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The Social Network of Early American Architecture: A Network Analysis of Early Architectural Training In and Out of the Lowcountry

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THE SOCIAL NETWORK OF EARLY AMERICAN ARCHITECTURE: A NETWORK ANALYSIS OF EARLY ARCHITECTURAL TRAINING IN AND OUT OF THE LOWCOUNTRY

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ABSTRACT

The contents of this thesis contain research conducted over a 9-month span surrounding the nature of architectural education in the late American Colonial Period, progressing into the Early Republic. Themes such as early European influences, 17th and 18th century art and architecture schools of Dublin, Ireland and Paris, France, and early American drafting schools/apprenticeship societies are analyzed. This paper, first, seeks to document the scholarly dialogue surrounding the ways in which early American architectural practitioners were educated, and in what ways this training was manifest in their physical designs. With a timeframe of approximately 1770 to 1830, 23 practitioners (brick layers, masons, carpenters, architects, military engineers, plaster workers, etc.) and 31 buildings were researched and analyzed. These individuals and built works were catalogued, providing raw data to be extrapolated into a networking software which conveys linkages between different entries. This paper will identify the intricate network of architects, builders, and designers that either taught, trained, or were influenced in some pertinent manner in the late colonial and early republic field of architecture. Additionally, the research highlights connectivity between buildings and people. This study will contribute to the larger dialogue by adding a visual, meta perspective to a field which has been more singularly focused on specific biographies and particular aspects of the early American field.

DEDICATION

I dedicate this work, first and foremost, to my mom, who has been an unwavering foundation of support- you're my inspiration, Ma. Grammy, Papa, Kate, Broghan, Molly, Aidan, Dad, and Bernie – my gratitude for your patience cannot be explained fully and your belief in me has been my rock. I am so excited for what's to come.

I also dedicate this work and journey to a dear friend and classmate Kelly Bulak, the light of our class and a living motivation to find joy in every day and everything we do. We miss you and will live out your legacy, Kelly!

To a circle of support that made the long days far more tolerable– Chuck, Grace, Jake, Todd, Connor, Spencer, Jack, Joseph, Cody, Alex, and Mariya.

Finally, I dedicate this work to my classmates who have become family. To Riley, Maria, Patty, Neale, Daniel, Brandon, Isabella, Jessica, Lizzy, Nicole, Tom, and Travis. It has been an immense pleasure to do this with all of you and create lifelong friendships.

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Chapter 1

Introduction

Identifying as "Gentleman Architects," throughout the latter portion of the 18th Century, figures such as Gabriel Manigault, William Rigby Naylor, and Thomas Jefferson were known to have crafted their own reputations as self-made and educated designers. These participants in the building culture were distinct from others in their field such as skilled craftsman and laborers. Gabriel Manigault, son of the elite Charleston planter Peter Manigault, William Rigby Naylor, immigrant and trained craftsman of the Dublin Royal Exchange, and Thomas Jefferson, signer of the American Constitution, all embodied the early personages of what would gradually become the modern conception of the American architect. The term "Architect," or the field of Architecture, was not formally defined in the newly formed American Republic. There was no accreditation, any sort of professional training, or testing for people who designed buildings in the colonial period. Rather, individuals specializing or working in fields such as plaster design, carpentry, brick laying, masonry or building design were more often referred to as "contractors," or, "undertakers," regardless of their specific area of expertise.[1]

However, as American building culture and practice evolved into the first decades of the 19th century, written records show the introduction of "The Architect," as a unique

[1] Stewart McLaurin, William Seale, Merlo Kelly, Finola O'Kane, Christopher Moran, Brian O'Connell, Andrew McCarthy, Matthew Costello and Kristen Hunter Mason. *James Hoban: Builder of the White House in White House History.* Washington, D.C.: The White House Historical Association, March, 2021.

individual in the trade, contributing to the building process in a definitive and specialized manner. With the emergence of contractors, construction professionals, engineers and design-build firms as their own distinct practices, our modern perception of the construction and design process is far more compartmentalized than was in the late eighteenth century. With the rise of formalized education and industrialization in the nineteenth century came the coalescence of the architectural field into a more specified profession. Further, the modern conception of architectural training and schooling bleeds into the origins of the profession. In the following section, a clear and concise breakdown of the literature and narrative dialogue surrounding the history of American architectural education will be provided. This section will outline James Hoban's Wentworth Street Drafting School and its place in this timeline development and support the nuanced nature of his Charleston educational practice in the early developmental period of the field.

To better understand the built environment, it is important to know the systems of building design and construction through time. Toward this end, this thesis examines a succinct window of time at the end of the 18th century and beginning of the 19th century. This research will present a view of this evolving phenomena in the late 18th century, both within and outside the lowcountry. Chronologically in this study, it is important to first analyze this shift from generalized construction to the establishment of architecture as a stand-alone and noteworthy professional field, within the broader concept of construction design.

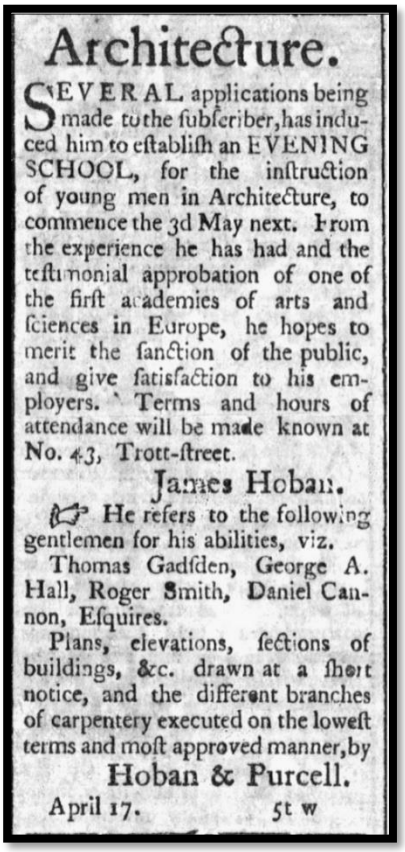
Throughout the early to mid-portion of the 18th century, booming European cities such as London, England and Dublin, Ireland were beginning to establish architectural drafting schools at the heart of their urban landscapes. For example, in Dublin, Ireland, The Royal Dublin Society of Architecture was formed in 1750 on Grafton Street to educate in the arts of architectural drawing, landscape and ornament.[2] The preliminary pursuit of these schools was to seek out young men within apprenticeship societies training to become skilled craftsmen in fields such as carpentry, plaster working, and brick laying, and educate them in the more institutionalized area of architectural drafting. In his article on James Hoban and his Charleston home, Charleston County Historian Nic Butler comments on Hoban's beginnings as an apprentice, "to a carpenter at the estate of a nearby manor house (Desart Court, now demolished) in County Kilkenny." From this apprenticeship, Hoban would demonstrate talent in the area of drafting to such an extent allowing for his recruitment to the Dublin Society as a student under renowned Irish architect Thomas Ivory.[3] Graduates of schools similar to the Dublin Society (present-day Royal Dublin Society) would go on to, in the European scale of industry, become professionalized architects with foundational knowledge in the more manual and hands-on trade. For example, in Paris, the Académie Royale d'Architecture (soon to be incorporated into the École des Beaux-Arts school) sought to train young individuals in

[2] Kevin Bright (2006). RDS TwoSevenFive, A Brief History of the Royal Dublin Society 1731–2006. Dublin, Ireland: RDS. p. 9.

[3] Nic Butler (March 16, 2018), *James Hoban's Charleston Home.* Charleston, SC: Charleston County Public Library

the academies of art, sculpting and architecture in a similarly calculated and rigorous fashion.[4]

James Hoban, and other European immigrants within the architectural trade of the era, was familiar with this model for training/educating architects and is known to have brought the model for a drafting school to Charleston.[5] Therefore, while time restrictions do not allow for an in-depth study within this research, the establishment of James Hoban and Pierce Purcell's drafting school at 46 Trott Street in the late 1780's Charleston, SC is notable in this historical moment, and potentially contributory to a paradigm shift in American architectural dogma. Further, how does the lowcountry narrative of the construction design field fit within a gradually evolving, yet distinct period of professionalization of the architectural field in the United States as a whole? In confronting this question, preservationists and architects alike will gain more perspective on the degree to which this professionalization influenced specific design and planning practice in historic building construction.



Architecture.

SEVERAL applications being made to the ſubſcriber, has induced him to eſtabliſh an EVENING SCHOOL, for the inſtruction of young men in Architecture, to commence the 3d May next. From the experience he has had and the teſtimonial approbation of one of the firſt academies of arts and ſciences in Europe, he hopes to merit the ſanction of the public, and give ſatisfaction to his employers. Terms and hours of attendance will be made known at No. 43, Trott-ſtreet.

James Hoban.

☞ He refers to the following gentlemen for his abilities, viz.

Thomas Gadſden, George A. Hall, Roger Smith, Daniel Cannon, Eſquires.

Plans, elevations, ſections of buildings, &c. drawn at a ſhort notice, and the different branches of carpentery executed on the loweſt terms and moſt approved manner, by

Hoban & Purcell.

April 17. 5t w

Fig. 1. April 17th, 1790 – Charleston City Gazette advertisement for Hoban & Purcell Drafting School on Trott Street.

[4] Pierre Bourdieu (1998). The State Nobility: Elite Schools in the Field of Power. Stanford UP. pp. 133–35.
[5] Stewart McLaurin, William Seale, Merlo Kelly, Finola O'Kane, Christopher Moran, Brian O'Connell, Andrew McCarthy, Matthew Costello and Kristen Hunter Mason. James Hoban: Builder of the White House in White House History. Washington, D.C.: The White House Historical Association, March, 2021.

The importance of this study is to aid in adding to the timeline of American architectural history, and the extent to which European immigrants such as James Hoban and Pierce Purcell influenced the specialization of the blossoming field in America. In the following sections, the reader can expect to come to know more fully the history of the architectural field and its early development in European cities, as well as how specialized, architectural curriculum began to assimilate into American cities. Further, as a means to better and more holistically understand the nature of this early field and it's training in the New Republic, a network study of these early practitioners is conducted, conveying potential trends, patterns, and relationships among design and construction circles. Categories such as Gentleman Architect, Amateur Architect, and Skilled Laborer will be implemented within a larger study of practitioners and buildings. Categories such as these will allow for insight into the ways in which people were training and working together prior to a formalized system of education.

Chapter 2

Literature Review

Providing Context for the Narrative

The philosophy of formal training and schooling in the subjects of design, hand-drafting and science of architectural craftsmanship were all significantly developed fields in leading European cities centuries preceding the first North American English Colony. Schools such as the Académie Royale d'Architecture in Paris and the Royal Dublin Society of Dublin, Ireland provided prestigious systems of curriculum that allowed for students to graduate with credentials as professional architectural designers.[6] While this culture of strict training and education was prevalent in 17th and 18th century European capital cities, it was a gradual process of assimilation into North American practice. The young United States did not see the same level of professionalization until the 19th century.[7] However, given its gradual evolution within the American educational system, it is important to identify the ways in which several different educational practices became manifest.

This section will first provide a timeline of architectural education, its origins in European practice and a breakdown of how the curricula were structured. With this information, it will then become more clear how the philosophy behind European architectural educational informed colonial drafting schools and informal academic

[6] Joan Ockman, *Architecture School: Three Centuries of Educating Architects in North America.* Washington D.C.: MIT Press & Association of Collegiate Schools of Architecture, 2001.
[7] IBID

programs. In synthesizing this timeline, a national narrative surrounding the gradual professionalization of the term “architect,” and the development of the architectural field in Charleston, South Carolina will convey how the city fits into the national dialogue. Leading scholars in the field such as John Bryan, Joan Ockman, and Kenneth Severens have led the conversation throughout the past century. These authors establish a timeline of American architectural history in which the term “Architect,” has gained weight, professionalization, and parameters. Within this narrative, we come to know more fully the effect that the growing field would have on our nation’s built heritage and modern preservation standards.

Establishing a Timeline

To best understand our nation's earliest architectural drafting schools and how their bodies of curricula began to take form, it is helpful to understand the field's earliest forms of education and the ideals upon which they were created. While much of modern Architectural education finds its classical roots in Greek and Roman design, most palpable in the work of figures such as Filippo Brunelleschi, Andrea Palladio, and Leon Battista Alberti, earlier forms of architectural typologies are found additionally in structures such as the Pyramids at Giza, Gobekli Tepe in Turkey, Sechin Bajo in Peru, and Sanchi Stupa in India. These ancient structures bring with them a nod to architectural craftsmanship and master building far earlier than this papers timeframe of study. Architectural studies and documentation of the Italian Renaissance period convey a keen cultural desire to excel in and define the practice of architectural design.[8] Typical of the Italian Renaissance period, but also indicative of other post-medieval eras such as Rococo and Baroque, the embodiment of architecture on a cultural level was significantly integrated into the practice of commissioned art. Leading Renaissance families such as the Medici's provided patronage for major civic works in the form of paintings, sculptures, scientific study, and buildings. Existing structures such as St. Peter's Basilica and Santa Maria del Fiore convey this mode of artistic commissioning in architecture.[9] It is important to note the study of architecture, in this period, was married to the

[8] Denna Jones, ed. *Architecture: The Whole Story*. London, UK: Thames & Hudson, 2014. ISBN 978-0-500-29148-1.
[9] IBID

established culture of art. Architecture gradually identify as its own distinct field, from which a pattern of analysis and education would gradually grow.

One of the earliest examples of Renaissance-era architectural documentation is found in the De Re *Aedificatoria (On the Art of Building)* recorded by Leon Battista Alberti. Rooted heavily in the classical and ancient ideals of Marcus Vitruvius Pollio's *De Architectura (The Ten Books on Architecture),* Alberti compiled a vast array of architectural drawings depicting classical Roman ruins standing in the mid 15th-century.[10] These records illustrate engineering, civic history, town planning, geometry and proportional beauty or elegance in architectural themes. The evidence of these notes on historic ruins in Rome marks a moment in history during which architectural studies began to influence the incorporation of classical ideals into new design and construction.[11] This movement codified standards upon which a foundation of architectural education and guidelines would be established. The gradual adoption of these ideals would, by the middle of the 17th century, become evident within academies of the arts and architecture throughout Europe.

[10] Jones, 2014, p. 196.
[11] IBID

France – Académie Royale d'Architecture

The Académie Royale d'Architecture was founded in Paris, France on December 30th, 1671 as an academic society for the advancement of architectural theory.[12] Housed in the Louvre, the academy taught design from a perspective of mathematics and classical theory. This theory was based substantially on the ideals established by Leon Battista Alberti's De Re *Aedificatoria* to such an extent that in 1720 the school set in action a competition titled the Gran Prix de Rome.[13] This competition was a French scholarship for exemplary architecture students to travel throughout, live, and study in Rome. Following graduation from the Academy, awardees would continue the tradition of 1st hand observation of building rooted in classical theory.[14] The Académie was structured on weekly meetings held within two halls, one for lecture in theory, the other for instructions in mathematics of design. The curriculum also included the design of architectural models and their presentation in a large room specifically meant for display.[15] Graduates of this school would in turn be granted the titled of élève meaning student, seeming to provide an aura of credentials in education, but remaining to be a novice in the field of architecture. The Académie was incorporated into the Académie des Beaux-Arts (present-day École des Beaux-Arts) in 1816.

[12] Richard Cleary. *Paris, VI. Institutions, 2. Académie Royale d'Architecture*, in The Dictionary of Art, 34 volumes, edited by Jane Turner, 1996. vol. 24, pp. 169–171 New York: Grove
[13] Hanno-Walter Kruft. *A history of architectural theory: from Vitruvius to the present*. Princeton Architectural Press, 1994.
[14] Cleary, 1996.
[15] Blondel 1756, pp. 26–27 (planche V)

Ireland – Royal Dublin Society

Throughout the 18th century in major European capitals, amateur and informal drafting schools run by skilled craftsman such as bricklayers, plaster workers, masons, sculptors, and architects were in common practice. Among this host of European drafting schools and home-taught curricula arose the "Dublin Society for improving Husbandry, Manufactures, and other Useful Arts."[16] The Dublin Society, gaining the "Royal" prefix in 1820, was created to stimulate the economy and bring employment opportunities to Dublin and the whole of Ireland alike.[17] Originally formed as a philanthropic society, the venture began to take more form in the area of architectural drafting in 1750 when, according to scholar John Turpin, "Jean-Baptiste Descamps, founder of French art schools, influenced the Dublin Society with his idea of providing free drawing education to craftsmen."[18] From this incorporation of architectural curriculum into the Dublin's Society's mission, the Dublin Society School of Architectural Drawing was founded in 1764, free of tuition and open to young men of any social distinction.

Central to the curriculum and theory being taught in the Dublin Society's School of Architecture were works such as Andrea Palladio's *I Quattro Libri dell'Architettura (1579),* Sir William Chamber's *A Treatise on Civil Architecture (1759),* and James Gibb's *Rules for Drawing the Several Parts of Architecture (1736).* These texts and foundations of architectural design served as central to the education of young men

[16] Terence de Vere White, *The Story of the Royal Dublin Society*. Tralee, Ireland: The Kerryman, 1955. p. 6.
[17] Kevin Bright. *RDS TwoSevenFive, A Brief History of the Royal Dublin Society 1731–2006.* Dublin: RDS, 2006. p. 6.
[18] John Turpin, *A School of Art in Dublin Since the Eighteenth Century.* Dublin: Gill & Macmillan, 1995.

within the school such as Francis Sandys, Richard Morrison, Robert Pool and a teenaged James Hoban, eventual friend to George Washington and architect of the White House. From its beginnings, the Dublin Society's program of architecture would have been married with the apprenticeship culture. This model is present not only in 18th century Dublin, but most other budding European societies following the medieval period.[19] While students were enrolled in courses in the Dublin Society, they would typically be engaged as apprentice to experienced craftspeople. Further, the embodiment of architectural education in 18th century Dublin, as evident in the French-inspired curriculum and theory of the Dublin Society School of Architectural Drawing, is clear to have been central to the practice of architects such as James Hoban when he settled on US soil in the mid 1780's.

In synthesizing a concise timeline of architectural education, beginning with its theoretical origins in Renaissance-era Italy, progressing into the centuries following throughout leading European urban centers, it becomes more clear the early characteristics of the field's education and training. With this knowledge, one can come to better understand the early foundations of architectural theory and schooling that would have been gradually assimilating into Colonial American culture. Joan Ockman, professor of architectural preservation and history at the University of Pennsylvania, describes a particular fluidity in accreditation and professionalization of the early American field. Ockman writes on the appellation "Architect" and how it came to be,

[19] Stewart McLaurin, William Seale, Merlo Kelly, Finola O'Kane, Christopher Moran, Brian O'Connell, Andrew McCarthy, Matthew Costello and Kristen Hunter Mason. James Hoban: Builder of the White House in White House History. Washington, D.C.: The White House Historical Association, March, 2021.

gradually, more defined and sanctioned as formal education in the field grew to be more formalized as well.[20] Considering, the next section of this chapter will characterize and define the national dialogue surrounding the early formation of the field of architecture by use of three main subheadings.

The first of these categories will focus on the narrative surrounding the curriculum and educational strategies employed in early American drafting and drawing schools. The second of these categories will focus on the dialogue surrounding the physical manifestation of these curricula, and the conversation pertaining to the figures and structures that these early schools of architectural theory were producing. The third section of this literature review will then provide a breakdown of the narrative as it relates to Charleston, South Carolina, and how the city's culture of architectural education contributes to the overarching national narrative. This third section will then allow the reader to most sufficiently understand this paper's methodology.

[20] Joan Ockman, *Architecture School: Three Centuries of Educating Architects in North America.* Washington, D.C.: MIT Press & Association of Collegiate Schools of Architecture, 2021.

Introducing the Narrative

Primarily consisting of architectural historians and professors of architecture, the narrative surrounding the professionalization of the field of architecture is one that is not densely populated. Instead, the literature on this topic is dominated by several defining bodies of literature. The majority of these publications pertain to specific architects or historical figures, with a few focusing on the history of architectural education in North America. Leading scholars within the modern dialogue include Joan Ockman, John Bryan, and George Barnett Johnston who each approach the topic of early American drafting schools and the development of architectural education in different manners. However, while differing in approach, each scholar seems to contribute to the dialogue by confirming the complex nature of the field's American origins.

