Augustus Laver (original architects of the Capitol) and Isaac G. Perry (the architect responsible for its completion) are also included. The remainder of the material shows other projects by Eidlitz including St. Peter's Church (1853-55, The Bronx, NY) and the post-fire restoration (1878-79) by Cyrus Lazelle Warner Eidlitz; the Continental Bank (1856-57, New York City); the American Exchange Bank (1857, New York City); the Broadway Tabernacle Church (1858-59, New York City); Temple Emanu-el (1866-68, New York City); the Dry Dock Savings Bank (1873-75, New York City); and additions and alterations to the Cooper Union (1884-85, New York City). Several unidentified buildings and buildings by other architects are also included including Cyrus W. Eidlitz's Association of the Bar of New York, Main Library (1896, New York City) and Robert H. Robertson's Phillips Presbyterian Church (1874, New York City). The two larger boxes contain approximately 200 photographs of architectural details and buildings, most of which are located in Italy, Spain, France, England, and the Holy Land.

*Drawings*

Broadway Tabernacle, 6th Avenue and West 34th Street, New York City (Leopold Eidlitz, 1858-59)

1 sheet, rendered perspective study in color of a cloister

Christ Church Cathedral, St. Louis, Missouri (Leopold Eidlitz, 1859-60, 1867)

2 sheets, rendered exterior elevation perspective studies in color,
1 sheet, annotated floor plan

New York Crystal Palace Competition, New York City (Leopold Eidlitz, 1852)

1 sheet, a fragment of a rendered exterior elevation perspective study in color. The drawing is backed by a photograph of the completed building taken ca. 1853-54, perhaps by Victor Provost

St. George's Church Memorial House, New York City (Leopold Eidlitz, 1886-88)

1 sheet, front elevation facing East Sixteenth Street in black-and-white
5 sheets, annotated floor plans (prints)

St. Peter's Church Restoration, Westchester, New York (Cyrus Lazelle Warner Eidlitz, 1878-79)

1 sheet, rendered interior perspective study in black-and-white

Athenaeum of Philadelphia, Philadelphia, Pennsylvania

Drawings and diary of Thomas Ustick Walter

American Institute of Architects, The Octagon, Washington, DC

Records of the New York State Chapter of the American Institute of Architects

Royal Institute of British Architects, London

Drawing and photograph collection

National Gallery of Canada, Ottawa, Ontario

Photographs, gifts of Dorothy Meigs Eidlitz, St. Andrews, New Brunswick, 1970. Ms. Eidlitz (1891-1976), a summer resident of St. Andrews for 35 years, was married to Ernest Frederick Eidlitz (1868-1959), the youngest son of Leopold's brother, Marc (1826-92). The items are part of a collection of 365 images created by 89 artists and assembled by Ms. Eidlitz.

Unknown (American), "Daughter of Leopold Eidlitz," c. 1868-1879
Albumen silver print, 6.8 x 13.7 cm
National Gallery of Canada no. 33940

Unknown (American), "Home of Leopold Eidlitz, Riverside Drive, New York City," c. 1868-1879
Albumen silver print, 7.8 x 13.5 cm
National Gallery of Canada no. 33939

Unknown (American), "Leopold Eidlitz and Daughters," c. 1868-1879
Albumen silver print, 6.2 x 13.4 cm
National Gallery of Canada no. 33943

Unknown (American), "Leopold Eidlitz and his Bride," c. 1839-1860
Daguerreotype, heightened, 6.8 x 5.8 cm sixth-plate (oval - sight)
National Gallery of Canada no. 34123

Unknown (American), "Leopold Eidlitz and Wife," c. 1868-1879
Albumen silver print, 7.3 x 13.5 cm
National Gallery of Canada no. 33944
Unknown (American)

Unknown (American), "View across the Hudson River from the Home of Leopold Eidlitz on Riverside Drive, New York City," c. 1868-1879
Albumen silver print, 7.2 x 13.5 cm
National Gallery of Canada no. 33938

Public Library, Newport, Rhode Island

New York City Historical Society

New York City Public Library

New York State Archives and Library

Office of the Connecticut State Historic Preservation Officer

Preservation Society of Newport County, Rhode Island

Rensellaer County, New York, Historical Society

Springfield, Massachusetts, Public Library

Stratford, Connecticut, Historical Society

Stratford, Connecticut, Public Library

Temple University Library, Philadelphia, Pennsylvania

Troy, New York, Public Library

University of California, Berkeley, Library

University of Pennsylvania Library, Philadelphia, Pennsylvania

BOOKS BY LEOPOLD EIDLITZ (CHRONOLOGICAL)

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