Holy renovations:
Adaptive re-use and dependent stakeholder opinion of converted church buildings

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by

Benjamin J. Garstka
b.j.garstka@students.uu.nl
3726657

Advisor: Dr. Brian Doucet

Abstract

With the ever increasing pace of socio-cultural change in contemporary society, one inevitable result is that some physical elements of the built environment fall into disuse or become redundant. One creative solution that has gained popularity in revitalizing vacant or derelict structures in urban areas is that of adaptive re-use. Adaptive re-use entails a reimagining of space in terms of both functional change and physical modifications while maintaining the original essence of the building. Although adaptive re-use is a process that can be applied to a variety of situations, one very distinct case is that of church-buildings. Churches stand as a unique case of adaptive re-use because they are much more multi-faceted than the average building, fostering strong emotional attachments and acting as historic symbols for norms, values, and moral codes. In relation to the re-use of churches, the debate over what is appropriate in terms of both functional and physical change has been dominated solely by religious authorities. This paper seeks to highlight how a more community oriented approach to development projects involving spaces of elevated social significance can benefit from consulting actual end-users.

Using redundant churches as an example of how socio-cultural aspects of adaptive re-use are overlooked, a survey was distributed to 124 participants in the Netherlands asking their opinion regarding the favorability of twelve examples of functional re-uses for church buildings and four issues dealing with potentially problematic physical modifications particular to the adaptive re-use of churches. In order to better understand how different groups perceived such proposed changes, the relationship between personal characteristics (religiousness, age, education, length of residence, and gender) and their attitude toward church re-use was tested through regression analyses and analysis of variances. The majority of dependent stakeholders favored functions that were close to the original mission of the church and those which involve more socially meaningful events. For physical modifications, issues of demolition and alterations to the exterior were the most strongly opposed by respondents. In terms of influential characteristics, religiousness and age were both significant predictors of opinion toward favorability of church re-use, with older and more religious respondents holding definitively more conservative views. The results underscore the importance of the relationship of place-identity in the framework of neighborhood change and the need for increased sensitivity in adaptive re-use projects involving sites with additional social and emotional significance.

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I.) Introduction

Socio-cultural trends change, economic structures change, times change. Given the pace at which the forces of globalization demand that societies react to such changes, the inevitable result is that some physical remnants of these past trends become redundant or fall into disuse. Once a place or building has lost its function, the possibilities of what can or should be done with the structure become important issues to those with vested interests in the site (Bullen & Love, 2010). Determining the future of socially significant sites is a complicated task because places are not composed solely of physical objects, but rather come with their own cultural baggage in the form of emotional attachments, collective histories, and symbolic representations (Barthel, 1996). The physical and intangible cultural aspects that places represent means that razing the structures is sometimes not a viable option. Such situations call for creative solutions, one of which is 'adaptive re-use.' Essentially, adaptive re-use refers to the "process of giving a building a new existence and function when it is no longer used or suitable for use in its original function" (Velthuis & Spennemann, 2007, p.45). Adaptive re-use entails more than simply using the raw materials or shell of a building in other projects. Rather, it is meant to give new life to the structure by physically adapting it for a new function relevant for the community which it serves.

1.1 The Case of Churches and Dependent Stakeholders

Although adaptive reuse is a process that could be applied to a variety of situations, one very distinct case is that involving churches. As church attendance dwindles across much of the Western world and the associated dioceses become financially strained, the houses of worship that were once filled each Sunday begin to fall into disuse (Knox, 2005; Rijksdienst voor het Cultureel Erfgoed, 2011). Churches are a unique case of adaptive re-use because they are much more multifaceted than the average building, standing as symbols for religious attachment and evoking strong emotions from former patrons and fellow believers (Mazumdar & Mazumdar, 2004; Brace et al., 2006). When discussing adaptive re-use and churches, it should be made clear that the most pressing cases are those involving urban churches. Geographically speaking, churches in cities often occupy desirable central locations, are prominent components in the urban landscape, and are structurally distinct as they historically served as centers for congregation. The combination of central locations, aesthetically unique buildings, and strong emotional attachment to the structures make the adaptive re-use of churches an interesting and at times controversial topic because of the multiplicity of interests and opinions of urban residents and entities. The adaptation of churches to accommodate other functions is not a new phenomenon, but the current body of literature regarding adaptive reuse typically dwells on debates pertaining to economic considerations and environmental sustainability. Currently, this body of literature on adaptive reuse generally disregards or over-simplifies the importance of socio-cultural considerations specific to projects involving spaces of elevated significance such as churches.