Early American Schools and their Curricula

While collections of measurable data, survey records, or specific studies pertaining to our nation's earliest schools of architecture are not widely available, comprehensive research surrounding the preliminary strategies from which early American architectural education evolved does exist. In her publication on 300 hundred years of architectural education in North America, University of Pennsylvania Professor Joan Ockman introduces the topic of early education, Ockman dubs the era prior to 1860 the period that defined the profession.[21] Ockman structures her work in a chronological manner. She states that, "architecture education – or, more precisely, architectural knowledge – was plentiful, varied, and widely-available before the establishment of the first collegiate schools of architecture in the United States."[22] She recognizes first that the preliminary establishment of college education in American architecture was not until 1868 at the Massachusetts Institute of Technology, but alludes to the nearly 200 years of existing education prior. Ockman identifies a lack of professionalization in the field which in turn allowed for a lack of standardization in who could call themselves an architect.[23] This was a result of differing views on the purposes and nature of architectural design. In other words there was substantial subjectivity in the field. Any sense of authority stemmed from drafting school teachers or those from whom young apprentices gained foundational knowledge.[24]

[21] Ockman, 37.
[22] IBID
[23] IBID
[24] IBID

Ockman's claims as to the subjectivity of the early American field and its modes of education are supported by examples such as Samuel Cardy, designer of St. Michael's church in Charleston, South Carolina, who identified during his lifetime as an undertaker, or contractor, but was attributed to being an, "ingenious architect," upon his death.[25] However, while the term "Architect," tended to be used loosely in colonial America, Ockman writes on measurable trends in styles of early drafting or drawing schools. While many early European schools were defined by a coexistence of architectural theory as well as mathematics, Anglo-America tended to focus on, "Practice over theory," and, "the mathematical and scientific skills needed to achieve them."[26] Ockman proceeds to note that, while many young men in the 18th and early 19th centuries (little if any documentation of women in architectural apprenticeships of the period) were trained through apprenticeships and the resources gained within them, drawing or drafting schools were additionally a major source of early education.

American Institute of Architects Journalist Louise Hall adds to the dialogue, stating that informal night schools were set up by a wide variety of figures within the field, be they architects, bricklayers or stonemasons. These enterprises were seen as early as 1735, from Quebec to New Orleans.[27] According to Ockman, informal drafting schools were the earliest form of education in the field of architecture. Ockman provides examples such as carpenter Thomas Nevell's 1771 school in Philadelphia, and civil

[25] Ockman, 39
[26] Ockman, 41.
[27] Louise Hall, *First Architecture School? No! But…* Journal of the AIA, August 1950.

engineer John Milligan's Boston school of measured drawing in 1818.[28] Further, Ockman documents curriculum-based patterns in these mentioned early schools including themes such as the Five Orders of Architecture, miniature model creation, proportionality of architectural fenestration, timber framing, length and backing of hip-rafters, and the art of drawing elevations and plans.[29]

Joan Ockman's publication proceeds to explore many of the European influences on early architectural education, centuries before colonial America. Ockman seems to directly respond, in confirmation and support, to Jeffrey A. Cohen's work entitled, "Building a Discipline: Early Institutional Settings for Architectural Education in Philadelphia, 1804-1890, stating that it is the, "Most thorough [account] of drawing schools."[30] In this work, Cohen documents specifically the culture of drafting education in early Philadelphia, citing examples of influential drafting school instructors such as Owen Biddle, William Strickland, John Haviland and G. Parker Cummings. Cohen strengthens his research by use of surveying program curriculum and records as a means to "compliment" a modern understanding of Philadelphia's architectural origins.[31]

An additional publication that adds to the theme of early architectural education and curricula is George Barnett Johnston's work entitled, "Drafting Culture: A Social History of Architectural Graphic Standards." Distinct from other publications in this section, Johnston's underlying purpose in this work is to identify both the historical and

[28] Ockman, 49
[29] IBID
[30] IBID
[31] Jeffrey A. Cohen. Building a Discipline: Early Institutional Settings for Architectural Education in Philadelphia, 1804-1890. Journal of the Society of Architectural Historians, June 1994. 53 (2): 139–183.

modern delineation between the term, "Draftsman," and "Architect." In doing this, Johnston establishes that the two are not mutually exclusive, but distinct in nature. Johnston structures his work around early American manuals, publications and standards that were produced to train budding draftsmen and architects.[32] Although primarily focusing on the latter portion of the period on which this thesis focuses, Johnston's work contributes to the overall conversation of American drafting school culture and its beginnings by outlining specific training resources that would have been in the hands of early practitioners. Specifically, Johnston writes on how the establishment of standard drafting manuals, such as those utilized by John D. Runkle within the curriculum of the first American collegiate architecture program at MIT, were influenced by early theory and dependency on drafting manual training.[33]

The literature pertaining to architectural education in colonial America and the early republic, early drafting schools, and their curricula allows one to understand the modern dialogue surrounding the subject. Foundational themes from the national narrative concern themselves with the first drafting schools in cities such as Boston and Philadelphia as early as 1735, standardization of curricula as a result of drawing and design manuals, and the classical, science-based patterns found in most early schools. With this information, it becomes more important to next seek to understand the role that

[32] George Barnett Johnston. Drafting Culture: A Social History of Architectural Graphic Standards Cambridge, Mass: MIT Press, 2008.
[33] Johnston, 14.

these educational practices played in the craftsmen and architects that they were producing.

Professionalization of the Field and it's first "Architects"

As referenced by the select leading scholars in the field, the nature of professionalization, standardization, and solidification of the title "Architect" is a complex and involved conversation. While several figures of note seek to analyze particular moments in history during which the field of architecture became formalized and regimented, the official sanctioning of architectural education in America is most commonly attributed to the first collegiate program at MIT in 1868. However, scholars central to the conversation such as Joan Ockman write on the differences between architects and builders around the turn of the 19th century, and the desire of a particular social distinction that allowed architects the loftier title.[34] This section will document several specific individuals who were graduates of early educational theory in architecture. As a result, a comprehensive knowledge surrounding early schools and apprenticeships, their educational strategies, specific students, and figures within these circles and their deliverables will be provided.

While Joan Ockman's publication on three centuries of architectural education in North America tends to focus most specifically on the curriculum, educational theory, and handbooks associated with early schools, she provides insight into the practices and ideas that students were taking with them into the field as well. Ockman theorizes that by the mid-19th century, architectural night schools and drafting schools had become highly, "sophisticated and wide-reaching."[35] She opines that this was a result of attention to

[34] Ockman, 61
[35] Ockman 52

handbooks, pattern books, and academic publications such as William Salmon's *Palladio Londonensis (1734)* which she writes to be a highly referenced design handbook in the middle decades of the 18th century.[36] While attention to and study of publications such as Salmon's handbook were important, it was the digestion and interpretation of this work that allowed later figures such as Thomas Nevell of Philadelphia (establishment of school between 1771-1772) and Asher Benjamin of Windsor, Vermont (establishment of school in 1805) to create unique educational platforms upon which students would gain skills needed for drafting and building design.

Ockman states that, while early drafting schools were influential in providing knowledge to young practitioners, these early figures were to be considered less designers than they were to be, "consumers of commercially available images."[37] By this, Ockman refers to two specific "Gentleman Architects" of New England, Peter Harrison and Joseph Brown, who would have served as undertakers to building projects that followed already existing pattern books and design aids such as James Gibb's *Book of Architecture.*[38] The application of this literature by early American architects allowed for high-style and taste as a result of access to such books that the affluence of a "Gentleman Architect," would allow. With this distinction in class that was beginning to marry itself with the title "Architect" around the turn of the 19th century, many builders, artisans, masons, and bricklayers began to find it more economic and beneficial to advertise as architects themselves. For instance, J. Ritchie Garrison, professor of History at the

[36] IBID
[37] IBID
[38] IBID

University of Delaware, writes on Peter Banner, carpenter and master builder from New York, as identifying to be an, "Architect and builder from London," in 1798 New Haven, CT.[39] Given the celebrity-like attention afforded to design and pattern books in London and Dublin of the mid-to-late 18th century, one found it fortuitous to false-advertise, and the lack of regulation or checks-and-balances allowed for it. As a wider interpretation of the title "Architect" began to take precedence throughout the latter portion of the 18th century and beginning of the 19th century, so too did its effect on the built landscape on which said figures would have been working. Builders such as William Strickland, according to Mary N. Woods in her publication *From Craft to Profession: The Practice of Architecture in 19th-Century America,* apprenticed with renowned figure Benjamin Henry Latrobe and gained foundational training through Latrobe's instructing. Strickland also credited his education to empirical resources such as pattern books and surveyor's offices.[40] However, according to Woods, Strickland possessed a self-trained and authentic style gained by his exposure to a wide variety of influences within the budding, early-19th century field.[41]

While conversation surrounding a particular shift in architectural education around the turn of the 19th century is scant, scholars such as Mary Woods, Joan Ockman and J. Ritchie Garrison respond to each other's arguments in support of the fact that the field was fluid, unregulated, and fairly uniform in design templates. However, these

[39] J. Ritchie Garrison, *Two Carpenters: Architecture and Building in Early New England, 1799-1859.* Knoxville, TN: University of Tennessee Press, 2006. P. 30.
[40] Mary N. Woods, *From Craft to Profession: The Practice of Architecture in Nineteenth Century America.* Berkley: University of California Press, 1999.
[41] IBID

scholars also agree on the topic of coexistence between adherence to manuals/pattern books and the individuality afforded by each apprenticeship. As noted by Dana Cuff in her work *Architecture: The Story of Practice,* young and budding architects tend to absorb, "Habits of thought….belonging to a common enterprise."[42] Additionally, Thomas U. Walter in an 1841 lecture to the Franklin Institute had spoken on the fact that the individuality is a necessary component to the modernization of architectural design, stating that, "Rules may give [them] confidence, but they can never give [them] taste and invention."[43]

This growing acceptance of uniqueness in design and individuality of interpretation that came with the educational culture of architecture in the first decades of the 19th century is a cultural shift that leading scholars do not refute and find as central to the drafting school movement and the figures that they produced.

[42] Dana Cuff, *Architecture: The Story of Practice.* Cambridge, Mass: MIT Press, 1991
[43] Thomas U. Walter, "Architecture Considered as a Fine Art," Philadelphia, December 1841, ms., Walter Papers, 32-33.

The Charleston Dialogue

While little in-depth documentation of Charleston's earliest drafting schools or modes of architectural education exist, there is a substantial pool of literature surrounding the city's rich architectural history, its first architects, and their influence on built heritage both locally and nationally. From this body of literature, this section will identify dialogue surrounding its earliest means of architectural education, formation of drafting schools, and renowned architects or practitioners trained within their curriculum. In synthesizing this localized information, a breakdown of how the Charleston dialogue fits into the national narrative of drafting schools and the professionalization of the field will be created. Leading scholars in the Charleston dialogue include John M. Bryan, Carl Lounsbury, Joan Ockman, and Nic Butler, each producing central publications ranging from biographical pieces on architects such as Robert Mills to architectural histories surrounding the early capitol city of Charleston.

AIA historian and professor of history John M. Bryan provides myriad accounts of Charleston architectural history by use, primarily, of studying architect Robert Mills. In his work, Bryan researches, to a meticulous degree the background, education, training, and practice of Robert Mills, and in doing so, highlights on aspects of Charleston's earliest education in architecture, and the three primary groups into which early builders fell. According to Bryan, 18th century architectural practice in Charleston was in the hands of immigrants such as Charles Chassereau who advertised "cafeteria"

lessons in drawing with roots in European practice.[44] The second subheading of practitioners that Bryan outlines is carpenters and builders. Lastly, Bryan alludes to "Gentleman Amateurs" whose social prominence allowed for access to things such as pattern books and expensive resources.[45] Similar to the writings of Joan Ockman and Mary N. Woods, Bryan states that early architects in Charleston also relied heavily on English, Irish and other European template books such as James Gibbs' publications. For example, Bryan states that Saint Michaels Church (1752-1761) and The Charleston Exchange (1766) were both examples of dependency on pattern books by immigrant craftsman and designers. Saint Michaels was said to have been, "Built on the plan of one of Mr. Gibson's Designs," most likely muddying the name of James Gibbs.[46] Samuel Cardy, undertaker of Saint Michael's construction, most likely utilized James Gibbs' plate 29 for the storied church's steeple.[47]

Bryan proceeds to speak on Charleston's earliest architects and the variety of informal schools or night classes. Practitioners such as William Rigby Naylor, architect of the Charleston Exchange Building, Charles Chassereau, M. Depresseville and Blakeley White are said to have offered lessons in their homes or shops in the practice of geometry and drawing. Bryan writes of Scottish stonemason Thomas Walker advertising an, "evening school for teaching rules of architecture, from seven to nine in the

[44] John M. Bryan, *Architectural Practice: The South Carolina Chapter of the American Institute of Architects.* Columbia, SC: AIA-SC, 2003.
[45] IBID
[46] Bryan, 2.
[47] Bryan, 2.

evening."[48] Comparatively, Bryan refers to the work of Gabriel Manigault and his, "Delicate English Adam style," that portrayed the methodology of a gentleman architect by use of expensive materials such as marble and granite.[49] The commonality, however, as Bryan points out, is the communal reliance on pattern books, and templates designed in European cities. Joan Ockman responds and adds to this dialogue by referencing the work of Ezra Waite who self-identified as, "Civil Architect, House-Builder in general, and carver, from London," and used his neoclassical architectural decoration in the Miles Brewton house as a means to display and teach his services.[50]

Falling within Bryan's category of "Immigrant Architect," Irish carpenter and draftsman James Hoban immigrated to the United States by way of Philadelphia and was settled in Charleston by the mid-1780's. Advertising first as a joiner and carpenter, Charleston Historian Nic Butler writes on Hoban's beginnings and business partnership with fellow Irish-immigrant Pierce Purcell.[51] Butler writes on Hoban's humble beginnings as an apprentice to a carpenter in Callan, County Kilkenny, Ireland, eventually rising to recognition within the ranks of Dublin as proficient in drawing and drafting at the Royal Dublin Society. Hoban then acquires training from renowned Dublin draftsman and architect Thomas Ivory. Upon settling in Charleston, Hoban began a business in carpentry and by April of 1790, was advertising the opening of an architectural evening school on Trott Street, present day Wentworth Street, in which he

[48] Bryan, 5.
[49] Bryan, 5.
[50] Ockman, 57
[51] Nic Butler, *James Hoban's Charleston Home,* Charleston, SC: Charleston County Public Library, 2018.

would instruct on, "Plans, elevations and sections of buildings.[52] Butler proceeds to write on the impact of Hoban's curriculum, writing on one of his graduates to become famed Charleston, Baltimore and Washington D.C. architect Robert Mills.[53] Following his training and education in Charleston, according to John Bryan, Mills would follow Irish architect James Hoban to Washington D.C., and work as his apprentice while he worked on designs of a new presidential palace alongside American patriot George Washington.[54]

The Charleston addition to the national narrative involves insight into structural evidence of drafting school curriculum both local to the city and beyond in cities such as Washington D.C., Philadelphia, and New York. Perhaps the most notable Charleston architect produced by this elementary period, as mentioned, is Robert Mills, and his contribution to the built heritage of Charleston is palpable. Historians Gene Waddell and Rhodri Windsor Liscombe add to the conversation in their work *Robert Mills: Courthouses & Jails,* stating that Mills added a flavor of interpretation to the Charleston architectural landscape that no one else had yet done at the turn of the 19th century.[55] Waddell and Liscombe hold that, as a result of his education under James Hoban, Benjamin Henry Latrobe and Thomas Jefferson, Mills demonstrated a new interpretation of Neo-Palladian ideals, and incorporated a sense of individual design seen in the materiality of structures such as Charleston's Fireproof Building (1826).[56]

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[52] IBID
[53] IBID
[54] John M. Butler, *America's First Architect: Robert Mills.* New York: Princeton Architectural Press, 2001.
[55] Gene Waddell, Rhodri Windsor Liscombe, *Robert Mills: Courthouses and Jails.* Easley, SC: Southern Historical Press: 1981.
[56] IBID

An additional aspect of the early education culture in Charleston was by use of the apprenticeship system. In 18th century Charleston, the culture of apprenticeships and their ties with the skilled craftsmanship industry was quite like that of major European cities. Young men, as young women are not documented to have been included in the system, were sent off to work in a distinguishable field for typically seven years, be it carpentry, plaster working, brick laying, etc.[57] Nic Butler, in his work on the early apprenticeship culture of Charleston, states that the system, "Was a practical and experiential form of education [in which] apprentice boys received verbal instruction from their respective masters, performed manual tasks repeatedly, and constantly observed more experienced craftsmen practicing." Chasserau would have most assumably utilized this system in an effort to recruit young men who had hands-on training in fields such as carpentry, brick laying or plaster working, thus allowing for more theoretical instruction in the art of drawing and drafting.

To summarize, the Charleston contribution to the overall narrative of early drafting schools and the nature of the budding colonial-era system of architectural education is one that involves unique characteristics and agrees with patterns present in other large North American cities of the time. As a result of closely analyzing the scholarly conversation surrounding Charleston's educational culture in architecture and the impact that it had on the city's built heritage, it becomes more apparent that there are studies left to be conducted.

[57] Nic Butler, *Educating Antebellum Tradesmen: The Charleston Apprentices' Library Society,* Charleston, SC: Charleston County Public Library, October 2021.

Conclusion of Literature Review and Introduction to Methodology

To summarize the contribution that this thesis seeks to make to both the Charleston and national narrative, it is key to study the type of documentation that exists on the field in Charleston, SC. This review of literature has uncovered a wealth of knowledge surrounding Charleston's early culture of architectural education; however, a defining aspect of the literature is that it concerns itself most notably with biographical histories of the period's architects, and structural analyses of physical buildings. While this body of literature is robust in nature, it seems to only provide mentions and ancillary notes on Charleston's first drafting schools, their influences and curriculum, and the deliverables that were produced as a result. With this knowledge comes a necessity or a literary "hole" to be filled by research pertaining specifically to the networks of early education and its diverse mode of practice. The following paper analyzes methods of research that will seek to uncover a new perspective on early education in and out of the lowcountry by use of examining networks of practitioners and the buildings they were designing. The methodology behind this venture includes in-depth archival research as its anchor, succinct biographies of practitioners, and the creation of a network map outlining where this period's architects worked, what they designed, and their ties to the lowcountry.

Chapter 3

Methodology

This research uses both empirical as well as qualitative analysis. The major research topic is architectural education in and out of the lowcountry, and what the existing historic record can tell us about networks of individuals. This research will identify the intricate network of architects, builders, and designers that either taught, trained or were influenced in some pertinent manner in the late colonial and early republic field of architecture. This chapter will outline the specific research methodology and strategy as to how this analysis will be conducted.

The strategy for research moving forward is rooted in both empirical and qualitative analysis so as to lay a foundation of both physical and literary understanding of our nation's early setting of architectural education. This procedure will be accomplished in two primary sections with the first being archival research and data collection- the foundation of content analysis. The second method includes the creation interactive webbed network maps documenting building and practitioner connectivity. This data will serve as the input for data mapping software UCINET. The network maps are then analyzed for potential trends, patterns, and characteristics of the early fields and it's practitioners. As a result of the study, the reader will gain a multi-faceted understanding of both the people and physical structures that were heavily influenced by the style of architectural education present in Charleston between approximately 1770 and 1830.

Archival Research

At the center of data collection and analysis is the in-depth study of archival material pertaining to late 18th century and early 19th century figures in the Charleston field of architecture, and their work either Charleston-centric or expanding outward into other states. The analysis relies on the data retrieved from archives and public records. The first step to take in order to begin this method of research is to lay out the specific archives and collections to be studied. These public repositories are the Charleston County Public Library, the Archives and Records Management for the Roman Catholic Diocese of Charleston, the Historic Charleston Foundation Online Catalogue of Archives and Library Collections, The Museum of Southern Decorative Arts, and the South Carolina Historical Society. While each archive provides insight into similar subjects, each repository requires a specified method of search specific to the type of records and archives in storage.

