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When Change Is the Best Option: Method for the Evaluation of the Impact of Change of Use in Houses of Worship

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When Change Is the Best Option: Method for the Evaluation of the Impact of Change of Use in Houses of Worship

Abstract

Houses of worship constitute valuable landmarks in the built environment; they represent the power of faith and mankind, in the form of durable buildings designed to stand the test of time. Nevertheless, houses of worship are becoming redundant as a result of endogenous factors, such as maintenance or lack of funding, and exogenous factors, often related to suburbanization and demographic changes. As a consequence, many houses of worship are suffering a process of decay, which calls for adaptive reuse as a necessary response.

While the adaptive reuse of houses of worship is becoming a common practice, current practices do not prioritize the comprehensive preservation of the character-defining features. Specifically, traditional preservation approaches do not take into consideration the relevance of the sensory perception of the space as a determinant in the preservation of the character and significance of the place.

This thesis seeks to provide a useful tool for preservation and design professionals in the decision-making process of adaptive reuse of houses of worship. In order to do so, this thesis: (1) identifies the character-defining elements of houses of worship and their source, (2) analyzes current practices in adaptive reuse of houses of worship, and (3) proposes an evaluation method that, when applied in early stages of the reuse process, assesses the impact that the change of use may cause in the character of houses of worship from a physical and experiential points of view.

Keywords

experiential, decision-making, underutilization, perception, identification

Disciplines

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**WHEN CHANGE IS THE BEST OPTION: METHOD FOR THE EVALUATION OF THE IMPACT
OF CHANGE OF USE IN HOUSES OF WORSHIP**

Fabiana C. Mileo

A THESIS

in

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in
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To my family, and to my loving and supporting husband.
Thank you for making this possible.

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1.1. Summary

Houses of worship constitute valuable landmarks in the built environment; they represent the power of faith and mankind, in the form of durable buildings designed to stand the test of time. Nevertheless, houses of worship are becoming redundant as a result of endogenous factors, such as maintenance or lack of funding, and exogenous factors, often related to suburbanization and demographic changes. As a consequence, many houses of worship are suffering a process of decay, which calls for adaptive reuse as a necessary response.

While the adaptive reuse of houses of worship is becoming a common practice, current practices do not prioritize the comprehensive preservation of the character-defining features. Specifically, traditional preservation approaches do not take into consideration the relevance of the sensorial perception of the space as a determinant in the preservation of the character and significance of the place.

This thesis seeks to provide a useful tool for preservation and design professionals in the decision-making process of adaptive reuse of houses of worship. In order to do so, this thesis: (1) identifies the character-defining elements of houses of worship and their source, (2) analyzes current practices in adaptive reuse of houses of worship, and (3) proposes an evaluation method that, when applied in early stages of the reuse process, assesses the impact that the change of use may cause in the character of houses of worship from a physical and experiential points of view.

The introduction of this thesis provides the necessary information for the understanding of fundamental issues related to houses of worship and their adaptive reuse. It also explores current issues affecting the continuity of use of some religious buildings, introduces the topic of adaptive reuse, and analyzes the available guidance for the adaptive reuse of houses of worship. Additionally, the introduction includes an analysis of the different approaches in the decision-making process in building adaptation.

1.2. Vacancy, Redundancy and Underutilization of Houses of Worship

Houses of worship are valuable repositories of significance for the community, they represent a substantial capital investment and they embody a great amount of energy due to their quality of construction and monumentality. Unfortunately the current social and economic situation makes them susceptible of being degraded resulting in a great quantity of redundant religious buildings. J. Douglas in his book *Building Adaptation* describes how building redundancy is, in great extent, determined by change of needs. He categorizes the factors that influence building change as exogenous and endogenous.

The exogenous factors are related to the situations happening outside the building such as urban changes, demographics, economic climate, and market. These factors cannot be controlled by the owner or occupants of the building and they are direct generators of change. The endogenous factors affecting the building are usually related to building maintenance, materials condition, funds disposition, management, among others.¹

¹ James Douglas, *Building Adaptation, Second Edition* (Oxford, UK: Butterworth-Heinemann, 2006), 10.

In case of religious buildings, the exogenous factors often trigger endogenous ones, creating a delicate situation of decline of houses of worship. The main exogenous factors that are currently influencing change in houses of worship can be grouped into three categories:²

- Suburbanization: changes in demographic have caused houses of worship in urban areas to become vacant. At the same time, the number of *megachurches*³ is growing in suburban areas;
- Decline of religiosity and denominational shift: resulting from people changing denominations during the course of their life or abandoning religion altogether; and
- Immigration and migration: immigrants from countries with different religious background tend to have problems adapting to local religion and culture, producing a change in the religious landscape.

The effect of these exogenous and endogenous factors is reflected in different statistics. According to the National Council of Churches in 2011 the trends of growth and decline of membership in churches have maintained previous years tendencies, where the Catholic Church (the largest denomination in the United States) reported a growth of 0.57%, the Southern Baptist Convention and the United Methodist Church (second and third largest denominations

² Eugene Choi, *Adaptive Reuse of Religious Buildings in the U.S: Determinants of Project Outcomes and the Role of Tax Credits*, thesis dissertation (Cleveland, OH: Cleveland State University, 2010), 13-16.

³ The Hartford Institute for Religion Research defines *megachurches* as congregations with a weekly sustained average attendance of 2,000 people or more in its worship services. Over 60% of megachurches in the U.S. are located in suburban areas and they occupy large plots of land (between 50 and 100 acres each) near major traffic arteries. For more data about megachurches refer to the link: <http://hrr.hartsem.edu/megachurch/definition.html> (accessed December 19, 2011).

in the United States respectively) declined a 0.42% and 1.01%.⁴ It is important to note that even when growth rates have been positive, they have been lower than the population growth rate, indicating a shrinking of affiliations in relative terms.

The economic recession that affected the United States during the years of 2008 and 2009 has played a big role as an exogenous factor.⁵ A report about the impact of the 2008 economic recession on American congregations found that every denomination was affected financially independent of its location or size. It also found that in an effort to deal with the economic situation, the majority of congregations used their savings, froze salaries and postponed capital projects. The report also explained that for 2010 (when the report was written) only one in ten congregations reported signs of recovery.⁶

As a result of the recession, the postponement of capital expenditures in congregations have delayed or canceled the investment of their religious buildings' infrastructure due to economic reasons. Partners for Sacred Places (a non-sectarian, non-profit organization devoted to help communities to sustain and actively use their houses of worship) estimated in a study that the average congregation will have to spend more than \$225,000 over the next years in repair of their houses of worship.⁷

⁴ National Council of Churches "Trends continue in church membership growth or decline, reports 2011 Yearbook of American & Canadian Churches" *News from the National Council of Churches* (February 14, 2011), <http://www.nccusa.org/news/110210yearbook2011.html>.

⁵ The global economic recession affected the United States starting in December of 2007 and it ended in June 2009, according to the National Bureau of Economic Research. For more information refer to the link: <http://www.nber.org/cycles/sept2010.pdf> (accessed April 28, 2012).

⁶ David A. Roozen, *HolyToll: The Impact of the 2008 Recession on American Congregations* (Hartford, CT: Hartford Institute for Religion Research, 2011), 2.

⁷ Diane Cohen and A. Robert Jaeger, *Sacred Places at Risk* (Philadelphia: Partners for Sacred Places, 1998), 2.

Similar economic pressures also come from the discrepancies between population growth rate and growth and decline of membership. Catholic Church buildings located in urban areas have suffered the most in the shift of congregational membership, causing economic decay. As a result, parishes in urban centers are being closed at a rapid pace. The city of Detroit is the most recent case of parish restructuring. On November 2011, Detroit's Archbishop announced the result of a year-long strategic planning process for the city's parishes. The final recommendations included the closure of 9 parishes in the next five years and the merging of 60 parishes down to 21.⁸ The Archdiocese of Boston announced during the same year the decision of relegating six of its churches to secular use for future redevelopment, and two others for alternative ecclesiastical uses.⁹ In order to involve local community in the process, the Archdioceses of Boston released a *Consultation Questionnaire*, asking members about their opinion on relegating to secular use some of their churches and their views on the impact for the community.¹⁰

1.3. Adaptive Reuse of Houses of Worship

Adaptive reuse is one of the available alternatives for the prolongation of the life of a religious building once its original use is no longer needed.¹¹ The term adaptation as defined by J. Douglas refers to "*any work to a building over and above maintenance to change its capacity, function or*

⁸ Archdiocese of Detroit "Lay Leaders Present Parish Recommendations to Archbishop Vigneron." (*Archdiocese of Detroit News*, November 30, 2011), 1.

⁹ Archdiocese of Boston "Cardinal Makes Decisions On Future Of Eight Closed Churches" (Braintree, July 14, 2011).

¹⁰ See Appendix 1.

¹¹ Other alternatives for the prolongation of the life of a religious building usually do not involve changing the space. These can include the use of a house of worship for other religious purposes, a shared use with art programs, among others.

*performance.*¹² He describes adaptive reuse as the conversion of a building into more effective and efficient use serving better to the client's requirements, including any necessary modifications to overcome the obsolescence of the structure granting the long-term use of the building.¹³

The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings define rehabilitation as:

*"The act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."*¹⁴

The first point of the *Standards* states that *"A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships."*¹⁵

These considerations highlight the importance of adaptive reuse from a heritage preservation perspective, but the reuse of existing buildings is not only relevant for the historic preservation field but is also considered a strategy for sustainable development. Adapting the available building stock for new current uses minimizes the quantity of new material input while maximizing the quality of the built environment.¹⁶ Therefore, adaptive reuse serves as a tool to improve the available resources, from the cultural and sustainable point of view. The term reuse

¹² Douglas, *Building Adaptation*, 1.

¹³ Ibid, 146.

¹⁴ National Park Service, *The Secretary of the Interior's Standards for the Treatments of Historic Properties*, http://www.nps.gov/hps/tps/standguide/rehab/rehab_index.htm.

¹⁵ National Park Service "Standards for Rehabilitation Historic Properties" *The Secretary of The Interior's Standards for the Treatment of Historic Properties*, http://www.nps.gov/hps/tps/standguide/rehab/rehab_standards.htm.

¹⁶ U. Hassler and N.Kohler "Cultural and Environmental Long-Term Strategies for the Built Environment" *Rational Decision-making in the Preservation of Cultural Property* (Berlin: Dahlem University Press, 2001), 245.

is also included in The National Trust for Historic Preservation Sustainability Initiative as one of the four core principles of sustainable stewardship: reuse, reinvestment, retrofit and respect.¹⁷

The National Trust recognizes the value of building reuse from the carbon and embodied energy points of view and its life cycle analysis.¹⁸

In terms of houses of worship, adaptive reuse is becoming popular. As noted earlier, many houses of worship in the United States are becoming vacant. This means that numerous religious buildings are now available in the real estate market. Partners for Sacred Places estimated that more than 200 houses of worship have been adaptively reused in the United States to date.¹⁹ The National Trust for Historic Preservation advocates for the preservation and sensitive reuse of historic houses of worship when its original use cannot be maintained.²⁰

1.4. Existing Guidance on Adaptive Reuse of Houses of Worship

In order to provide guidance for the reuse of religious buildings, The National Park Service U.S. Department of Interior’s published a report interpreting the application of the Secretary of the Interior’s Standards for the interior reuse of historic churches (see Appendix C).²¹ In the report they used two reused religious buildings to illustrate compatible and incompatible treatments of the historic fabric. The applicable criteria from the *Standards for Rehabilitation* considered for the analysis were:

¹⁷ Patrice Frey, *Building Reuse: Finding a Place on American Climate Policy Agendas* (Washington DC: National Trust for Historic Preservation, 2008), 4.

¹⁸ *Ibid*, 8-16.

¹⁹ Not published data obtained from a study of adaptive reuse of houses of worship in the U.S. conducted by Partners of Sacred Places during the summer of 2011.

²⁰ “Our Position on Historic Houses of Worship” by The National Trust for Historic Preservation.

²¹ Mary Grzeskowiak and Camille M. Martone, *ITS Number 6: Interpreting The Secretary of the Interior’s Standards for Rehabilitation: Preserving Historic Church Interiors* (Technical Preservation Services National Park Service U.S. Department of the Interior, 1999).

1. Compatible Use
2. Retention of Historic Character
5. Preservation of distinctive features, Finishes and Craftsmanship
10. Reversibility of New Additions/Alterations

The report brings special attention to the treatment of common architectural features to this type of building such as stained glass windows, choir lofts, altars and large open spaces:

“Alterations which compromise or destroy these spaces or which cause the removal of distinctive architectural features and finishes, or which subdivide these two-story spaces and that result in compromising the integrity of these significant spaces, will not meet Standards 2 and 5, and, in some cases, also will not meet Standards 1 and 10.”²²

In the analysis, the report implicitly establishes two levels of analysis: (1) the type of new use, and (2) the type of physical changes. The report favors the adaptation of historic churches into uses that are less invasive and that require fewer modifications of their architectural features. In terms of the type of use, J. Douglas in his book *Building Adaptation* listed possible uses that can be adapted to houses of worship; ranked from the less invasive to the more intrusive, these uses are:²³

- preservation as a monument;
- cognate religious use;
- continuing use as a place of worship;
- community use;
- commercial use;
- recreational use;
- residential use;
- mixed residential/church use; and
- industrial use.

What J. Douglas considers to be most important in maintaining the character of a religious building are retention of the fenestration and the way in which the interior space is subdivided.

²² Ibid.

²³ Douglas, *Building Adaptation*, 164 - 167.

Regarding the latter he favors the introduction of new internal steel framework to support new floor subdivision in substitution of new beams anchored to the existent walls.²⁴

It is recognized by design and preservation professionals that the adaptive reuse of houses of worship can be more challenging and potentially invasive than the adaptive reuse of other types of buildings.²⁵ However, adaptive reuse of an underutilized or vacant house of worship can catalyze civic pride, economic and cultural development.²⁶ Adaptive reuse calls for creative design solutions, for this reason is important to get appropriate advice and guidance when dealing with the potential reuse of a religious building.²⁷

1.5. Omissions in the Existing Guidance

Although the above-mentioned existing guidance on adaptive reuse of houses of worship establishes a base for the preservation of the physical character-defining features of religious buildings, there is a gap in identifying and approaching the preservation of the sensory and experiential elements, which also define the character of a house of worship.

In order to evaluate how change of use may affect a house of worship, it is first important to identify the elements that give this type of building its distinctiveness and authenticity. Typically, the character-defining features associated to houses of worship are related to its physical fabric.

In fact, the Secretary of the Interior's Standards for the Treatment of Historic Properties focus

²⁴ Ibid, 167.

²⁵ You Kyong Ahn, *Adaptive Reuse of Abandoned Historic Churches: Building Type and Public Perception*. (College Station, TX : Texas A&M University, 2007), 140.

²⁶ Partners for Sacred Places, *Planning for the Reuse of Cambria City Churches* (Opening presentation: Johnstown, PA, 2010).

²⁷ "Adaptive Reuse" by Paul Zakrzewski (Common Bond Volume 17 Number 2, 2002), 5.

on the preservation of the historic material of a building and its distinguishing character,²⁸ establishing the physical fabric as a well-recognized defining element. However, there is another set of sensory and experiential aspects of the interior space of a house of worship that are also relevant in the perception of the physical fabric and in the identification of the character-defining elements of a spiritual space. This thesis explores both in an effort to provide a comprehensive approach to the subject, and analyzes the importance of the second as a fundamental part in experiencing the place.

1.5.1. Physical Character-defining Features

The physical character-defining features of a building are the tangible visual aspects that provide it with its own distinctive appearance. These may include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces, and features. If any of these elements are not preserved or altered in an insensitive way its character can be seriously damaged.²⁹

Houses of worship have distinctive elements that differentiate them from other types of buildings. As explained by J. Douglas in his book *Building Adaptation*, there can be common characteristics to all religious buildings.³⁰ He identifies seven common characteristics such as thick masonry walls, tall-narrow fenestration with stained glass, steep pitched roofs, and high

²⁸ Lee H. Nelson, *Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character* (Technical Preservation Services, National Park Service U.S. Department of Interior: 1988).

²⁹ Lee H. Nelson, *Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character* (Technical Preservation Services, National Park Service U.S. Department of Interior: 1988).

³⁰ James Douglas, *Building Adaptation, Second Edition* (Oxford, UK: Butterworth-Heinemann, 2006), 162-163.

floor-to-ceiling dimensions. However, this attempt to find elements that are common to all houses of worship is too simplistic since there is not a universal blueprint for religious buildings nor they share a single type of architectural form or style.³¹

1.5.2. Experiential Character-defining Features

The sensory and experiential aspects that define a house of worship have been the subject of analysis by different disciplines. One of these describes the role of houses of worship as the connection between the sacred and the profane; a physical point of reference to the sacred within the profane architecture of the city.³² This philosophical approach assigns a symbolic value to the material fabric of the building that acts as the boundary between two worlds, where the building and its materials become the container of the sacred. This point of view is contrasted by other views that understand the sacred as the product of human interactions that cannot be manifested in the material, clarifying that the idea of architectural form as something sacred is a misconception.³³

One of the aspects that define a house of worship is its connection with the community and the context in which it stands. The National Trust for Historic Preservation recognizes that houses of worship have a great historic, artistic, social and cultural value to communities.³⁴ Under this view, houses of worship are examples of how communities can come to associate the built

³¹ Nelson, *American Sanctuary: understanding sacred spaces*, 129. In this chapter written by Paula M. Kane, she refers specifically to Roman Catholic Churches in the United States, but her comment can be also applied to other denominations.

³² Mircea Eliade, *The sacred and the profane: the nature of religion* (New York: Harper & Row, 1961), 23.

³³ Louis P. Nelson, *American Sanctuary: understanding sacred spaces* (Bloomington, US: Indiana University Press, 2006), 4.

³⁴ "Our Position on Historic Houses of Worship" by The National Trust for Historic Preservation. <http://www.preservationnation.org/issues/historic-houses-of-worship/public-policy/our-position.html> (accessed December 14, 2011).

environment with shared values.³⁵ Houses of worship would be, therefore, storytellers of the events they hold, echoing the people who gather in them.³⁶ Not only are religious buildings closely attached to local history³⁷ but they are also often the most ambitious and architectural significant buildings in their urban context.³⁸

Another aspect that defines the experiential character-defining features of a house of worship is its spiritual atmosphere, which is usually determined by the way in which its users perceive the space. In a conference organized by the Academy of Neuroscience for Architecture, an interdisciplinary group of scholars analyzed the symbolic messages transmitted through the physical elements of a building and how these affect the users' disposition toward a spiritual state. They stated that:

*"At the level of architectural experiences, or more specifically the human response to places, it is clear that 'space matters.' The attributes of space from shapes, to color, thermal conditions, light (both natural and artificial), and sound are perceived by our sensory systems..."*³⁹

During the conference a great effort was made in defining what a *sacred* space is and what a *spiritual* space is. The first was defined as the space with a religious significance assigned to it. The second as *"any place (including sacred spaces) that evokes special transcendent feelings, or connection with something larger and deeper than oneself."*⁴⁰ In terms of the sensory and experiential character-defining features of a house of worship, any element that contributes to

³⁵ Elaine B. Stiles, *A Guide to Preserving Historic Unitarian Universalist Churches* (Unitarian Universalist Association, 2002).

³⁶ Richard S. Vosko, *God's House is Our House* (Collegeville, MN: Liturgical Press, 2006), 3.

³⁷ *Preserving Historic Religious Properties: A Toolkit for Congregations & Community Leaders* (Boston, MA: The Massachusetts Preservation Coalition and The National Trust for Historic Preservation, 2005), 4.

³⁸ "America's Endangered Historic Urban Houses of Worship" a paper by Partners for Sacred Places, 2.

³⁹ Eve A. Edelstein, *Neuroscience & The Architecture of Spiritual Spaces*. Report of the workshop held in April 2004 (Columbus, IN: Academy of Neuroscience for Architecture, 2005), 4.

⁴⁰ *Ibid*, 14.

its spiritual atmosphere is relevant to the space. These are typically related to the volume of the space, light and smell, and are the most susceptible to be modified with any interior alteration to the building.

1.5.3. Existing Guidelines for the Identification of Character-defining Features

Awareness of the importance of preserving the character-defining features is a critical factor in design for adaptive reuse of a house of worship. Therefore, the effective identification of these features becomes an essential part of the planning, and design process.

The National Park Service in its Preservation Brief No.17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character, provides support for building owners and design professionals to help identify the physical character-defining features of their buildings. These guidelines are based on a visual inspection with a three-step approach:

- 1) the first step observes the building from afar, giving an idea of the relation of the building with its context and revealing any prominent part of it;
- 2) the second step proposes an inspection from an arm-length distance with the purpose of recognizing the quality of its materials and craftsmanship; and
- 3) the third step includes the visual inspection of the interior of the building identifying any relevant detail and the relation of the interior spaces and the visual connection between them.⁴¹

⁴¹ Nelson, *Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*.