When dealing with churches, two main components of the adaptive re-use process can be culturally problematic: the change in function of the building and the modifications to the building that accompany such a change. The problematization of these two aspects of church re-use has typically been dominated by Christian church authorities that have been able to voice their opinions regarding their preference for the future of vacant churches. However, in the

debate surrounding redundant churches, there are in reality a multitude of stakeholders. Invoking the classification scheme of Mitchell et al (1997), the group of stakeholders that has been overlooked in the discussion of church re-use is that of the dependent stakeholders; the individuals who actually use church buildings, either for religious purposes or in other various states of re-use. The attitudes of this group of people are important because they have first-hand experience regarding the effects of various re-uses, possess opinions underrepresented in comparison to the Church, and are ultimately the ones who will determine the relative success of adaptive re-use projects by using the spaces or rejecting the results. However, as of now, no study has investigated the opinion of dependent stakeholders regarding the idea of adaptive re-use as it pertains to church buildings. Therefore, this study seeks to address this gap by asking the question:

"What is the opinion of dependent stakeholders regarding proposed changes in function and physical modifications accompanying the adaptive re-use of church buildings? Furthermore, which and to what extent do personal characteristics play a role in influencing these opinions?"

1.2 Theoretical Foundations

The first part of the research question seeks to address the two major components of adaptive re-use that are culturally problematic in the case of churches, while the second part of the question delves further into how these opinions are influenced by certain personal characteristics of the respondents. The characteristics deemed significant are derived from literature regarding place-identity (Proshansky et al, 1983; Osborne, 2001; Mazumdar & Mazumdar, 1993, 2004; Bonaiuto et al, 1999), neighborhood satisfaction (Hur & Murrow-Jones, 2008; Kamphuis et al, 2010; Sirgy & Cornwell, 2002; Lupton & Power, 2004; Kweon et al, 2010) perceptions of environmental change (Dear, 1992; Martin, 2005; Freeman, 2006; Snel et al, 2011, Sullivan, 2007; Gjerde 2011; Green, 1999), and the relationship of religion to aspects of individual identity (Schwadel, 2011; Miller & Hoffman, 1995; Stark, 2002). Place-identity literature provides the foundation for explaining how individuals become attached to physical elements in their environment and through this attachment certain sites, such as churches, beget more social significance than others. Neighborhood satisfaction and change literature is included because adaptive re-use by its very definition necessitates change. Especially regarding churches, the neighborhood is the most relevant level of urban life at which a bond is formed between the individual and their physical environment outside of the home, as shown through degrees of satisfaction and reactions to changes (Hipp, 2009). Furthermore, since churches are the building in question, it is vital to examine the way aspects of religion interact with other personal characteristics. Resulting from the examination of these bodies of literature, it is shown that the most likely characteristics to influence dependent stakeholders' opinions toward the re-use of churches are religiousness, age, length of residence, level of education, and gender.

Furthermore, in order to answer these questions they must be applied to a context. The country of the Netherlands was identified as a suitable environment to carry out this research. The Netherlands offers a valuable opportunity to study the opinions of dependent stakeholders toward vacant churches because it has a very rich history in terms of adaptive reuse. The Netherlands is interesting because the country is extremely dense, meaning that adaptive re-use has found considerable support as a way to more efficiently use derelict sites (Velthuis & Spennemann, 2007). In addition to the physical constraints on space, there has been a trend toward

secularization in the Netherlands since the turn away from 'pillarization' in the 1950's (Lechner, 1996**;** Knippenberg, 1998). In addition to these physical and socio-cultural factors, Dutch law is unique in that it does not prevent the sale of churches on the private market whereas in other countries there is a requirement for governments to assist financially troubled churches (Dubois 2002). The current situation in the Netherlands has lead to an increasing number of vacant churches that will inevitably become the subject of community debates regarding what should be done with such structures. Therefore, investigating the opinions of dependent stakeholders in the Netherlands will provide relevant insight into how considerations of place-identity, perceptions of change, and working with socially significant sites add to the complexity of adaptive re-use projects.