Search trajectories in these archives will include a wide variety of search terms and methods in an effort to diversify findings and create numerous avenues from which new findings might be encountered. For instance, archives such as the Charleston County Public Library, South Carolina Historical Society, and the Historic Charleston Foundation call for search routes that pertain to colonial drafting schools like White House Architect James Hoban's, 18th century newspaper ads in search of or advertising for city architects, Charleston City Gazette announcements of new buildings both local or in other cities, records of Charleston craftsmen, builders, masons and bricklayers, and other relating topics. On the other hand, the Charleston Roman Catholic Archdiocese and

Museum of Southern Decorative Arts provide more externally related documents such as parish tithing records, family, baptismal and census records, allusions to artisan manuals and pattern books, and company or business records/receipts. The collection and analysis of this content provides a more complete narrative on architectural education connections among participants in Charleston's early architectural field. In turn, this allows for substantial information on individuals as well as the buildings that were influenced or influencing the practice of architecture education in late-colonial Charleston.

Excel Data & UCINET Network Mapping

Upon collection of the pertinent material outlined above, the research design was to create a comprehensive table in Microsoft Excel. This format is used by the software UCINET to extrapolate network data. The table is formatted into two primary sheets: people and buildings. Fields within the "people" table are: year born and died; general timeframe working in the field; place(s) trained; place(s) worked; associated buildings; related people or colleagues; and nature of education. Fields within the "buildings" table are: building name; location; address and/or GPS coordinates; people associated with the building; the year built or timeframe of construction; year demolished (if demolished); notoriety or accolades the building has received such as status on the national register or Carolopolis; and if the building still exists today. This creates a foundation for synthesizing an understanding of architectural education and its influences within and outside the lowcountry.

The excel table was built out to include 23 individuals and 31 buildings. The UCINET network mapping software was then implemented. Found on their website, developers and statisticians describe the platform as follows:

"UCINET is a comprehensive package for the analysis of social network data as well as other 1-mode and 2-mode data. Social network analysis methods include centrality measures, subgroup identification, role analysis, elementary graph theory, and permutation-based statistical analysis."[58]

[58] "UCI NET." DataONE: Data Observation Network for Earth

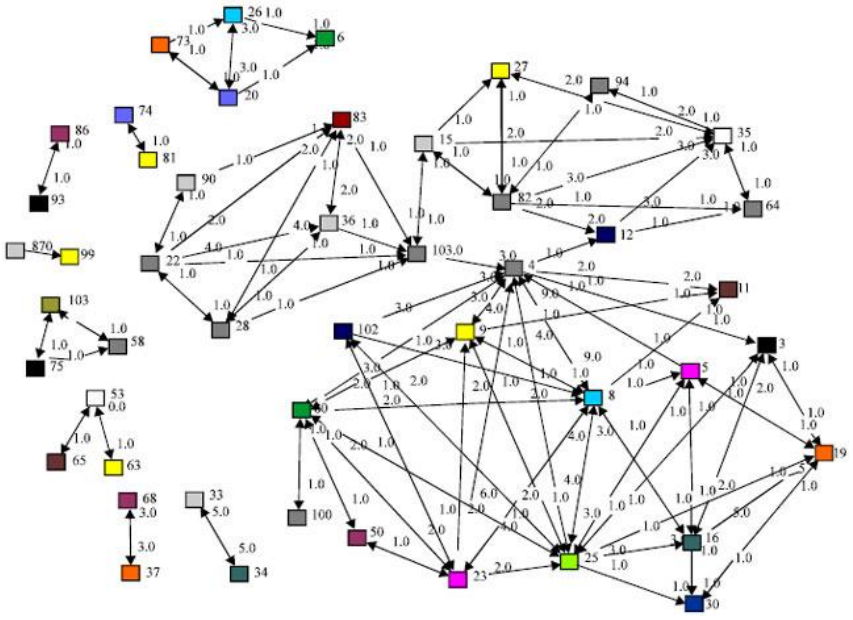


Fig. 2. UCINET example of webbed network data

This software, using the Microsoft Excel table as data input, created a system of webbed networks conveying linkages between buildings and people, in Charleston and around the world. The software allows for toggling fields such as color coding, shape identification of nodes or points denoting each building/practitioner and labelling of different clusters defined by 4 or more connected nodes. This allows the researcher to implement different fields or focus on aspects of the building or individual history. In turn, this allows the reader to more comprehensively and visually understand certain themes or trends present within the data. Three network maps were created, each portraying different modes of connectivity. One map focuses on links between practitioners and buildings, one on links between practitioners, and one on links between buildings. The three maps allow for an understanding of not only similarities in education, but also linkages between how these individuals were practicing in the field,

the ways that social classes and access to resources played into education, and in what ways their training was manifest in their structural designs. This information will be analyzed in the following analysis chapters.

Standing as diverse strategies for discovering, analyzing, and mapping new data, the methodology for this paper's research provides interpretation of architectural education and training in and outside of late colonial/early republic Charleston, and the impact that it had on the national legacy of designers. Each medium of data presentation that is provided will complement the other and provide visual insight into how methodologies of training in architecture spread into and out from Charleston and manifest themselves in the built heritage of other expanding cities of the same era.

Chapter 4

Presentation of Data and Network Organization

To most clearly identify patterns between modes of architectural education among practitioners in the early American field of building design, it was first important to begin with archival research and documentation. The pairing of primary source documents such as 18th century newspaper postings advertising architectural drafting school with secondary source documents like Beatrice St. Julien Ravenel's work, "Architects of Charleston," creates a substantial body of data was compiled. This data was separated into two primary headings, these being architects and buildings. The first step included the collection of 23 architects, builders, brick layers, and other relevant craftspeople who either worked within, trained within, or networked within Charleston, South Carolina. Following this, a comprehensive list of both standing and demolished structures was organized to convey built evidence of these 18th c. practitioners. The research into archives and published information on 18th c- practitioners populated these lists. Additional details beyond name of practitioner or building were recorded as part of the research process. Standardized fields for each entry were charted to capture as much information on the background and context of each entry as was available in the documentary record.

Though this process was rigorous, neither the list of practitioners nor the list of buildings is exhaustive. Many individuals practiced (designed and built buildings) in the study period who are not part of the historic record. Many structures were built in the

period which do not have enough information available to include in the study. Buildings or practitioners for which there was a singular mention or only enough information to populate the ‘name’ field within the building and practitioner list spreadsheet were ultimately excluded from the study.

Once information from the historic record was collected and organized into data tables in Microsoft Excel (Appendix A), analysis was done to explore the presence of patterns of networks among these practitioners. Network maps allow for visualization of patterns of connections among individuals and buildings from the period in the study. A first step in producing network maps is to categorize the spreadsheet fields into network themes or connection patterns. As a result, the data was broken up into five headings. The first looks at the data from a two-mode network lens linking architects to buildings. This table was organized with 23 different architects as rows in the table, and 31 buildings populating the columns of the table (Figure 3). For the network mapping software UCINET to be able to import the data into a visually webbed system, simple coding and numeric references was necessary.

	The White House	The Fireproof Building	Circular Congregational Church	Newcomen Bank	Sedgeley Porter's House	Washington Monument
James Hoban	1	0	0	1	0	0
Pierce Purcell	1	0	0	0	0	0
Robert Mills	0	1	1	0	0	1
Gabriel Manigault	0	0	0	0	0	0
Samuel Cardy	0	0	0	0	0	0
Benjamin Henry Latrobe	0	0	0	0	1	0
Thomas Walker	0	0	0	0	0	0
John Spindle	0	0	0	0	0	0
Ezra Waite	0	0	0	0	0	0
Edward McGrath	0	0	0	0	0	0
Joseph Nicholson	0	0	0	0	0	0
Thomas Bennett	0	0	0	0	0	0
William Drayton	0	0	0	0	0	0
John Christian Senf	0	0	0	0	0	0
Thomas Hope	0	0	0	0	0	0
James Gordon	0	0	0	0	0	0
John Gordon	0	0	0	0	0	0
William Jay	0	0	0	0	0	0
Frederick Wesner	0	0	0	0	0	0
ohn Horlbeck Jr. & Henry Horlbeck	0	0	0	0	0	0
Russell Warren	0	0	0	0	0	0
William Strickland	0	0	0	0	0	0
Charles F. Reichardt	0	0	1	0	0	0
E. B. (Edward Brickell) White	0	0	0	0	0	0

Fig. 3. The first six columns of 31 conveying the data organization necessary for the UCINET network software to extrapolate into a larger, interactive system.

This was accomplished by marking a "1" within a data cell that indicated a connection between the practitioner and the building, and a "0" within a data cell that bore no connection between a given practitioner and building. To determine if there was a connection, information was reviewed in the historic record, as organized in the excel spreadsheet. If the architect in the row was a designer on the building in the column, or was a builder associated or had any information that connected the person and structure, then the field at the intersection of the column and row received a 1. If there was no record of a connection between the individual and the building, then the field received a '0' entry. From this data and elementary level of connection coding, the UCINET software is able to extrapolate a network map.

The second and third iterations of data re-representation use a one-mode network theme. A one-mode network theme is a data perspective that focuses on potential connections between one category, as opposed to two. These two analyses explore

connections between architects and between buildings. These data tables do not require coding or data input within Excel. Instead, the UCINET software pulls data from the preliminary two-mode network collection and organizes it into networks conveying potential connections between practitioners based on their mutual connection to a shared building. Specifically, the second analysis conveys connections between practitioners involved in the construction, design and/or rehabilitation of buildings like Charleston City Hall, such as Gabriel Manigault of South Carolina, Charles F. Reichardt of Germany, and James Gordon of Scotland. The third analysis similarly conveys connections between buildings which have practitioners in common such as the Newcomen Bank of Dublin, Ireland and the White House, linked by Irish American practitioners James Hoban and Pierce Purcell.

	Born	Died	Career Start	Career End	Training Location	Education
James Hoban	1755	Dec 8, 1831	1780	1830	Dublin, IRE	Royal Dublin Society, Carpenter's Apprentice, Thomas Ivory
Pierce Purcell	NA	NA	1780	1830	Ireland, Charleston	James Hoban
Robert Mills	Aug 12, 1781	March 3, 1855	1790/1795	1850's	Charleston, SC, Wasington, DC	James Hoban's Drafting School, Benjamin Henry Latrobe, Thomas Jefferson
Gabriel Manigault	March 17, 1758	November 4, 1809	1780	1809	Charleston, SC, Rhode Island, Geneva, London	Gentleman/Amateur Architect, Adam and Classical Revival
Samuel Cardy	NA	January 24 1774	1740's	1774	Charleston, SC	Architect/contractor, bricklaying
Benjamin Henry Latrobe	May 1, 1764	September 3, 1820	1783	1820	Leeds, England, Moravia, Germany, Rome	Neoclassicism, Greek Revival, drafting/architecture, engineering of canals
Thomas Walker	Unknown	1838	Unkown	Unknown	Edinburgh, Scotland	Stoncutter and Mason, Designer, Sculptor, Grave stone carving. "Evening School for teaching the rules of architecture." (Oct 31, 1793)
John Spindle						
Ezra Waite	Unkown	1769	1730's	1769	London, England	Civil Architect, Housebuilder, wood carver
Edward McGrath	Unkown	Unkown	1800	1810	Charleston, SC	Carpenter and Architect
Joseph Nicholson	Unkown	Unkown	1800	1805	Charleston, SC	Carpentry
Thomas Bennett	February 11, 1754	February 16, 1814	1780	1814	Charleston, SC	Gentleman/Amateur Architect, Carpenter, Contractor and Designer

Fig. 4. Data table conveying section of concise documentation of practitioner attributes to be extrapolated by UCINET software creating context-based network map for each individual.

	Location	Range of Construction	Standing?
The White House	1600 Pennsylvania Avenue NW, Washington, DC	1791 - 1800	Yes
The Fireproof Building	100 Meeting Street, Charleston, SC	1822 - 1827	Yes
Circular Congregational Church	150 Meeting Street, Charleston, SC	1804	Yes
Newcomen Bank	Lord Edward Street, Dublin, Ireland (53.343836, -6..267821)	1781	Yes
Sedgeley Porter's House	3250 Sedgley Drive, Philadelphia, PA 19130	1799 - 1802	Yes
Washington Monument	2 15th Street NW, Washington, DC 20024	1848 - 1884	Yes
Miles Brewton House	27 King Street, Charleston, SC, 29401	1765 - 1769	Yes
St. Michael's Church	80 Meeting Street, Charleston, SC	1751 - 1761	Yes
Francis Alexander Ramsey House	2614 Thorngrove Pike, Knoxville, TN 37914	1797	Yes
Owens-Thomas House	124 Abercorn Street, Savannah, GA 31401	1819	Yes
The Telfair House	121 Barnard Street, Savannah, GA, 31401	1819	Yes
Manning Hall (Brown University)	Manning Hall, Prospect Street, Providence, RI	1833	Yes
Philadelphia Custom House	420 Chestnut Street, Philadelphia, PA	1819-1824	Yes

Fig. 5. Data table conveying section of concise documentation of Building attributes to be extrapolated by UCINET software creating context-based network map for each structure.

To develop familiarity with the building entries in the study, a series of maps pinpoint the precise locations of all 31 buildings. These basic yet important reference maps allow the reader to more holistically understand the scope of study and the broad geographical areas which were discovered in the initial research. Further, the georeferencing below allows the reader to gain an understanding of how wide-reaching Charleston's practitioners and educational system was. Looking at the distribution of buildings associated with practitioners with a tie to Charleston, we see a wide range of impact made by these practitioners.

Geographic Context of Data Collection

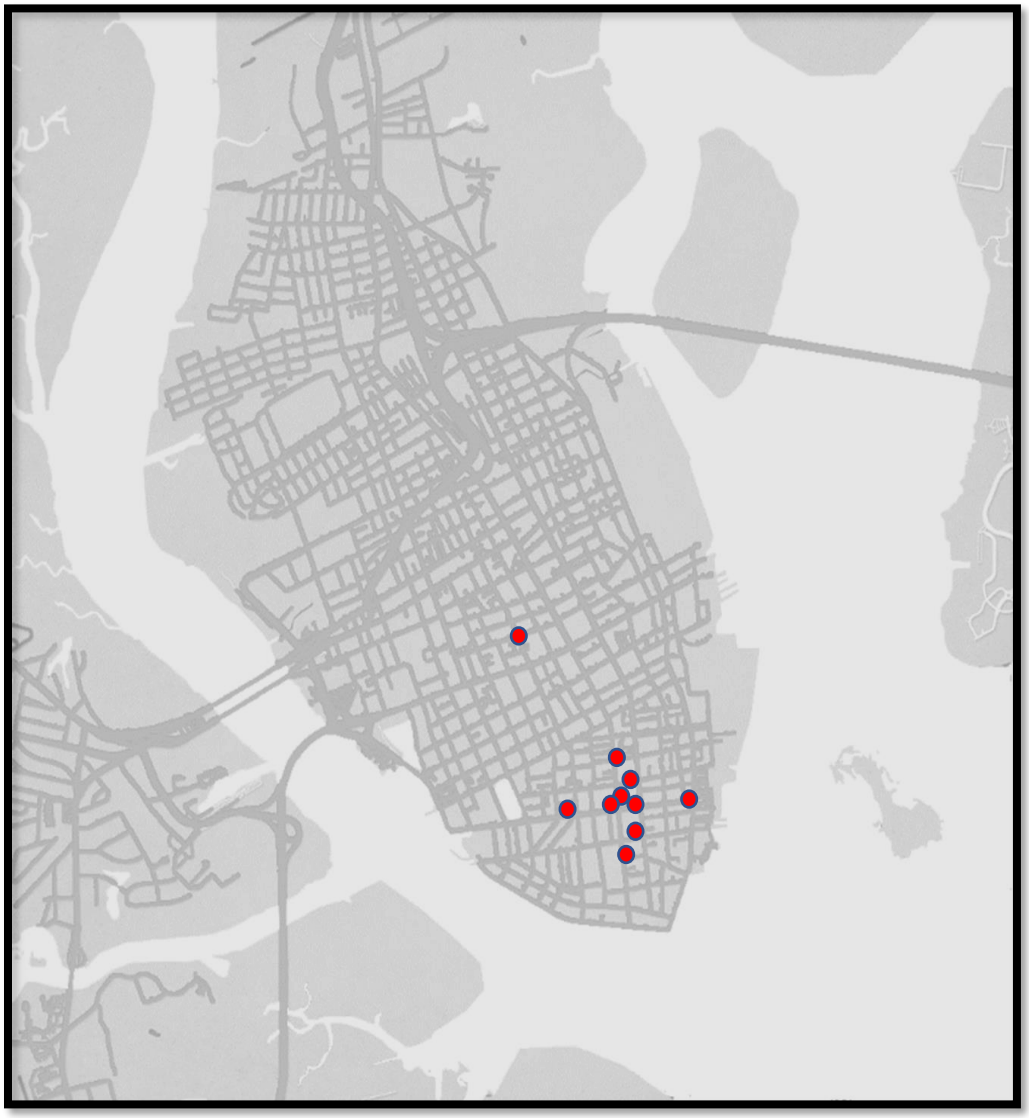


Fig. 6. Map of Charleston Peninsula showing approximate locations of The Fireproof Building, Circular Congregational Church, Miles Brewton House, St. Michael's Church, Randolph Hall (College of Charleston), Charleston Theater, Charleston Exchange Building, South Carolina Society Hall, Charleston County Courthouse and Charleston City Hall.

Fig. 7. Map of Eastern United States showing approximate locations of The White House, Sedgeley Porter's House, The Washington Monument, Francis Alexander Ramsey House, Owen-Thomas House, The Telfair House, Manning Hall (Brown University) Philadelphia Custom House, Bulloch-Habersham House, Westminster Arcade, Mt. Holly Prison, Monumental Church, Nashville Capitol Building, St. Patrick's Church, Philadelphia Masonic Temple, Pope Villa, Stephen Decatur House, Trinity Episcopal Church

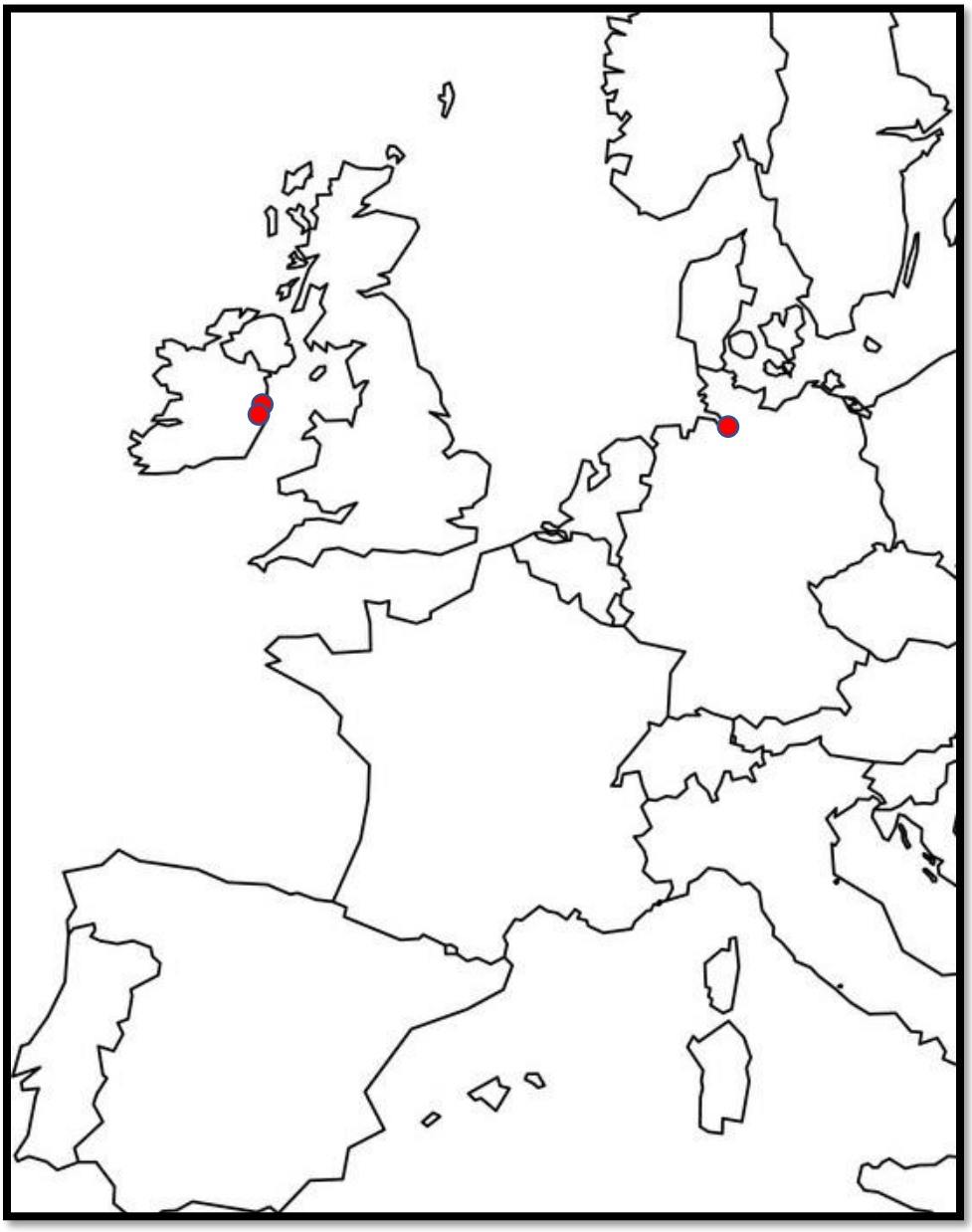


Fig. 8. Map of Western Europe showing approximate locations of Dublin, Ireland's Newcomen Bank and Royal Exchange Building as well as Hamburg, Germany's Hotel Petersburg.