The National Park Service also published the Preservation Brief No.18: Rehabilitating Interiors in Historic Buildings - Identifying Character-Defining Elements, in which it gives an overview of the elements that can contribute to the sense of historic character in a building. It states that:

*"...a thorough professional assessment should be undertaken to identify those tangible architectural components that, prior to rehabilitation, convey the building's sense of time and place--that is, its "historic character."*⁴²

The Brief No. 18 relies on the identification of primary and secondary spaces, according to their relevance, in order to maintain the historic character during the rehabilitation process. The primary spaces are defined as the most relevant due to their use, visual importance, architectural detail and proportions, and the preservation of these is essential in order to maintain the character of the place. The secondary spaces are defined as more utilitarian and less impressive in size, allowing them to admit greater amount of change without affecting the overall character of the building. In addition to the identification of the different types of spaces, and in consistency with the Brief No. 17, the Brief No. 18 also emphasizes the importance of assessing the specific architectural features and finishes that provide with character to the space.

Other sources, such as the book *Building Evaluation for Preservation*, offer an overview of the most common architectural styles in an effort to facilitate the task of recognizing the characteristic features of a building without involving a qualified expert on the subject.⁴³

⁴² H. Ward Jandl, *Preservation Brief 18: Rehabilitating Interiors in Historic Buildings - Identifying Character-Defining Elements* (Washington, D.C.: U.S. Department of the Interior National Park Service, 1988).

⁴³ J. Stanley Rabun and Richard M. Kelso. *Building Evaluation for Preservation* (National Council of Architectural Registration Boards, 2009).

The National Park Service' preservation briefs address some of the main issues involved in the identification of the architectural defining features of a historic building. However, their approach is too broad and open to interpretation. For example, the Brief No. 18 briefly mentions the identification of non-physical sources of character, such as significant historical events and sequence of interior spaces, with little emphasis in the importance of their preservation for the success of the rehabilitation process.

The identification of the physical character-defining features of a house of worship is a critical step in the evaluation of the significance of the building and a fundamental task in order to assess the impact that a change of use may create. Equally important is the identification of those sensory and experiential character-defining features that determine in great extent how the physical fabric of a religious building is perceived. Visual inspection, historic research, and documentation are the logical steps to follow in order to achieve accurate results.

1.6. Decision-making Process for Adaptive Reuse of Houses of Worship

This part of the introduction explores available information about the decision-making process related to the adaptive reuse of buildings. The decision-making process in adaptive reuse projects needs to incorporate both the physical fabric of the building as well as the difference of opinions, criteria, and needs of the stakeholders involved. An analysis of the available literature reveals two important dimensions in decision-making processes: (1) the drivers, and (2) the approach to the process itself.

1.6.1. Decision-making Drivers

Any decision-making process in adaptive reuse is driven by the participants and essential variables that determine the feasibility of the new use. In terms of the agents involved in the decision-making process in adaptive reuse, a good source is the book *Adapting Buildings for Changing Uses*, in which the author identifies five types of participants or “decision agents” involved in the reuse process:⁴⁴

- 1) investors;
- 2) producers (designers and constructors);
- 3) marketers;
- 4) regulators; and
- 5) users.

The author, D. Kincaid, also explains that the success of a reuse project relies on its viability, which should be one of the main drivers in the decision-making process. He defines four categories to be considered when identifying the viability of a project as: (1) cost, (2) value, (3) risk, and (4) robustness.⁴⁵

The viability of the project itself must be reconciled with the feasibility of the new use. The author suggests using the following basic framework to consider different viable new uses for the adaptive reuse of buildings:⁴⁶

- The supply characteristics: physical opportunities and constraints of the building such as location, site, facilities, and services.

⁴⁴ David Kincaid, *Adapting Buildings for Changing Uses: Guidelines for change of use refurbishment* (London and New York: Spon Press, 2002), 13.

⁴⁵ *Ibid*, 15.

⁴⁶ *Ibid*, 21.

- The demand characteristics: related to the requirements of use taking into account the demands and needs of the users.
- The performance requirements: where supply and demand meet, matching the physical components with the operational requirements.
- The decision procedures: the assessment of different options of change of use, taking into account their use viability, physical viability, and financial viability.

1.6.2. Approaches to the Decision-making Process

L. Martignon, one of the participants to the workshop Rational Decision-making in the Preservation of Cultural Property held in Dahlem University in 2001, explains the existence of two tendencies in the decision-making process. The first one sees the decision-making process as a group of logical and probabilistic rules that ensure the best and optimal results. The second tendency proposes a more realistic approach of the decision-making process that takes into account its participants and the surrounding environment.⁴⁷

As an example of decision-making process based in logical parameters, the book *Adapting Buildings for Changing Uses* proposes a computer-based methodology using as a base the general framework explained previously (supply, demand, and performance requirements), with the final purpose of providing a decision aid called the *Use Comparator*. One can recognize the abovementioned decision-making drivers (elements of viability) in the Comparator: it attempts to identify the most appropriate new use for a building based on its physical location and characteristics (the supply), and the building requirements that a particular use needs (the

⁴⁷ Laura Martignon “Cultural and Environmental Long-Term Strategies for the Built Environment” *Rational Decision-making in the Preservation of Cultural Property* (Berlin: Dahlem University Press, 2001), 264.

demand). In order to do this, a database with 77 basic uses was gathered and the characteristic profile for each of these uses was determined. The Comparator works as a standard spreadsheet that matches the characteristics of the building to be reused with the profile of the 77 uses, ranking them through comparison and determining the best possible uses for the building.⁴⁸

In contrast to the logical decision-making approach that the Use Comparator offers, another example is based in a more realistic method. During the summer of 2009 three Roman Catholic parishes in the city of Johnstown, PA were closed, leaving their buildings vacant. A year later, and with funds raised through a volunteer group called Save Our Steeples, Partners for Sacred Places was hired to lead the planning process to reuse the three vacant churches.⁴⁹ In order to do this, Partners for Sacred Places organized a *Design Charrette* that brought together citizens, community leaders, and designers to an intensive, participatory workshop, indicating that this approach relies heavily on another decision-making driver (the agents). The purpose was to “*build a new or alternative vision for a building or place through a creative, collaborative process.*”⁵⁰ The guiding principles of the process were:

⁴⁸ Kincaid, *Adapting Buildings for Changing Uses*, 33-52.

In order to map the profile for each of the 77 uses, thirteen characteristics were taken into consideration: zoning classification, hostility of the building location, building availability (total or partial), floor to ceiling height, existing floor strength, building specification, building character, perimeter to perimeter depth of the building floor plate, access, characteristic of the street, local amenities, public transportation provision, and private transportation provision. The comparator system is available at the Bartlett School of Graduate Studies, London.

⁴⁹ Mike Faher, "Church 'brainstorming'" *The Tribune Democrat, Johnstown, PA*. November 15, 2010. <http://tribune-democrat.com/local/x967715328/Church-brainstorming>.

⁵⁰ Partners for Sacred Places, *Planning for the Reuse of Cambria City Churches* (Johnstown, PA: Partners for Sacred Places, 2010).

- to manage a process where options for adaptive reuse were rigorously explored with significant community input without advocating for any particular reuse option;
- to recognize the challenges involved and focus on the positive and possible;
- to base the ideas and plans resulting from the workshop on the practical and doable;
- to connect with larger planning initiatives for Johnstown;
- to involve a variety of stakeholders; and
- to build upon and support positive developments in the neighborhood.

The outcomes of the workshop consisted of two new use proposals for each church, ranging from ethnic food factory, climbing wall center, a columbarium, brewpub, indoor green space, and performing arts center. Each of the two new uses was tailored for each building's individual needs, taking into account each building's physical characteristics and the inputs from the community, designers, and planners. The next step was the creation of a steering committee capable of carrying the work forward after the conclusion of the Charrette.⁵¹

1.7. Conclusion

There is a pressing need for the adaptive reuse of religious buildings, and for deeply understanding what constitutes the character-defining elements of a house of worship. The physical character-defining features play an important role in the preservation of all types of buildings, but the way in which these elements are experienced is especially important in houses of worship. Currently, the greatest omission of the existing guidance for the adaptive reuse of

⁵¹ Partners for Sacred Places "Re-using Closed Churches in Johnstown, PA," <http://www.sacredplaces.org/Johnstown.htm>.

religious buildings is the lack of recognition of the experiential character-defining features and their role in the preservation of the character of a religious building.

The contrasting approaches found in the literature about decision-making process associated to the built environment show the options related to the decision-making process, pertaining to evaluation and determination of the preferred use from an historic preservation standpoint. Each approach addresses different drivers to answer the problem of future use, one relying in physical and contextual features while the other gives a great importance to the stakeholders involved in the process.

Nowadays the Secretary of the Interior's Standard for Rehabilitation and the National Park Service Preservation Briefs No. 17 and No. 18 are the only available guidance on how to deal with historic buildings from the physical point of view. However, the interpretation of these guidelines depends on each individual case and the sensibility and expertise of the person in charge of the rehabilitation. It is therefore evident that there is a need for a framework that offers guidance and considers all the variables involved in the adaptive reuse process, not only from the physical point of view but also from sensory and experiential perspective.

Chapter 2

Character of Houses of Worship

2.1. Summary

This chapter addresses the identification of the main sources of character in religious buildings, which can be directly linked to the physical fabric as well as to experiential elements. In addition to identifying the source of the character, this chapter also synthesizes the most common character-defining features of houses of worship from an experiential and physical point of view.

In order to maximize the usefulness of this thesis, and based in the information gathered in the literature review, this chapter specifically targets those houses of worship that are likely to be candidate for adaptive reuse in the United States: mid-size houses of worship located in urban areas mainly of Catholic and Protestant denominations.

2.2. Source of Character

The character of a house of worship is defined by the elements that provide it with its particular appearance and identity. These elements can be physical associated to its materials, shape, craftsmanship and style, and experiential, which covers the sensory perception of the space and the events related to the place.

The identification of the elements that contribute to the character of a house of worship is a fundamental task in order to guarantee any successful intervention to its physical fabric. Since the alteration of the character-defining features can severely modify the perception of the

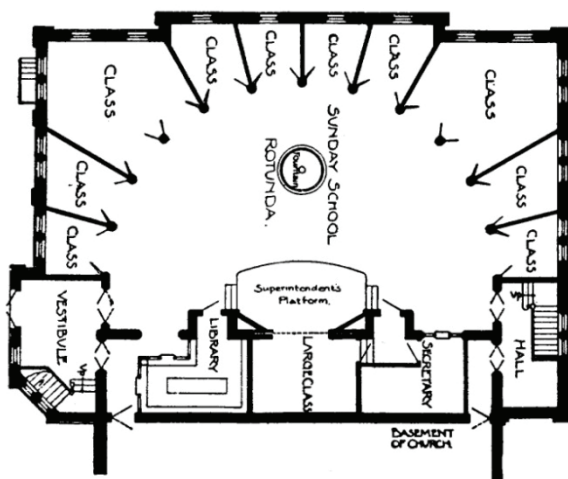
space, it is necessary to embrace their identification with sensibility and understanding of the history of the place.

In order to evaluate and identify the character-defining features of a house of worship it is important to understand the *source* of the character. This source can be a single source or the combination of different ones. The following classification identifies some of the general sources that provide character to the elements that compose a house of worship:

- **Architectural style:** the architectural style of a house of worship can greatly determine its character-defining features. The style can influence the appearance of the building, determining elements such as the shape of the building, structure composition, windows, ornamentation, materials, and finishes. There are many architectural styles that have been used in the construction of houses of worship and each one has its own particularities. One of the styles that have been widely used houses of worship is the Gothic Revival style that became popular in the 19th century and is characterized by its emphasis in naturalism and influence of medieval aesthetics.⁵² Houses of worship built in the Gothic Revival style have common character-defining elements such as pointed arch windows, expressive use of the stone, foliated ornaments, buttresses and towers among others;
- **Use:** The use is tightly related to the principles and philosophy of the religion it holds, as each type of service requires different ritual or liturgical artifacts and disposition of the space. The distribution of the space and the elements that compose a house of worship can vary according to the particular use that each denomination gives to its space. One example

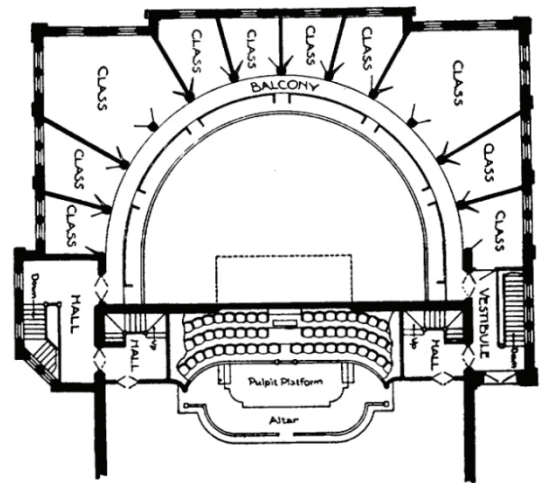
⁵² Carol E. Hoffecker "Church Gothic: A Case Study of Revival Architecture in Wilmington, Delaware," Winterthur Portfolio, Vol. 8, 1973: 215-231.

of how use can define physical character to a house of worship is the Akron Plan Sunday School, widely applied in Protestant churches during the late 19th century and early 20th century. The Akron Plan Sunday School is the formal translation of the educational movement that Methodist and Episcopal churches embraced during the 19th century.⁵³ In this sense, churches that applied the Akron Plan Sunday School were characterized by having a one-or-two-story Sunday school attached to the sanctuary building, with a main central space usually called the *rotunda* and classrooms that opened to this central space (see Figure 1). The classrooms were visually connected to the rotunda through the use of sliding doors. The central space had a podium where the lecture of the day was read, after that, each class room closed their sliding doors to have individual sessions and, at the end of the day, the doors were opened again for the group conclusion. Even if the particular elements that compose the Sunday school may not been relevant on their own, the group of elements and their use make them significant and character-defining.



By permission of G. W. Kramer, Architect, New York City

FIG. 1.—The Original Akron Plan. Main



By permission of G. W. Kramer, Architect, New York City

FIG. 2.—The Original Akron Plan. Balcony

Figure 1: "The Original Akron Plan" (Image published by The University of Chicago Press in *The Biblical World*, Vol. 44, No. 3 (September, 1914), pp. 150-224)

⁵³ Christopher Stephen Jenks "The Akron Plan Sunday School," *Common Bond*, December 1995.

- **Craftsmanship:** houses of worship and the different elements that compose them can have character-defining features directly related to the quality and details of its construction. The value of craftsmanship can be found in intricate decorative elements in important temples as well as in vernacular houses of worship, where the structure is of great quality even when its decoration and design are not as intricate (see Figure 2). An example of a type of house of worship that holds a great amount of character due to its craftsmanship are the churches of the Carpenter Gothic style. This style was an American interpretation of the Gothic Revival style that took advantage of the invention of the scroll saw and the availability of



Figure 2: "View of Nave, Looking East Toward Altar. Ceiling modeled after Henry VII chapel at Westminster Abbey" Unitarian Church, Charleston, SC (Photo courtesy of Library of Congress, Prints & Photographs Division, HABS, SC-473-7, November 1977)

wood.⁵⁴ It was related to wood structures built by house-carpenters mixing influences of the picturesque movement;

- **Symbolic:** this source of character relates to any of the elements and objects of a house of worship with a symbolic value attached to it. Examples of this type of source are the physical representation of deities in Christian temples, or the representation of the eternal light in the Jewish temples. While the symbolic value of character-defining features in a religious building is evident exclusively to the denomination it holds, it is important to recognize its significance and treat it with sensibility and respect.
- **Historic:** the character of a sacred place can be highly influenced by important events developed in its precinct. In this sense, the character can be reflected in a particular part or element of the building, or can also be related to the whole building in an ephemeral way. The character-defining elements derived from this source need to be identified through historical research.

The understanding of the source of significance of character-defining features is an aid to determine which elements are the most important. As explained in the Secretary of the Interior's Standards Preservation Brief 17, a complete understanding of the building through documentation research is fundamental. Information of the building such as its architect, owner, function, materials, style and historical outline, will provide the necessary background to help make informed decisions. In addition to the documentation research, visual inspection is

⁵⁴ John Poppeliers et al., *What Style Is It?* (Washington, D.C.: The Preservation Press National Trust for Historic Preservation, 1977), p. 18.

essential in the identification of the character-defining elements of any building and how they are perceived.⁵⁵

2.3. Character-defining Features

As explained in the introduction of this thesis there is a particular group of religious buildings that are most susceptible of potential reuse, at least in the United States and other western countries: mid-size buildings (neither of the size of cathedrals nor chapels), usually from Catholic or Protestant denominations and located in urban areas. This part of the chapter addresses the character-defining features of this group of houses of worship in an effort to frame and focus the research.

The most common physical and experiential character-defining features of the targeted type of religious building are presented in the following sections. It is important to note that, since the scope of this thesis is to analyze the impact of change of use in houses of worship, it is assumed that the most relevant impact takes place in the interior of the building and also in transitional interior-exterior elements such as windows. Consequently the character-defining elements to be analyzed are focused in the interior spaces and surfaces and wall openings of the building.

2.3.1. Physical Character-Defining Features

The physical character-defining features of a house of worship are the ones related to the fabric of the building. These elements can be structural, functional or decorative and can be generally

⁵⁵ Lee H. Nelson "Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character" by the Technical Preservation Services, National Park Service U.S. Department of Interior. 1988. <http://www.nps.gov/hps/tps/briefs/brief17.htm>.

identified by visual inspection. The most common physical character-defining features for the targeted group of houses of worship are discussed below.

Structure

The structure of a house of worship is a highly relevant element that determines not only the stability of the building but also the shape of the space. The structure is directly related to the architectural style of the building, the expertise and craftsmanship of the builders, and the availability and quality of materials. The role that the structural members play in a house of worship is important because the structure is often evident as part of the ornamentation and architectural expression of the space (see Figure 3). This role is emphasized by the fact that houses of worship often feature single open spaces. The structural elements commonly found in religious buildings can be divided in the following:

- Roof structure or elements with horizontal spans: depending on the type of roof there can be different types of structural members, such as beams, trusses, domes, arches, vaults, and lanterns; and
- Vertical supporting structure: the supporting structure can include columns, arches, bearing walls, buttresses, among others.

From a functional point of view, all structural members are equally important in order to provide the building with the stability it needs. However, in terms of space there are structural members that are more visually prominent than others, adding character to the space and becoming part of the identity of a house of worship.



Figure 3: Green Hill Presbyterian Church: rafters with iron tie rods, Philadelphia (Demolished) (Photo courtesy of Library of Congress, Prints & Photographs Division, HABS PA,51-PHILA,741-7, documentation compiled after 1933)

Windows

Windows are also potentially significant character-defining features in houses of worship, because of their role in the illumination and coloration of the space, their formal expression both in the interior and exterior of the building, and their treatment in terms of the type of glass. In most cases windows are functional as well as decorative elements, contributing to the spiritual atmosphere of the space with light infiltration, and as a work of art depicting symbolic messages with stained glass decorations (see Figure 4). The fact that windows can come in a variety of shapes such as rectangular, arched, round, and fan windows, add to their potential as character-defining elements, playing an important role in conveying the atmosphere of the space and in some cases the architectural style of the building.

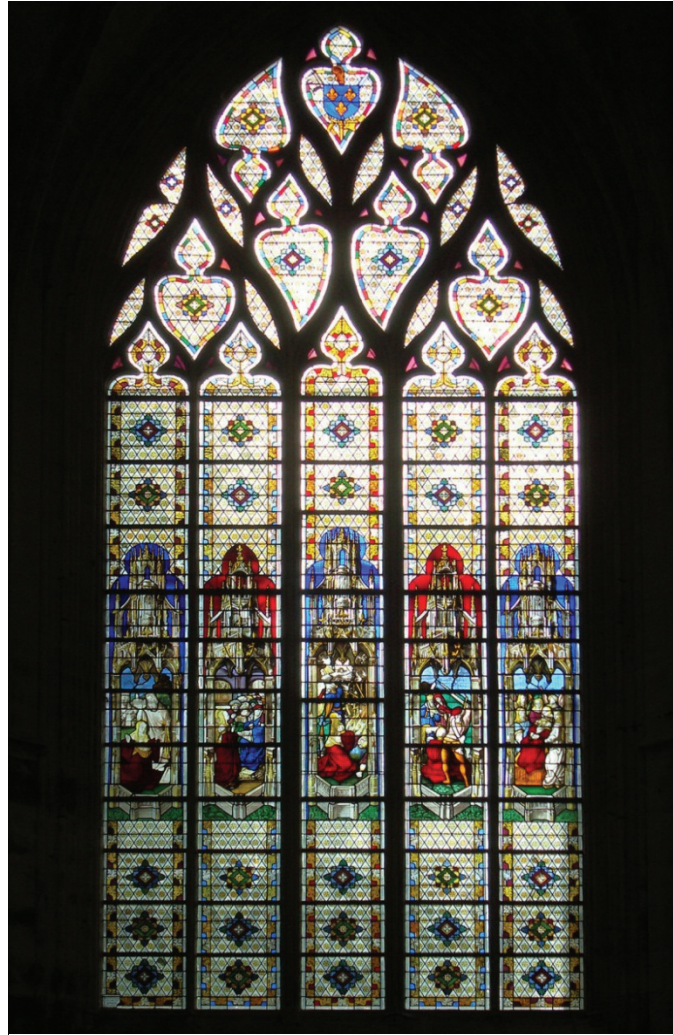


Figure 4: Stained Glass window (photo by the author, August 2008)

Materials and finishes

The materials of houses of worship are closely related to the architectural style and the location of the building. The interior materials and finishes are typically linked to the construction system and type of structure. It is common to have interior finishes in carved stone, wood and plaster, with finishes that vary from varnished or natural surfaces to gold leaf decorations and paint.