1.3 Methods and Techniques

In order to study the opinion of stakeholders in the Netherlands, surveys were distributed at three sites in the cities of Utrecht and Amsterdam. The sites selected for survey distribution represent a cross section of church buildings in various stages of adaptive re-use. The survey contained a series of Likert scale statements in which respondents gave their opinion regarding twelve possible future functions for redundant churches and four problematic issues particular to the adaptive re-use of churches. Respondents were also asked to give the personal information necessary to see how the certain characteristics influenced respondents' opinions toward the statements.

The results of the survey answer the research questions in relation to functional preference and significant differences between sub-groups of the sample through a series of multiple-regression and ANOVA analyses. Such results are important both in the Dutch context and internationally. By analyzing the opinion of dependent stakeholders, certain sensitivities toward functional transformations and alterations to church buildings are revealed. Furthermore, the case of the church explores how adaptive re-use projects involving sites of elevated social attachment are different from more conventional projects and can therefore benefit from a community oriented approach to development. This information is valuable for regional municipalities, preservation theorists, and city planners as when faced with a vacant church or religious building, they can better understand in what sense the building is important to dependent stakeholders and realize that such sites will benefit from consulting this silent majority to develop an acceptable, creative solution. Additionally, this research adds to the bodies of literature pertaining to environmental psychology (especially place attachment) and adaptive re-use by examining the socio-cultural aspects of the conversion process through a community oriented approach to re-use of a site with known emotional attachments.

1.4 Thesis Structure

The following section provides a review of the relevant literature that is referred to throughout the analysis. Beginning with a definition of adaptive re-use, the reasons why adaptive re-use has gained support are shown by highlighting the economic, environmental, and socio-cultural benefits of the process when compared to demolition and new-build construction techniques. In order to better explain the connection between socio-cultural importance and geographical

locations, the relationship between adaptive re-use and place identity is explained. These largely theoretical concepts are then linked to reality by discussing the relevant context of place-attachment; the neighborhood. Literature regarding neighborhood satisfaction, neighborhood change, and how these perceptions vary according to demographic characteristics is critiqued with a focus on the two components of change associated with adaptive re-use; functional and physical. The second part of the literature review examines the church building within the discourse of adaptive re-use and place-identity. This is done by discussing the economic, environmental, and socio-cultural importance of the church with a special emphasis on the link between identity (both religious and secular) and the church building. Following the discussion of the church, the concept of dependent stakeholders and specificities of vacant churches in the Netherlands is explained.

Elaborating on the specificities of the church, a hierarchy of preference with regard to adaptive re-use is developed through a critical review of current sources of Christian authorities' opinion on the re-use of churches. It is through this review of Church opinion that the statements in the survey related to function and significant physical issues are determined. The following section describes the methodology of the research, including justifications for a quantitative approach, format of the survey, descriptions of the sampling sites, and an overview of the data collected. Based on this data, the results of the statistical analyses are described and discussed leading to the conclusions. Overall, this research hopes to contribute to the limited body of literature regarding the socio-cultural importance of adaptive re-use by considering the important links between individuals' identities, psychological attachments to physical locations, and how additional consultation of dependent stakeholders can reveal sensitivities and preferences to guide the adaptation of socially significant sites to more creative and fruitful outcomes.

II.) Theory

2.1. Adaptive Re-use

2.1.1 Foundations of Adaptive Re-use

Before delving into the complexities surrounding the concept of adaptive re-use, it is first necessary to clearly define what is meant by the term. Definitions of adaptive re-use vary in the degree of intricacy depending on who is defining the term and from what perspective they are writing. For example, Kurul (2007) takes a more architecturally oriented stance on the idea and posits adaptive re-use as "a development process by which structurally sound buildings are developed for economically viable new uses" (p.556). His view of adaptive re-use includes ideas of property development (limiting the practice to "structurally sound" buildings) and references to profitability (citing "economically viable new uses" as a required result). However, some authors have chosen to remain more vague in defining adaptive re-use in order to make the process relevant for a wider variety of view-points (economic, socio-cultural, political, legal, etc). Conejos et al. (2011) succinctly describe adaptive re-use as "a significant change to an existing building function when the former function has become obsolete" (p. 1). Choosing to limit adaptive re-use to functionality allows them to analyze the concept with consideration to factors from a range of disciplines rather than constricting their analysis to economic or political bodies.