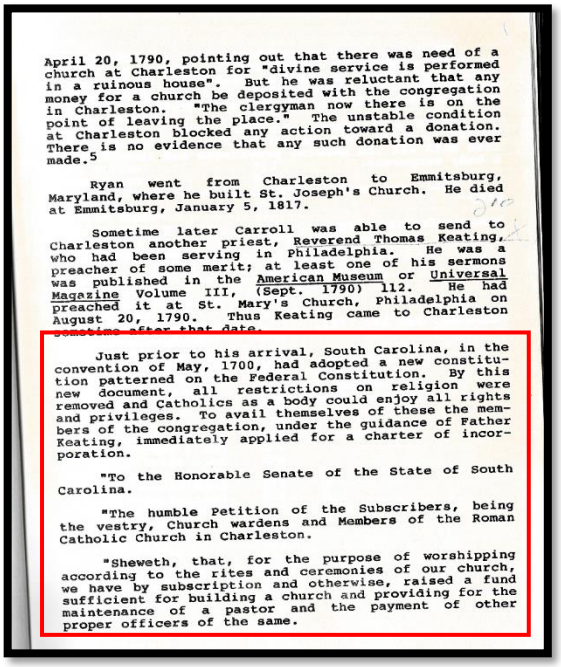
Chapter 5

Analysis of Practitioners

To aid in an understanding of this research, it is important to provide an introduction to each practitioner and building. In doing this, the reader may be able to more holistically understand how each practitioner and building contributes to this study. Further, this chapter will briefly outline the importance of, and purpose for inclusion behind, each practitioner and building documented in this paper's data presentation. This information will additionally allow the reader to best comprehend potential themes and patterns to be analyzed in the interactive network maps of Chapter 6.

One of the leading questions to be addressed when confronting the "why" behind each practitioner's and building's inclusion is the nature behind the list's length. The response to this is that each list of data is not exhaustive and brings with it a host of recommendations for further research which will be addressed in chapters following. This data is not exhaustive for a number of reasons, the first of which having to do with the constrains placed upon timeframe of completion for this paper. For this reason, a general timeframe of 60 years, approximately 1770 to 1830, was placed upon research spectrum. The reason for selecting this particular parameter concerns itself with major events and turning points occurring in the late colonial and early republic periods of American history. This period saw excitement in individuality and national autonomy which manifest itself in a particular fervor for creation and establishment. For instance, James Hoban, Irish immigrant to the United States in the 1780's and eventual architect of the

President's White House, was a devout Roman Catholic and left his native country in which the Penal Laws still remained, prohibiting Catholics from involvement in business affairs.[59] When Hoban arrived in Charleston, South Carolina as late as 1787, the practice of Catholicism was also illegal and prohibited in city limits. [60] However, by January of 1791, this prohibition was lifted and Charleston Catholics such as James Hoban experienced new-found liberties and inclusion in professional society happenings.[61] The meaning behind this example is a testament to shifts in societal norms that allowed for nuances in social and business settings.



April 20, 1790, pointing out that there was need of a church at Charleston for "divine service is performed in a ruinous house". But he was reluctant that any money for a church be deposited with the congregation in Charleston. "The clergyman now there is on the point of leaving the place." The unstable condition at Charleston blocked any action toward a donation. There is no evidence that any such donation was ever made.[5]

Ryan went from Charleston to Emmitsburg, Maryland, where he built St. Joseph's Church. He died at Emmitsburg, January 5, 1817.

Sometime later Carroll was able to send to Charleston another priest, Reverend Thomas Keating, who had been serving in Philadelphia. He was a preacher of some merit; at least one of his sermons was published in the American Museum or Universal Magazine Volume III, (Sept. 1790) 112. He had preached it at St. Mary's Church, Philadelphia on August 20, 1790. Thus Keating came to Charleston

Just prior to his arrival, South Carolina, in the convention of May, 1700, had adopted a new constitution patterned on the Federal Constitution. By this new document, all restrictions on religion were removed and Catholics as a body could enjoy all rights and privileges. To avail themselves of these the members of the congregation, under the guidance of Father Keating, immediately applied for a charter of incorporation.

"To the Honorable Senate of the State of South Carolina.

"The humble Petition of the Subscribers, being the vestry, Church wardens and Members of the Roman Catholic Church in Charleston.

"Sheweth, that, for the purpose of worshipping according to the rites and ceremonies of our church, we have by subscription and otherwise, raised a fund sufficient for building a church and providing for the maintenance of a pastor and the payment of other proper officers of the same.

Fig. 9. Excerpt from Richard Madden's piece entitled "Catholics in South Carolina," documenting the petition submitted by St. Mary's Catholic Church of Charleston to be incorporated as a state-recognized religious body. This petition followed the January 1791 lifting of restrictions on South Carolina

[59] Stewart McLaurin, William Seale, Merlo Kelly, Finola O'Kane, Christopher Moran, Brian O'Connell, Andrew McCarthy, Matthew Costello and Kristen Hunter Mason. *James Hoban: Builder of the White House in White House History.* Washington, D.C.: The White House Historical Association, March, 2021.
[60] Vestry and Church Wardens of the Roman Catholic Church in Charleston, Petition and Supporting Papers Asking that they May Incorporate. (8 Pages) Date: 1/25/1791
[61] Richard C. Madden, "Catholics in Colonial South Carolina." Records of the American Catholic Historical Society of Philadelphia 73, no. 1/2 (1962): 10–44.

It is impossible to study our nation's built culture of the late 18th century and early 19th century without consideration of the system of slavery, and how that impacted society at large, and the built environment specifically. While many white individuals in the field experienced newfound liberties and freedoms following the establishment of a new republic and shedding of English monarchial presence, the black enslaved population saw no such expulsion of oppression. While documentation of specific individuals within enslaved communities working on particular Charleston buildings is either scant or incomplete, the designs, commissions, and conceptions of our nation's built heritage at the turn of the 19th century would not only be inconceivable, but non-existent without the enormous expenditure of unpaid labor brought to bear in these projects.

This chapter will be organized in a succinct and documentary manner in an effort to convey the importance of and purpose behind each practitioner and building's inclusion in this research. Additionally, the spreadsheet recording the basic information is available in the appendix.

Practitioners

James Hoban and Pierce Purcell

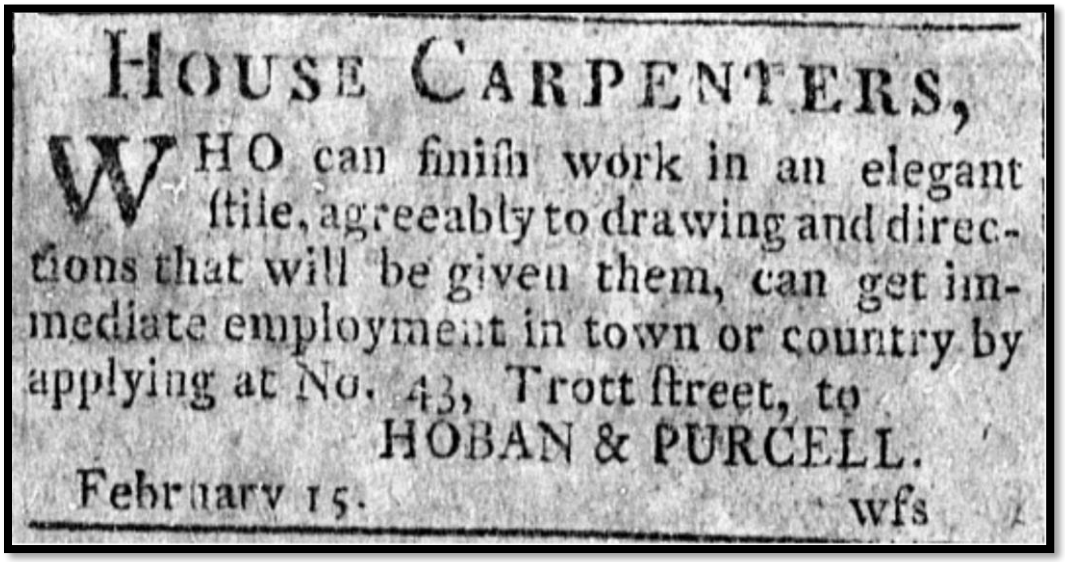
Person	James Hoban	Pierce Purcell
Born-Died	1755 - December 8, 1831	Unkown
Prime Career Period	1780-1830	1780-1830
Place(s) Trained	Dublin, Ireland, Charleston, SC	Charleston, SC, Washington, DC
Place(s) Worked	Dublin, Ireland, Philadelphia, Charleston, SC, Washington, DC, Baltimore, MD	Charleston, SC, Washington, DC
Associated Buildings	Charleston Theater, Charleston County Courthouse, The White House, Necomen Bank (Dublin), Charleston Exchange Building, Royal Exchange (Dublin), Leinster House (Dublin), Dublin Custom House	The White House, The Charleston Exchange Building, The Charleson Theater
Related People	Pierce Purcell, Benjamin Latrobe, Pierre Charles L'Enfant, Robert Mills, Anthony Toomer	James Hoban
Nature of Education	Carpenter (Dublin), Architect (Dublin, CHS), Drafting School Instructor Georgian-Adams pattern books, Thomas Ivory, Carpentry apprentice	Unkown

Fig. 10. Background data information on James Hoban and Pierce Purcell

James Hoban was born in Callan, County Kilkenny Ireland around 1755 and found his beginnings in carpentry apprenticeship to a local craftsman. This venture soon led him to recognition as a budding drafter and designer with the Royal Dublin Society in the 1770's.[62] Hoban's work and success in Dublin led him to North America in the 1780's, arriving in Charleston, South Carolina as late as 1787.[63] It was in Charleston that James Hoban's, and fellow Irish American business partner Pierce Purcell's, allure as

[62] Stewart McLaurin, William Seale, Merlo Kelly, Finola O'Kane, Christopher Moran, Brian O'Connell, Andrew McCarthy, Matthew Costello and Kristen Hunter Mason. *James Hoban: Builder of the White House in White House History.* Washington, D.C.: The White House Historical Association, March, 2021.
[63] IBID

both a trained carpenter and architectural drafter would become most apparent and manifest. It was in Charleston too, that Hoban and Purcell would train and instruct budding apprentices and practitioners such as a young Robert Mills.[64] Following his time in Charleston and introduction to the first President George Washington in 1791, Hoban and Purcell would progress in their ventures in the new capitol at Washington, DC, leading the design charge for the new Presidential Manner, soon to be the White House.



HOUSE CARPENTERS,

WHO can finiſh work in an elegant ſtile, agreeably to drawing and directions that will be given them, can get immediate employment in town or country by applying at No. 43, Trott ſtreet, to

HOBAN & PURCELL.

February 15. wfs

Fig. 11. February 15, 1792 Charleston City Gazette and Daily Advertiser article advertising Hoban and Purcell's drafting school at 43 Trott Street, modern day 16 Wentworth Street.

[64] Stewart McLaurin, William Seale, Merlo Kelly, Finola O'Kane, Christopher Moran, Brian O'Connell, Andrew McCarthy, Matthew Costello and Kristen Hunter Mason. *James Hoban: Builder of the White House in White House History.* Washington, D.C.: The White House Historical Association, March, 2021.

Robert Mills

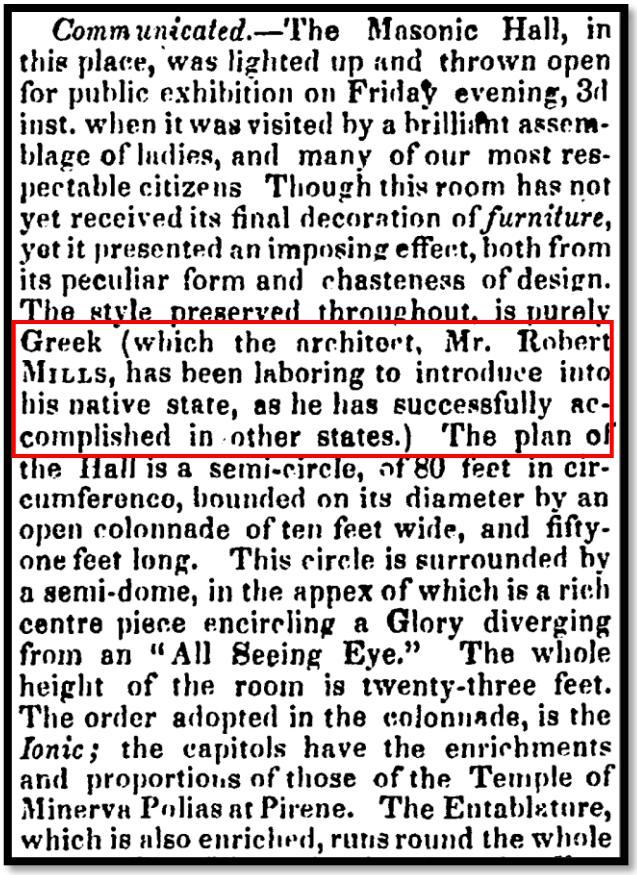
Person	Robert Mills
Born-Died	Augst 12, 1781 - March 3, 1855
Prime Career Period	1795-1850's
Place(s) Trained	Charleston, SC, Washington, DC
Place(s) Worked	South Carolina, Washington, DC, Baltimore, MD, Philadelphia, PA, Georgia, Richmond
Associated Buildings	Fireproof Building (CHS), The White House, Washington Hall, Circular Congregational Church, Monticello, Octagon Church for the First Unitarian Church of Philadelphia, Mt. Holly Prison (NJ), Monumental Church (VA), Washington Monument (DC), First Presbytirian Church (GA)
Related People	James Hoban, Benjamin Latrobe, Pierre Charles L'Enfant, Andrew Ellicott, Joseph Ellicott
Nature of Education	College of Charleston, James Hoban's Charleston Drafting School, Benjamin Henry Latrobe, Thomas Jefferson Neoclassical, Palladian/Georgian, some Greek Revival

Fig. 12. Background data information on Robert Mills

In her work, "Architects of Charleston," Beatrice St. Julien Ravenel writes on the prolific nature of architect Robert Mills and his architectural footprint left on not only Charleston, South Carolina, but the early republic as a whole. Born in Charleston in August of 1781, Mill's family traces its roots back to Scotland with his father working as a well-to-do tailor. Working primarily as a designer of commercial buildings, Mills represents revolutionary ideals in the early field, bringing practicality to architectural design. Buildings such as Charleston's Fireproof Building convey excellence in classical design, married with purpose and sustainability. The Fireproof building, one of the first in the nation to embody cast-iron window casings and muntins, also embodies beauty in aesthetic. Ravenel writes that, in Mills work, we find, "More superficial but singularly consistent characteristics, the round-headed single windows and flat-headed triple

windows, often set in panels, and the courses, niches, blind arches, ventilating skylights, and cupolas in which he delighted."[65]

It is additionally important to analyze the nature of Robert Mills' education, deriving from the training of Irish architect James Hoban. Mills began his young career as a student of Hoban and Purcell's Charleston drafting school, which was rooted in both skilled carpentry as well as scaling, drafting, and conceiving architectural design. The importance of his inclusion in this study concerns itself with the fact that Mills was trained to both know how to swing a hammer, as well as scale practical designs for a building from the ground up.



Communicated.—The Masonic Hall, in this place, was lighted up and thrown open for public exhibition on Friday evening, 3d inst. when it was visited by a brilliant assemblage of ladies, and many of our most respectable citizens Though this room has not yet received its final decoration of *furniture*, yet it presented an imposing effect, both from its peculiar form and chasteness of design. The style preserved throughout, is purely Greek (which the architect, Mr. Robert MILLS, has been laboring to introduce into his native state, as he has successfully accomplished in other states.) The plan of the Hall is a semi-circle, of 80 feet in circumference, bounded on its diameter by an open colonnade of ten feet wide, and fifty-one feet long. This circle is surrounded by a semi-dome, in the appex of which is a rich centre piece encircling a Glory diverging from an "All Seeing Eye." The whole height of the room is twenty-three feet. The order adopted in the colonnade, is the *Ionic;* the capitols have the enrichments and proportions of those of the Temple of Minerva Polias at Pirene. The Entablature, which is also enriched, runs round the whole

Fig. 13. Charleston Courier article dating September 15, 1824, recognizing Robert Mills as the architect for the new Charleston Masonic Hall.

[65] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 116

Gabriel Manigault

Person	Gabriel Manigault
Born-Died	March 17, 1758 - November 4, 1809
Prime Career Period	1780-1809
Place(s) Trained	Charleston, Rhode, Island, Geneva, London
Place(s) Worked	Charleston, SC, Rhode Island, Philadelphia, PA
Associated Buildings	Joseph Manigault House, Bank of the United States Building (Charleston City Hall), South Carolina Society Building,
Related People	Peter Harrison, Frederick Wesner, Edward Magrath, Joseph Nicholson
Nature of Education	Gentleman/Amateur Architect, Adam and Classical Revival

Fig. 14. Background data information on Gabriel Manigault

Born in Charleston, South Carolina on St. Patrick's Day, 1758, Gabriel Manigault's legacy in the field of architecture is one of grandeur and strict education. Born into a French Huguenot family, recognized as one of the wealthiest in British North America in 1770, Manigault was raised with elite opportunity.[66] Considering Manigault's privileged access to the most coveted resources of the day, Gabriel left for Rhode Island at the age of 16, and went on to study law in Geneva and London. Upon return to Charleston from Europe, Manigault quickly involved himself in the higher echelon of Lowcountry society. Gabriel invested himself in plantation ownership, crop cultivation by use of enslaved labor, and public affairs such as incorporation into the College of

[66] *The North Carolina Historical Review*. Vol. 47. Raleigh, NC: North Carolina Historical Commission. 1970. p. 17.

Charleston Board of Trustees. However, simultaneous to his daily affairs was his regard for architecture.

Upon return from Europe, Manigault had developed a substantial library of architectural documents and pattern books, the study to which he dedicated much of his free time.[67] Gabriel Manigault is recognized, from a modern perspective, as one of Charleston's leading Gentleman Architects. This title pays reference to Gabriel's elite placement in society, and meticulous study of design via pattern books such as James Gibb's, but a lack of training in the building arts. The inclusion of such practitioners is crucial to a holistic study of varying types of training and backgrounds of which the early field was made up.