Materials and finishes are an important part of the architectural expression of any religious building: they can express the solidness and holiness of the space all in one.

Seating Configuration

The seating configuration in houses of worship is a fundamental piece in the distribution of the interior space. In most of the cases the seats in a sanctuary are fixed furniture that delimits the circulation paths and the overall distribution of the space. The disposition of the seats (usually pews in form of benches or boxes) can vary from one denomination to another; the most common disposition being in form of rows of benches looking toward the place where the ceremony of worship is held. Rows of seating can radiate in a concentric shape forming curved or inclined rows, can follow a specific symbolic or spiritual orientation (cardinal orientation toward a specific place in the globe) or can be simply located perpendicular to the orientation of the nave. Besides the type of seats meant to accommodate the general audience, there are other forms of seating configurations that are specific to the denomination and size of the building, such as balconies, choir, lofts and box pews (see Figure 5). These alternative types of seating configuration usually have the function of dividing the audience in groups, establishing physical barriers between different types of hierarchical groups, families, class and/or gender. Overall, the disposition of the seats determines not only the interior distribution of the space but also conditions the way in which the space is experienced, establishing physical barriers and directing the attention of the worshippers toward a specific area of the building.



Figure 5: Old South Meetinghouse “Interior, General View Looking Northeast” (photo by Cortlandt V. D. Hubbard, Library of Congress, Prints & Photographs Division, HABS MASS,13-BOST,54-8, Summer 1968)

Musical Components

The most common musical components in a house of worship are the pipe organ and the choir (either located in the sanctuary level or as a loft). As tangible character-defining features, both can be valuable, holding a great amount of craftsmanship.

- Choir: in religious buildings the choir is the seating area designated for the members of the choir and, in some occasions, part of the clergy. Choirs can be found in two forms: located

between the sanctuary area and the nave (mostly in cathedrals and large churches) or in a balcony (choir loft). The first form of choir is usually composed by a set of stalls located in the perimeter of the area bounded by a balustrade, handrail or screen. The stalls, usually made in carved wood, have a high back and sometimes a canopy at the top. The choir loft is usually less elaborated, and has the form of a balcony dedicated only for the members of the choir.

- Pipe organ: wind musical instrument composed by one or more keyboards and by wood and metal pipes. Pipe organs vary in size and are usually embedded in the structure of the building, serving not only as a musical instrument but also as a decorative piece. Pipe organs are usually custom made for each building, which together with their massive size and complex configuration, makes them challenging to reuse or to incorporate into new uses without compromising their integrity.

Artwork

Houses of worship are, in most of the cases, containers of valuable artistic expression, where the artwork can be used as ornamentation, as functional element and/or as symbolic feature. A wide variety of artistic media can be found in religious buildings: stained glass windows, sculptures, paintings in form of frescoes, among others. The themes reflected in artworks vary from one religion to another. Religions such as Judaism and Islam do not allow the use of human images in their buildings. In contrast, Christian denominations have a tradition of venerating human images and they constantly appear in their houses of worship both depicted and sculpted. Commonly, artwork in religious buildings contains symbolic messages, such as

passages of sacred writings that link directly with the denomination they hold, making it a tangible character-defining feature.

Liturgical and Ritual Artifacts and Furniture

There are particular liturgical artifacts needed during the religious rite that provide character to the sacred place and vary across each denomination and the type of service they perform. As mentioned in the *Seating Configuration* section of this chapter, the type of furniture is also characteristic of the denomination and size of the building (See Figure 6). The following table shows the most common denominations in the United States and their most usual liturgical artifacts.

Table 1: Liturgical and ritual artifacts and furniture by denomination.

Liturgical elements	Roman Catholic	Protestant	Jewish	Friends
Liturgy platform	Altar	Altar	--	--
Reader platform	Pulpit / lectern / ambo /	Pulpit / lectern / ambo /	Bimah / tebah	--
Sacred cabinet	Tabernacle	Tabernacle	Torah Ark	--
Space divider	--	--	Mechitzah	Partition
Study room	Sunday school	Sunday school	Beth midrash	--
Special seating	Choir	Choir	--	Gallery / loft
Important artifacts	Font	Font	Ner tamid / eternal light	--



Figure 6: Episcopal Church of the Evangelist (currently the Samuel S. Fleisher Art Memorial), Pulpit (Photo by the author, July 2011)

2.3.2. Experiential Character-defining Features

As well as physical character-defining features, there are experiential character-defining features in houses of worship that are related to the sensory perception of the space. As Thomas Barrie explains in his book *Spiritual Path, Sacred Place* “...the feel and texture of materials and surfaces, the sound of echoes and footsteps, all are part of the complete architectural experience.”⁵⁶ In these ephemeral components of the architectural experience relay a great part of the character, especially in houses of worship where the spiritual

⁵⁶ Thomas Barrie, *Spiritual Path, Sacred Place: Myth, Ritual, and Meaning in Architecture* (Boston & London: Shambhala, 1996), p. 47.

atmosphere has an important role. The following are the most relevant experiential character-defining features in the targeted segment of houses of worship.

Volume

Houses of worship are usually characterized by having a distinctive use of spatial volume. In almost every style and type of house of worship, the ceiling height of the main nave plays an important role in the perception of the space. Ceilings usually go higher than two stories, having an uneven and narrow proportion that emphasizes the verticality of the space (see Figure 7). The volume is used as a technique to express the power and divinity of the place and the difference between the interior space and the human scale tends to overwhelm the user.



Figure 7: Acts of the Apostles Church in Jesus Christ (former St. Ludwig's Roman Catholic Church), Philadelphia (Photo by Joseph Elliott, Library of Congress, Prints & Photographs Division, HABS PA-6694-14, summer 2001)

Circulation

The interior arrangement of a house of worship is determined by the seating arrangement and the denomination-specific relationship of the worshippers to each other and to the location of the liturgical focus. In general terms, the entrances to the sanctuary area are located in the opposite side of the podium where the service is held. The location of the entrance generates a continuous flow toward the end of the nave, approaching with each step to the most important area of the building. There are also some houses of worship that recreate pilgrimages around the interior perimeter of the sanctuary, through the disposition of ritual artifacts, like small chapels or stations, that invite users to move around the building. Therefore, the interior arrangement determines the circulation which often has religious meaning. Other elements that affect the perception of movement inside the space are the structural elements and windows. The repetition of these features in the interior of the space and the contrast between light and shadow provide with a sense of movement to the interior space as well as providing human scale. The circulation inside a house of worship is a direct interaction of the user with the sacred, providing different spiritual experiences depending on where the user is located within the building and, sometimes, creating intimacy in a shared space.

Light

The role of light in houses of worship is determinant in the perception of the space. The source of light and level of illumination varies depending on the type of house of worship. This is tightly related to the shape and disposition of the windows in the façade. Windows can have either transparent glass or colored stained glass, and can be located either at the upper part of the walls or at the user level.

Windows located at the top of the walls provide indirect light. Their effect, which is emphasized by the movement of the light depending on the time of the day, sometimes is diffused and other times throws dramatic shadows and shafts of light into the interior of the space. As stated by S. Bergmann in his essay *Can Churches Fly?*:

"In this interplay of light and darkness God's revelation can certainly be perceived but never entirely grasped. The experience of light's continuity and change creates a liturgical drama of a very specific nature. The rhythm of the flow of light, hymns, processions and prayers interact in synergy with the light from the sun and the candles."⁵⁷

In contrast to this type of dramatic illumination, there are houses of worship for which clarity and transparency are the main goal of the space. This type of buildings usually have clear windows located at the user level that, together with white interior finishes and furniture, create a luminous and clean atmosphere.

Artificial light also plays an important role, through the use of chandeliers and lighting fixtures, which can provide with general illumination and also direct illumination to highlight specific points in the building. The use of candles, mostly with symbolic purposes, provides another source of light, creating dramatic effects in the space, as well as adding sensory value in terms of smell and ritual experience.

⁵⁷ Sigurd Bergmann, "Can Churches Fly?" in *Theology in Built Environments: Exploring Religion, Architecture and Design*, by Sigurd Bergmann (Editor), 281-309 (New Brunswick and London: Transaction Publishers, 2009), p. 293.

Visual Focus

The combination of the previous experiential character-defining features (volume, circulation and light) contributes to the visual emphasis of some parts of a house of worship. For example, high ceilings and an emphasis on vertical proportion challenge the user to look up; central corridors that flow to the altar area (usually the most prominent part of a religious building) attract the view towards the end of the space. The visual focus is usually directed toward the altar area and to the ceiling (see Figure 8), reinforcing the attention of the worshippers to the service, and creating a connection with something superior, above their heads (both physically and metaphorically).



Figure 8: Church of the Holy Trinity "Interior View of Nave and Chancel From East" (photo by Jack E. Boucher, Library of Congress, Prints & Photographs Division, HABS PA,51-PHILA,677-5, March 1959)

Smell, Temperature and Touch

The sensory perception of houses of worship includes not only the visual aspect, but also the olfactory and the tactile senses. In terms of the olfactory experience, elements such as candles, incense and myrrh, are directly related with the religious atmosphere. The tactile experience is achieved through the finishes of the materials, such as natural carved stone and wood, and the cold touch that some surfaces may have. The temperature of the space, which usually is difficult to control because of the volume of the rooms, can result in temperatures outside of the normal comfort range. All in all, these involuntary character-defining features are a fundamental characteristic of this building typology, which can evoke nostalgic and spiritual feelings.

Acoustics

The nature of the function of houses of worship requires them to have an appropriate acoustic capacity, to serve as a space to preach, and also for singing hymns and playing musical instruments. Even when houses of worship are meant to be used as places to communicate and to listen, they are also intended to be quiet places to pray and meditate. In terms of the space, the contrasting uses houses of worship hold are usually achieved through their volume and shape, which also generates other types of distinctive acoustical effects such as echo.

2.4. Conclusions

The sources of character of houses of worship can be diverse yet related features. The combination of different types of sources adds to their value and significance. Their identification can be made through archival research, which can involve academic knowledge of architectural styles and history, through visual inspection, and through sensory perception of

the space, identifying the physical defining elements while discovering the experiential elements of the building.

The character-defining elements can be associated to the physical fabric of the building and to the experiential perception of the space. The physical character-defining features are the focus of traditional preservation practices. Their value and significance is well appreciated, and their identification forms part of conventional procedures when working with existent buildings. On the other hand, the experiential character-defining features, which are related to the perception of the spiritual atmosphere of a house of worship, are equally important in adding value to the place, but are commonly overlooked in the process of identification of the character.

The success of adaptive reuse of a house of worship depends on the recognition and appropriate treatment of its character-defining features. The identification of the character-defining elements as well as the understanding of the source of the character demands a careful approach that involves different variables, ranging from the type of structural system of the building to its smell.

Chapter 3

Adaptive Reuse of Houses of Worship

3.1. Summary

As discussed in previous chapters of this thesis in modern times, vacancy, redundancy and underutilization of houses of worship has triggered the reuse of religious buildings as a good option to give utility and continuity to this type of structure.

Changing the use of houses of worship to secular uses constitutes a viable option to make useful otherwise underutilized buildings. Adaptive reuse benefits from their embodied energy, maximizes their capital value, and preserves their architectural and historical significance. This chapter gives an overview of the current practices in adaptive reuse of houses of worship that fit in the criteria of mid-size buildings, usually from Protestant and Catholic denominations and located in urban areas. As examples of the issues associated with reuse, case studies of reused houses of worship in the Philadelphia area are discussed, identifying the treatment of the character-defining features, and the success of the adaptation, in terms of preserving the original physical and experiential character of the houses of worship.

3.2. Adaptive Reuse of Houses of Worship: International Approach

The international panorama in terms of adaptive reuse of houses of worship varies across different regions. In general, western countries are more acquainted with the practice of reusing their sacred places than eastern countries. The vacancy, redundancy and underutilization of houses worship is a common phenomenon in most European countries and Canada, with subtle

differences when compared to the United States. One of these differences resides in the fact that rural areas in European countries are depopulating: *“where aging and declining congregations and lack of resources are threatening the viability of retaining the buildings in active use as places of worship.”*⁵⁸ On the other hand, in the United States the houses of worship located in urban areas are more threatened.

The position of the European Union in terms of adaptive reuse of houses of worship is reflected in the Resolution 916 (1989) on Redundant Religious Buildings (see Appendix D). It states that *“...when a religious building is no longer viable as such, efforts should be made to ensure a future use, whether religious or cultural, as far as possible compatible with the original intention of its construction”*⁵⁹ and it invites local communities *“to rediscover a common interest and future role for such buildings.”*⁶⁰ Using this resolution as a behavioral tool to encourage the sensible disposition of underutilized religious buildings, each country in Europe addresses the adaptation of redundant houses of worship in different ways.

The United Kingdom is an example of well-developed practices of adaptive reuse of houses of worship. The Church of England (officially established Christian denomination that encompasses around 70% of England’s religious census)⁶¹ operates the Closed Churches Division, with the aim of assisting and advising in the process of closing and disposing of their unused religious buildings. The Closed Churches Division calculated that between 1969 and 2005, 1696 churches

⁵⁸ Nick Haynes, *Research Report on Church-State Relationships in Selected European Countries* (Historic Environment Advisory Council for Scotland (HEACS): 2008), p.4.

⁵⁹ *Resolution 916 (1989) on Redundant Religious Buildings* by the Parliamentary Assembly of the Council of Europe, point 7.

<http://assembly.coe.int/Main.asp?link=/Documents/AdoptedText/ta89/ERES916.htm> (accessed February 04, 2012).

⁶⁰ *Ibid*, point 8.

⁶¹ Haynes, 9.

were left underutilized and vacant,⁶² with a current rate of 20 to 30 churches closed each year. The Closed Churches Division identified three options to deal with underutilized churches: change of use, preservation by the Churches Conservation Trust or demolition.⁶³ The division's policy is that change of use is a preferred alternative for preserving the built heritage, resulting in a considerable amount of converted churches in the United Kingdom, of which about one third is for residential use and another third for community uses.⁶⁴ The new uses of the remaining third can range from traditional uses to innovative ones. Successful examples of reused churches range from indoor skate parks (e.g.: the Skaterham in Surrey) to pharmacies (e.g.: Tesco facilities in the former Westbourne Methodist Church).

The Closed Churches Division in England has a great influence in deciding which new uses are appropriate for their deconsecrated religious buildings. In contrast, other European countries are more flexible, leaving the choice open for developers to decide what new uses are more appropriate for redundant houses of worship. As a result it is common to find nightclubs and bars in former churches, as the Gattopardo bar in Milan, Itlay, or the Church Bar in Dublin, Ireland.

Australia constitutes another country that faces the question of how to reuse its houses of worship. The country is well aware of the heritage value of its built environment and has well-developed policies to protect it. The Department of Environment and Heritage, the entity responsible for "*implementing the Australian Government's policies to protect our environment*

⁶² Paul Lewis and Paul Howlett "Sub Regional Seminar Presentation: Buildings - Practical Issues" (Church of England web site: 2006), p.3
<http://www.churchofengland.org/media/55169/buildingspracticalissues.pdf> (accessed February 04, 2012).

⁶³ Ibid, 2.

⁶⁴ Ibid, 9.

*and heritage, and to promote a sustainable way of life*⁶⁵ understands the adaptive reuse of redundant buildings as *“an essential component of sustainable development”*⁶⁶ and suggests that *“the most successful built heritage adaptive re-use projects were those that best respected and retained the building’s heritage significance and added a contemporary layer that provided value for the future.”*⁶⁷ In Australia, communities play an important role when deciding the future of their buildings. The involvement of different stakeholders in the reuse process adds validity to the practice but, when considering the reuse of houses of worship, the process is not exempt of difficulties. This happened to the Uniting Church of Australia, a denomination with underutilized houses of worship candidates for being reused, in which the community opposed to the idea of reusing any of the congregation’s buildings for non-sacred use.⁶⁸

Other countries susceptible of reusing their religious buildings are those that experienced a change of government that affected the approach to religion. One of these countries is Cyprus that, after Turkish invasion in the 1970’s, was left with more than one hundred churches and monasteries desecrated, of which many were converted into *“hotels and recreational sites or otherwise reduced to stables, hay stores and places of public convenience.”*⁶⁹

In general terms, the adaptive reuse of houses of worship outside the United States is mostly concentrated in developed countries, where Protestant and Catholic denominations are the

⁶⁵ Australian Government, *Department of Sustainability, Environment, Water, Population and Communities* (April 05, 2012) <http://www.environment.gov.au/index.html> (accessed April 07, 2012).

⁶⁶ Heritage Division of the Department of the Environment and Heritage, *Adaptive Reuse: Preserving Our Past, Building Our Future* (Commonwealth of Australia: 2004), p.2.

⁶⁷ Productivity Commission, *Conservation of Australia’s Historic Heritage Place Inquiry Report* (Commonwealth of Australia: 2006), p.23.

⁶⁸ Ibid.

⁶⁹ *Destruction of Cultural Heritage*, Embassy of the Republic of Cyprus in Washington D.C. web site <http://www.cyprusembassy.net/home/index.php?module=page&pid=22> (accessed February 05, 2012).

most susceptible of having vacant and underutilized structures. In these countries the adaptive reuse of religious buildings is usually the result of a careful process, where community and denominations are involved in the different decision stages.

3.3. Adaptive Reuse of Houses of Worship in the U.S.

The adaptive reuse of mid-size houses of worship, from Protestant and Catholic denominations, located in urban areas in the United States is a relatively new practice, starting in the last quarter of the 20th century. Currently in the United States there is not a specific agency (public or private) that protects or offers guidance in the adaptation of religious buildings. As stated by J. Kiley in his dissertation about the adaptive reuse of churches *“because churches infrequently turn over to other uses, the market, the developers and the public do not have systems in place for addressing their unique conditions.”*⁷⁰ Nevertheless, even with the lack of specialized guidance, the significance and values attached to houses of worship generally sparks the awareness in the people involved in their conversion. This awareness helps achieve acceptable results in the preservation of the character of the building during the reuse process, even if the decisions leading to these results are not necessarily well informed.

An ongoing study being developed by Partners for Sacred Places identified more than two hundred reused houses of worship in the United States in the last years. The following chart shows the new uses’ distribution by type.

⁷⁰Christopher John Kiley, *Convert! The Adaptive Reuse of Churches* (Cambridge: Massachusetts Institute of Technology, 2004), p.106.

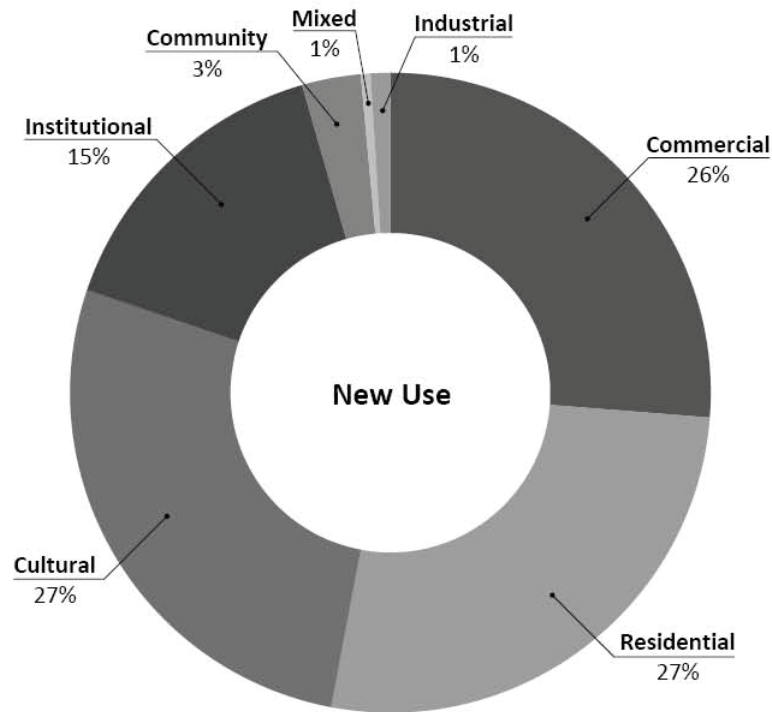


Figure 9: Adaptive reuse of houses of worship in the U.S. by type of new use. Data collected by Partners for Sacred Places during the summer of 2011 from a sample of 202 projects.