The Adaptive Re-Use Handbook maintains this focus on function, stating adaptive re-use "refers to the rehabilitation of a building/set of buildings or district for a use, or uses, different from what the original purpose(s) of the structure or neighborhood had been"(as cited in Suzuki, 1996, p. 561). However this definition appears outdated and does not take into account certain developments in the field that have taken place over time. Therefore, for the purposes of this paper, the definition of Velthuis & Spennemann (2007) will be used, which states that:

> "Adaptive re-use more specifically refers to the process of giving a building a new existence and function when it is no longer used or suitable for use in its original function. A change in function frequently, though not always, results in changes to the structure or interior of a building . . . and adaptive re-use and development actually go hand in hand" (p.45).

This definition is important because it recognizes the idea that adaptive re-use may consist of very little modification to the building at all. Also of note is that the term "new existence" is included in the working definition, meaning that adaptive re-use is more than simply renovating a building for the sake of preservation, but rather the new uses for the building must be practical and/or relevant for the community in which it is located.

This recognition that adaptive re-use is much more than conservation is further emphasized in the government of Australia's Department of Environmental Heritage's (2004) "Adaptive Re-Use" report. In the report, the authors specifically identify the importance of the structure itself in conservation, but not at the expense of "façadism", referring to the process whereby the building is gutted and only the exterior retained. Furthermore, the group emphasizes the idea that adaptive re-use projects are not the same as restoration projects. This means that any project which is to be identified with adaptive re-use should not simply be "poor imitations" of what the

building once was (Australian Government, 2004, p. 3). Rather, innovation and creativity should be utilized to adapt the building to the modern context, both in terms of functionality and style.

Adaptive re-use must therefore entail a re-imagining of spaces or sites in terms of both function and appearance. These two factors define adaptive re-use and are the most significant components in affecting the way adaptive re-use projects are carried out and the degree to which they are perceived as successful. Furthermore, these two aspects represent two different sides to adaptive re-use projects; the social (change in function) and physical (change in appearance). Adaptive re-use is a process which seeks to utilize existing spaces in ways that increase the usability of structures for the communities in which they are located, which makes it more than a solely aesthetic procedure. However, the physical side is also important to consider, as the interplay between changes in appearance and changes in function play a large role in determining the acceptance and subsequent success of adaptive re-use projects. Both the future function and the extent to which the building is or can be modified are contingent upon a range of factors that will be explicitly addressed later in this paper. For now, it suffices to emphasize that although adaptive re-use can be applied to a variety of scenarios, it will inevitably consist of both physical and social changes in a community.

2.2 Why Adaptive Re-Use?

2.2.1 Economic Considerations of Adaptive Re-use

Economic benefits have been touted as an advantage of the adaptive re-use process mainly for the potential financial impacts and effects on local communities. While letting buildings sit vacant is acknowledged as the least profitable use of both land and material structure, the most prominent issue within the arena of economics and adaptive re-use is the debate between the traditional demolition of obsolete buildings and the recent supporters of re-use (Bullen & Love, 2010).

One of the celebrated aspects of adaptive re-use is that it has been found to be cheaper than the process of demolishing a structure and rebuilding on the site from scratch (Bullen & Love, 2010; Bullen & Love, 2011; Langston, 2010; Australian Government, 2004). Typically, adaptive re-use projects take less time than new-build projects because most of the materials are already on-site and largely constructed. In fact, Johnson (1996) claims that "rehabilitation typically takes half to three-quarters of the time necessary to demolish and reconstruct the same floor area" (as cited in Langston et al, 2007, p. 1711). The reduced time of construction has financial implications which include savings associated with borrowing and inflation (Langston, 2010). In addition to savings related to financing, costs are also reduced in the form of "embodied energy" and tax based incentives (Velthuis & Spennemann, 2007; Johnson, 2004; Newman, 2001; Australian Government, 2004; Langston, 2010). The concept of embodied energy refers to the idea that it takes energy, either manual or mechanic, to convert raw materials into their usable form and bring them to the building site (Randall, 2005). All of this energy has associated costs including production, transport, manufacturing, and installation, which add value to the buildings. Since adaptive re-use utilizes materials already on site, the pre-existing embodied energy becomes a saved cost for those redeveloping the space. In addition to saving on purchasing costs, governments have recently started taking an active role in supporting the idea of adaptive re-use through tax based incentives (Velthuis & Spennemann, 2007; Australian Government, 2004; Heath, 2001; Johnson, 2004).