[67] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 56

Samuel Cardy, Thomas Walker, Edward McGrath & Joseph Nicholson

Person	Samuel Cardy	Thomas Walker	Edward McGrath	Joseph Nicholson
Born-Died	Unkown - January 24, 1774	Unknown (In Charleston by 1793) - Approx. 1838	Unkown	Unkown
Prime Career Period	1740's -		1800-1810	1800-1805
Place(s) Trained	Dublin, Ireland, Charleston, SC	Edinburgh, Scotland	Scotland, Charleston, SC	Scotland, Charleston, SC
Place(s) Worked	Dublin, Ireland, Charleston, SC	Scotland, Charleston, SC	Charleston, SC	Charleston, SC
Associated Buildings	St. Michael's Church, Morris Island Lighthouse (CHS), Drogheda and Navan Baracks (IRE)	Charleston grave stones and masonry/stone cutting work	St. Michael's Church, Charleston City Hall	St. Michael's Church, Charleston City Hall
Related People	Horlbeck Brothers, William Rigby Naylor, Adam Miller	John B. Ricketts	Gabriel Manigault	Gabriel Manigault
Nature of Education	Architect/contractor, bricklaying	Stoncutter and Mason, Designer, Sculptor, Grave stone carving. "Evening School for teaching the rules of architecture." (Oct 31, 1793)	Carpenter and Architect	Carpentry

Fig. 15. Background data information on Samuel Cardy. Thomas Walker, Edward McGrath & Joseph Nicholson

While the majority of practitioners analyzed within this study bring with them a host of background and contextual information, it is also necessary to include practitioners about whom little, but key information is documented. With this, the body of studied practitioners in this paper is not exhaustive or contained to a particular number. Several practitioners intended to be included at the beginning of data collection have since been omitted as a result of lacking information and known documentation such as M. Depresseville, John Spindle, the Lapham Brothers, and Charles Chassereau. These mentioned figures remain to be key players, especially in Charleston's early field of construction. However, for the sake of this study's timeline, they have been left out to instead be included in recommendation for further study.

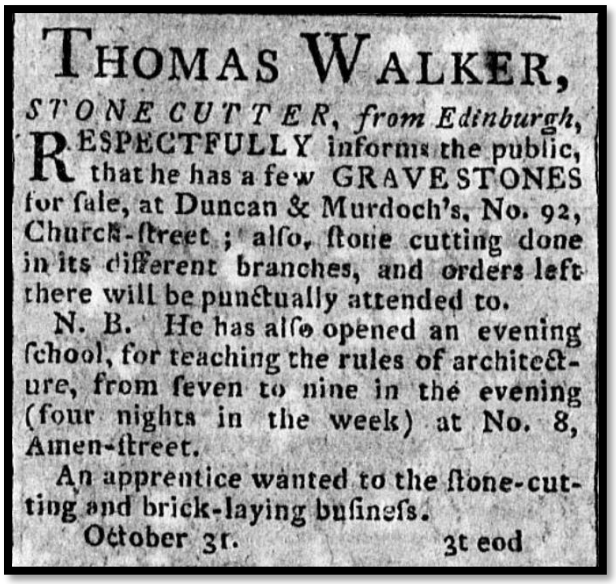
Though there is scant documentation surrounding their background, specific work, or nature of education, four practitioners important enough in the understanding of early networks of architectural education both in and outside of Charleston, SC to warrant inclusion in the study. These four practitioners are: Samuel Cardy, Thomas Walker, Edward McGrath, and Joseph Nicholson. These men provide insight into Charleston' early field of building practice, in particular their documented involvement in key, early Charleston structures such as St. Michael's Church and Charleston City Hall.

Samuel Cardy's birth year is not known, but his work is documented to have begun in Dublin, Ireland in the 1740's, working as a carpenter's apprentice.[68] The record shows that he arrived in Charleston by May of 1752. He is part of the record from the Charleston Colonial Commissioners. Cardy is listed as the master carpenter of St. Michael's Church, for which he earned a monthly salary of £25.[69] While little more documentation of Cardy's work exists following his involvement in St. Michael's design and construction, his transatlantic career and swift establishment in the built landscape of Charleston exemplifies the background and work so necessary for this paper's network-rooted study.

Thomas Walker was of Scottish birth and training, specializing in stone cutting and drawing, most specifically as it relates to gravestones.[70] While little is known about his involvement in projects from an architectural design perspective, the purpose for his

[68] Kenneth Severens. "Emigration and Provincialism: Samuel Cardy's Architectural Career in the Atlantic World." Eighteenth-Century Ireland / Iris an Dá Chultúr 5 (1990): 21–36.
[69] IBID, 31
[70] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 89

inclusion in this study relates to his apprentice school established by October of 1793 in Charleston. The Charleston City Gazette lists an advertisement on October 31, 1793 for, "an evening school, for teaching the rules of architecture."[71] This advertisement, similar to that posted by James Hoban and Pierce Purcell one year prior, embodies the differing yet contributory spheres of influence playing into Charleston's early field of architectural education and the late colonial period as a whole. Walker brought with him from Scotland exposure to the practice of architectural drawing rooted in an understanding of stone carving and design.



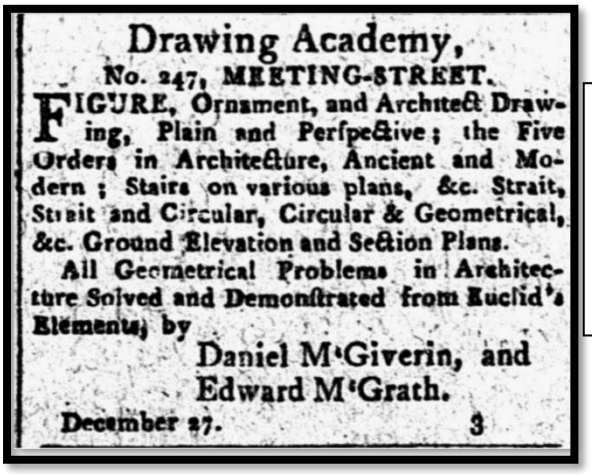
THOMAS WALKER,
STONE CUTTER, from Edinburgh,
RESPECTFULLY informs the public, that he has a few GRAVE STONES for ſale, at Duncan & Murdoch's, No. 92, Church-ſtreet; alſo, ſtone cutting done in its different branches, and orders left there will be punctually attended to.
N. B. He has alſo opened an evening ſchool, for teaching the rules of architecture, from ſeven to nine in the evening (four nights in the week) at No. 8, Amen-ſtreet.
An apprentice wanted to the ſtone-cutting and brick-laying buſineſs.
October 31. 3t eod

Fig. 16. Charleston City Gazette advertisement for Thomas Walker's architectural drawing school, October 31, 1793

[71] "Advertisement." THE City Gazette & Daily Advertiser (Charleston, South Carolina) XI, no. 2324, October 31, 1793: [3]. NewsBank: Access World News – Historical and Current.

Edward McGrath (also referred to as Magrath or M'Grath) and Joseph Nicholson were business partners, specializing in architectural design and construction between approximately 1800 and 1812.[72] The two practitioners oversaw and found a hand in projects such as Charleston's Branch Bank of the United States, now City Hall as well as the erection of two galleries at St. Michael's for the use of, "people of colour."[73] In the Charleston City Directory of 1803, the two practitioners are listed as carpenters, and while documentation of Joseph Nicholson vanishes after this mention, McGrath is listed as an architect in the Directories of 1806 and 1807. Similar to practitioners such as James Hoban, Pierce Purcell, and Thomas Walker, McGrath is also documented as having started his own "Drawing Academy," for training in areas such as, "Figure, ornament, and Architectural Drawing, Plain and Perspective [in the] Five Orders in Architecture."[74] A Charleston City Gazette advertisement dating December 29th, 1797, publishes the mentioned information and the intention to offer training in the field of architectural design and drawing. McGrath's contribution to this paper's theme of architectural education finds itself rooted in the procurement of training and instruction relating directly to the professional practice of architectural design, drawing, understanding of scale and order, and "Geometrical Problems in Architecture."[75]

[72] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 67
[73] St. Michael's Vestry Book, vol. II, p. 257.
[74] "Advertisement." City Gazette (Charleston, South Carolina) XV, no. 3247, December 29, 1797: [3]. NewsBank: Access World News – Historical and Current.
[75] IBID



Drawing Academy,
No. 247, MEETING-STREET.
FIGURE, Ornament, and Architect Drawing, Plain and Perspective; the Five Orders in Architecture, Ancient and Modern; Stairs on various plans, &c. Strait, Strait and Circular, Circular & Geometrical, &c. Ground Elevation and Section Plans.
All Geometrical Problems in Architecture Solved and Demonstrated from Euclid's Elements, by
Daniel M'Giverin, and
Edward M'Grath.
December 27. 3

Fig. 17. Charleston City Gazette Advertisement for architectural Drawing Academy offered by Edward McGrath, December 29, 1797.

Benjamin Henry Latrobe

Person	Benjamin Henry Latrobe
Born-Died	May 1, 1764 - September 3, 1820
Prime Career Period	1783 - 1820
Place(s) Trained	Leeds, England, Moravia, Germany, Rome
Place(s) Worked	England, Ohio, Washington D.C., Philadelphia, Lexington, KY, Virgina, New Orleans,
Associated Buildings	Hammerwood Park (ENG), Ashdown House, East Sussex (ENG), Alderbury House (ENG), Decatur House (DC), Adena (OH), Sedgeley Porter's House (PA), Pope Villa (Lexington), United States Capitol, Washington Canal, St. John's Episcopal Church (DC)
Related People	Robert Mills, James Hoban, Thomas Jefferson, William Strickland, Pierre Charles L'Enfant
Nature of Education	Neoclassicism, Greek Revival, drafting/architecture, engineering of canals

Fig. 18. Background data information on Benjamin Henry Latrobe

Within the network study of practitioners, Benjamin Henry Latrobe is a key figure upon which national connections can be established. While Latrobe never worked

exclusively in Charleston, his direct ties to and work with practitioners such as Robert Mills and William Strickland allow for a cohesive study of with whom and to what extent Charleston practitioners were corresponding with other practitioners throughout the country and Europe. Latrobe's background of training and education brings with it rich context of European modes of knowledge. With beginnings in the Royal Prussian Army as a novice military engineer, Latrobe mastered nearly seven languages and eventually became acquainted with neoclassical architect via apprenticeship to English architect Samuel Pepys Cockerell.[76] The importance of Latrobe's inclusion in this analysis is due to his classical training in leading Italian, English and German cities, and how his more traditional style of early education contributed to the not yet professionalized mode of training in the young United States.

[76] Benjamin Henry Latrobe (1905). The Journal of Latrobe. D. Appleton & Company. ISBN 0-917860-21-7.

Ezra Waite

Person	Ezra Waite
Born-Died	Unknown - 1769
Prime Career Period	1730's -
Place(s) Trained	London, England
Place(s) Worked	London, Charleston, SC
Associated Buildings	Miles Brewton House (CHS)
Related People	
Nature of Education	Civil Architect, Housebuilder, wood carver

Fig. 19. Background data information on Ezra Waite

While little documentation exists today tying Ezra Waite to large scale building and design projects in the late colonial period, sufficient record exists to substantiate his inclusion in the study. Specific to Charleston, South Carolina, The Miles Brewton house at 27 King Street stands as one of the most important manifestations of English Palladianism in not only Charleston, but the (soon to be) United States as a whole. Waite is tied to this residential structure as a key figure in its design conception, most due to an August 1769 advertisement in the *South Carolina Gazette and Country Journal*, stating:

"Ezra Waite, Civil Architect, House-Builder in general, and

Carver, from London, Has finished the Architecture, con

ducted the execution thereof, viz; in the joiner way, all tabernacle

frames, (but that in the dining-room excepted) and

carved all the said work in the four principal rooms, and also

calculated, adjusted, and draw'd at large for to work by, the

Ionick entablature, and carved the same in the front and

round the eaves, of Miles Brewton, Esquire's House on White

Point for Mr. Moncrief."[77]

The inclusion of Ezra Waite in this study aids in an understanding of the early Charleston field, as well as a further understanding of practitioners about whom little is known aside from one or two key design projects.

[77] Beatrice St. Julien, *Architects of Charleston,* pp. 49-50 Suggestion from Ravenel and analysis of the Gazette advertisement suggests that Waite

Thomas Bennett

Person	Thomas Bennett
Born-Died	February 11, 1754 - February 16, 1814
Prime Career Period	Approx 1780's - 1814
Place(s) Trained	Charleston, SC
Place(s) Worked	Charleston, SC
Associated Buildings	Charleston Orphan House, Belle-Vue Rice Mill, St. Michael's Church Enlargement (1804), Apprentices' Library Society Hall
Related People	Anthony Toomer, Robert Mills, Thomas Bennett Jr.,
Nature of Education	Gentleman/Amateur Architect, Carpenter, Contractor and Designer

Fig. 20. Background data information on Thomas Bennett

Thomas Bennet was born February 11, 1754, in South Carolina and finds characterization in both the Gentleman and Amateur Architect fields. Beatrice St. Julien Ravenel, in her work *Architects of Charleston,* defines Bennett as a "Lumberman, Contractor, and Designer of public buildings and a rice mill."[78] Appearing as an architect by 1792 public listings for his designs of the new Orphan House, Bennett is defined by his training in carpentry as well as design conceptions for buildings around Charleston, SC. While falling into the category of Gentleman Architect can be defined most notably

[78] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 81

by socio-economic status and access to rich material, resources, and literature, Bennett differentiates himself by his skilled knowledge in working with lumber and timber joinery. This dichotomy in training and practice contributes to this study, as it conveys and variability in nature and knowledge of late colonial practitioners and the factors by which their methods of work were influenced.

William Drayton

Person	**William Drayton**
Born-Died	March 21, 1732 - May 18, 1790
Prime Career Period	Approx. 1750-1790
Place(s) Trained	London, Princeton University,
Place(s) Worked	Charleston, SC
Associated Buildings	Charleston County Courthouse, 18 Bull Street (CHS)
Related People	Adam Brothers, James Hoban, Joseph Manigault
Nature of Education	Gentleman/Amateur Architect,

Fig. 21. Background data information on William Drayton

Born into a well-to-do plantation family at Magnolia on the West Ashley River of Charleston, William Drayton exemplifies the Gentleman Architect typology of the late colonial period. Drayton went abroad in 1750 to study law in London, returning to

Charleston to practice professionally by 1756.[79] Drayton's life was dominated almost exclusively by involvement in state affairs as a public official, serving as Chief Justice of East-Florida in 1763 and Judge of the Admiralty Court of South Carolina and Associate Justice of the Supreme Court of the State.[80] In addition to state-level bureaucratic affairs, Drayton managed his family plantation at Magnolia, chaired the Committee of the South Carolina Society of Agriculture, and served as the Grand Master of the Fraternity of South Carolina Ancient York Masons.[81] Consistent with the nature of Gentleman affairs of the late 18th century, co-curricular involvements such as interest in architectural design were areas least documented in Drayton's historiography. However, William Drayton played a key role in the architectural footprint of Charleston's built history and can be attributed most completely within this study as key to understanding the training and practice of an elite-class Gentleman Architect.

[79] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 73
[80] Ravenel, 73
[81] IBID

John Christian Senf

Person	John Christian Senf
Born-Died	1754 - August 24, 1806
Prime Career Period	Unkown
Place(s) Trained	Germany, Charleston, SC
Place(s) Worked	Germany, Charleston, SC
Associated Buildings	Santee Canal, Storehouse at Simpson's Lock, James Island Fort (1787), Little Clubhouse of the Black Oak (St. John's Hunting Club)
Related People	Robert Mills, Emes and Thomas Hope, John Horlbeck, John Clements,
Nature of Education	Engineer and Designer

Fig. 22. Background data information on John Christian Senf

John Christian Senf's background is one rooted in military engineering with an emphasis in design and construction of canals in the Continental Army. Praised later in his career by Robert Mills, Senf was responsible also for the design of several buildings in the vicinity of modern-day Charleston. Sent to South Carolina in 1777 by Henry Laurens, president of the Continental Congress, Senf was commissioned to design a fort at James Island near the old Fort Johnson. Ravenel, in the mentioned piece, "*Architects of Charleston,"* describes a doorway, "Sheltered by a pedimented porch supported by two columns," and a, "Neatly drawn plan accompanied by a profile of the battery and a view of the battery and barracks at the gate," referring to the recognizable picture of downtown

Charleston.[82] The importance of Senf's inclusion in this study relates to several important factors surrounding both his mode of training and the networks in which he was practicing. Assumed to be a close colleague of Robert Mills by analysis of a letter written upon Senf's death, Senf plays an integral role in understanding the tightly wound networks of communication and work so indicative of the early field. Additionally, Senf was trained as a military engineer, but found crossover into the field of architectural design, which pays homage to the diverse nature of practitioner influences in the late colonial period and early republic alike.

Thomas Hope

Person	Thomas Hope
Born-Died	December 25, 1757 - October 4, 1820
Prime Career Period	Approx 1770 - 1820
Place(s) Trained	Kent, England
Place(s) Worked	England, Charleston, SC, Knoxville, TN
Associated Buildings	Ralph Izard Mansion (CHS), Francis Alexander Ramsey House, Knoxville Plantation Houses
Related People	Unkown conclusively
Nature of Education	Wood carving, Cabinet and Millwork, Architecture, English Architecture

Fig. 23. Background data information on Thomas Hope

[82] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 87

Born in Kent, England on Christmas, 1757, Thomas Hope finds early exposure to the building and skilled field as a wood carver, cabinet maker, and is trained as an architect in London. Similar to the background of Irish architect James Hoban, Hope gained education in both the mechanics of wood and an understanding of construction methodology, as well as scaling and architectural practice. Leaving England and settling in Charleston as late as 1790, Hope was immediately commissioned for work on a mansion for Ralph Izard, United States Senator from South Carolina.[83] Following his work in South Carolina, Hope moved with his family to Tennessee where he was responsible for the designs of noteworthy structures such as the Francis Alexander Ramsey House and many other Plantation Buildings in Knoxville, TN.[84] Thomas Hope's work and nature of training renders him key to this study, as he is an example of education which was not necessarily common in the newly formed United States upon his arrival from England. When compared to Gentleman Architect Gabriel Manigault who was well acquainted with pattern books and stylistic design, as well as the Horlbeck Brothers who worked exclusively in the realm of brick laying, Hope was well trained in the knowledge of both skilled craftsmanship as well as the practice of conceiving a scaled and practical design.

[83] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 89
[84] IBID

James and John Gordon

Person	James Gordon	John Gordon
Born-Died	1783 - 1814	1787 - 1835
Prime Career Period	1784 - 1814	1788 - 1835
Place(s) Trained	Scotland, Charleston, SC	Scotland, Charleston, SC
Place(s) Worked	Charleston, SC	Charleston, SC
Associated Buildings	Bank of the United States Building (Charleston City Hall), Second Presbytirian Church, Cathedral of St. Luke and St. Paul	Bank of the United States Building (Charleston City Hall), Second Presbytirian Church, Cathedral of St. Luke and St. Paul, St. Stephen's Episcopal Church (Guignard St.)
Related People	John Gordon, Hugh Smith	James Gordon, Hugh Smith
Nature of Education	Trained in Scotland, Bricklaying and amateur design	Trained in Scotland, Bricklaying and amateur design

Fig. 24. Background data information on James and John Gordon

Born in Scotland and trained in Charleston, South Carolina, James and John Gordon are examples of practitioners about whom little is documented save several bodies of record that tie them to important building projects in Charleston. James and John were the sons of Andrew Gordon who had been the master bricklayer for the Charleston City Hall between 1800 and 1801.[85] As a result, the brothers would have been exposed to the trade and science of building construction from a young age. While record surrounding the nature of the brother's training has not been found, James and John were

[85] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 101

identified formally as architects and builders, and responsible for overseeing the construction of Second Presbyterian Church of Wraggborough and the Cathedral of St. Luke and St. Paul.[86] While the feasibility of the designs conceived by the brothers stand today as faulty and lacking knowledge in building mechanics, James and John Gordon held amateur credentials in architectural practice, and involved themselves additionally in plantation management and brick production at Moreland Plantation on the Cooper River as well as many social affairs such as the Charleston Jockey Club, the Hibernian Society, and the St. Andrew Society.[87] The purpose of James and John Gordon's inclusion in this study is to highlight the work of practitioners within the amateur categorization, and additionally, practitioners whose skill and design competency may have been considered to be sub-par, but crucial for inclusion due to the key structures on which they worked.