As reflected in the graphic, the most common new uses for the adaptive reuse of houses of worship in the United States are *cultural* (which includes performing arts venues and museums, among others), and *residential* (such as apartments, condos, private residencies and affordable housing). The *commercial* use is also widely applied and it includes offices, restaurants and shops.

In the study, Partners for Sacred Places interviewed the developers of adaptively reused houses of worship in the Philadelphia area, in order to understand the drivers, challenges and decision-making approaches:

- Drivers: in terms of the character-defining features, the elements that influenced the reuse of houses of worship are usually the singular architectural characteristics;
- Challenges: in terms of character-defining features, stained glass windows and pipe organs are usually the most complicated elements to preserve during the adaptation process;
- Approach: both professionals with previous experience working with this type of building as well as amateurs executed the conversion of houses of worship into other uses;
- None of the projects used tax credits incentives in the conversion process; and
- Almost every project resulted in significant and permanent changes to the religious building.

The next part of this chapter will examine two examples of case studies of reused houses of worship, with the final purpose to analyze the challenges, successes and missed opportunities in adaptive reuse of houses of worship. This evidence will serve to assess the need for guidance on how to approach the reuse of a house of worship, providing insights for the development of the evaluation tool.

3.4. Study cases

The following two study cases serve as an example of reused houses of worship in the Philadelphia, PA, area. They offer an overview of how the decision-making process in the adaptive reuse of religious buildings can affect both physical and experiential character-defining features. The analyzed cases are typical examples of adaptive reuse of houses of worship:

- Mid-size religious buildings;
- Centrally located in Philadelphia's urban area;
- The new use is among the two most common private uses: commercial and residential.

3.4.1. Former Church of the New Jerusalem: Corporate Facilities Offices



Figure 10: Exterior view of the former Church of the New Jerusalem, currently Corporate Facilities Offices (photo by the author, April 2012)

Building general information

- Address: 2129 Chestnut Street, Philadelphia PA.
- Year built: 1883.
- Architect: Theophilus Parsons Chandler.
- Architectural style: Gothic Revival.
- Denomination: Swedenborgian Congregation.
- Building size: 27,462 sq. ft.

The Church of the New Jerusalem is an excellent example of a gothic mid-size church located in an urban area (see Figure 10). It was design by Theophilus Parsons Chandler, a Philadelphian architect well known for being the founder and first dean of the University of Pennsylvania's School of Architecture. The building, which was inspired in European cathedrals, was part of a complex that included the sanctuary, the parish hall, and an enclosed garden.

The cruciform-shape sanctuary capped by a 65 feet height ceiling is supported by granite flying buttresses built in the Gothic Revival style. The original space was characterized by the presence of stained glass arched windows, ornate carved woodwork, and stone tracery. The interior distribution of the space was determined by the location of the main altar and the organ at the shortest part of the cruciform shape, opposite to the main entrance. Additional seating was provided by a "u" shaped balcony that partially covered the perimeter of the nave (see Figure 11).

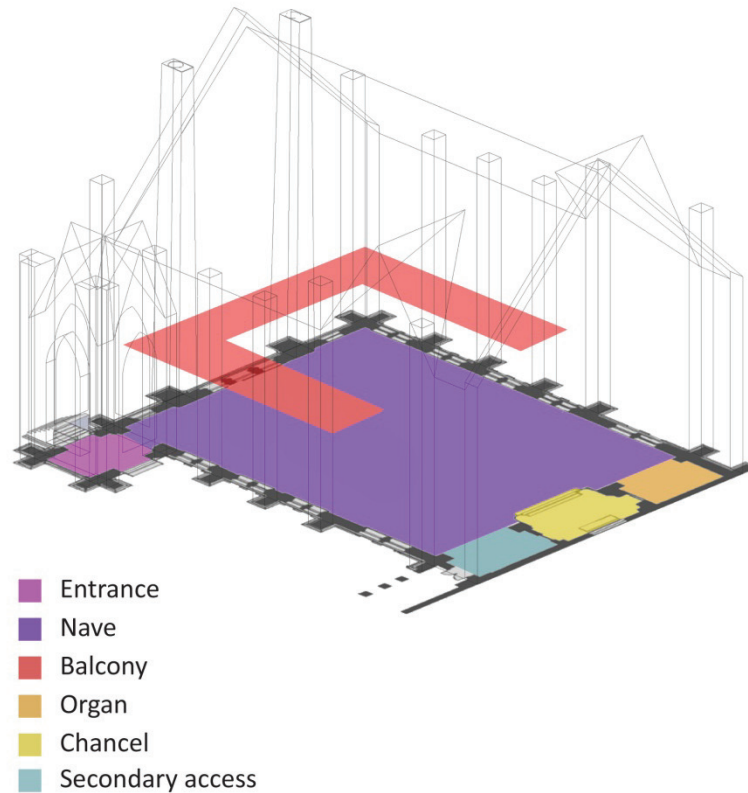


Figure 11: Church of the New Jerusalem interior distribution before renovation (image by the author, July 2011)

Building adaptation

- Developer: Edward S. Brown Group for the Graduate Health System.
- Year of adaptation: 1989.
- Architect: Mark B. Thompson Associates with Richard Mark design and Sir Peter Shephard for the landscape.
- New use: Offices.

The adaptive reuse of the Church of the New Jerusalem was the result of a thoughtful process. The owners of the building, the Swedenborgian congregation, recognized that the new development pressures could adversely affect the future of the building. A city-initiated change in zoning in the area, from mainly residential to commercial use, posed a threat to the church. To ensure the preservation of the main character-defining features of the building, the

congregation approached the Preservation Fund and the Philadelphia Historical Commission asking for support in the decision-making process to determine a new compatible use for the structure. The owner, with the two agencies, hired an architecture firm that would recommend a new use that preserved the physical historic fabric and the character of the space. This firm was Mark B. Thompson Associates which, after analyzing three different possible uses, recommended that office use was the most appropriate use due to its high demand through time.

The identification of the main character-defining features of the interior of the building preceded the design proposal, and was agreed by all the parts involved: the congregation, the Preservation Fund, and the Philadelphia Historical Commission. In the identification process, it was determined that the shortest part of the cruciform-shape of the sanctuary conveyed most of the character of the building, and therefore was the most important space to preserve. This area included the altar and chancel area, the organ, and two important stained glass windows. The proposal for the adaptation of the space leaves this area intact and uses it as the core area for the new use (see Figure 12).

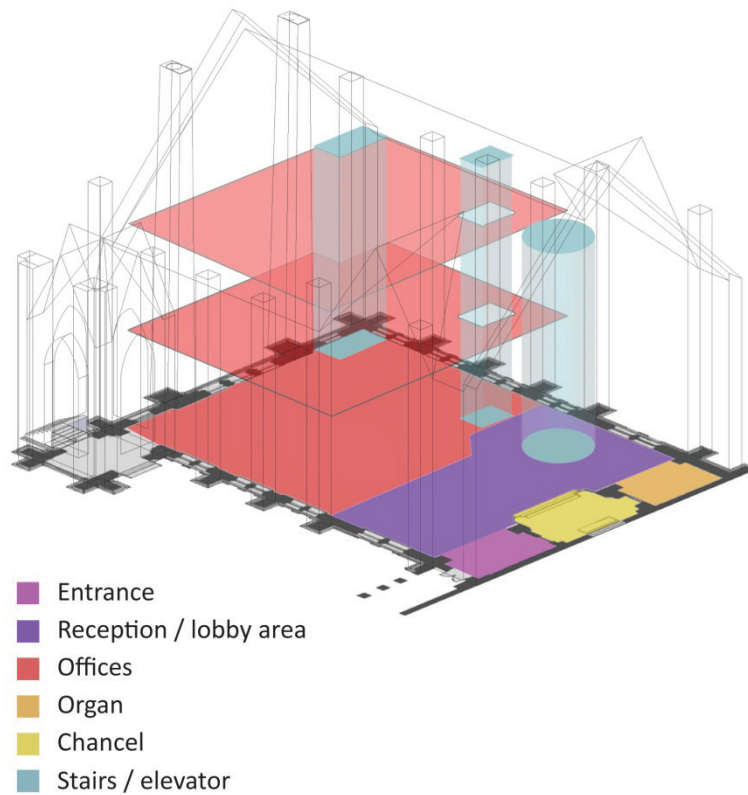


Figure 12: Church of the New Jerusalem interior distribution after renovation (image by the author, July 2011)

The main alterations required to accommodate the new use were:

- One floor was excavated below the ground floor of the sanctuary area to accommodate a usable basement level;
- Two floors were added in the nave of the church partially dividing the volume of the church while integrating the balcony. These new floors used the exterior walls of the building and new steel round columns in the middle section for structural support;
- The transept area, now used as the reception atrium, was separated from the rest of the nave by a three-story glass wall, offering visual connection between the work-space and the preserved area of the church;

- A freestanding double helix staircase and a small elevator were added in the transept area;
- Some stained glass windows were replaced by clear leaded glass windows in order to provide the necessary level of natural light required by the new use; and
- Mechanical systems were located in the ceilings of the new floors, leaving the wood trusses of the original roof intact and exposed.

Even though the alterations performed in the adaptation process were sensitive to the original fabric, the new elements and construction were built attached to the original fabric, altering a considerable part of it. During the adaptation process the following elements were intentionally preserved in order to enhance the defining character of the space:

- The distribution of the pews along the central axis in the nave's ground floor, was used as a reference to locate the work-stations;
- The church's original balcony and its ornamental wood balustrade were used as a frieze defining the ceiling height for a group of offices in the first floor;
- The cherry wood of the original pews was recycled for the construction of a reception desk now located in the reception atrium;
- The original altar and the organ pipes were restored to be used in occasional commemorative services and concerts.



Figure 13: Former Church of the New Jerusalem interior view of the atrium after renovation (image courtesy of Mark B. Thompson Associates)

The adaptation was approached using as a base the character-defining features that were significant features of the original house of worship. The identification of the building values, relied on advice from preservation and design professionals, and included physical character-defining features (such as the altar piece, the pipe organ, the structure, and the woodworks) and experiential ones (such as volume, circulation, and visual focus). This allowed the preservation of its religious and spiritual atmosphere. The commitment of the congregation during the decision making process was the key factor that led to an alternative use that cared

about the success of the investment, as well as the conservation of the structure and the sense of its traditional use.

The preservation of the spiritual atmosphere of the space was achieved through the maintenance of the volume and the visual focus toward the altar area (see Figure 13). The success of the preservation of the experiential character is demonstrated a few times a year when the Swedenborgian congregation gathers in the new atrium of the building for commemorative services and concerts, reconciling the original use of the building with the new use.

The case study of the former Church of the New Jerusalem is an example of a successful adaptation of a house of worship that enhanced the holistic character of the place through appropriate design solutions. An important part of the adaptive reuse was to recognize the development pressures affecting the area, seeking for the appropriate advice of local institutions to protect the character of the building. However, even when the process was successful, trying to implement it as a standard model for the decision-making approach in the adaptation of religious buildings would not be realistic, since it required the coordination of many agents from the public and the private sector, making it difficult to replicate.

3.4.2. Former Christ Reformed Church: The Chapel Lofts



Figure 14: Exterior view of the former Christ Reformed Church, currently the Chapel Lofts (photo by the author, July 2011)

Building general information

- Address: 1520 Green Street, Philadelphia PA.
- Year built: 1860.
- Architect: Stephen D. Button.
- Architectural style: Romanesque Revival.
- Denomination: Lutheran.
- Size: 18,240 sq. ft.

The Christ Reformed Church was a Lutheran church located in the Spring Garden residential area of Philadelphia (see Figure 14). The building was designed by Stephen Button, a well-established Philadelphia architect, responsible for projects such as the Spring Garden Institute (c.1851-52), and the First Baptist Church (1853-56). The building, listed in the Philadelphia Register of Historic Places, is significant for its physical fabric and also because of historic events related to the building: the Wanamaker family, an influential family in Philadelphia, used to worship in the church. Moreover, after the death in 1926 of Mrs. Elizabeth Wanamaker, mother of the renowned businessman John Wanamaker, the family donated a stained glass window dedicated to her memory and designed by D'Ascenzo Studio, a Philadelphia-based firm that was one of the most prolific stained glass artists of the United States.

The building, designed in the Romanesque style, was characterized by a symmetrical floor plan, reinforced by a centered entrance with mirrored staircases leading to the sanctuary level. The two story structure, with the Sunday school located in the ground floor and the sanctuary nave on the first floor, was flanked by two towers (see Figure 15). The building materials included brownstone for the main façade, brick for the other three façades and wood structure. It was complemented by carved woodwork ornaments, carved stone decorations and arched stained glass windows.

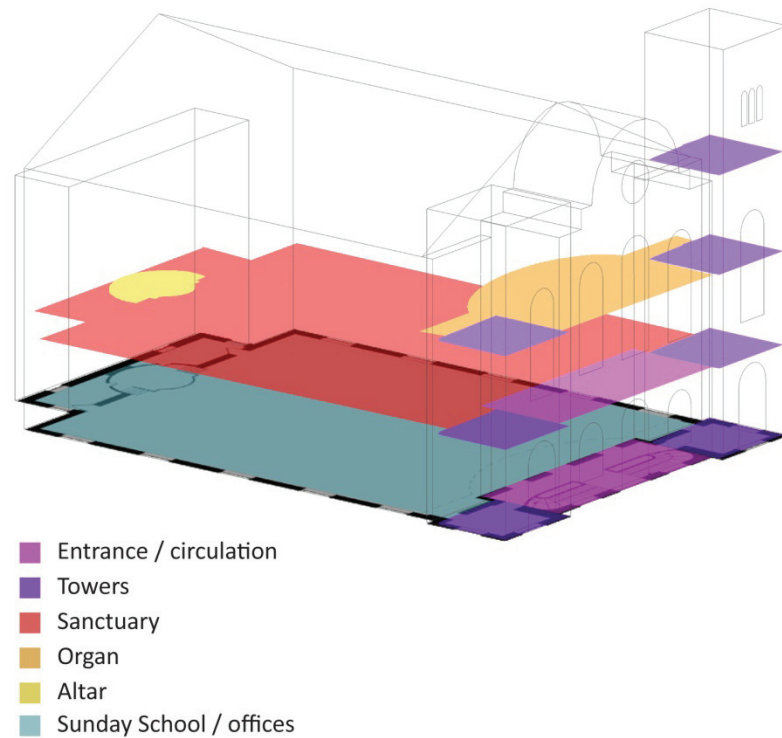


Figure 15: Interior distribution of the former Christ Reformed Church before renovation (image by the author, July 2011)

Building adaptation

- Developer: Regis Development Corporation.
- Year of adaptation: 2005.
- Architect: JK Roller Architects.
- New use: Residential (17 units).

The Regis Development Corporation acquired the building from the Christ Evangelical and Reformed Church in 2004. The developer, who owned other residential buildings in the area, saw the potential of the underutilized structure to be converted into apartment units. It was explained by the developer in an interview held during summer of 2011, that when the former Christ Reformed Church was sold it was partially being used by a Hispanic group that worshiped

in the Sunday school area (the name of the group was not disclosed during the interview). Moreover, this group only used the lower floor of the building due to water leakage problems in the sanctuary nave caused by roof deterioration and overexposure to the elements through broken window panes.⁷¹

The Chapel Lofts renovation process was led by Regis Development Corporation following a design plan prepared by JK Roller Architects, a firm with no previous experience in the conversion of religious buildings. The main goal of the adaptive reuse was to maximize the

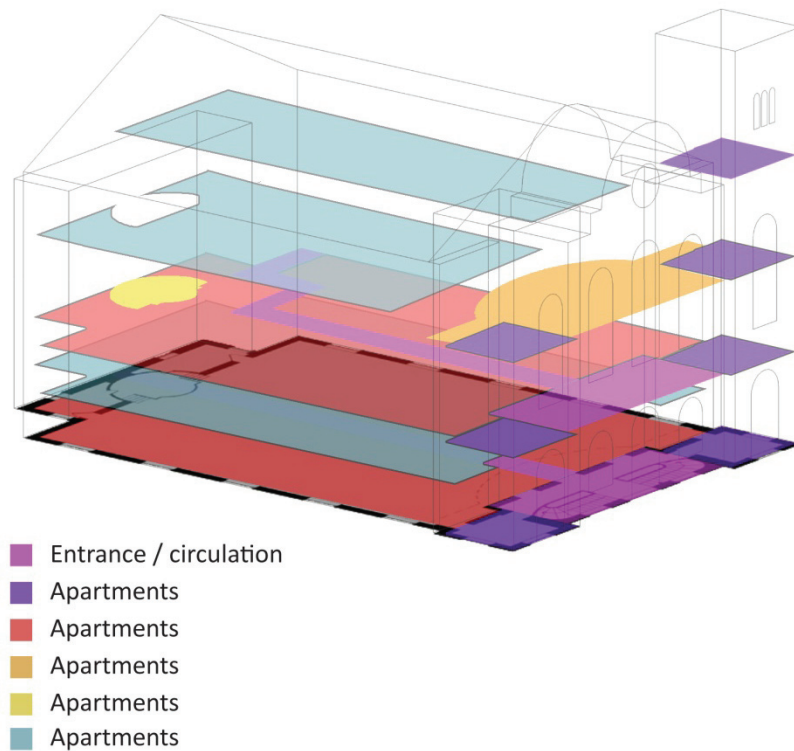


Figure 16: Interior distribution of the former Christ Reformed Church after renovation (image by the author, July 2011)

⁷¹ Regis Group Representative, interview by Rachel Hildebrandt and Fabiana Mileo, *The Chapel Lofts Adaptation Process* (July 2011, 2011).

number of apartment units, taking advantage of the uniqueness of the physical character-defining features of the structure, such as stained glass windows, original carved woodwork, and stone decorations (see Figure 16).

The major alterations that were necessary to accommodate the new residential use were:

- One floor was added in the Sunday school area and two floors were inserted in the sanctuary area to accommodate more apartment units;
- The interior space was subdivided with modern gypsum wall board partitions;
- New sanitary systems were installed to accommodate the bathrooms and kitchens;
- An elevator and fire protection and climate control systems were added;
- The roof was repaired and insulated; and
- The organ was removed and its wood pipes were recycled as window sills.

In the adaptation, the following physical elements were recognized as contributing to the character of the place and therefore an effort was made to preserve them:

- The entrance hall was restored in order to maintain its original features including the wood stairs and handrails, the lighting fixtures and the original finishes;
- The stained glass windows that were sound were restored;
- The main decorative elements of the altar area were restored including the carved wood balustrade and carved stone decorations and moldings; and
- The choir loft was integrated as a mezzanine floor inside the apartment units.

In the adaptive reuse of the former Christ Reformed Church important physical elements that characterized the building were preserved, even if that resulted in unusual situations, such as apartments with no natural ventilation or light. However, the extensive horizontal and vertical subdivision of the interior space is fundamentally incompatible with the character-defining spatial quality of the church interior and other experiential character-defining-features. The only remaining area where the building is experienced as a former house of worship is in the entrance of the building, which was restored to its original state and use.

The efforts made by the developer in order to maintain the relevant physical architectural features of the building were successful, taking into consideration that apartment use is potentially an intrusive new use. In the opinion of the developer, the project is successful since his clients appreciate the particular physical character of the building, provided by the reminiscence of original physical elements that remind them of the previous use of the space, adding value to their daily living experience (see Figure 17).



Figure 17: Interior of apartment unit in the Chapel Lofts showing the choir loft (photo by the author, July 2011)

The case study of the former Christ Reformed Church is an example of how deciding the new use for a house of worship is a fundamental task in the preservation of its character. Since the design proposal for the adaptation of the building was developed by an architect with no previous experience in this type of tasks, the passion and commitment of the developer was determinant in protecting part of the physical character. Nevertheless, the insertion of seventeen apartment units in the sanctuary area and the Sunday school permanently modified

the experiential perception of the house of worship, which lost the spiritual atmosphere that characterized its previous use.

3.5. Conclusions

The overview of the international approaches for the adaptive reuse of houses of worship, as well as the study cases in the Philadelphia area, demonstrates how the involvement of public institutions (such as the Preservation Fund and the Philadelphia Historical Commission) in the adaptive reuse, offers a necessary advice and support in protecting the character-defining features of a house of worship. It is important to ensure the participation of the different stakeholders in the decision-making process, including design professionals with the appropriate training.

The study cases of reused houses of worship in the Philadelphia area show two different approaches for the reuse process. The first one was the result of a careful decision-making process in which the owner, public institutions and an experienced architect were involved. In the process of changing the use of the building, they successfully identified its most important character-defining features and proposed a new use that preserved them, without altering the sensory perception of its spiritual atmosphere. The second case shows an effort to harmonize the new use with the original fabric, through the preservation of its physical character-defining features but, as a result of the fundamental incompatibility of the new use, the experiential perception of the house of worship was lost without any chance of being recovered.