Economically speaking, adaptive re-use has financial benefits not only from the developer's point of view, but also from the societal perspective. Adaptive re-use projects can have prominent spill-over effects within recessed areas of communities and often serve as focal points for wider regeneration projects (Johnson, 2004; Australian Government, 2004). Kennedy (2010) highlights this point by discussing how charter schools in the New York City area have utilized the ideas of adaptive re-use in order to open school buildings in central, inner-city locations where constructing a new building or buying land would have otherwise been too expensive. By re-using existing buildings, the charter schools were able to take derelict areas and give them a new vibrancy. Furthermore, adaptive re-use projects typically maintain historic facades and add to the uniqueness of place for certain neighborhoods/areas (Pendlebury, 2002). Positive effects of such aesthetic are reflected in the local real-estate market, as Newman (2001) notes that areas which surrounded adaptive re-use projects involving historically significant buildings saw property prices increase and a stabilization of real-estate prices where property markets were formally volatile. Such flagstone regeneration projects can also lead to spill-over effects to the local economy, including job creation and the construction of desirable housing (Mason, 2005).

2.2.2 Environmental Considerations of Adaptive Re-use

In addition to economic benefits of adaptive re-use, the recent focus on environmental awareness and urban sustainability have given credence to the adaptive re-use technique (Bullen & Love, 2010; Australian Government, 2004; Langston et al., 2007; Langston 2010; Conejos et al., 2011). While governments across the world struggle to determine how to create more environmentally friendly and sustainable societies, Conejos et al. (2011) insightfully remark that "the greenest buildings are the ones we already have" (p. 2). What they mean by this is that the potential re-use of materials already available in buildings that are no longer functional is a solution that is often overlooked. Emphasizing the importance of the current building stock, Conejos et al. (2011) continue this reasoning by stating that "about 75% of all buildings expected to be operating in the year 2040 are already built or renovated" (p. 1). Therefore, if societies and cities want to become more sustainable, then adaptive re-use should be prioritized as a method of construction.

In order to highlight the way adaptive re-use encourages environmental sustainability, it is appropriate to return to the idea of embodied energy. In addition to the associated financial benefits, embodied energy is also beneficial for the environment. The "energy" in the term refers to the "energy consumed by all of the processes associated with the production of a building" (Australian Government, 2004, p. 4). Logically, if the material is already created, then this embodied energy is saved, meaning that there are less emissions and less energy wasted in adaptive re-use projects compared to other construction techniques. Furthermore, Langston (2010) makes the point that older buildings typically contain materials that have useful lives in excess of their modern counterparts (solid stone, slate roofing, marble floors, etc). Therefore, older buildings are prime candidates for adaptive re-use because these materials are still good, yet require large amounts of energy to create. Thus, through adaptive re-use, the building stock can be re-imagined as a renewable resource rather than a finite one that depreciates until it must be destroyed (Langston et al., 2007).

Another important environmental benefit of adaptive re-use pertains to the construction site itself. As less actual construction is necessary, the building site is less of a disturbance to the surrounding environment than demolition. This is especially relevant in the urban context where construction sites are amidst the already crowded city. As Bullen & Love (2010) argue, adaptive

re-use is safer for the immediate environment because "it reduces the amount of disturbance due to hazardous materials, contaminated ground, and the risk of falling materials and dust" (p. 216). Adaptive re-use can be linked to debates related to urban sustainability through the reduced need to develop Greenfield sites by reimagining buildings (and the foundations they sit on) as renewable resources (Bullen & Love, 2010). In his article on sustainable urban forms, Jabareen (2006) lists the benefits of maintaining green spaces in the city, including: maintaining existing biodiversity, reducing pollution, and increased health benefits for the local population. The importance of Greenfield sites extends to urban policy. Greenbelts are often used as a spatial containment technique to delimit city borders by creating areas of preserved open space (Jabareen, 2006, p. 46). Therefore, adaptive re-use can clearly assist in carrying out contemporary sustainability policies by encouraging developers to be more creative in reimagining the built environment while preserving green spaces.