[86] Ravenel, 101.
[87] IBID

William Jay

Person	William Jay
Born-Died	November 16, 1792 - April 17, 1837
Prime Career Period	Approx. 1815 - 1825
Place(s) Trained	Bath, Somersetshire, England, London, Savannah, GA
Place(s) Worked	Savannah, GA and Charleston, SC
Associated Buildings	Savannah Branch of the Bank of the United States, Owens-Thomas House, The Scarborough House, The Telfair House, The Bulloch/Habersham House, Fonthill Abbey,
Related People	Robert Mills, Charles Fraser, David Riddall Roper
Nature of Education	Apprenticed and trained in England (Bath and London)

Fig. 25. Background data information on William Jay

In addition to the study of key architects, both gentleman and amateur, the analysis of skilled tradespeople and craftspeople is crucial to understanding the integrated nature of practitioners within this paper's timeframe of focus. William Jay was born in 1792 into a strict, education-oriented family of Bath, England. Jay was apprenticed at an early age to his father, and reputable stonecutter and mason.[88] Exposed to the Palladian influences of Bath at a young age, Jay was well-equipped to create a career with classical influences and an understanding of building mechanics. While Jay began his career in the area of skilled stonework, his rich knowledge pushed him into the world of architecture

[88] Ravenel, 107.

and eventually to North America. Coming to the United States in 1817, Jay began work in the field of Architecture in Savannah, GA, and focused his career primarily in this city. Jay was responsible for noteworthy residential projects such as the Bulloch-Habersham House, The Telfair House, and the Owens-Thomas House, all displaying within them classical and Regency Detail.[89] While most native to Savannah, Jay commissioned little but notable work in Charleston as well. Jay was responsible for a Marine Villa at Sullivan's Island in the Gothic order, a headquarters building for the South Carolina Academy of Fine Arts, and, though tied to him primarily by educated oral history, the Ashley Hall School at 172 Rutledge Avenue.[90] William Jay is a necessary inclusion in this study as a result of his English origins in the skilled trade of stonecutting, and his fusion into the American field of classical architecture. His training and stylistic impressions aid in an understanding of influences on Savannah and Charleston's historic structures.

[89] Ravenel, 109
[90] Ravenel, 115

Frederick Wesner

Person	Frederick Wesner
Born-Died	January 14, 1788 - March 11, 1848
Prime Career Period	Approx. 1800 - 1825
Place(s) Trained	Charleston, SC
Place(s) Worked	Charleston and Aiken, SC
Associated Buildings	St. John's Lutheran Church (new brick building), South Carolina Society Hall Portico, The Old Citadel (Marion Square), Church of St. Thaddeus (Aiken, SC), Charleston Market rebuild (1833)
Related People	John Jr. and Henry Horlbeck, E. B. White, Robert Mills,
Nature of Education	Apprenticed to Charleston Carpenters, President of Charleston Carpenter's Society (1821)

Fig. 26. Background data information on Frederick Wesner

The incorporation of Frederick Wesner into this study brings with it valuable analysis of early methods in carpentry training and the work of an architect whose work was limited to the City of Charleston. Wesner, born into a German American family in 1788, lived and worked in Charleston for the duration of his career. As a practitioner, he had many critics and saw waning success after approximately 1831.[91] However, Frederick Wesner's impact on the built heritage of Charleston is worthy of note and inclusion within this research. Key projects in which Wesner was either involved or oversaw include the portico at South Carolina Society Hall, St. John's Lutheran Church,

[91] Ravenel, 137.

The Old Citadel Building at Marion Square, and the rebuild of Charleston's Market Hall in 1833. Working in many classically rooted styles, Wesner began as a carpenter's apprentice eventually finding training in scaling and design conception, similar to the education path of Robert Mills via James Hoban's Charleston Drafting School.[92] In understanding the nature of Frederick Wesner's training and his work on public building design exclusive to Charleston, this study provides important insight into architectural training and its influences in the lowcountry.

[92] Ravenel, 139.

John Horlbeck Jr. & Henry Horlbeck

Person	John Horlbeck Jr. & Henry Horlbeck
Born-Died	September 24, 1771 - February 26, 1846 October 27, 1776 - December 18, 1837
Prime Career Period	
Place(s) Trained	Charleston, SC
Place(s) Worked	Charleston, SC
Associated Buildings	German Friendly Society Hall, St. John's Lutheran Church (CHS), St. Stephen's New Chapel (CHS),
Related People	Frederick Wesner
Nature of Education	General Structural engineering, bricklaying

Fig. 27. Background data information on John Jr. and Henry Horlbeck

While scant documentation of the Horlbeck brothers and their decades of work in Charleston exists, the little that has been published contributes to this study in a crucial manner. Like their father, their Uncle Peter, and many descendants to follow, John Jr. and Henry Horlbeck were builders who specialized in the fabrication and laying of brick.[93] John Jr. and Henry were most likely trained from a young age in the practice of working with brick and worked as apprentices to family members in the trade. Working the entirety of their careers in Charleston, John Jr. and Henry were deeply involved in the social circles of the city, designing the German Friendly Society Hall and serving as

[93] Ravenel, 148

members within the group as well. Additionally, the brothers provided the brick production and work for St. John's Lutheran Church, with the woodwork being headed by Frederick Wesner.[94] The inclusion of the Horlbeck brothers is key to the comprehensive nature of this study as it provides insight into the coexistence that existed between the skilled trade such as masonry and brick laying, and the larger scheme of overseeing major building projects. Additionally, the Horlbeck brothers are an example of particular stylistic influences attained through training being dependent upon the experienced figure from whom the younger practitioner was learning.

Russell Warren

Person	Russell Warren
Born-Died	August 5, 1783 - November 16, 1860
Prime Career Period	Approx. 1800 -1860
Place(s) Trained	Tiverton, Rhode Island,
Place(s) Worked	New England (Bristol, Providence, Bedford, Fall River), Charleston, SC
Associated Buildings	James De Wolfe's The Mount (Bristol), Edwin L. Kerrison House House (Wentworth St, CHS), Shepherd House, (Providence), Manning Hall (Brown University), Westminster Arcade
Related People	Alexander Jackson Davis (NY), James C. Bucklin
Nature of Education	Trained in Rhode Island in the Adam tradition, work transitioned into Classical Revival

Fig. 28. Background data information on Russell Warren

[94] IBID

"Working first in a continuation of the Adam tradition, before turning to the style of the Classic Revival…..He had a fondness for columns, porticoes, quoins, cupolas, for flankers attached to the main building by arcades, for fairly simple but effective interiors, and for dramatic spiral staircases."[95]

Born in New England and raised in Tiverton, Rhode Island, Russell Warren's extensive architectural design work is well documented, and his rich legacy preserved in cities such as Bristol and Providence. It was in these New England cities during the last quarter of the 18th century that Warren designed reputable buildings such as James De Wolfe's The Mount, Manning Hall at Brown University, and the famed Westminster Arcade. However, his work in South Carolina is far less documented but no less noteworthy. Appearing in Charleston directories as early as 1822, Warren was identified publicly as a "carpenter" and is seen as a purchaser and seller of lumber at several points between 1822 and 1850.[96] Charleston Architectural Historian Beatrice St. Julien Ravenel holds that, given many stylistic similarities to Warren's early style such as the ornate style, placement and scale of the staircase, Charleston's famed Nathaniel Russel House may have been the work of Russell Warren.[97] Warren is additionally attributed to the Classical Revival brick Miller House at 138 Wentworth Street.[98] While little is documented pertaining to the nature of Warren's education in architecture and wood working, the study of his practice and methods of design provide context for

[95] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992), p. 151
[96] Ravenel, 154
[97] IBID
[98] IBID

understanding more clearly the national narrative, and how stylistic influences were communicating throughout the nation from places such as Providence, Rhode Island into Charleston, South Carolina.

William Strickland

Person	William Strickland
Born-Died	c. 1787 - April 6, 1854
Prime Career Period	Approx. 1800 - 1854
Place(s) Trained	Philadelphia, PA
Place(s) Worked	Philadelphia, PA, Charleston, SC
Associated Buildings	Philadelphia Masonic Temple (1810), Philadelphia Custom House (1824), Philadelphia Merchant's Exchange (1834), Nashville, TN Capital Building (1854), College of Charleston (Randolph Hall)
Related People	Benjamin Henry Latrobe, Robert Mills, E. B. White
Nature of Education	Painter, Engraver and Architect of Philadelphia, apprentive to Benjamin Henry Latrobe

Fig. 29. Background data information on William Strickland

The documentation and inclusion of William Strickland is paramount in most completely understanding the diverse networks of connections, partnerships, apprenticeships, and building projects among practitioners throughout the young United States. William Strickland was born and worked extensively in Philadelphia, studying under and serving as an apprentice to Benjamin Henry Latrobe.[99] Additionally, Strickland's father had worked as a carpenter for Latrobe. Moreover, Strickland was

[99] Ravenel, 172

exposed to rich experience from a young age, an additional testament to style development dependent upon leadership. Strickland was the impetus behind leading projects of the day such as the Philadelphia Custom House, the Masonic Temple of Philadelphia, the Capitol Building in Nashville, TN, and Randolph Hall at the College of Charleston.[100] Strickland's incorporation of the Greek Revival and simple, straight forward decoration is a result of his early training and exposure to monumental figures, as well as his own take on the evolving field into the mid-19th century. Working in cities all over the nation and coordinating with figures in many different facets and locations of the field makes William Strickland a key player in the study of architectural training and design-influenced networks.

[100] Ravenel, 172.

Charles F. Reichardt

Person	Charles F. Reichardt
Born-Died	June 27, 1803 - August 7, 1871
Prime Career Period	Approx. 1820 - 1860's
Place(s) Trained	Berlin, Hamburg, Germany
Place(s) Worked	Berlin, Hamburg, New York, Charleston, SC, Nicaragua
Associated Buildings	Chisolm Alston House (CHS), Roper House (CHS), Charleston City Hall (remodel), Charleston Hotel (Meeting St CHS), Hotel Petersburg (Hamburg), Extension of Circular Congregational Church Steeple (CHS), Hampton Park Grand Stand (CHS)
Related People	Karl Friedrich Schinkel, E. B. White, Thomas Bennett
Nature of Education	Berlin Building Academy, Apprentice to Karl Friedrich Schinkel

Fig. 30. Background data information on Charles F. Reichardt

Falling within the later portion of this study's timeframe parameters, Charles F. Reichardt was trained, possibly by renowned German architect Karl Friedrich Schinkel, in the Greek Revival tradition. Reichardt arrived in Charleston in December of 1836, and while none of the buildings that he designed stand today, his footprint played a large role in the development of the period's architectural legacy. As a member of the American Institution of Architects, established in 1857, Reichardt was responsible for notable Charleston buildings such as the Charleston Hotel on Meeting Street and the extension of the steeple of the Circular Church in 1838.[101] Additionally, Reichardt contributes to the

[101] Ravenel, 178.

rich and wide-reaching nature of this paper's network study through his work on the Hotel Petersburg of Hamburg, Germany in 1843. It is worthy of note that, while specific documentation does not exist, it is inferable that Reichardt would have been working in the same circles as leading figures such as Robert Mills and E. B. White, given dedication to the Greek Revival typology, similar locations, and timeframes.

Fig. 31. The Charleston Hotel, 200 Meeting Street, Charles F. Reichardt, architect. From a lithograph by B. W. Thayer, c. 1839. No longer standing.

E. B. (Edward Brickell) White

Person	E. B. (Edward Brickell) White
Born-Died	January 29, 1806 - May 10, 1882
Prime Career Period	Approx. 1820 - 1870's
Place(s) Trained	St. John's Parish, SC, West Point
Place(s) Worked	Charleston, SC
Associated Buildings	Market Hall (CHS), The German Lutheran Church/St. Johannes Lutheran Church (CHS), French Huguenot Church (CHS), Grace Church Cathedral (CHS), Trinity Episcopal Cathedral (Columbia, SC), St. Phillips Church (steeple enlargement, 1848-49)
Related People	E. W. Brown, Ephraim Curtis
Nature of Education	Civil Engineer, Architect and Surveyor, Military Engineering and design at West Point, surveys and construction of bridges and railroads,

Fig. 32. Background data information on E. B. White

A native of South Carolina and raised in a wealthy planting family, Edward Brickell White had access to a wealth of education in the areas of painting, writing, sculpting, and law.[102] White found interest in architecture, particularly the study of Classic and Gothic Revival, by route of engineering as an officer at West Point Academy.[103] Further, his early education was elite, formative, and provided exposure to rigorous military-like detail. Contributing to the engineering and design of Forts Pulaski and Adams as an artillery officer in the United States Army.[104] Following his military

[102] Ravenel, 183.
[103] IBID
[104] IBID

service, E. B. White transitioned into the practice of architecture, working on and heading design commissions for prolific Charleston structures such as the French Huguenot Church, Grace Church, Market Hall, and rehabilitation of St. Phillips, and St. Michael's Church. Well into his career, White continued to identify himself as a civil engineer, an architect and a surveyor, seeming to never lose sight of his early military training. E. B. White not only headed the design and construction of many new Charleston buildings, but had his hands on the additions to, or rehabilitation of buildings conceived decades before by practitioners examined earlier in this paper's study. E. B. White's career exemplifies the diverse nature of training and practice so indicative of this study's intricate networks of figures and their specialties. White's career stands as a testament to the unclear borders between fields and professions in this early period of architecture, that in turn contributed to many hands involved in the evolution of historic structures.

Chapter 6

UCINET Network Mapping & Analysis of Data

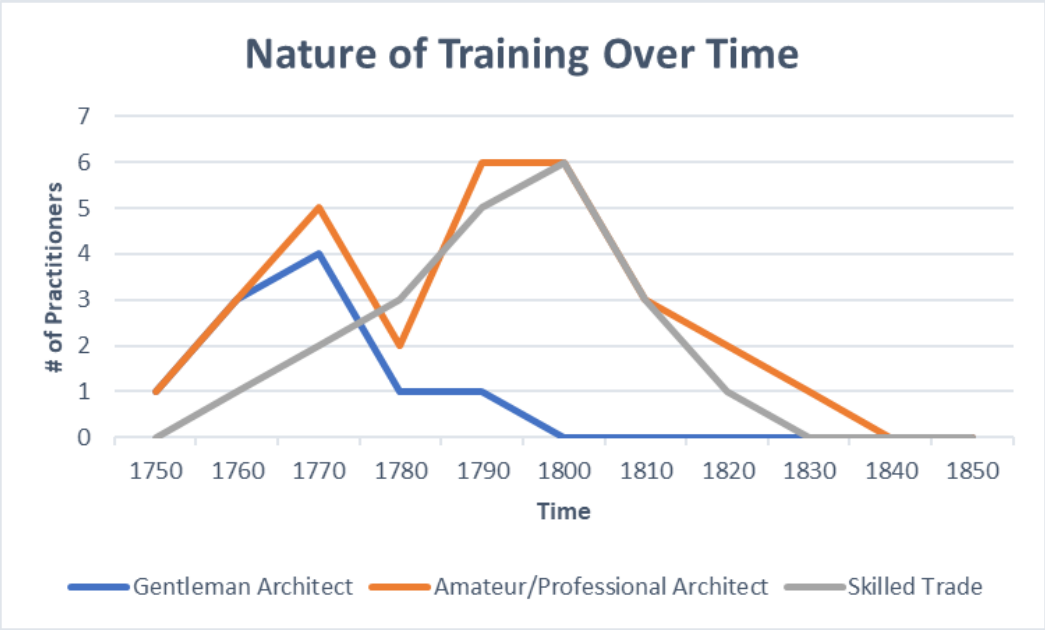


Fig. 33. Chart showing the nature of training over 10 decades and the rise and fall of each category's prominence

Chapter 2, the Literature Review, documents the established knowledge on architectural education in the 18th and early 19th century. This included the study of architectural education and training in the colonies and early republic, and the European spheres of influence that played such an impactful role in the formation of the early American field. Building upon these ideas, this chapter move from individual studies of specific practitioners to provide network maps created by the UCINET software that allow a reader to understand the relationships linking various individuals and individual projects in a straight-forward, and visual fashion. The above graph provides a more meta

visual of how different modes of training were taking precedence during different periods within this study timeframe. Immediate analysis of this graph seems to convey a sharp rise in education in 1750, as well as a sharp decline following 1840- This is not the case and simply a result of the strict study timeframe within the scope of this research. Rather, it is important to study this graph as a means to understanding shifts in adoption of differing educational ventures slightly before and after this paper's study timeframe. The most notable is that the term and category of Gentleman Architect falls out of use circa 1800. This coincides with the rise of formal training and is a clear illustration of how figurehead architects were no longer self-taught, well-read scholars, but people who were part of a system of training.

This chapter provides more empirical insight into this paper's qualitative study. The three network maps are presented and interpreted in the first portion of this chapter. The chapter then provides analysis of the networks and identifies patterns or trends.

Two-Mode Architect to Building Network Map

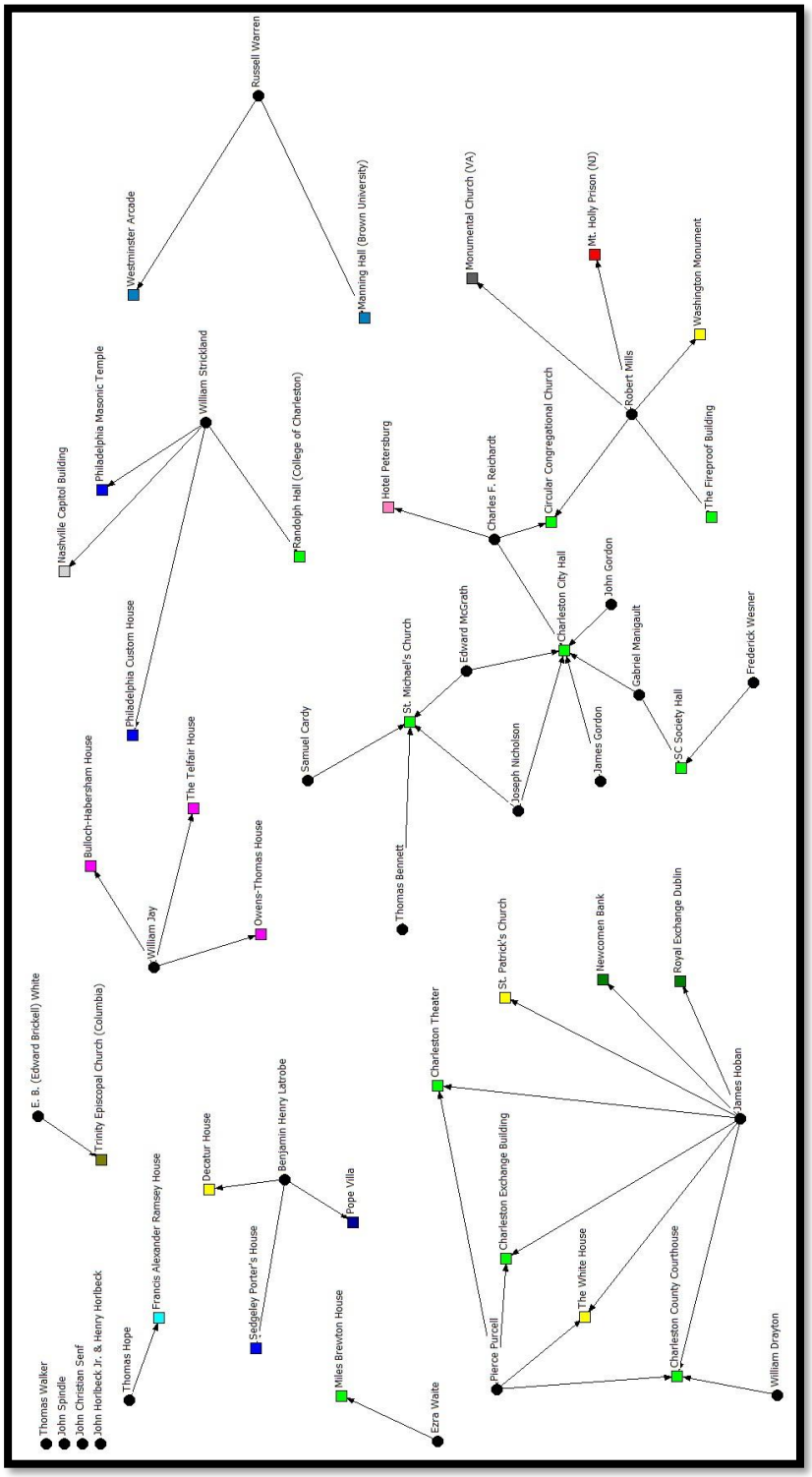


Fig. 34. Two-Mode Architect to Building Network Map

The first network map is the Two-Mode map showing connections between practitioners and buildings in a web-like manner. This map conveys direct relationships, connecting people to respective building projects in which they were involved. Though this information is visible in the spreadsheet recording the historic research, the value of representing the connections in a network map is the ability to visualize the direct connections quickly and simultaneously.