4.1. Summary

The previous chapters of this thesis explored how the available guidance for the adaptive reuse of houses of worship only partially addresses the identification of the physical character-defining features as part of the process. Moreover, current practices of adaptive reuse of religious buildings do not consider the contribution of the sensory defining aspects of the space.

This chapter develops a proposed evaluation method that when applied to a religious building: (1) determines its character-defining features, and (2) establishes a hierarchy of groups of character-defining features. The application of the method constitutes a judgmental assessment of the possible impact that the adaptation may have.

4.2. Decision-making in Adaptive Reuse

The analysis of the rational decision-making approaches described in the literature reveals two tendencies in the preservation of the built environment: (1) a logical approach based on probabilistic rules and, (2) a realistic approach that takes into consideration the participants and the particular context of each project. Since the process of changing the use of a house of worship depends on the particularities of each case and its stakeholders, a prescriptive approach is not suitable. Therefore the evaluation method proposed in this chapter is based on a realistic decision-making approach, which includes the different sources of value, gives

importance to the experience of the space and takes into consideration the experienced professional judgment of the agent applying the method.

4.3. Evaluation method

The evaluation method proposed to assess the impact of change of use in houses of worship is a tool to assist in the decision-making process. The guiding philosophy behind the evaluation method establishes that:

The evaluation method relies in the identification of the character-defining features of a house of worship from both the physical and experiential points of view and considers the perception of the space as the main contributing factor. The realistic approach in the decision-making process seeks to involve the different variables and stakeholders while identifying the features that are fundamental in order to maintain and enhance the spirit of the place.

The evaluation method is designed to be used by the producer agents (designers and constructors) with the goal of extracting valuable information about the physical and experiential characteristics of the building. These physical and experiential variables ultimately will determine the feasibility and viability of the reuse project and will provide important data for the next steps of the process. Examples of the use of this data are risk cost and sustainability analysis. In summary, the application of the evaluation method will provide:

- A comprehensive assessment of the physical and experiential features that provide character to the building;

- The establishment of a hierarchy of the physical and the experiential variables combined and organized by level of contribution to the character of the place; and
- A judgmental analysis of which areas or elements can be intervened and the extent of the intervention without radically affecting the perception of the building character.

The result of the application of the method is a customized information package that identifies the priorities in the adaptation of the building and that enables an adaptive reuse process that preserves the significance of the original building. The final outcomes of the application of the evaluation method are based in a judgmental process held by the agent applying it. These outcomes take into consideration the combination of the different findings during the process, and propose the best way to approach the adaptive reuse of the religious building.

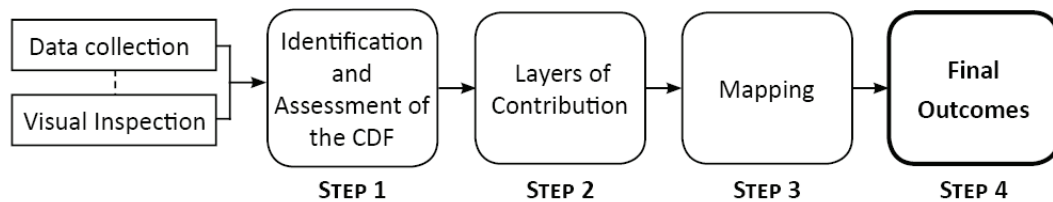


Figure 18: Process Diagram for the proposed Evaluation Method.

The proper application of the evaluation method must satisfy the following requirements:

- 1) The evaluation method should be used while the building is under its original use; and
- 2) The analysis and evaluation of the significance of the building features and the evaluation of the impact of possible new uses should precede the identification of a preferred use for the building.

4.3.1 Methodology

As laid out in the first part of this chapter, there is a need for a decision-making tool that:

- Establishes a process that serves as a guide in the identification and assessment of character-defining features;
- Helps the agent applying the method to make decisions, and therefore make compromises, in the adaptive reuse of a house of worship;
- Is comprehensive in evaluating the significance of a house of worship, including factual as well as subjective value; and
- Recognizes the importance of the relationships between different character-defining features in creating value.

The above mentioned characteristics are the basis of the evaluation method, establishing the basic principles that are reflected in each step of the evaluation process:

Step 1

Identification and assessment of the character-defining features of the house of worship to be evaluated.

- Identification: provides a system to identify what elements contribute to the significance of a house of worship. A basis in the formulation of the method is that it must provide a detailed yet comprehensive approach. To do so, it breaks down the character-defining features by:
 - Including physical and experiential elements; and

- Listing each significant feature of the house of worship by categories: structure, windows, materials and finishes, seating arrangement, music components, artwork and liturgical artifacts for the physical features; and volume, circulation, light, visual focus, sensorial and acoustics for the experiential ones.
- Assessment: Provides a structured approach to help reach compromises that take into account the inherent importance of an element, as well as its relationship with the environment. It also recognizes that significance is essentially subjective; it is a quality users give places, not necessarily a quality places possess on their own. This approach is structured in the method along the following elements:
 - Structured approach: a quantitative ranking of the identified character-defining features of a house of worship to help the agent reach compromises without being prescriptive;
 - Ranking categories for physical elements that recognizes the inherent significance ('character source' field) and the importance of the element in relation to the environment ('visual importance' field). These elements are ranked from 0-9; and
 - Ranking categories for experiential elements that recognizes that significance is derived from the subjective sensory perception. These elements are ranked from 0-3 and then weighted to be comparable with the physical elements.

Step 2

Grouping of categories of character-defining features into layers of contribution. A basis in the formulation of the method is that in aiding the agent in making decisions and compromises, the method must recognize that not all elements are relevant to the significance of a house of

worship and that association of elements, as well as individual elements, can add character to the space.

- Layers of contribution: The method groups character-defining features into layers of contribution based on the values of the assessment from Step 1. This categorization is formalized in three layers of contribution (essential, contributing and low relevance);
- Association of elements: Experiential and physical character-defining features are evaluated as standalone elements but then integrated in layers of contribution that may form units of significance (group 1, 2 and 3).

Step 3

Mapping of the layers of contribution. The method allows the visualization of the character-defining features in the built environment. A basis in the formulation of the method is that contextual visualization can help the user reveal interactions between groups that add significance even if the groups *per se* do not add essential significance as standalone units.

Step 4

Judgmental outcome. As mentioned above, this evaluation method should not be prescriptive. An important basis for the method is that it is intended as a guide in the decision-making process and that the outcome must be interpreted and judged by an experienced professional.

4.4 Steps of the Evaluation Method

The formal translation of Steps 1 and 2 of the evaluation method consists in a set of tables that constitute the core of the process, setting the base that will provide the necessary information for the mapping and the final outcomes of the process. Since the evaluation method seeks to be a standard tool applicable to different cases, the main advantage of the tables is that they serve as a guide, listing the most important categories of character-defining features, while giving room for the inclusion of the specific components for each particular case. They provide a foundation for standardization while allowing flexibility for the components of each building.

The Steps 3 and 4 of the evaluation method do not follow any specific format. However, an example of the mapping is provided for guidance.

Following are the specific Steps for the application of the evaluation method for assessing the impact of change of use in houses of worship:

Step 1: Character Identification

As explained in previous chapters of this thesis, the relevance of the character-defining features of a house of worship should rely heavily on how the space is experienced and not solely on the identification of physical fabric. It is not a coincidence that scientific disciplines are increasingly interested in *“understanding the human responses to the built environment.”*⁷²

As stated by Carol Frenning in the workshop Neuroscience and The Architecture of Spiritual Spaces:

⁷² Academy of Neuroscience for Architecture. *Mission*. 2010. <http://www.anfarch.org/about/> (accessed March 26, 2012).

“...when a worship space is renovated, the congregants ask that it retains its existing image or feeling. It would be interesting to know how much one can take away, or what one can change, and still have it perceived as the same space.”⁷³

The first Step of the evaluation method seeks to identify the character-defining features and uses as a base Chapter 2 of this thesis, with special attention to the multi-sensory experience of the place. In order to do this, a set of evaluation tables (one for the physical and one for the experiential character-defining features) need to be filled out, using the information obtained through historical research and by inspection and sensory perception.

⁷³ Carol Frenning “Elements of Familiarity” in *Neuroscience & The Architecture of Spiritual Spaces* (Report of the workshop held in April 2004, Columbus, IN: Academy of Neuroscience for Architecture, 2005), p.7.

Physical Character-defining Features Evaluation Table

Table 2: Evaluation Table for the identification of the Physical Character-defining Features.

PHYSICAL CDF	CHARACTER SOURCE					VISUAL IMPORTANCE	TOTAL		
	ARCHITECTURAL STYLE	USE	CRAFTSMANSHIP	SYMBOLIC	HISTORIC				
1. STRUCTURE a. _____ b. _____ c. _____	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	=	<input type="checkbox"/>
2. WINDOWS a. _____ b. _____ c. _____	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	=	<input type="checkbox"/>
3. MATERIALS AND FINISHES a. _____ b. _____ c. _____	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	=	<input type="checkbox"/>
4. SEATING ARRANGEMENT a. _____ b. _____ c. _____	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	=	<input type="checkbox"/>
5. MUSIC COMPONENTS a. _____ b. _____ c. _____	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	=	<input type="checkbox"/>
6. ART WORK a. _____ b. _____ c. _____	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	=	<input type="checkbox"/>
7. LITURGICAL ARTIFACTS a. _____ b. _____ c. _____	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	+	<input type="checkbox"/>	=	<input type="checkbox"/>
NOTES: _____ _____									

Character source (add 1 point where applicable)

Visual importance (evaluate from 1 to 4)

1 = non visible / 2 = slightly visible / 3 = visible / 4 = very visible

The evaluation table for the physical character-defining features analyzes and identifies the physical elements of a house of worship. Furthermore, the purpose of this table is to assess the value of each physical character-defining feature based on its visual importance, as well as on the source of the character. This process allocates more relevance to the physical elements that are more perceptible as part of the visual experience.

Experiential Character-defining Features Evaluation Table

Table 3: Evaluation Table for the identification of the Experiential Character-defining Features.

EXPERIENTIAL CDF	RELEVANCE	TOTAL
1. VOLUME	<input type="checkbox"/> x 3 =	<input type="checkbox"/>
2. CIRCULATION	<input type="checkbox"/> x 3 =	<input type="checkbox"/>
3. LIGHT	<input type="checkbox"/> x 3 =	<input type="checkbox"/>
4. VISUAL FOCUS	<input type="checkbox"/> x 3 =	<input type="checkbox"/>
a. _____		
b. _____		
c. _____		
5. SENSORIAL	<input type="checkbox"/> x 3 =	<input type="checkbox"/>
6. ACOUSTICS	<input type="checkbox"/> x 3 =	<input type="checkbox"/>
NOTES: _____		

RELEVANCE (evaluate from 0 to 3)
 0 = non relevant / 1 = slightly relevant
 2 = relevant / 3 = very relevant

The main goal of this table is to identify and assign a value to the most relevant experiential character-defining features product of the sensory perception of the space.

Once the tables are filled in, one for the physical and one for the experiential character-defining features, each category of character-defining features of the space will have an assigned value. This value is the result from the assessment of the importance and relevance of the categories for the significance of the space. Once these values have been determined, the next step is to distribute them into three groups according to their total assigned value:

Table 4: Distribution of Groups.

Group	Total
1	6 to 9
2	3 to 6
3	0 to 3

The distribution of the categories of character-defining elements into three groups combines the physical and experiential character-defining features equally, since both are important in providing value to the space.

Step 2: Layers of contribution

With the character-defining features identified and divided by groups, the evaluation method proposes three layers of contribution of the character-defining features of the building, one for each of group. The three layers of contribution are:

Table 5: Classification criteria by group and level of contribution.

Layer	Classification	Intervention
Group 1	Essential	Elements that if modified can severely affect the character of the space
Group 2	Relevant	Elements that can be slightly modified without affecting the character of the place
Group 3	Low relevance	Elements that do not specially contribute to the character of the place. Therefore their modification or removal do not significantly affect the experience of the space

Step 3: Mapping of the character-defining features

This step consists in providing visual representation of the previous findings in a set of drawings to illustrate the location of the groups of character-defining features. Another goal of the mapping process is to display the interactions and combinations among the groups of character-defining features in the house of worship. To this purpose, it is necessary to have access to basic floor plans and cross sections of the building. Although the physical character-defining features can be easily mapped, the experiential ones can be difficult to illustrate, for this reason the mapping process should be accompanied by the table of layers of contribution.

The following illustrations are an example of the product of mapping the groups of character-defining features of a religious building. The house of worship selected as a case is the former Second Presbyterian Church in Pittsburg, PA, now converted into The Union Project, a community and arts space.

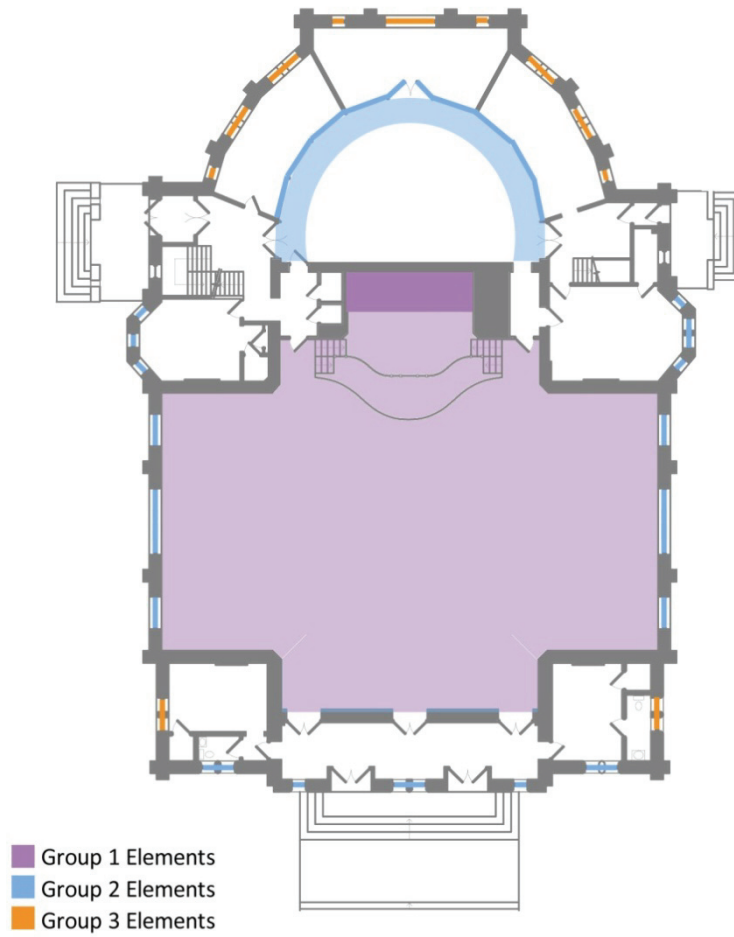
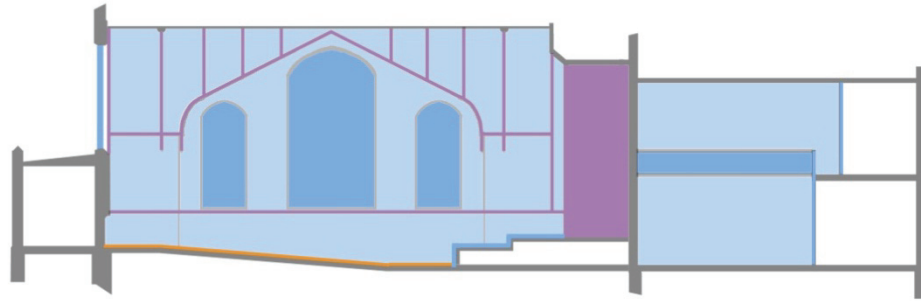


Figure 19: Example of the mapping of the groups of character-defining features using as a case the former Second Presbyterian Church in Pittsburg, PA (image by the author, February 2012)

Step 4: Outcomes

The last part of the evaluation method consists in producing the final outcomes using the information from previous Steps of the process. The outcomes are the conclusion of a judgmental assessment of the findings product of the analysis of the physical fabric of the building, its sensory perception and the historical research. The final aim of the outcomes is to suggest a set of guidelines, specific for each individual case, that reveal the most important combinations of character-defining features and recommend how to intervene them in order to retain the significance and value of the space, from the physical and experiential points of view.

Using the information provided by the layers of contribution table, the outcomes will include a list of: (1) the elements that should be preserved in order to enhance the value of the building, (2) the elements that could be modified without affecting the significance of the space, and (3) the ones that could be removed without adversely affecting the character of the building.

4.4. Conclusions

The proposed evaluation method recognizes the relevance of the physical and experiential character-defining features as equally contributing factors to the significance of a house of worship. Furthermore, the method assigns a great relevance not only to the identification of the character-defining features, but also to their possible combinations and interactions, establishing three groups of intervention according to their contribution to the significance of the place. The idea of combining character-defining features into groups is innovative since traditional preservation practice usually pays attention to the individual elements of a building separately.

Since the application of the evaluation method relies on the professional and experienced judgment of the agent applying the method, the outcomes are specific for each specific house of worship. Therefore, these outcomes will provide tailored intervention guidelines to achieve the best result when changing the use of a religious building.

Chapter 5

Application of the Evaluation Method

5.1. Summary

This chapter applies the evaluation method proposed in Chapter 4, with the purpose to determine if it is successful in identifying the physical and experiential character-defining features of a house of worship. A house of worship that matched the profile described in Chapter 2 was selected as case study.⁷⁴ The building chosen for the application of the evaluation method is St. Andrew's Chapel of the former Divinity School of the Protestant Episcopal Church (see Figure 20). It is located in west Philadelphia in the 4200 block of Spruce Street and it has been owned by The University of Pennsylvania since 1977.⁷⁵

5.2. St. Andrew's Chapel overview

This part of the chapter gives a brief introduction of the history of the St. Andrew's Chapel, since its construction as part of the Divinity School complex. It also provides a description of the building, highlighting the necessary information in order to apply the evaluation method.

⁷⁴ Middle size building, usually from Catholic or Protestant denominations located in urban areas

⁷⁵ The University of Pennsylvania acquired the institutional complex from the Episcopal Church including: two residential buildings, two institutional halls, the library, the chapel and the Deanery.



Figure 20: St. Andrew's Chapel South façade, Philadelphia (photo courtesy of the University of Pennsylvania Graduate Program in Historic Preservation, 2010)

5.2.1. Brief history

The Divinity School, founded in 1857, was an educational institution part of the Protestant Episcopal Church. In 1919 an architectural competition for a new school complex was held under the supervision of the Dean of Penn's Design School, as collaboration between

educational institutions.⁷⁶ The winning proposal was presented by the architecture firm of Zantzinger, Borie, and Medary (1910-1929), of which two of its young architects were Penn alumni: Zantzinger (1895) and Borie (1907).

St. Andrew's Chapel, designed in the Neo-Gothic style and finished in 1924, was part of the Divinity School educational complex and was used for scholastic and ecclesiastical purposes, reflecting its condition of dependency with the rest of the school. Renowned artists were involved in the construction of the new chapel: Nicola D'Ascenzo for the stained glass windows, Samuel Yellin for the iron work, and Gustav Ketterer for the wood structural members and painted decoration.⁷⁷

The Divinity School was one of the first seminars of the Episcopal Church that admitted African American students and trained women in its campus. In 1974 the school merged with its sister institution in Boston, MA, leaving the complex vacant until 1977 when was purchased by The University of Pennsylvania. Since its acquisition the buildings in the complex have been partially used for academic purposes, such as the Penn Children's Center, The Middle Years Alternative School and the University City New School, with exception of St. Andrew's Chapel, which has remained vacant.⁷⁸

⁷⁶ The Architectural Archives of the University of Pennsylvania hold a collection with the drawings of the winning design as well as the program for the competition. The original plaster model is also stored in the archives.

⁷⁷ Graduate Program of Historic Preservation "St. Andrew's Chapel: Preservation Plan" (Philadelphia: University of Pennsylvania, fall 2010), p. 15-24.

⁷⁸ Andrea Tursi "At the Former Philadelphia Divinity School Site: Discovering Inspiration from the Past and Creating Spaces to Learn and Grow" Almanac Volume 56 Number 27 (University of Pennsylvania: March 30, 2010), p. 12.

In 2001 a partnership between The University of Pennsylvania and The School District of Philadelphia was established for the creation of a Pre-K8 public school in the former campus of the Divinity School. The Sadie Tanner Mossell Alexander University of Pennsylvania Partnership School, integrates the historic buildings with a new development of 83,000 square feet.⁷⁹ Other uses accommodated in the buildings of the former Divinity School, besides the Pre-K8 public school, are the Parent Infant Center and the Philadelphia Writing Project.⁸⁰

St. Andrew's Chapel has witnessed the changes in its surroundings without being part of them. The chapel has remained unused during all the years The University of Pennsylvania has owned the Divinity School complex. Its potential for reuse is demonstrated in the Studio Report prepared by the Graduate Program in Historic Preservation of the University of Pennsylvania during fall of 2010, where a comprehensive assessment of the building, its physical condition, its context, and its options of reuse were analyzed.⁸¹

⁷⁹ The School District of Philadelphia. Penn Alexander School: Pre K-8. n.d. <http://webgui.phila.k12.pa.us/schools/p/penn-alexander> (accessed March 9, 2012).