2.2.3 Socio-Cultural Considerations of Adaptive Re-use

While the environmental and economic benefits have been explicitly documented, an under-researched and overlooked area in the literature related to adaptive re-use is that of the potential socio-cultural benefits that the process can have for a given community or neighborhood. The socio-cultural aspect of adaptive re-use typically becomes an issue when dealing with historically significant buildings or areas that are considered important for collective cultural heritage (Australian Government, 2004). Especially in the context of the urban environment where land is frequently subject to speculation, the fact that adaptive re-use can provide an innovative solution for preservation without sacrificing functionality has been a major argument in swaying popular opinion toward favoring re-use over destruction (Langston, 2010).

Discussing the socio-cultural impact of adaptive re-use, Langston (2010) describes how older buildings "retain attractive streetscapes, add character, and provide status" to an urban environment (p. 9). His succinct statement is generally supported by other authors regarding how a streetscape, and by extension neighborhood, can benefit from adaptive re-use projects that utilize older buildings (Australian Government, 2004**;** Bullen & Love, 2010; Faircloth et al., 2009; Langston et al., 2007; Londin, 2004**)**. The idea of a diverse built environment as vital to neighborhood well-being can largely be attributed to Jane Jacobs and the new-urbanism movement. In her landmark text *The Death and Life of Great American Cities*, Jacobs (1961) spells out four conditions she describes as "indispensible" for generating "exuberant diversity in a city's streets and districts", the third of which states: "The district must mingle buildings that vary in age and condition, including a good proportion of old ones so that they vary in the economic yield they must produce" (p. 150-151). Jacobs (1961) argues that a thriving city will contain a mixture of new and older buildings in order to vary the rents they charge for the use of space, both commercial and residential. Theoretically, this would allow for a diverse mix of people and enterprises with various levels of economic resources to inhabit the city.

This idea has clearly influenced Conejos et al. (2011), who in their adaptive re-use potential model include the "sinking stack building theory," which refers to how the age of buildings determine their location in the aggregated "stack", with older buildings soaking up more resources as they "sink" to the bottom (p. 1711). While Jacobs (1961) laments how neighborhoods built all at one time "show a strange inability to update themselves" (p. 198), Conejos et al. (2007) pose adaptive re-use as one way to stagger the affective condition of the building stock so that entire sections of neighborhoods do not become derelict or age at the same

pace. Furthermore, staggering the age of the building stock results in a more diverse streetscape which is known to be more desirable to pedestrians and residents (Jacobs, 1961; Langston et al., 2007).

Continuing the discussion of how adaptive re-use can provide social benefits to a community, it is necessary to revisit the idea of urban regeneration from the civilian perspective. Adaptive re-use projects have been described as a strategy to jump-start urban renewal programs, often acting as flagship projects to anchor investment and showcase future change (Bullen & Love, 2010; Faircloth et al., 2009; Pendlebury, 2002; Australian Government, 2004; Johnson, 2004). Although the positive effects of flagship regeneration are debatable, the built environment can act as a reflection of community well-being; when people begin to care less, the environment deteriorates, community morale lowers, and social cohesion suffers. Wilson and Kelling (1982) provide a compelling argument for the relationship between the physical quality of the built environment and crime in their "broken windows theory." Essentially, they explain that public incivilities (broken windows, public drinking, graffiti, etc) can attract predatory crime as potential offenders assume that those in the neighborhood are less likely to confront them based on the disorderly appearance of the area. Broken windows theory is named as such because crime tends to occur in areas with large amounts of blight and where buildings are abandoned or derelict. As is the case, regeneration projects that are spearheaded by adaptive re-use provide dualistic benefits to the community; they reduce the amount of derelict or vacant buildings in the area and also serve as new focal points by offering a function for the community (Johnson, 2004). Such projects, especially when large scale or involving historic buildings, provide an additional benefit by attracting positive publicity to help shed the often sticky negative connotations associated with impoverished neighborhoods (Sampson, 2009). Through its role in flagship projects, supporters of adaptive re-use advocate that it can make a strong impact on a blighted area due to the preservation of character and renewed functionality within the community.