There are several patterns or themes immediately observable. The first is the disparity between large-scale projects, such as the Charleston City Hall, in which numerous practitioners were involved and small projects which record a single person in the historic record for the building. There are many building and design projects in which single practitioners, or much smaller groups of players were involved. For instance, Trinity Episcopal Church of Columbia, South Carolina, and the Francis Alexander Ramsey House of Knoxville Tennessee surely involved multiple people in their conception, and certainly in their construction, but the historic record attributes the design to one practitioner. The scale of the project impacts the amount of linkage provided in the network. Large projects are more connective than small; however, this distinction requires context. For the sake of this paper, large-scale projects and small-scale projects are most defined by the nature of their commissioning (Public or Governmental buildings, including large churches, versus private residences and small churches). For instance, the Charleston City Hall is a project which would take on large-scale designation as a result of its governmental usage, funding, and overall lot size (approximately 5,500 square feet). Comparatively, the Francis Alexander Ramsey House

designed by Thomas Hope is a building that would take on small-scale designation as a result of its purpose for being built as a private residence, private funding, and overall lot size (approximately 1,800 square feet). The table below provides further insight into which of the two categories each of the 31 buildings analyzed in this study falls. Additionally, this table conveys the number of connections stemming off of each building to portray the amount of hands involved its conception, additions, or rehabilitations.

Large-Scale Building Pojects	# of Connections	Small-Scale Buildings Projects	# of Connections
The White House	2	Sedgeley Porter's House	1
The Fireproof Building	1	Miles Brewton House	1
Newcomen Bank	1	Francis Alexander Ramsey House	1
Washington Monument	1	Owens-Thomas House	1
Manning Hall (Brown University)	1	The Telfair House	1
Philadelphia Custom House	1	Bulloch-Habersham House	1
Randolph Hall (College of Charleston)	1	Monumental Church	1
Westminster Arcade	1	St. Patrick's Church	1
Mt. Holly Prison	1	Philadelphia Masonic Temple	1
Nashville Capitol Building	1	Pope Villa	1
Hotel Petersburg	1	The Stephen Decatur House	1
Dublin Royal Exchange	1		
Charleston Exchange Building	2		
Charleston County Courthouse	3		
Charleston City Hall	6		
St. Michael's Church	4		
Circular Congregational Church	2		
Charleston Theater	2		
South Carolina Society Hall	2		
Trinity Episcopal Church	1		

Fig. 35. Table showing scale size of each building project in this study, as well as the connections pertaining to each building in the Two-Mode Network Map.

Looking at the chart above, large scale projects have an average of 1.7 connections per building. The small-scale building projects have an average of 1 connection per building. This is not a very sizable difference and demonstrated that large

scale projects were not necessarily hubs of significantly greater connection in professional networks.

The period of the building also influences how connective it is within the networks. Using Charleston City Hall and St. Michael's Church as examples, these projects date from the earliest portion of the study period. These two buildings have 10 linkages between them, and 5 more extending off these connections as well. These connections make up a substantial percentage of this network's total linkages, coming to almost 30% of the network's total connections. Later projects such as E. B. White's Trinity Episcopal Church are generally more isolated and defined by their figurehead architect, thus bringing with them far fewer linkages (one each). Other projects similar to Trinity Episcopal Church are the Francis Alexander Ramsey House, the Miles Brewton House, the Telfair House, and the Decatur House. This category of building totals 15, making up 48% of the buildings studied and they have 15 connections among them or 32% of the total 46 connections. Early in the study period, 2 buildings make up about one third of the connections, while late in the study period, 15 buildings almost half of the connections. For the later buildings, these 15 buildings, with their associated 15 connections are associated with only 7 different architects. The other 16 buildings in the study have 13 architects associated with them documented in this network map.

As analyzed in the Literature Review section of this paper, the term "Architect" was more fluid and less professionally defined throughout the mid to late 18th century. This was due to a lack of official criteria or accreditation. As a result, there tended to be multiple figureheads on a given project, all working together, though specializing in their

given practice. While this process of coexistence in the building practice did not cease to exist, even to today's standards, there seems to be fewer people credited with projects as time passes. For instance, within the first 10 years of this paper's study period, St. Michael's Church and The Charleston Exchange Building were constructed. These two buildings, together, are visible in the network map as having 9 total linkages, and certainly many more not able to be documented within this study. Comparatively, two buildings erected in the later portion of this study period are the Westminster Arcade and Washington Monument, consisting of two total connections, their sole architects. This reinforces the evolving social stature around the term "Architect" in the 19th century. As a result, even large-scale design and construction projects like the Washington Monument later in the study period are associated with a singular figure, as opposed to St. Michael's Church or Charleston City Hall where numerous practitioners are credited in the historic record.

Consistent with this paper's Lowcountry-centered research and the nature of the nucleus of this study, the majority of connections between practitioners and buildings are associated with Charleston. Smaller-webbed connections find themselves in regions such as the northeast and mid-Atlantic US. The network maps also depict a system of patterns for practitioners immigrating to the United States, and their trajectory of working locations following arrival. For example, practitioners such as James Hoban, William Jay, James Gordon and John Gordon were all trained in and emigrated from European countries including Ireland, Scotland and England. There are trends to these practitioners' movement through geographic circles following their arrival in the US. The practitioners

listed above are seen to have specialized in one or two cities only. These men typically established a practice and continued work exclusively in one place, Washington, DC for James Hoban, Savannah and Charleston for William Jay. Comparatively, American-born practitioners such as Robert Mills of Charleston, South Carolina, William Strickland of Philadelphia, PA, and Russell Warren of Rhode Island were varied in their places of practice. American-born architects had more geographically broad locations for their practice, associated with projects up and down the American coastline.

Time periods see different intensities/versions of the trend of more geographically concentrated practices for European born architects and broader geographic practices for American-born. As mentioned earlier in this chapter as well as in the Literature Review portion of this paper, the professionalization, polarization, and overall socio-economic stature of the term, "Architect," seems to experience a shift around the turn of the 19th century. This change in practice may be seen in the Two-Mode Network map themes. Practitioners such as James Hoban and William Jay both practice later in the study period timeframe and have more place-concentrated practices. These two men possess more professional training than many peers in this study as a result of their European beginnings (as described in chapters 1 and 2). The greater amount of formal training and the late period of their practices, perhaps as much as their status as being an immigrant to the United States, may explain the relatively narrow geography to the practices for these two architects.

Practitioners possessing similar traits such as nature of training and period of practice, but distinct in terms of stylistic influences and place of practice seemed to

remain in a smaller pool of communities so as to capitalize on their reputations as respected architectural figureheads. Practitioners such as Robert Mills and William Strickland trained within the apprenticeship cultures of the late colonial period, and possibly structured their work and design methodology around a far more interactive process of construction and design.

One-Mode Architect Network Map

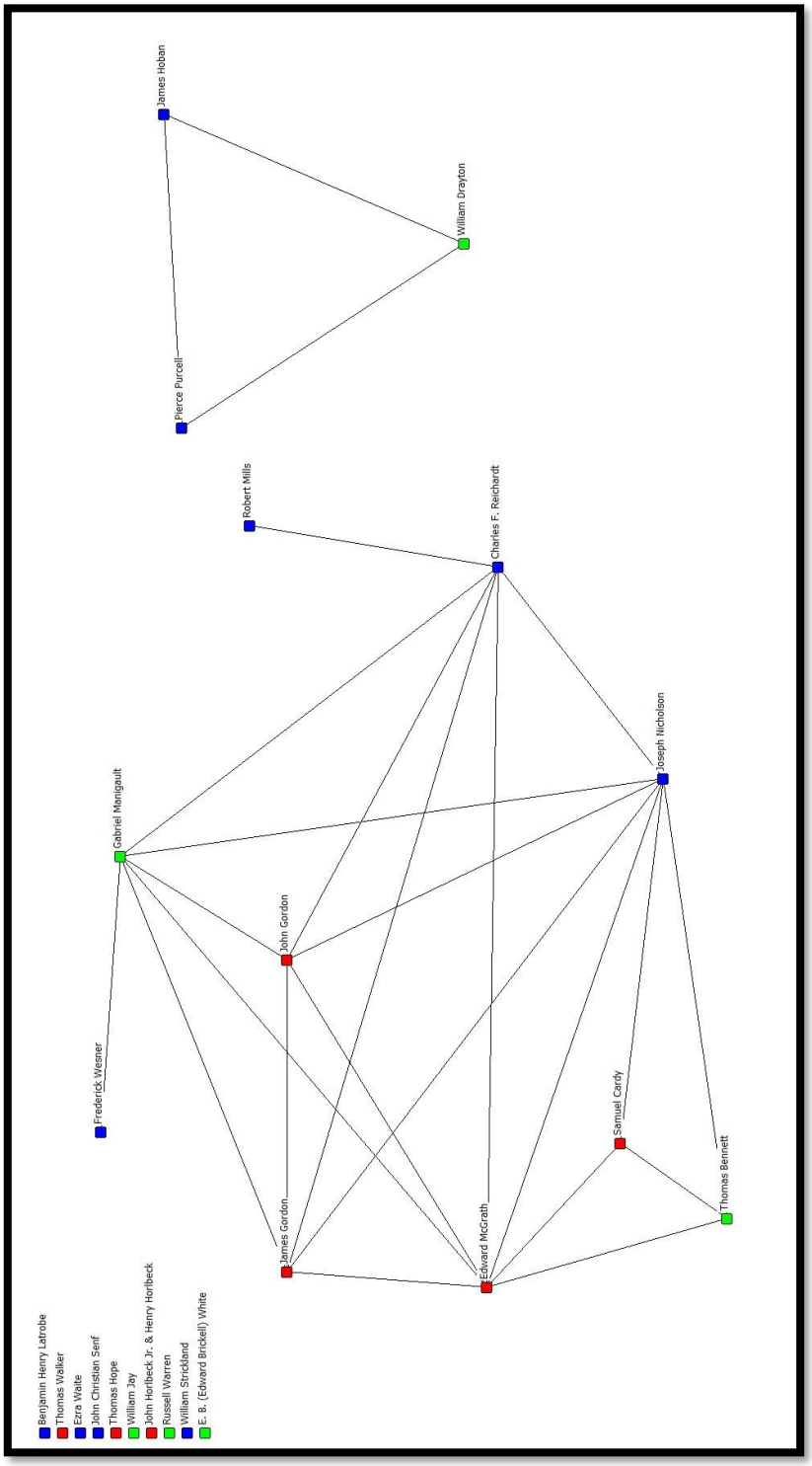


Fig. 36. One-Mode Architect Network Map

Next, this research examines individuals and their respective contextual backgrounds in relation to other practitioner's professional networks. The network map "One-Mode Architect Network Map" (Figure 34) is coded by use of three colored categories. Each color denotes a practitioner with certain training, educational or instructional background. Green nodes represent an architect or practitioner who would be colloquially recognized as a "Gentleman Architect," coming from a wealthy background allowing for extensive travel and access to literature such as pattern books and instructional diagrams. From this category, Gabriel Manigault is a leading example, especially within the narrative of Charleston's architectural education history.

Blue nodes represent an architect or practitioner who may have come from more middle-class circles and spheres of influence, referred to informally as an amateur or amateur-professional architect. This individual would likely have been trained within the apprenticeship society, drafting, or drawing schools, and/or under a leading practitioner, eventually seeking the title of journeyman and professional in their field. A leading example of this category, also specific to Charleston, South Carolina, is Robert Mills. Training under James Hoban through his drafting school on modern-day Wentworth Street, Mills would come from humble beginnings but progress to work alongside prolific figures in American architectural history such as Benjamin Henry Latrobe and Thomas Jefferson. A defining aspect of this category is the practitioner's understanding of both construction science/methodology, as well as the art of drafting and designing a scaled structure.

The third category within the One-Mode Network Architect map is denoted by red nodes. The red node represents an architect or practitioner who found their beginnings in a skilled trade such as bricklaying, carpentry, wood carving, masonry, plaster working, and other hands-on fields. While this individual would have most likely been trained through the apprenticeship society, similar to the former category of practitioner, they would most notably dedicate themselves to their sole skilled trade and lack the knowledge of designing, drafting, and scaling large building projects. John Horlbeck Jr. and brother Henry Horlbeck stand as leading examples of this categorization, as their training, consistent with generations of the Horlbeck family business, dealt almost exclusively with the trade of bricklaying and novice-level structural engineering.[105]

Nature of Training	% of Total Practitioners	
Gentlemen Architecture	**20%**	**Green**
Amateur/Professional Architecture (apprenticeship society, drafting/drawing schools, design)	**40%**	**Blue**
Skilled Trade (Bricklaying, carpentry, wood carving, mason, etc.)	**40%**	**Red**

Fig. 37. Color coding and Practitioner percentages for nodes in One-Mode

It is impossible to examine this network map without also taking into account the methods of training that came with each category of practitioner. The One-Mode Architect Network Map allows for a succinct tie back to the origins of this study, which roots itself in the nature of early architectural education in the late colonial period and

[105] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992)

early republic. This map (Figure 34) allows for not only analysis of the types of practitioners and linkages between them, but additionally, linkages between the ways these individuals were trained. As identified in the Literature Review and Introduction, the nature of education that a practitioner achieved was dependent on social status. Gentleman Architects such as Gabriel Manigault and William Drayton were born into wealthy planting families which in turn provided them with access to a richness in resources such as European literature, pattern books, and even training at European schools. Comparatively, Amateur Architects such as Robert Mills or James Hoban would have been raised in the apprenticeship culture, learning from experienced practitioners, often in the skilled trades, then moving into more refined training in scaling and drawing. The marriage of these two modes of education would then catapult them into the field of architectural design with foundational knowledge in construction mechanics.

The third of these societal categories is the skilled tradesperson. These skilled fields included areas such as carpentry, brick laying, plaster working, masonry and stonecutting, and ironworking. These individuals, similar to the amateur architect, would be brought up in the apprenticeship society, learning from members of the community or their own families. These practitioners would typically remain and specialize in their trade, similar to the Horlbeck Brothers (John Jr. and Henry) who had been raised in a brick laying family.

With these modes of training that coexist with the category of practitioner, there are themes to be drawn from this map (Figure 34). Amateur Architects such as James Hoban, Robert Mills, Charles F. Reichardt, and Frederick Wesner are seen to be

connected to both several skilled trades people as well as Gentleman Architects like William Drayton and Thomas Bennett. In examining the One-Mode Network Architect map, patterns are drawn out to describe the linkage between practitioners from the same color-coded category. Of 36 connections represented in this network map, 13 connect nodes of the same color (36% of connections), and 23 linkages between nodes of different colors (63.9% of connections). If the connections were spread over the possible scenarios evenly, one would expect an equal number of same color connections (red-to-red, blue-to-blue, and green-to-green) and mixed color connections (red-to-blue, red-to-green, and green-to-blue). The fact that there are significantly more connections across node colors (representing training types) indicates that professional networks disproportionately favor collaborations with people of other types of training.

Within the same color connections there is not even distribution. For example, there is a high proportion of red nodes (representing skilled trade-trained architects) with other red nodes (8 linkages). The 8 linkages out of 13 is roughly 60% of the linkages. If same-color linkages were spread evenly across categories we would expect 40% of linkages to be associated with skilled traces, 40% to be associated with amateur architects, and 20% to be associated with gentleman architects, proportional to the training types for the individuals in the survey. The skilled trades people (red nodes) seem to be more isolated but densely connected with each other. Among the blue nodes (Amateur/Professional Architects) are 6 linkages, and among the green nodes (Gentleman Architects) are 0 linkages. Given that skilled trades people make up 40% of the practitioners studied, as do Amateur/Professional Architects, and gentleman architects

make up 20% of the practitioners studied, this shows that skilled tradespeople were disproportionately connected to other individuals in their group, and gentlemen architects extremely unconnected with peers. The red nodes, or skilled trades people, comprise the majority of connections within a training group.

Numerous connections between different colored nodes are visible (23). Most obvious is, is again, the lack of linkages connecting with Gentleman Architects. Only two linkages (8% of different color connections) connect a skilled trades person and a Gentleman Architect. 4 linkages connect amateur and gentleman architects. Together these numbers (6 out of 23) are substantially lower than the 33% that you would expect of these two linkage types if connections were spread evenly. The lack of linkages from gentleman architects may convey, quite indicative of the time, a social hierarchy and sense of "untouchability" among the Gentleman's class. This particular social hierarchy may refer to the types of commissions that this class of practitioner was experiencing, most assumably larger-scale public projects, funded by the local or state government.

Further, this map confirms an interconnected nature of work and training between amateur architects and those of the skilled trades. 10 of the 23 different-color connections are between red and blue nodes. Given that these are the largest groups of practitioners, it makes sense that the number of red-to-blue linkages would outnumber the blue-to-green or red-to-green since reds and blue categories make up 40% of the individuals studied and green makes up 20%. It can be inferred that these linkages are a direct result of training. Amateur architects, given their education in both the skilled labor area as well as the more elite knowledge of scaling, drafting, and designing, could essentially speak

the colloquial language of all practitioners on a job site. While a Gentleman architect was intelligent in his craft of design and order, they are likely not common in the language of construction mechanics and physical labor.

In summary, the skilled trade category of architect training (red) is the most connected category. Red-to-red, red-to-blue, and red-to-green make up 16 of the 24 connections (66.7%). If the connections were spread evenly among the types of training, then you would expect these categories to make up half of the connections. This overrepresentation shows an obvious collaboration in practice and potentially training between the skilled members of the architectural trade.

The green nodes, representing a Gentleman Architect, seem to stand more isolated than connected. While the green nodes are connected to projects via the blue and red nodes, they are not tied to other green nodes. Comparatively, the Amateur Architects and Skilled Tradespeople seem to tie together via more robust networks, potentially confirming the more interconnected nature of coexistence between these two types of practitioners within a given construction/design project.

It is important to look at the patterns present in the Two-Mode Network Map (Figure 33) with the One-Mode Architect Network Map (Figure 34). The observation of more isolated/less connected, Gentleman Architects is reminiscent of the social stature of architects around the turn of the 19th century. Similar to the finding from the Two-Mode Network Map that large-scale projects are most commonly associated with elite figureheads, earlier Gentleman Architects such as Gabriel Manigault, William Drayton

and Thomas Bennett can be seen within this network map as detached from the more interconnected process between Amateur Architects and skilled tradespeople.

The analysis of the One-Mode Network Architect map provides the reader with context behind how and to what extent three primary categories of practitioners were or were not interconnected in the field. This study and network analysis of late 18th century and early 19th century practitioners, both in and out of Charleston, allows for a more comprehensive understanding of biographical research already conducted throughout the last century. Progressing into the third and final network map, the One-Mode Network Architect map provides context, next, into the physical structures on which these communities of practitioners were working.