⁸⁰ The new development for the Penn Alexander School was designed by the architecture firm Atkin Olshin Schade Architects, with the goal of conserving the site including the historic buildings and the 'centennial' trees.

⁸¹ For a copy of St. Andrew's Chapel Preservation Plan contact the Historic Preservation Department of the School of Design in the University of Pennsylvania.



Figure 21: St. Andrew's Chapel "View of sanctuary from above showing the existing plywood floor" (photo courtesy of The University of Pennsylvania Graduate Program in Historic Preservation, fall 2010)

5.2.2. Building description

St. Andrew's Chapel of the former Divinity School is a rectangular building located on top of a low hill in the north-west corner of Spruce and 42nd Streets in Philadelphia. The building, designed in the collegiate Gothic style, is characterized by its narrow proportions, resulting from a floor plan of 28 feet wide and 124 feet in length, topped with a pitched roof of 74 feet in its highest part. Two symmetrical massive stairs provide access to the main entrance located in the south end of the sanctuary nave.



Figure 22: St. Andrew's Chapel "Panel and hammer beam ceiling depicting biblical figures" (photo courtesy of The University of Pennsylvania Graduate Program in Historic Preservation, fall 2010)

The exterior façade, made in Wissahickon schist distributed in random ashlar, harmonizes with the uniform gray cement stucco that covers the interior walls. The hardness of the stone and the stucco is contrasted by the airy feeling, provided by the tall windows that recreate symbolic images in colored stained glass. The interior distribution of the chapel is unusual, since it served to educational and religious purposes all in one. The choir is the only seating arrangement in the chapel and it was originally distributed in three levels of pews at each side of the nave. The floor in the choir area, currently covered by a plywood floor, is three steps below the entrance level, and it occupies almost the totality of the nave (see Figure 21). Its central nave is accompanied by lateral auxiliary spaces that can be accessed through doors, and that connect the chapel with the deanery and surrounding buildings.



Figure 23: St. Andrew's Chapel "View of sanctuary present-day" (photo courtesy of The University of Pennsylvania Graduate Program in Historic Preservation, fall 2010)

The verticality of the chapel is emphasized in every element of the building: from its crowning spire and slender windows, to the choir stalls and the altarpiece. Moreover, the ceiling interior is richly ornate with wood hammer beams, ending in shaped-like angels, and wood panels depicting biblical themes, giving special attention to the upper part of the building (see Figure 22). The altar reredos is also a vertical masterpiece, crowned at the top by an arched stained glass window and accompanied at each side by two arched doors, of which one of them still conserves an intricate iron fence (see Figure 23).

Nowadays St. Andrew's Chapel is in good condition, taking into consideration that it has been unused for decades. Few minor modifications have been made to the interior of the building without altering many of its original features, such as leveling the floor in the choir area with a temporal plywood floor, removing and storing the choir pews and taking out one of the iron fences next to the altar. It is, nevertheless, a well preserved example of Neo-Gothic architecture and a beautiful building with great significance and value to be preserved for future generations.

5.3. Application of the Evaluation Method

Step 1: Character Identification

Table 6: St. Andrew's Chapel Evaluation Table for the identification of the Physical Character-defining Features.

PHYSICAL CDF	CHARACTER SOURCE					VISUAL IMPORTANCE	TOTAL						
	ARCHITECTURAL STYLE	USE	CRAFTSMANSHIP	SYMBOLIC	HISTORIC								
1. STRUCTURE a. <u>Roof</u> b. <u>Hammer beams</u> c. _____	1	+	-	+	1	+	-	+	-	+	4	=	6
2. WINDOWS a. <u>Stained glass W.</u> b. _____ c. _____	1	+	-	+	1	+	-	+	-	+	3	=	5
3. MATERIALS AND FINISHES a. <u>Cement stucco</u> b. <u>Painted wood</u> c. _____	1	+	-	+	-	+	-	+	-	+	2	=	3
4. SEATING ARRANGEMENT a. <u>Choir stalls</u> b. _____ c. _____	1	+	1	+	1	+	-	+	-	+	4	=	7
5. MUSIC COMPONENTS a. _____ b. _____ c. _____	-	+	-	+	-	+	-	+	-	+	-	=	-
6. ART WORK a. <u>Iron fence</u> b. _____ c. _____	-	+	-	+	1	+	-	+	-	+	2	=	3
7. LITURGICAL ARTIFACTS a. <u>Altar / Reredos</u> b. <u>Pulpit</u> c. _____	1	+	-	+	1	+	1	+	-	+	4	=	7

NOTES: The painted panels in the roof could be also counted as 'art work.'

There are not 'music components' since the choir is counted as 'seating arrangement.'

Character source (add 1 point where applicable)
Visual importance (evaluate from 1 to 4)
 1 = non visible / 2 = slightly visible / 3 = visible / 4 = very visible

Table 7: St. Andrew's Chapel Evaluation Table for the identification of the Experiential Character-defining Features.

EXPERIENTIAL CDF	RELEVANCE	TOTAL
1. VOLUME	3 x 3 =	9
2. CIRCULATION	2 x 3 =	6
3. LIGHT	1 x 3 =	3
4. VISUAL FOCUS	3 x 3 =	9
a. <u>Altar / Reredos</u>		
b. <u>Roof</u>		
c. _____		
5. SENSORIAL	0 x 3 =	0
6. ACOUSTICS	0 x 3 =	0
<p>NOTES: <u>The sensorial aspects of the building have been</u> <u>lost after being vacant for so many years.</u></p> <p>_____</p>		

RELEVANCE (evaluate from 0 to 3)
 0 = non relevant / 1 = slightly relevant
 2 = relevant / 3 = very relevant

Step 2: Layers of Contribution

Table 8: St. Andrew's Chapel Table of Layers of Contribution

Groups	Classification	Relevance
Group 1	Essential	Volume Visual focus: Altar / Reredos and Roof Liturgical artifacts: Altar / Reredos and Pulpit Structure: Roof and Hammer beams Seating arrangement: Choir Stalls
Group 2	Relevant	Windows Materials and finishes: Cement Stucco and Painted Wood Circulation Light
Group 3	Low relevance	Iron fence

Step 3: Mapping of the Character-defining Features

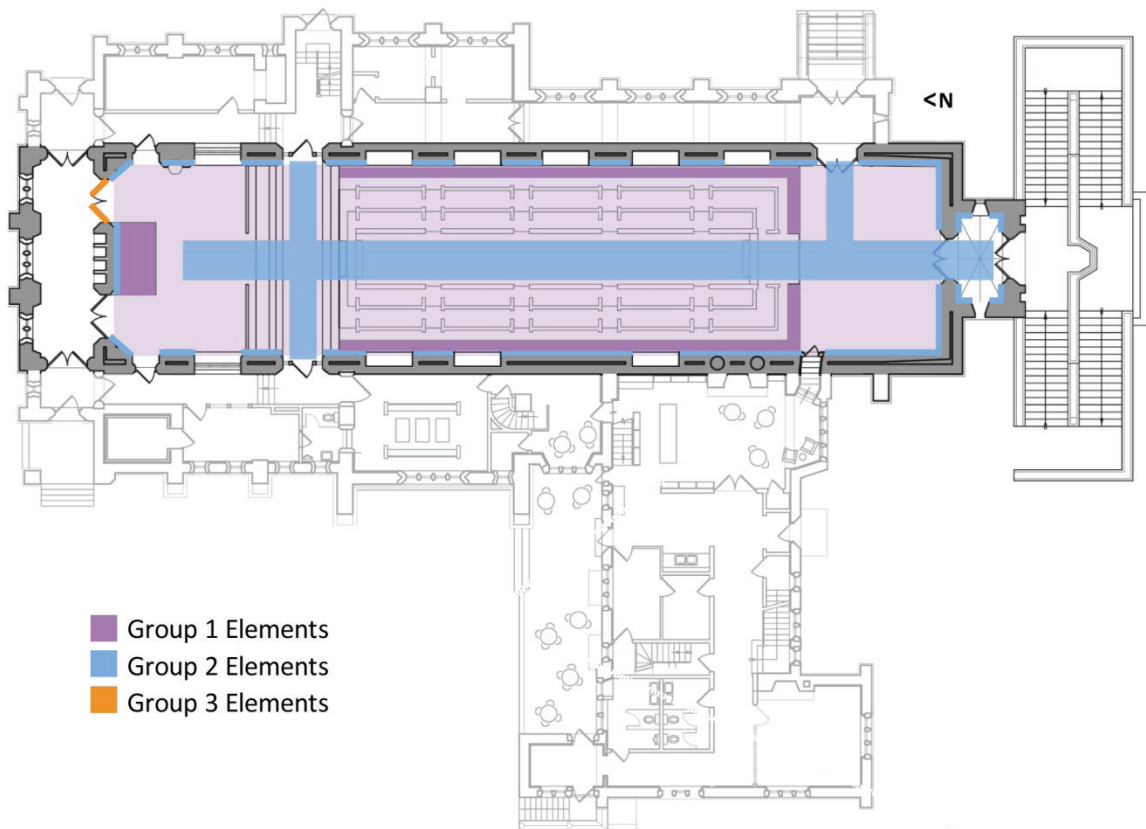


Figure 24: St. Andrew's Chapel floor plan, mapping of the character-defining features by group (image by the author, floor plan base courtesy of The University of Pennsylvania Graduate Program in Historic Preservation)

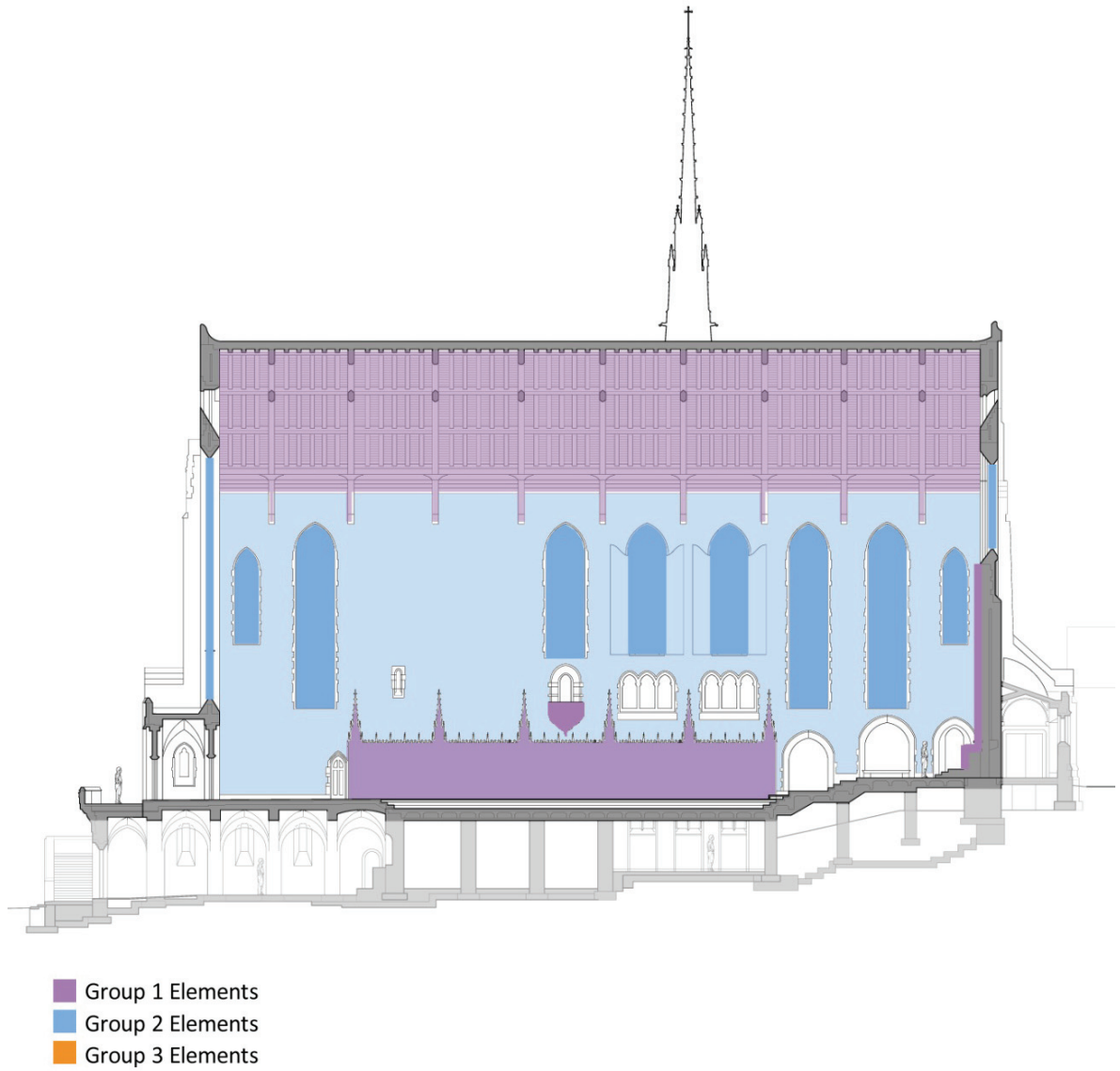
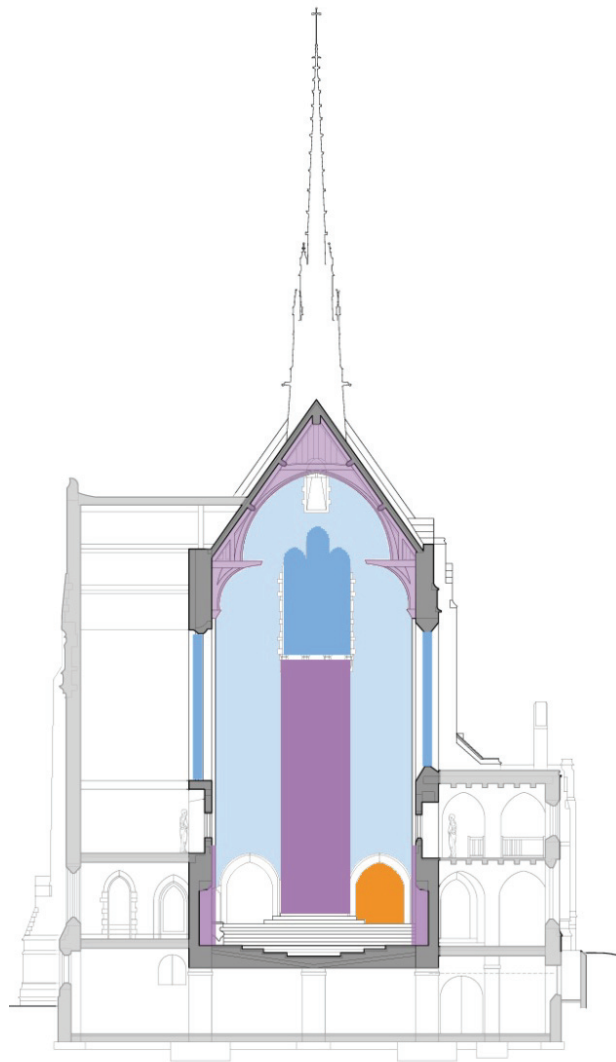


Figure 25: St. Andrew's Chapel longitudinal section, mapping of the character-defining features by group (image by the author, cross section base courtesy of The University of Pennsylvania Graduate Program in Historic Preservation)



- Group 1 Elements
- Group 2 Elements
- Group 3 Elements

Figure 26: St. Andrew's Chapel transversal section, mapping of the character-defining features by group (image by the author, cross section base courtesy of The University of Pennsylvania Graduate Program in Historic Preservation)

Step 4: Outcomes

St. Andrew's Chapel is a house of worship with exclusive characteristics, derived from its condition of dependency with the Divinity School complex. The application of the evaluation method revealed two combinations of character-defining features that, if well preserved, interpreted, and enhanced during the reuse process, can help to retain the experiential character-defining features of the space. The identified combinations are:

1) Volume + Visual focus + Structure

The two elements that ranked the highest in the identification and hierarchy of character-defining features were the experiential elements of volume and visual focus, followed by the physical structural element formed by the roof. The elaborated ceiling, consisting of detailed painted wood panels and hammer beams trusses, has a leading role when combined with the narrow vertical proportion of the building.

2) Seating arrangement + Circulation + Liturgical artifacts

This combination of character-defining features also relies in the experiential visual focus but, in this case, framed by the choir stalls, emphasizing the horizontal direction. The horizontal movement and circulation of the space drags the user toward the altar and its reredos, which symbolically constitutes the most sacred area of the chapel.

Any intervention or change in the space that preserves the previous explained combinations of character-defining features, will maintain the character of the building and the sense of the original use. Other character-defining elements, such as the materials and finishing, the stained

glass windows, and the iron fence, contribute to the significance of the space but their visual importance is less substantial. Therefore, their partial modification will not impact the character of the space.

The following are judgmental outcomes based on the findings of the application of the evaluation method. The aim of these outcomes is to help in the decision-making process for the change of use of St. Andrew's Chapel:

- The interior perception of verticality of the space needs to be preserved. In order to achieve this, it is important to give emphasis to the ceiling, leaving a portion of the nave open to the total height of the interior space, without visual obstructions or partitions. This can be achieved by preserving the open space in both ends of the building, showcasing both the altar area as well as the stained glass window on top of the main entrance. The vertical emphasis can be also achieved through dramatic illumination of the ceiling and trusses, reinforcing the visual focus toward the ceiling.
- The choir stalls should be retained in place. The central circulation path should be kept open towards the altar area. The seating arrangement of the building represents an extra challenge because of the change of level in the floor, which currently is covered by temporary plywood. A possible solution to overcome this obstacle could be to build a central corridor in the choir area, leveled with the rest of the nave, and to leave the laterals open all the way to the stalls. This would emphasize the horizontality of the circulation pathway and the visual connection to the altar area, and would respect the space created by the original seating arrangement.

- The central section of the nave could allow the insertion of an independent, free-standing structure inside the building. The lower limit of the new structure should be aligned with the upper part of the choir stalls, leaving the ground floor open. The total height of the new structure should be limited by the beginning of the hammer beams in the roof. To the sides it should be connected to the perimeter of the sanctuary only in specific locations, if it all. The construction of a new independent structure inside the building could maximize the use of the space, providing more floor area for the accommodation of new uses.

5.4. Conclusions

The application of the evaluation method in St. Andrew's Chapel was successful in accomplishing the following:

- It identified the physical and the experiential character-defining features that provide significance to the house of worship;
- It grouped the character-defining features by hierarchy, combining the physical and the experiential elements within each group; and
- It illustrated the location of the groups of character-defining features showing the interactions among them, serving as a visual aid in the evaluation of the possible options for the change of use of the space.

The final outcomes based in the information provided by the findings consist in three key points that, if followed in the adaptive reuse of the building, will preserve the most relevant character-defining features of the former St. Andrew's Chapel. Ultimately, these outcomes constitute

valuable information that can be used in the adaptation process, providing guidance on how to intervene the space while enhancing its physical and experiential character.

Chapter 6

Final Conclusions

The final conclusions of this thesis are divided in two main topics derived from the research and findings of previous chapters. One relates to the importance of providing specific tools for the preservation and adaptive reuse of houses of worship. The other relates to the recognition of the sensory and experiential features of houses of worship, and buildings in general, as a fundamental component in the preservation of their character.

Preservation of Houses of Worship

Houses of worship are exceptional buildings and an important component of the built and cultural heritage. The rapidly increasing underutilization, vacancy and decay affecting religious buildings is a call to action for a better protection of this type of structures. The research for this thesis showed that currently in the United States there is the need for specialized preservation tools for the treatment of religious buildings, either for their renovation or repurposing for other uses.

Houses of worship constitute a typology of buildings meant to be significant for the community as repositories of the sacred, and their form reflects this fact: their distinctive shapes reflect the importance of their use. When compared to other common building typologies such as residential or commercial buildings, the value of houses of worship can be easily recognized as structures of greater proportions, built with high quality materials, usually designed by recognized architects, and with generous treatment of the space volume. It is thus logical to customize the preservation tools for the treatment and protection of houses of worship.

Currently the preservation practice in the United States uses standard guidelines conceived for the protection of any, but no specific, type of historic buildings. In terms of houses of worship this approach could be improved, offering personalized guidelines with a deeper level of understanding of the complexities involved in their intervention, increasing the possibilities of success during the preservation process. Specific guidelines for the preservation of houses of worship that address common challenges for this type of building, such as possible subdivision of the space, repurposing of musical components, treatments of stained glass windows, and disposition of liturgical elements, will ultimately guarantee that all interventions made to the buildings, even if it means changing their use, will not degrade their character, irreversibly losing their heritage value.