Aside from creating a vibrant living environment, adaptive re-use is cited as important in preserving the character of an area by preventing complete destruction of significant structures or districts (Velthuis & Spennemann, 2007; Dubois, 2002; Sevecenko, 1983; Pendlebury, 2002). In a conference regarding the application of adaptive re-use in the ancient quarters of the cities of Jeddah and Fez, discussant Stefano Bianca eloquently expresses the connection between the built environment and community well being when he states:

> "We worked under the assumption that an urban pattern is a physical expression of the spiritual, cultural, and social values of the community that have survived into modern times. In the past few decades, changes in lifestyle . . . have occurred and cannot be ignored, but we ought not automatically to assume that these innovations have canceled all the society's deeply rooted values" (Sevecenko, 1983, p. 88).

When subsequently asked exactly how the physical environment expresses societal values, he continues by saying "in the close interrelation of urban functions and spaces, in the way private places and public places are articulated, how people meet, and how a certain community feeling is established" (Sevecenko, 1983, p. 88). The importance of the connection between the built environment and culture should not be underestimated. The street patterns, denotations of public and private, the relationship between function and space, and the way these elements create

feelings of community all help to understand how the built environment contributes to establishing culture, identities, and character.

Too frequently overlooked is the fact that adaptive re-use is a strategy that offers the ability to retain the patterns and associated social structures embedded in the built environment, allowing the past to be updated instead of forgotten. Velthuis and Spennemann (2007) explain this idea by advocating that "continuity of place is beneficial to the psychological well-being of a community, because older buildings have a past firmly rooted in the community and because people generally have the desire to feel at ease in a familiar environment" (p. 46). In order to understand exactly why people feel at ease in certain environments and the related importance of adaptive re-use to community feelings, the following section will address the topics of place-identity, how the urban environment is perceived, and how adaptive re-use can mitigate the detrimental effects of change in socially significant sites.

2.3 Place-identity

The potential importance of adaptive re-use to socio-cultural ideas of community typically revolves around the concept of place as a significant factor. Humanity's relationship to socio-geographic structures often means that people imbue certain places, for a variety of reasons, with meaning. Either as an individual or collective, the idea of 'place' often intersects with significant memories, rituals, folklore, or histories that combine to create a sense of belonging. Mazumdar & Mazumdar (2004) explain that "to be human is to live in a world that is filled with significant places . . . we learn that significant places provide stability and security; act as anchors and symbolic life lines, and become fields of care . . . they are invested with deep emotional meaning, so much so that collective sentiments strongly resist any attempt to alter the setting" (p. 385). The source of this metaphorical anchor and basis for resisting change is found in the formative concept of place-identity.

2.3.1 The Relationship between Place and Identity

Proshansky et al. (1983) provide the foundation for place-identity and position the concept within the larger ideas of childhood psychological development and socialization, advocating that physical settings are inherently part of the process as much as other social structures. Following a discussion of the fluid relationship of 'the self' and 'place', they offer a comprehensive definition of place-identity:

> "To begin with, it is a sub-structure of the self-identity of the person consisting of, broadly conceived, cognitions about the physical world in which the individual lives. These cognitions represent memories, ideas, feelings, attitudes, values, preferences, meanings, and conceptions of behavior and experience which relate to the variety and complexity of physical settings that define the day-to-day existence of every human being. At the core of such physical environment-related cognitions is the 'environmental past' of the person; a past consisting of places, spaces, and their properties which have served instrumentally in the satisfaction of the person's biological, psychological, social, and cultural needs" (Proshansky et al., 1983, p. 59)

The definition of place-identity is multi-faceted, yet clearly highlights the important relationship between certain physical settings, the memory of the individual, and the extent to which certain

'environments' have offered satisfaction (or conversely, dissatisfaction) for a variety of needs. The most vital part of this definition is the idea that the individual from a young age identifies certain environments with fondness and integrates the familiarity of such structures into his or her identity at the individual level. Through this individualized attachment to geographically locatable places, a person acquires a "sense of belonging and purpose which gives meaning to his or her life" (Proshansky et al., 1983, p. 60). Notably, this process of integration of place within one's identity mainly occurs at a subconscious level, often going unrecognized until such places are under threat or taken away. Thus, when a significant physical place is threatened, so indirectly is a part of the individual's identity, which partially explains human resistance to significant changes in familiar environments.