One-Mode Building Network Map

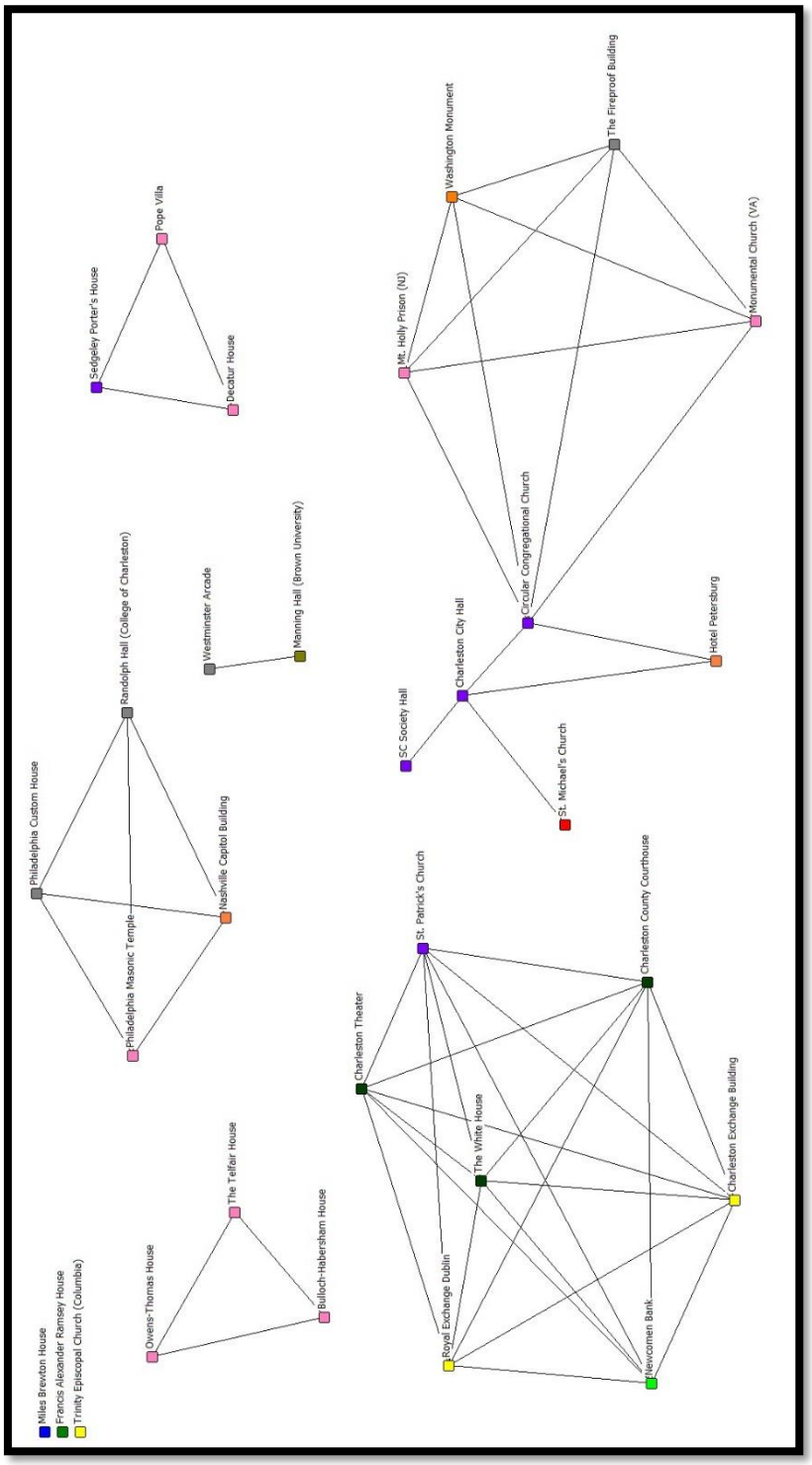


Fig. 38. One-Mode Building Network Map

Color coded nodes in the One-Mode Building Network map refer to the decade in which the buildings were constructed. The legend below provides a breakdown of each decade. The reader may note that the dates listed extend past the thesis study period. This is because a given building may have been constructed well before a project analyzed within this study. Additionally, a given project may have been begun within this paper's timeframe, but not completed until decades later. This network map documents a wider construction timeframe of 31 buildings constructed between approximately 1750 to 1850. The reason for widening this timeframe is a result of evolution, additions, and rehabilitation periods that a given historic structure experiences. For instance, while St. Michael's Church of Charleston was originally constructed between 1751 and 1761, many additions and partial reconstruction periods were implemented such as Thomas Bennett's 1804 consultation regarding Robert Mills plans drawn up for the enlargement of the esteemed church.[106]

Construction Decades	Node Color
1750-1760	Red
1760-1770	Navy Blue
1770-1780	Yellow
1780-1790	Light Green
1790-1800	Dark Green
1800-1810	Purple
1810-1820	Pink
1820-1830	Grey
1830-1840	Gold
1840-1850	Orange

Fig. 39. Color coding legend for One-Mode Building Network Map

[106] Beatrice St. Julien Ravenel, "Architects of Charleston," (Columbia: University of South Carolina Press, 1992).

The chronological presentation of data in this network map contributes to a further understanding of building and construction networks that the former two network maps do not necessarily highlight. The first two network maps provide insight into the locations and nature of field practice, while this map allows for comprehension of timeframe and chronology. Buildings are depicted by the nodes, and the lines denoting linkages show where architects connect to these separate buildings by being associated with the construction or design.

Of first note, chronological groupings of buildings present themselves in a clear manner in the One-Mode Building Network Map (Figure 36). This can be seen by the number of linking lines between buildings constructed within neighboring decades such as the dark green, light green, and yellow nodes representing buildings such as The White House, The Dublin Exchange Building, the Charleston Exchange Building, and Newcomen Bank of Ireland. This is an intuitive connection, as practitioners worked in respective time periods. This chronological connection between buildings may show how more contemporary practitioners were working together on projects. With the exception of later additions, rehabilitation projects, and stabilization projects, the buildings in this network layout seem to follow a pattern of connection relating directly to chronology.

The One-Mode Network Building map additionally supports and reasserts patterns evident in previous maps relating to the nature of earlier construction practice compared to those of later decades. In this network map, there are clusters of buildings connected with many relationships to other buildings. Other smaller clusters seem to group together in more static and interrelated ways. For instance, in the bottom right of

the building network map, we see a web of building connections including structures The White House, the Charleston Exchange Building, The Charleston Theater, St. Patrick's Church, the Royal Dublin Exchange, Newcomen Bank, and the Charleston County Courthouse. Given the yellow and green colored nodes (representing earlier decades of construction from 1770 to roughly 1810), we see that this period has buildings which connect more through the people associated with them than later buildings such as The White House and Charleston County Courthouse. The greater frequency of connection reflects the nature of multiple practitioners working on these buildings, and by extension the nature of the training/work patterns of early practitioners. As analyzed in the One-Mode Architect Network section of this chapter, these projects involved a web of contributing practitioners with a great number of skilled craftspeople and amateur architects. Further, this web of buildings reinforces the conclusions that earlier projects involved more practitioners, as recorded in the archival documents.

Comparatively, in the top left and right portions of the One Mode Network Building map, we see two webs defined by three-building network connections. Five of these six buildings are represented by pink nodes tying them to construction between 1810 and 1820, with the sixth building represented by a purple node tying it to construction between 1800 and 1810. These webbed networks are far smaller and simpler in their connections when set against the more densely networked cluster in the bottom left of the map as well as the web in the bottom right portion. These buildings within the smaller webs represent projects tied to William Jay and Benjamin Henry Latrobe. To reiterate, this particular set of analyses notes that practitioners specializing in the field of

architectural drafting, scaling, drawing, and design seemed to become more isolated as this study pushed into the first and second quarter of the 19th century. William Jay and Benjamin Henry Latrobe are good examples of this trend and convey this evolving nature of isolation. Later projects in this study period, such as the Decatur House of Washington, DC, Pope Villa, Sedgeley Porter's House, The Telfair House, Owens-Thomas House, and Bulloch-Habersham House are closely identified with a single architect or designer (in these cases of high profile) not the many hands involved in the building's erection.

Chapter 7

Conclusion and Recommendations for Further Research

This chapter reiterates the purpose of this study, summarizes primary findings, and demonstrates how these analyses contribute to the ongoing conversation and provide a new perspective. In the Literature Review portion of this paper, the national and international narrative surrounding the history of architectural education is examined. Major relevant ideas are early American schools and their curricula, the professionalization of the field and its first, "architects," and the Charleston dialogue. One of the most relevant ideas in the established literature is the nature of training and practice around the turn of the 19th century. Prior to this point, the field was fluid, undefined and cohesive as opposed to sanctioned in each specific practice. Following this point, professionalization began to become more apparent bringing with it a more elite social stature and a more defined system of reputable education. Writings on the history of architectural education tend to focus on practitioner biographies and analyses of buildings in a given city from which more broad conclusions on a national or international level can be drawn. Further, little work exists concerning itself with the origins and evolution of architectural education and training save one leading work, *Architecture School: Three Centuries of Educating Architects in North America* by Joan Ockman, which this paper references extensively.[107]

[107] Ockman's work dominates the literature review section of this paper, as her works stands as the most comprehensive study available today, off of which this research has sought to develop.

This thesis seeks to use new methods, network maps, to examine a small collection of buildings and practitioners, with connections to Charleston in the 1770s-1830s. This analysis contributes to additional ways to investigate the history of architectural education and the ways in which education and training have evolved our nation's architectural practice. To best accomplish this, the paper lays out data compiled from the historic record and demonstrates the change in how practitioners collaborated on built works. The extent to which early practitioners were working on shared projects is seen by more dense linkages for earlier buildings. For instance, as seen in the One-Mode Building Network Map (Figure 36), the largest clusters in the bottom left (7 buildings) and right (9 buildings) include largely early buildings within this study and make up the densest connections. Denser linkages are also present for architects who were more skills based/trade trained and the least for Gentleman Architects. The skilled trade and amateur architect categories make up 80% of the networked linkages and 74% of the total 23 practitioners documented (17 of 23).

Using Charleston, South Carolina and the Lowcountry as a whole as a central point, this research shows the geographic spread of built works associated with different practitioners. Many of the architects discovered in the historic research do not have practices entirely in Charleston. 6 of 14 practitioners who are trained in Charleston or are known to have buildings constructed in Charleston in the study period (approximately 1770 to 1830) also have buildings constructed in other places. The network maps enable the visualization of how practitioners move in and out of the Lowcountry throughout their practice by showing the geographic distribution of built works associated with that

person. This method of analysis allows the reader or researcher to better understand the early field of architecture and construction from a more macro perspective. This new lens builds from an understanding of the individual people and buildings (presented in Chapter 5).

The limitations of this research are important to acknowledge, also, to provide a platform upon which recommendations for further research can be established. As mentioned in Chapters 4 and 5, the collection of data involved in this research is not exhaustive and brings with it a host of suggestions for further study. The field of architectural study and education in Charleston is evident as early as the colony is established in 1670. Many of its earliest figures, about whom little is known, were establishing amateur night schools and the procurement of architectural literature clearly by the turn of the 18th century. Influences such as early Adamesque mechanics of drawing, pattern books authored by European architectural figures such as James Gibbs and Stephen Riou, and the overall influx of Palladian and classical typologies were within the minds of the Lowcountry's earliest practitioners. With this, a wide body of early figures such as Charles (Peter) Chassereau, Samuel Holmes, John Spindle, and J.F. and T.R. Samuel Lapham require further study and perhaps incorporation into a larger network of early practitioners. Future research could include a far more extensive list of early colonial practitioners, including those just mentioned.

While the Literature Review allowed for an understanding of European influence on American architectural training and practice this research depicts the way several practitioners who trained in major European cities such as Dublin, Hamburg, London and

Edinburgh, collaborate, move their practice through Charleston, SC, and spread revolutionary influence throughout the young United States. The Literature Review, found in Chapter 2, offers a brief overview of several early European schools of architecture such as Dublin, Ireland's Royal Dublin Society and the Académie Royale d'Architecture (Later named the École des Beaux-Arts). This concise outline of early European education provides context for the nature of training that was coming into the late colonial field. A wealth of documentation and historical context behind the development of the leading European schools and their curricula exists and provides deeper insight into North American architectural influences. Further research could look deeper into other European and American cities, developing more on the contextual background analyzed in this thesis' review of literature.

A second limitation of this study pertains to the nature of work for different types of architects trained and practicing at the turn of the 19th century. Though practitioners within the field of architecture were the main topic of study, throughout the process of research, there was substantial crossover with figures working in the fields of engineering and masonry. These fields bring with them a host of potential for further study. This study was limited to practitioners in the field of architecture but would benefit significantly by the addition of documentation of engineering and masonic fields of practice.

Significant findings within this paper's scope of data analysis include the inner workings of how, where, and when early practitioners were working together in the field of buildings design and construction. This study contributes to the ongoing conversation

of architectural education and its development by use of nuanced organization of data by use of network software. As a result, the history can be visualized in a clearer manner, thus allowing trends and patterns to become more discernible. For instance, the fluid nature of the architectural field and its modes of training is an area about which much has been written. The network map study provided within this thesis confirms these inferences made by scholars by use of nuanced perspective and visualizations that aid in this understanding of both qualitative as well as quantifiable data. This multi-faceted approach provides a diverse body of analysis, both empirical and qualitative, that in turn allows the reader to more deeply understand the conclusions and patterns.

While this thesis brings with it many limitations and opportunities for further study, research conducted contributes to the field by providing an understanding of historiography surrounding architectural education and important connections between the early field's practitioners and buildings. Additionally, this more visual interpretation of data has potentially brought to light patterns and trends which may not have been known prior. For instance, the meta understanding of how different types of practitioners were working together, or not working together. As the One-Mode Architect Network Map (Figure 34) shows, there was a blatant tie between working relationships of skilled trades people and amateur architects, while gentleman architects, or those members of the higher-up elite classes, tended to be more isolated. In addition to this theme, the Two-Mode Architect to Building Network Map presents themes that provide new information. For instance, the turn of the 19th century seems to mark a gradual turning point in the elite social stature of the American architect. Throughout the late colonial period, large-scale

construction projects seem to be defined by the many persons and types of practitioners involved. However, as the field progresses into the first and second quarters of the 19th century, similar large-scale projects seem to become most defined by the architectural figurehead or person fabricating the design.

This study contributes to a larger conversation of late colonial practitioners and the social networks in which they were involved. Aiding research could include a similar analysis of engineers in the late colonial and early republic periods of the United States, and how these individuals were being educated. Additionally, the field of masonry is one that brings with it a rich history finding roots in European practice hundreds of years prior to the first American colony. As a result, this inclusion of analysis within the historical narrative of practitioner education would require extensive time allotment and meticulous documentation. The study of architectural education, its origins, and its evolution into early American building practice is a small piece within a much more holistic conversation that is consistently growing. The hope is that this documentation of early American networks of architectural education and practice will aid in an understanding of not only the history of the field, but how best to maintain a sense of historical empathy when studying our nation's built heritage from a modern perspective.

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APPENDICES

Appendix A
Data Tables for Network Maps

Figure A-1: Architect Attribution section of raw data collection

	Born	Died	Career Start	Career End	Training Location	Education
James Hoban	1755	Dec 8, 1831	1780	1830	Dublin, IRE	Royal Dublin Society, Carpenter's Apprentice, Thomas Ivory
Pierce Purcell	NA	NA	1780	1830	Ireland, Charleston	James Hoban
Robert Mills	Aug 12, 1781	March 3, 1855	1790/1795	1850's	Charleston, SC, Wasington, DC	James Hoban's Drafting School, Benjamin Henry Latrobe, Thomas Jefferson
Gabriel Manigault	March 17, 1758	November 4, 1809	1780	1809	Charleston, SC, Rhode Island, Geneva, London	Gentleman/Amateur Architect, Adam and Classical Revival
Samuel Cardy	NA	January 24 1774	1740's	1774	Charleston, SC	Architect/contractor, bricklaying
Benjamin Henry Latrobe	May 1, 1764	September 3, 1820	1783	1820	Leeds, England, Moravia, Germany, Rome	Neoclassicism, Greek Revival, drafting/architecture, engineering of canals
Thomas Walker	Unknown	1838	Unkown	Unknown	Edinburgh, Scotland	Stoncutter and Mason, Designer, Sculptor, Grave stone carving. "Evening School for teaching the rules of architecture." (Oct 31, 1793)
John Spindle						
Ezra Waite	Unkown	1769	1730's	1769	London, England	Civil Architect, Housebuilder, wood carver
Edward McGrath	Unkown	Unkown	1800	1810	Charleston, SC	Carpenter and Architect
Joseph Nicholson	Unkown	Unkown	1800	1805	Charleston, SC	Carpentry
Thomas Bennett	February 11, 1754	February 16, 1814	1780	1814	Charleston, SC	Gentleman/Amateur Architect, Carpenter, Contractor and Designer
William Drayton	March 21, 1732	May 18, 1790	1750	1790	Charleston, London, Princeton University	Gentleman/Amateur Architect
John Christian Senf	1754	August 24, 1806	1765	1806	Germany, Charleston, SC	Engineer and drafter
Thomas Hope	December 25, 1757	October 4, 1820	1770	1820	Kent, England	Wood carving, Cabinet and Millwork, Architecture, English Architecture
James Gordon	1783	1814	1800	1814	Scotland, Charleston	Trained in Scotland, Bricklaying and amateur design
John Gordon	1787	1835	1800	1835	Scotland, Charleston	Trained in Scotland, Bricklaying and amateur design
William Jay	November 16, 1792	April 17, 1837	1800	1825	Bath, Somersetshire, England, London, Savannah, GA	Apprenticed and trained in England (Bath and London)
Frederick Wesner	January 14, 1788	March 11, 1848	1800	1825	Charleston, SC	Apprenticed to Charleston Carpenters, President of Charleston Carpenter's Society (1821)
John Horlbeck Jr. & Henry Horlbeck	September 24, 1771 October 27, 1776	February 26, 1846 December 18, 1837	1790	1830's/1840's	Charleston, SC	General Structural engineering, bricklaying
Russell Warren	August 5, 1783	November 16, 1860	1800	1860	Tiverton, Rhode Island	Trained in Rhode Island in the Adam tradition, work transitioned into Classical Revival
William Strickland	1787	April 6, 1854	1800	1864	Philadelphia, PA	Painter, Engraver and Architect of Philadelphia, apprentice to Benjamin Henry Latrobe
Charles F. Reichardt	June 27, 1803	August 7, 1871	1820	1860's	Berlin and Hamburg, Germany	Berlin Building Academy, Apprentice to Karl Friedrich Schinkel
E. B. (Edward Brickell) White	January 29, 1806	May 10, 1882	1820	1870's	St. John's Parish, SC, West Point Academy	Civil Engineer, Architect and Surveyor, Military Engineering and design at West Point, surveys and construction of bridges and railroads,

	Location	Range of Construction	Standing?	Map Color
The White House	1600 Pennsylvania Avenue NW, Washington, DC	1791 - 1800	Yes	
The Fireproof Building	100 Meeting Street, Charleston, SC	1822 - 1827	Yes	
Circular Congregational Church	150 Meeting Street, Charleston, SC	1804	Yes	
Newcomen Bank	Lord Edward Street, Dublin, Ireland (53.343836, -6..267821)	1781	Yes	
Sedgeley Porter's House	3250 Sedgley Drive, Philadelphia, PA 19130	1799 - 1802	Yes	
Washington Monument	2 15th Street NW, Washington, DC 20024	1848 - 1884	Yes	
Miles Brewton House	27 King Street, Charleston, SC, 29401	1765 - 1769	Yes	
St. Michael's Church	80 Meeting Street, Charleston, SC	1751 - 1761	Yes	
Francis Alexander Ramsey House	2614 Thorngrove Pike, Knoxville, TN 37914	1797	Yes	
Owens-Thomas House	124 Abercorn Street, Savannah, GA 31401	1819	Yes	
The Telfair House	121 Barnard Street, Savannah, GA, 31401	1819	Yes	
Manning Hall (Brown University)	Manning Hall, Prospect Street, Providence, RI	1833	Yes	
Philadelphia Custom House	420 Chestnut Street, Philadelphia, PA	1819-1824	Yes	
Randolph Hall (College of Charleston)	66 George Street, Charleston, SC	1829	Yes	
Bulloch-Habersham House	229 Barnard Street, Orleans Square, Savannah, GA	1818	No	
Westminster Arcade	130 Westminster Street, Providence, RI	1828	Yes	
Mt. Holly Prison (NJ)	128 High Street, Mount Holly, NJ 08060	1811	Yes	
Monumental Church (VA)	1224 E Broad St. Richmond, VA	1812-1814	Yes	
Nashville Capitol Building	Capitol Hill, Nashville, TN	1845-1859	Yes	
Hotel Petersburg	Jungfernstieg, Hamburg, Germany	1843	No	
Royal Exchange Dublin	Dame Street, Dublin 2, Dublin, Ireland	1769-1779	Yes	
St. Patrick's Church	619 10th Street NW, Washington, DC	1794-1809	No	
Philadelphia Masonic Temple	Chestnut and Seventh Street, Philadelphia, PA	1810-1813	No	
Pope Villa	326 Grosvenor Ave, Lexington, KY	1811	Yes	
Charleston Theater	37 New Street, Charleston, SC 29401	1792	No	
Charleston Exchange Building	East Bay & Broad Street, Charleston, SC 29401	1771	Yes	
South Carolina Society Hall	72 Meeting Street, Charleston, SC	1804	Yes	
The Stephen Decatur House	748 Jackson Place, Washington, DC	1818	Yes	
Charleston County Courthouse	Broad and Meeting Streets, Charleston, SC	1790-1792	Yes	
Charleston City Hall	Broad and Meetings Streets, Charleston, SC	1800-1804	Yes	
Trinity Episcopal Church	1100 Sumter Street, Columbia, SC	1845	Yes	

Figure A-2: Building Attribution section of raw data collection