An analysis of the study cases described in Chapter 3 reveals that the most successful project in retaining the character-defining features of the building was the one that counted with the involvement of public organizations during the adaptive reuse. In the change of use of the former Church of the New Jerusalem, the consciousness of the owner together with the advice of public institutions such as the Preservation Fund and the Philadelphia Historical Commission, granted the success of the intervention. This example demonstrates how the appropriate guidance provided by public institutions during the intervention of historic houses of worship can achieve excellent results.

Often, communities are aware of the importance of religious buildings, and this awareness is an advantage for the protection of their value. The improvement of the available preservation tools and the involvement of different agents in the reuse process of houses of worship, especially

public institutions, are much needed steps in extending the life of religious buildings, conserving their character and heritage for future generations.

The sensory experience

The relevance of the spirit of place and the sensory experience of buildings is becoming a topic of discussion in different ambits. Disciplines such as neuroscience are increasingly interested in understanding the ways in which users experience the place and the implications of the sensorial interaction in the overall perception of the space. Applied to adaptive reuse, an important question is to which extent a building can be changed without losing its character. Applied to houses of worship the question is even more important due to the specific characteristics of this type of structures as well as their symbolic implications.

The proposed evaluation method for assessing the impact of change of use proposed in this thesis constitutes a useful tool in the identification and hierarchization of the values that provide character to a house of worship. Most importantly it assigns equal significance to the experiential and to the physical character-defining features. The appropriate identification of the elements that provide character to a house of worship, and the recognition of the possible combinations and interaction between them, sets the foundation for determining the extent for future interventions while preserving the spirit of the place.

Considering the wide array of options when approaching the decision-making process for the adaptive reuse of religious buildings, the proposed evaluation method facilitates the direction to follow establishing the first step of recognizing what deserves to be preserved and the source of the value. Moreover, the evaluation method, supported by specific guidance for the

preservation of houses of worship, could be an excellent resource in the protection of both the physical and the experiential character-defining features.

The recognition of the spirit of place as a main factor to consider in the preservation of the built and cultural heritage is evident in the declaration result of the 16th General Assembly of ICOMOS. The Québec Declaration on the Preservation of the Spirit of Place encompasses the principles and recommendations for preserving the intangible character. In the declaration it is stated that:

“...intangible cultural heritage gives a richer and more complete meaning to heritage as a whole and it must be taken into account in all legislation concerning cultural heritage, and in all conservation and restoration projects.”⁸²

Furthermore it demands that *“...governments and other stakeholders call upon the expertise of multidisciplinary research teams and traditional practitioners in order to better understand, preserve and transmit the spirit of place.”⁸³*

The consideration of the sensory experience of the building as one of the most relevant components in identifying the character of a house of worship is fundamental, since the physical fabric of a building has no meaning without users to experience it. The preservation of historic buildings is far from a standardized process. For this reason, simple tools such as the proposed evaluation method, provide useful guidance in the identification of the character-defining features, and sets the base for further discussion in the reuse process providing useful information for the steps to follow.

⁸² International Council on Monuments and Sites "Québec Declaration On The Preservation Of The Spirit Of Place" Adopted at Québec, Canada (October 4, 2008)

⁸³ Ibid.

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The Secretary of the Interior's Standards for Rehabilitation

(National Park Service, U.S. Department of the Interior)

- 1) A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- 2) The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- 3) Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
- 4) Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- 5) Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- 6) Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- 7) Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- 8) Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- 9) New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- 10) New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

17 Preservation Briefs

Technical Preservation Services
National Park Service
U.S. Department of the Interior



Architectural Character Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character

Lee H. Nelson, FAIA

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A NOTE TO OUR USERS: The web versions of the **Preservation Briefs** differ somewhat from the printed versions. Many illustrations are new, captions are simplified, illustrations are typically in color rather than black and white, and some complex charts have been omitted.

The Secretary of the Interior's Standards for the Treatment of Historic Properties embody two important goals: **1)** the preservation of historic materials and, **2)** the preservation of a building's distinguishing character. Every old building is unique, with its own identity and its own distinctive character. *Character* refers to all those visual aspects and physical features that comprise the appearance of every historic building. Character-defining elements include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment.

The purpose of this Brief is to help the owner or the architect identify those features or elements that give the building its visual character and that should be taken into account in order to preserve them to the maximum extent possible.

There are different ways of understanding old buildings. They can be seen as examples of specific building types, which are usually related to a building's function, such as schools, courthouses or churches.

Buildings can be studied as examples of using specific materials such as concrete, wood, steel, or limestone. They can also be considered as examples of an historical period, which is often related to a specific architectural style, such as Gothic Revival farmhouses, one-story bungalows, or Art Deco apartment buildings.

There are many other facets of an historic building besides its functional type, its materials or construction or style that contribute to its historic qualities or significance. Some of these qualities are feelings conveyed by the sense of time and place or in buildings associated with events or people. A complete understanding of any property may require documentary research about its style, construction, function, its furnishings or contents; knowledge about the original builder, owners, and later occupants; and knowledge about the evolutionary history of the building. Even though buildings may be of historic, rather than architectural significance, it is their tangible elements that embody its significance for association with specific events or persons and it is those tangible elements both on the exterior and interior that should be preserved.

Therefore, the approach taken in this Brief is limited to **identifying those visual and tangible aspects of the historic building**. While this may aid in the planning process for carrying out any ongoing or new use or restoration of the building, this approach is

not a substitute for developing an understanding about the significance of an historic building and the district in which it is located. If the various materials, features and spaces that give a building its visual character are not recognized and preserved, then essential aspects of its character may be damaged in the process of change.

A building's character can be irreversibly damaged or changed in many ways, for example, by inappropriate repointing of the brickwork, by removal of a distinctive side porch, by changes to the window sash, by changes to the setting around the building, by changes to the major room arrangements, by the introduction of an atrium, by painting previously unpainted woodwork, etc.

A Three-Step Process to Identify A Building's Visual Character

This Brief outlines a three-step approach that can be used by anyone to identify those materials, features and spaces that contribute to the visual character of a building. This approach involves first examining the building from afar to understand its overall setting and architectural context; then moving up very close to appreciate its materials and the craftsmanship and surface finishes evident in these materials; and then going into and through the building to perceive those spaces, rooms and details that comprise its interior visual character.

Step 1: Identify the Overall Visual Aspects

Identifying the overall visual character of a building is nothing more than looking at its distinguishing physical aspects without focusing on its details. The major contributors to a building's overall character are embodied in the general aspects of its setting; the shape of the building; its roof and roof features, such as chimneys or cupolas; the various projections on the building, such as porches or bay windows; the recesses or voids in a building, such as open galleries, arcades, or recessed balconies; the openings for windows and doorways; and finally the various exterior materials that contribute to the building's character.

Step One involves looking at the building from a distance to understand the character of its site and setting, and it involves walking around the building where that is possible. Some buildings will have one or more sides that are more important than the others because they are more highly visible. This does not mean that the rear of the building is of no value whatever but it simply means that it is less important to the overall character. On the other hand, the rear may have an interesting back porch or offer a private garden space or some other aspect that may contribute to the visual character. Such a general approach to looking at the building and site will provide a better understanding of its overall character without having to resort to an infinitely long checklist of its possible features and details. Regardless of whether a building is complicated or relatively plain, it is these broad categories that contribute to an understanding of the overall character rather than the specifics of architectural features such as moldings and their profiles.

Step 2: Identify the Visual Character at Close Range

Step Two involves looking at the building at close range or arm's length, where it is possible to see all the surface qualities of the materials, such as their color and texture, or surface evidence of craftsmanship or age. In some instances, the visual character is the result of the juxtaposition of materials that are contrastingly different in their color and texture. The surface qualities of the materials may be important because they impart the very sense of craftsmanship and age that distinguishes historic buildings from other buildings. Furthermore, many of these close up qualities can be easily damaged or obscured by work that affects those surfaces. Examples of this could include painting previously unpainted masonry, rotary disk sanding of smooth wood siding to remove paint, abrasive cleaning of tooled stonework, or repointing reddish mortar joints with gray portland cement.

There is an almost infinite variety of surface materials, textures and finishes that are part of a building's character which are fragile and easily lost.

Step 3: Identify the Visual Character of Interior Spaces, Features and Finishes

Perceiving the character of interior spaces can be somewhat more difficult than dealing with the exterior. In part, this is because so much of the exterior can be seen at one time and it is possible to grasp its essential character rather quickly. To understand the interior character, **Step Three** says it is necessary to move through the spaces *one at a time*. While it is not difficult to perceive the character of one individual room, it becomes more difficult to deal with spaces that are interconnected and interrelated. Sometimes, as in office buildings, it is the vestibules or lobbies or corridors that are important to the interior character of the building. With other groups of buildings the visual qualities of the interior are related to the plan of the building, as in a church with its axial plan creating a narrow tunnel-like space which obviously has a different character than an open space like a sports pavilion. Thus the shape of the space may be an essential part of its character.

With some buildings it is possible to perceive that there is a visual linkage in a sequence of spaces, as in a hotel, from the lobby to the grand staircase to the ballroom. Closing off the openings between those spaces would change the character from visually linked spaces to a series of closed spaces. For example, in a house that has a front and back parlor linked with an open archway, the two rooms are perceived together, and this visual relationship is part of the character of the building. To close off the open archway would change the character of such a residence.

The importance of interior features and finishes to the character of the building should not be overlooked. In relatively simple rooms, the primary visual aspects may be in features such as fireplace mantels, lighting fixtures or wooden floors. In some rooms, the absolute plainness is the character-defining aspect of the interior. So-called secondary spaces also may be important in their own way, from the standpoint of history or because of the family activities that occurred in those rooms. Such secondary spaces, while perhaps historically significant, are not usually perceived as important to the visual character of the building. Thus we do not take them into account in the visual understanding of the building.

Overall Visual Character: Shape

The **shape** of a building can be an important aspect of its overall visual character. The building illustrated here, for example, has a distinctive horizontal boxlike shape with the middle portion of the box projecting up an extra story.



This building has other visual aspects that help define its overall character, including the pattern of vertical bands of windows, the decorative horizontal bands which separate the base of the building from the upper floors, the dark brown color of the brick, the large arched entranceway, and the castle-like tower behind the building.

Overall Visual Character: Openings



The **opening** illustrated here dominates the visual character of this building because of its size, shape, location, materials, and craftsmanship. Because of its relation to the generous staircase, this opening places a strong emphasis on the principal entry to the building. Enclosing this arcade-like entry with glass, for example, would materially and visually change the character of the building.



Overall Visual Character: Setting

Even



architecturally modest buildings frequently will have a **setting** that contributes to their overall character. In this very urban district, setbacks are the exception, so that the small front yard is something of a luxury, and it is important to the overall character because of its design and materials, which include the iron fence along the sidewalk, the curved walk leading to the porch, and the various plantings. In a district where parking spaces are in great demand, such front yards are sometimes converted to off-street parking, but in this instance, that would essentially destroy its setting and would drastically change the visual character of this historic property.

Arm's Length Visual Character: Materials



At arm's length, the visual character is most often determined by the surface qualities of the **materials** and craftsmanship; and while these aspects are often inextricably related, the original choice of materials often plays the dominant role in establishing the close range character because of the color, texture, or shape of the materials.

In this instance, the variety and arrangement of the materials is important in defining the visual character, starting with the large pieces of broken stone which form the projecting base for the building walls, then changing to a wall of roughly rectangular stones which vary in size, color, and texture, all with accentuated, projecting beads of mortar, then there is a rather precise and narrow band of cut and dressed stones with minimal mortar joints, and finally, the main building walls are composed of bricks, rather uniform in color, with fairly generous mortar joints. It is the juxtaposition and variety of these materials (and of course, the craftsmanship) that is very important to the visual character. Changing the raised mortar joints, for example, would drastically alter the character at arm's length.

Arm's Length Visual Character: Craft Details

There are many instances where **craft details** dominate the arm's length visual character. As seen here, the craft details are especially noticeable because the stones are all of a uniform color, and they are all squared off, but their surfaces were worked with differing tools and techniques to create a great variety of textures, resulting in a tour-de-force of craft details. This texture is very important at close range. It was a deliberately contrived surface that is an important contributor to the visual character of this building.



Interior Visual Character: Individually Important Spaces

In assessing the interior visual character of any historic building, it is necessary to ask



whether there are spaces that are important to the character of this particular building, whether the building is architecturally rich or modest, or even if it is a simple or utilitarian structure.

The character of the **individually important space**, which is illustrated here, is a combination of its size, the twin curving staircases, the massive columns and curving vaulted ceilings, in addition to the quality of the materials in the floor and in the stairs. If the ceiling were to be lowered to provide space for heating ducts, or if the stairways were to

be enclosed for code reasons, the shape and character of this space would be damaged, even if there was no permanent physical damage. Such changes can easily destroy the visual character of an individually important interior space. Thus, it is important that the visual aspects of a building's interior character be recognized before planning any changes or alterations.

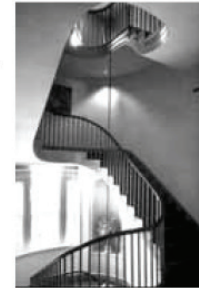
Interior Visual Character: Related Spaces

Many buildings have interior spaces that are visually or physically related so that, as you move through them, they are perceived not as separate spaces, but as a sequence of **related spaces** that are important in defining the interior character of the building. The example which is illustrated here consists of two spaces that are visually linked to each other.

The top photo shows a vestibule which is of a generous size and unusual in its own right, but more important, it visually relates to the staircase off of it.



The stairway, bottom photo, is the second part of this sequence of related spaces, and it provides continuing access to the upper floors. These related spaces are very important in defining the interior character of this building. Almost any change to these spaces, such as installing doors between the vestibule and the hallway, or enclosing the stair would seriously impact their character and the way that character is perceived.



Interior Visual Character: Interior Features



Interior features are three-dimensional building elements or architectural details that are an integral part of the building as opposed to furniture. Interior features are often important in defining the character of an individual room or space. In some instances, an interior feature, like a large and ornamental open stairway may dominate the visual character of an entire building. In other instances, a modest iron stairway (like the one illustrated here) may be an important interior feature, and its preservation would be crucial to preserving the interior character of the building.

Such features can also include the obvious things like fireplace mantles, plaster ceiling medallions, or paneling, but they also extend to features like hardware, lighting fixtures, bank tellers cages, decorative elevator doors, etc.

Interior Visual Character: Surface Materials and Finishes

When identifying the visual character of historic interior spaces one should not overlook the importance of those materials and finishes that comprise the surfaces of walls, floors and ceilings. The surfaces may have evidence of either handcraft or machine made products that are important contributors to the visual character, including patterned or inlaid designs in the wood flooring, decorative painting practices such as stenciling, imitation marble or wood grain, wallpapering, tinwork, tile floors, etc.



The example illustrated here involves a combination of real marble at the base of the column, imitation marble patterns on the plaster surface of the column (a practice called scagliola), and a tile floor surface that uses small mosaic tiles arranged to form geometric designs in several different colors. While such decorative materials and finishes may be important in defining the interior visual character of this particular building, it should be remembered that in much more modest buildings, the plainness of **surface materials and finishes** may be an essential aspect of their historic character.

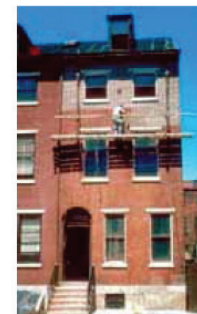
Interior: Exposed Structure



If features of the **structural system** are exposed, such as loadbearing brick walls, cast iron columns, roof trusses, posts and beams, vigas, or stone foundation walls, they may be important in defining the building's interior visual character.

Fragility of A Building's Visual Character

Some aspects of a building's visual character are **fragile and are easily lost**. This is true of brickwork, for example, which can be irreversibly damaged with inappropriate cleaning techniques or by insensitive repointing practices. At least two factors are important contributors to the visual character of brickwork, namely the brick itself and the craftsmanship. Between these, there are many more aspects worth noting, such as color range of bricks, size and shape variations, texture, bonding patterns, together with the many variable qualities of the mortar joints, such as color, width of joint and tooling.



These qualities could be easily damaged by painting the brick, by raking out the joint with power tools, or repointing with a joint that is too wide. As seen here during the process of repointing, the visual character of this front wall is being dramatically changed from a wall where the bricks predominate, to a wall that is visually dominated by the mortar joints.

Conclusion

Using this three-step approach, it is possible to conduct a walk through and identify all those elements and features that help define the visual character of the building. In most cases, there are a number of aspects about the exterior and interior that are

important to the character of an historic building. The visual emphasis of this brief will make it possible to ascertain those things that should be preserved because their loss or alteration would diminish or destroy aspects of the historic character whether on the outside, or on the inside of the building.

The Architectural Character Checklist/Questionnaire

This checklist can be taken to the building and used to identify those aspects that give the building and setting its essential visual qualities and character. This checklist consists of a series of questions that are designed to help in identifying those things that contribute to a building's character. The use of this checklist involves the threestep process of looking for: 1) the overall visual aspects, 2) the visual character at close range, and 3) the visual character of interior spaces, features and finishes.

Because this is a process to identify architectural character, it does not address those intangible qualities that give a property or building or its contents its historic significance, instead this checklist is organized on the assumption that historic significance is embodied in those tangible aspects that include the building's setting, its form and fabric.

STEP ONE

1. Shape

What is there about the form or shape of the building that gives the building its identity? Is the shape distinctive in relation to the neighboring buildings? Is it simply a low, squat box, or is it a tall, narrow building with a corner tower? Is the shape highly consistent with its neighbors? Is the shape so complicated because of wings, or ell's, or differences in height, that its complexity is important to its character? Conversely, is the shape so simple or plain that adding a feature like a porch would change that character? Does the shape convey its historic function as in smoke stacks or silos?

Notes on the Shape or Form of the Building:

2. Roof and Roof Features

Does the roof shape or its steep (or shallow) slope contribute to the building's character? Does the fact that the roof is highly visible (or not visible at all) contribute to the architectural identity of the building? Are certain roof features important to the profile of the building against the sky or its background, such as cupolas, multiple chimneys, dormers, cresting, or weather vanes? Are the roofing materials or their colors or their patterns (such as patterned slates) more noticeable than the shape or slope of the roof?

Notes on the Roof and Roof Features:

3. Openings

Is there a rhythm or pattern to the arrangement of windows or other openings in the walls; like the rhythm of windows in a factory building, or a threepart window in the front bay of a house; or is there a noticeable relationship between the width of the window openings and the wall space between the window openings? Are there distinctive openings, like a large arched entranceway, or decorative window lintels that accentuate the importance the window openings, or unusually shaped windows, or patterned window sash, like small panes of glass in the windows or doors, that are important to the character? Is the plainness of the window openings such that adding shutters or gingerbread trim would radically change its character? Is there a hierarchy of facades that make the front windows more important than the side windows? What

about those walls where the absence of windows establishes its own character?

Notes on the Openings:

4. Projections

Are there parts of the building that are characterdefining because they project from the walls of the building like porches, cornices, bay windows, or balconies? Are there turrets, or widely overhanging eaves, projecting pediments or chimneys?

Notes on the Projections:

5. Trim and Secondary Features

Does the trim around the windows or doors contribute to the character of the building? Is there other trim on the walls or around the projections that, because of its decoration or color or patterning contributes to the character of the building? Are there secondary features such as shutters, decorative gables, railings, or exterior wall panels?

Notes on the Trim and Secondary Features:

6. Materials

Do the materials or combination of materials contribute to the overall character of the building as seen from a distance because of their color or patterning, such as broken faced stone, scalloped wall shingling, rounded rock foundation walls, boards and battens, or textured stucco?

Notes on the Materials

7. Setting

What are the aspects of the setting that are important to the visual character? For example, is the alignment of buildings along a city street and their relationship to the sidewalk the essential aspect of its setting? Or, conversely, is the essential character dependent upon the tree plantings and out buildings which surround the farmhouse? Is the front yard important to the setting of the modest house? Is the specific site important to the setting such as being on a hilltop, along a river, or, is the building placed on the site in such a way to enhance its setting? Is there a special relationship to the adjoining streets and other buildings? Is there a view? Is there fencing, planting, terracing, walkways or any other landscape aspects that contribute to the setting?

Notes on the Setting:

STEP TWO

8. Materials at Close Range

Are there one or more materials that have an inherent texture that contributes to the

close range character, such as stucco, exposed aggregate concrete, or brick textured with vertical grooves? Or materials with inherent colors such as smooth orange colored brick with dark spots of iron pyrites, or prominently veined stone, or green serpentine stone? Are there combinations of materials, used in juxtaposition, such as several different kinds of stone, combinations of stone and brick, dressed stones for window lintels used in conjunction with rough stones for the wall? Has the choice of materials or the combinations of materials contributed to the character?

Notes on the Materials at Close Range:

9. Craft Details

Is there high quality brickwork with narrow mortar joints? Is there hand tooled or patterned stonework? Do the walls exhibit carefully struck vertical mortar joints and recessed horizontal joints? Is the wall shinglework laid up in patterns or does it retain evidence of the circular saw marks or can the grain of the wood be seen through the semitransparent stain? Are there hand split or handdressed clapboards, or machine smooth beveled siding, or wood rusticated to look like stone, or Art Deco zigzag designs executed in stucco?

Almost any evidence of craft details, whether handmade or machinemade, will contribute to the character of a building because it is a manifestation of the materials, of the times in which the work was done, and of the tools and processes that were used. It further reflects the effects of time, of maintenance (and/or neglect) that the building has received over the years. All of these aspects are a part of the surface qualities that are seen only at close range.

Notes on the Craft Details:

STEP THREE

10. Individual Spaces

Are there individual rooms or spaces that are important to this building because of their size, height, proportion, configuration, or function, like the center hallway in a house, or the bank lobby, or the school auditorium, or the ballroom in a hotel, or a courtroom in a county courthouse?

Notes on the Individual Spaces.

11. Related Spaces and Sequences of Spaces

Are there adjoining rooms that are visually and physically related with large doorways or open archways so that they are perceived as related rooms as opposed to separate rooms? Is there an important sequence of spaces that are related to each other, such as the sequence from the entry way to the lobby to the stairway and to the upper balcony as in a theatre; or the sequence in a residence from the entry vestibule to the hallway to the front parlor, and on through the sliding doors to the back parlor; or the sequence in an office building from the entry vestibule to the lobby to the bank of elevators?

Notes on the Related Spaces and Sequences of Spaces:

12. Interior Features

Are there interior features that help define the character of the building, such as fireplace mantels, stairways and balustrades, arched openings, interior shutters, inglenooks, cornices, ceiling medallions, light fixtures, balconies, doors, windows, hardware, wainscoting, panelling, trim, church pews, courtroom bars, teller cages, waiting room benches?

Notes on the Interior Features:

13. Surface Finishes and Materials

Are there surface finishes and materials that can affect the design, the color or the texture of the interior? Are there materials and finishes or craft practices that contribute to the interior character, such as wooden parquet floors, checkerboard marble floors, pressed metal ceilings, fine hardwoods, grained doors or marbleized surfaces, or polychrome painted surfaces, or stenciling, or wallpaper that is important to the historic character? Are there surface finishes and materials that, because of their plainness, are imparting the essential character of the interior such as hard or bright, shiny wall surfaces of plaster or glass or metal?

Notes on the Surface Finishes and Materials:

14. Exposed Structure

Are there spaces where the exposed structural elements define the interior character such as the exposed posts, beams, and trusses in a church or train shed or factory? Are there rooms with decorative ceiling beams (nonstructural) in bungalows, or exposed vigas in adobe buildings?

Notes on the Exposed Structure:

This concludes the three-step process of identifying the visual aspects of historic buildings and is intended as an aid in preserving their character and other distinguishing qualities. It is not intended as a means of understanding the significance of historical properties or districts, nor of the events or people associated with them. That can only be done through other kinds of research and investigation.

Acknowledgements

This Preservation Brief was originally developed as a slide talk/methodology in 1982 to discuss the use of the Secretary of the Interior's Standards for Rehabilitation in relation to preserving historic character; and it was amplified and modified in succeeding years to help guide preservation decision making, initially for maintenance personnel in the National Park Service.

Please note that many of the figures that were in the printed Brief had to be omitted here; however you can go to a special web site, [The Walk-Through--Identifying the Visual Character of Historic Buildings](#), to study all of Lee Nelson's photos and text presented as a long distance learning program.

A number of people contributed to the evolution of the ideas presented here. Special thanks go to Emogene Bevitt and Gary Hume, primarily for the many and frequent discussions relating to this approach in its evolutionary stages; to Mark Fram, Ontario Heritage Foundation, Toronto, for suggesting several additions to the Checklist; and more recently, to my coworkers, both in Washington and in our regional offices, especially Ward Jandl, Sara Blumenthal, Charles Fisher, Sharon Park, AIA, Jean Travers, Camille Martone, Susan Dynes, Michael Auer, Anne Grimmer, Kay Weeks, Betsy Chittenden, Patrick Andrus, Carol Shull, Hugh Miller, FAIA, Jerry Rogers, Paul Alley, David Look, AIA, Margaret Pepin-Donat, Bonnie Halda, Keith Everett, Thomas Keohan, the Preservation Services Division, MidAtlantic Region, and several reviewers in state preservation offices, especially Ann Haaker, Illinois; and Stan Graves, AIA, Texas; for providing very critical and constructive review of the manuscript.

Washington, D.C. September, 1988

National Park Service
U.S. Department of the Interior



Technical Preservation Services
National Center for Cultural Resources

ITS
NUMBER 6

Interpreting The Secretary of the Interior's Standards for Rehabilitation

Subject: Preserving Historic Church Interiors

- Applicable Standards:
1. Compatible Use
 2. Retention of Historic Character
 5. Preservation of Distinctive Features, Finishes and Craftsmanship
 10. Reversibility of New Additions/Alterations

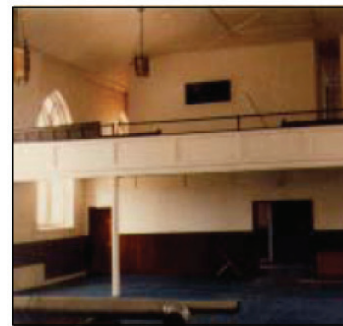
Issue: The appropriate rehabilitation of a historic structure must always preserve significant interior spaces, features and finishes. Large, multi-story interior spaces are often found in theaters, school auditoriums and gymnasiums, meeting halls, and religious buildings. These spaces characterize such building types and should be preserved in rehabilitation projects.

Redundant churches have often been rehabilitated for other uses, some more successfully than others. In historic churches, architectural features such as stained glass windows, choir lofts, altars, and large open spaces are important in defining the historic character of the building. Libraries, museums and historical societies, performing arts centers, community centers, and artists' studios are often appropriately selected as new uses for historic churches, as there is no need to introduce major architectural changes into the sanctuary space. However, the conversion of churches into apartments, shops or offices may not be as successful since these new uses are likely to require too many changes that are not compatible with the historic character of these interiors. Alterations which compromise or destroy these spaces or which cause the removal of distinctive architectural features and finishes, or which subdivide these two-story spaces and that result in compromising the integrity of these significant spaces, will not meet Standards 2 and 5, and, in some cases, also will not meet Standards 1 and 10.

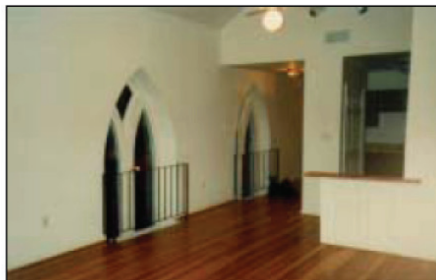
Application 1 (*Incompatible treatment*): A simple Gothic Revival church constructed in 1858 was rehabilitated for combined office and residential apartment use. The interior still possessed a high degree of integrity before its rehabilitation with its tray ceiling, twelve large stained glass windows, choir loft, and the large, two-story space of the sanctuary itself. During the rehabilitation the choir loft was demolished, and the construction of a full second floor resulted in bisecting the two-story interior space horizontally. The combination of these treatments resulted in a loss of interior features and loss of the interior space itself in this historic church building. Inserting the new floor level removed the choir loft and, most importantly, resulted in the loss of the



1858 Gothic Revival church building prior to rehabilitation.



Sanctuary with choir loft prior to rehabilitation



Sanctuary after rehabilitation with new floor and newly divided windows.

SIGNIFICANT SPACES

historic spatial volume so characteristic of church building interiors. The new second floor also negatively impacted the tall Gothic-arched windows by cutting across them, effectively reportioning them and reducing their appearance to smaller segments. This rehabilitation, because it did not preserve the integrity and historic character of the church interior, did not meet Standards 1, 2, 5 and 10. Although this particular rehabilitation was not successful, some subdivision may have been possible if a sense of the historic interior space and volume had been preserved, as was achieved in the second example.

Application 2 (Compatible treatment): In another example, a small, two-story, rectangular Shingle-style church, built in the late-19th century, was rehabilitated into a single-family dwelling. Prior to rehabilitation, the interior historic finishes still remained intact, as did the sanctuary space itself lit by original clear glass casement windows. As part of the rehabilitation, approximately a third of the first floor sanctuary space was partitioned off at the rear and modified for use as two bedrooms. The remaining two thirds of the sanctuary was retained intact as the living room, and the apse became the dining area. The corner rooms (the cloakroom, vestry and rear entry vestibule) were kept in their historic configuration and converted into a bathroom, kitchen and mudroom, respectively. To permit more light into the interior, plaster panels at the back of the apse were removed and replaced with clear, single-paned glass windows. The existing stairway provided access to the choir loft which was converted into a master bedroom and bath with only a minimal amount of alteration, even allowing retention of the historic church organ. This rehabilitation successfully preserved the primary, character defining features, finishes and spaces of this historic church interior.



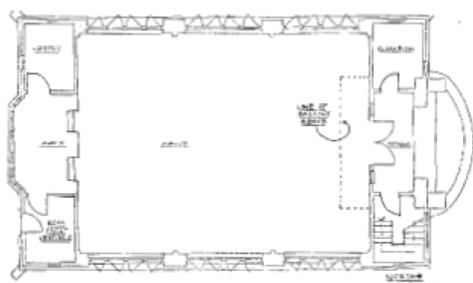
*Shingle-Style church.
North and east elevations after rehabilitation.*



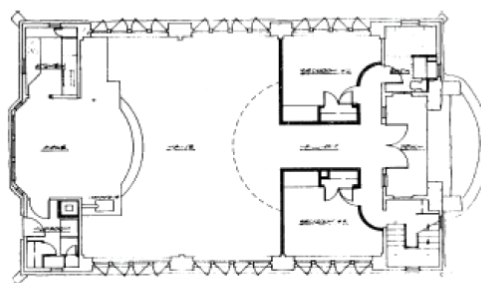
Sanctuary and apse before rehabilitation.



Sanctuary after rehabilitation. View toward kitchen and dining area from living space.



Before rehabilitation first floor plan with reflected line of balcony.



First floor plan after rehabilitation.

Adapted from ITS by Mary Grzeskowiak, Mid-Atlantic Region, and Camille M. Martone, Technical Preservation Services, National Park Service

These bulletins are issued to explain preservation project decisions made by the U.S. Department of the Interior. The resulting determinations, based on the **Secretary of the Interior's Standards for Rehabilitation**, are not necessarily applicable beyond the unique facts and circumstances of each particular case.

JULY 1999, ITS Number 6

Parliamentary Assembly of the Council of Europe
RESOLUTION 916 (1989)¹ on redundant religious buildings

The Assembly,

1. Having noted the report of its Committee on Culture and Education on redundant religious buildings (Doc. 6032), and welcoming in particular the preliminary survey of the situation in all European countries;
2. Aware of the very considerable number of religious buildings throughout Europe that no longer fulfill their original function and are therefore vulnerable through neglect to demolition or inappropriate transformation;
3. Noting that this continues to be the result of historic factors such as population shifts, changes in religious practice and habits, or even the construction of new buildings for religious use;
4. Recalling the Council of Europe's statutory duty to safeguard the ideals and principles which are the common heritage of member states and to which religious buildings bear witness;
5. Asserting also the importance of freedom of religion and religious expression, as set out in Article 9 of the European Convention on Human Rights;
6. Pointing out that religious buildings are often of architectural and historical significance, and recalling its longstanding concern for the integrated conservation of this heritage and to ensure a future for our past;
7. Believing that, when a religious building is no longer viable as such, efforts should be made to ensure a future use, whether religious or cultural, as far as possible compatible with the original intention of its construction;
8. Noting that a church or any other major religious building is often the focal point and central feature of a community and a local landmark, and believing that sufficient time and encouragement should be given to such communities to rediscover a common interest and future role for such buildings;
9. Recalling by way of example that the European Centre for Training Craftsmen began in Venice in a former religious building, the Scuola di San Pasquale;
10. Welcoming the successful examples throughout Europe of the preservation and protection of redundant religious buildings, through their sensitive adaptation to new uses,

11. Calls on the responsible authorities (Church, government and local) to co-operate with interested organizations and experts with a view to:
- i. taking effective measures to preserve redundant religious buildings and secure wherever possible their appropriate future use;
 - ii. consolidating (in compatible computerized form) surveys of redundant religious buildings, of their architectural and historical significance, and of their current use, and regularly updating such surveys which should also reflect contemporary interest and include nineteenth and twentieth century buildings;
 - iii. ensuring effective protection for the survival of the original fabric and fittings of such buildings pending future readaptation;
 - iv. avoiding, except in cases of exceptional architectural, historic or commemorative interest, the preservation of religious buildings as ruins;
 - v. promoting projects for reuse and readaptation which are not incompatible with the original function of the building and do not cause irreversible alteration to the original fabric;
 - vi. providing funds or tax benefits for the restoration, repair and maintenance of religious buildings, whether in use or redundant, in order to ensure they are not abandoned;
 - vii. encouraging a more imaginative use of existing religious buildings;
 - viii. assuring the supply of appropriate building materials, and encouraging the research, crafts and support work necessary for the continuous upkeep of religious buildings;
 - ix. encouraging the inclusion of redundant religious buildings in the redevelopment of cultural itineraries throughout Europe, and ensuring that the proceeds of cultural tourism are channeled into the preservation of the buildings tourists visit.

¹ Assembly debate on 9 May 1989 (3rd Sitting) (see Doc. 6032, report of the Committee on Culture and Education, Rapporteur: Mr Rauti). Text adopted by the Assembly on 9 May 1989 (3rd Sitting).



QUÉBEC DECLARATION ON THE PRESERVATION OF THE SPIRIT OF PLACE

Adopted at Québec, Canada, October 4th 2008

Preamble

Meeting in the historic city of Québec (Canada), from 29 September to 4 October 2008, at the invitation of ICOMOS Canada, on the occasion of the 16th General Assembly of ICOMOS and the celebrations marking the 400th anniversary of the founding of Québec, the participants adopt the following Declaration of principles and recommendations to preserve the spirit of place through the safeguarding of tangible and intangible heritage, which is regarded as an innovative and efficient manner of ensuring sustainable and social development throughout the world.

This Declaration is part of a series of measures and actions undertaken by ICOMOS over the course of the past five years to safeguard and promote the spirit of places, namely their living, social and spiritual nature. In 2003, ICOMOS focused the scientific symposium of its 14th General Assembly on the theme of the preservation of social intangible values of monuments and sites. In the ensuing Kimberly Declaration, ICOMOS committed itself to taking into account the intangible values (memory, beliefs, traditional knowledge, attachment to place) and the local communities that are the custodians of these values in the management and preservation of monuments and sites under the World Heritage Convention of 1972. The ICOMOS Xi'an Declaration of 2005 draws attention to the conservation of context, defined as the physical, visual and natural aspects as well as social and spiritual practices, customs, traditional knowledge and other intangible forms and expressions, in the protection and promotion of world heritage monuments and sites. It also calls upon a multidisciplinary approach and diversified sources of information in order to better understand, manage and conserve context. The Declaration of Foz Do Iguaçu, drawn up in 2008 by ICOMOS Americas, specifies that the tangible and intangible components of heritage are essential in the preservation of the identity of communities that have created and transmitted spaces of cultural and historical

significance. The new ICOMOS charters on Cultural Routes and on Interpretation and Presentation, formulated after extensive consultations and presented for ratification at the present 16th ICOMOS General Assembly, also recognize the importance of intangible dimensions of heritage and the spiritual value of place. Because of the indivisible nature of tangible and intangible heritage and the meanings, values and context intangible heritage gives to objects and places, ICOMOS is currently considering the adoption of a new charter dedicated specifically to the intangible heritage of monuments and sites. In this regard, we encourage discussion and debates in order to develop a new conceptual vocabulary that takes into account the ontological changes of the spirit of place.

The 16th General Assembly, and more specifically the Youth Forum, the Aboriginal Forum and the Scientific Symposium, have provided an opportunity to further explore the relationship between tangible and intangible heritage, and the internal social and cultural mechanisms of the spirit of place. Spirit of place is defined as the tangible (buildings, sites, landscapes, routes, objects) and the intangible elements (memories, narratives, written documents, rituals, festivals, traditional knowledge, values, textures, colors, odors, etc.), that is to say the physical and the spiritual elements that give meaning, value, emotion and mystery to place. Rather than separate spirit from place, the intangible from the tangible, and consider them as opposed to each other, we have investigated the many ways in which the two interact and mutually construct one another. The spirit of place is constructed by various social actors, its architects and managers as well as its users, who all contribute actively and concurrently to giving it meaning. Considered as a relational concept, spirit of place takes on a plural and dynamic character, capable of possessing multiple meanings and singularities, of changing through time, and of belonging to different groups. This more dynamic approach is also better adapted to today's globalized world, which is characterized by transnational population movements, relocated populations, increased intercultural contacts, pluralistic societies, and multiple attachments to place.

The spirit of place offers a more comprehensive understanding of the living and, at the same time, permanent character of monuments, sites and cultural landscapes. It provides a richer, more dynamic, and inclusive vision of cultural heritage. Spirit of place exists, in one form or another, in practically all the cultures of the world, and is constructed by human beings in response to their social needs. The communities that inhabit place, especially when they are traditional societies, should be intimately associated in the safeguarding of its memory, vitality, continuity and spirituality.

The participants of the 16th General Assembly of ICOMOS therefore address the following Declaration of principles and recommendations to intergovernmental and non-governmental organizations, national and local authorities and all institutions and specialists in a position to contribute through legislation, policies, planning processes and management to better protecting and promoting the spirit of place.

Rethinking the Spirit of Place

- 1.** Recognizing that the spirit of place is made up of tangible (sites, buildings, landscapes, routes, objects) as well as intangible elements (memories, narratives, written documents, festivals, commemorations, rituals, traditional knowledge, values, textures, colors, odors, etc.), which all significantly contribute to making place and to giving it spirit, we declare that intangible cultural heritage gives a richer and more complete meaning to heritage as a whole and it must be taken into account in all legislation concerning cultural heritage, and in all conservation and restoration projects for monuments, sites, landscapes, routes and collections of objects.
- 2.** Because the spirit of place is complex and multiform, we demand that governments and other stakeholders call upon the expertise of multidisciplinary research teams and traditional practitioners in order to better understand, preserve and transmit the spirit of place.
- 3.** Since the spirit of place is a continuously reconstructed process, which responds to the needs for change and continuity of communities, we uphold that it can vary in time and from one culture to another according to their practices of memory, and that a place can have several spirits and be shared by different groups.

Identifying the Threats to the Spirit of Place

- 4.** Since climatic change, mass tourism, armed conflict and urban development lead to the transformation and disruption of societies, we need to better understand these threats in order to establish preventive measures and sustainable solutions. We recommend that governmental and non-governmental agencies, and local and national heritage organizations develop long term strategic plans to prevent the degradation of the spirit of place and its environment. The inhabitants and local authorities should also be made aware of the safeguarding of the spirit of place so that they are better prepared to deal with the threats of a changing world.
- 5.** As the sharing of places invested with different spirits by several groups increases the risk of competition and conflict, we recognize that these sites require specific management plans and strategies, adapted to the pluralistic context of modern multicultural societies. Because the threats to the spirit of place are especially high amongst minority groups, be they natives or newcomers, we recommend that these groups benefit first and foremost from specific policies and practices.

Safeguarding the Spirit of Place

6. Because in most countries of the world today the spirit of place, in particular its intangible components, do not currently benefit from formal educational programs or legal protection, we recommend the setting up of forums and consultations with experts from different backgrounds and resource persons from local communities, and the development of training programs and legal policies in order to better safeguard and promote the spirit of place.

7. Considering that modern digital technologies (digital databases, websites) can be used efficiently and effectively at a low cost to develop multimedia inventories that integrate tangible and intangible elements of heritage, we strongly recommend their widespread use in order to better preserve, disseminate and promote heritage places and their spirit. These technologies facilitate the diversity and constant renewal of the documentation on the spirit of place.

Transmitting the Spirit of Place

8. Recognizing that spirit of place is transmitted essentially by people, and that transmission is an important part of its conservation, we declare that it is through interactive communication and the participation of the concerned communities that the spirit of place is most efficiently safeguarded, used and enhanced. Communication is the best tool for keeping the spirit of place alive.

9. Given that local communities are generally in the best position to comprehend the spirit of place, especially in the case of traditional cultural groups, we maintain that they are also best equipped to safeguard it and should be intimately associated in all endeavors to preserve and transmit the spirit of place. Non-formal (narratives, rituals, performances, traditional experience and practices, etc.) and formal (educational programs, digital databases, websites, pedagogical tools, multimedia presentations, etc.) means of transmission should be encouraged because they ensure not only the safeguarding of the spirit of place but, more importantly, the sustainable and social development of the community.

10. Recognizing that intergenerational and transcultural transmission plays an important role in the sustained dissemination and the preservation of the spirit of place, we recommend the association and involvement of younger generations, as well as different cultural groups associated with the site, in policy-making and the management of the spirit of place.

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