Proshansky et al. (1983, p. 64-66) put forth four primary properties of place identity for individuals. The first property is that place-identities are not only concerned with attachments to physical realities, but also to the social meanings and beliefs of such places. This property emphasizes that although physical places are important, their significance is partly found in the social structures they represent. The second property of place-identity is that it is a personal construction, growing out of direct experiences with the physical environment which are in turn modified by the individual. 'Places' affect individuals because the norms, values, and attitudes associated with assimilation or socialization processes take place in these physical settings. The result is a strong link between the social situation and physical background in which the images, feelings, and memories of a physical place become intertwined with the socio-cultural and demographic characteristics that compose individual identity (Proshansky, 1983).

The third property of place-identity is that physical settings typically only serve as the backdrops for which more memorable social interactions take place, thereby implying that the individual is not typically attentive to the physical structures that become associated with socialization. Such a property means that most people are only passively aware of meaningful places on a daily basis and become attune to the importance of familiar places only when they are threatened or removed. The fourth and final property of place-identity refers to how alterations to the environment may provoke or reveal degrees of place-attachment. Proshansky et al. (1983) describe how some possible threats, including "the intrusion of unwanted groups, the evidence of crime in the area, and beginning signs of physical decay, may all precipitate stronger emotional attachments to one's home and neighborhood" (p. 66). These threats refer to changes in the socio-physical environment and how until faced with significant change, the emotional attachments to place may go unnoticed.

The main problem with the analysis of Proshansky et al. (1983) is that their discussion of place-identity is limited to the individual and fails to explain how social processes based in groups or collectives affect the individual's relationship with place. Osborne (2001) accounts for these effects of communities and collectives through place attachment and collective memory. He clarifies how 'place attachment' includes a societal pillar of place-identity, describing how places "are linked to society through repetitive prosaic practices, ritualized performance, and institutionalized commemoration . . . there is an ongoing reciprocal relationship between people and the places they inhabit" (p. 41). Place attachment maintains the reciprocity of place and identity, the fact that places are more than material, and that this relationship is often only subconsciously acknowledged. The major addition of place attachment is in the inclusion of societal aspects through the role of rituals and institutions which are created by and disseminated

through groups rather than the individual. Therefore, the relationship between place and the individual also has a societal component.

This societal side of place attachment is transmitted and recalled through collective memories. Hutton (as cited in Osborne, 2001) describes collective memory as the "elaborate network of social mores, values, and ideals . . . underpin[ning] the dimensions of our imaginations according to the attitudes of the social groups to which we relate. It is through the interconnections among these shared images that the social frameworks of our collective memory are formed" (p. 44). Essentially, there are two types of social, place-based narratives that become part of identity; the collective and the individual. The individual narrative is that of personal place-identity described by Proshansky et al (1983). The collective narrative is that which is preserved through (often selective) archives, museums, school curricula, official histories, monuments, public displays, etc. Institutionalized histories are often place-based, with ceremonies/monuments occurring at physical sites where events deemed significant have occurred or are remembered. These ceremonies, memorials, and landmarks then become symbolically significant for what they represent and foster attachments (the 'social framework' of shared images). These attachments to certain places are then integrated with the individual identity, solidifying the importance of the collective narrative in the individual. Therefore, individuals may value certain physical sites as symbols even though they themselves were not directly involved with the event or idea memorialized, but rather a social group to which they subscribe was impacted (for example, the relationship of Jewish people to the Holocaust memorial in Berlin).

Although the exact relationship between the self, place, and societal identity is still debated (see Hauge, 2007 for an overview of the discussion), it is clear that both macro and micro socialization processes play roles in linking place with identity. By extension, the stability of such places becomes important, even if subconsciously, to a person's overall identity and feelings of belonging/rootedness. Therefore, it is pertinent to examine how people perceive their most immediate urban environment and how changes affect this perception/evoke feelings of resistance and or satisfaction.

2.4 The Relevance of the 'neighborhood'

In relation to place-attachment, the neighborhood has typically been regarded as the most relevant level of urban life in which a bond is formed between the individual and the physical environment (Hipp, 2009). Outside of the home, the neighborhood is where the majority of activities of daily life take place. Therefore, the neighborhood and how residents perceive it has been the subject of a large body of literature, including investigations of crime, health, and social cohesion amongst others. Within this literature, the emphasis on the importance of the neighborhood to overall quality of life has led researchers to investigate which factors affect residents' satisfaction (Hur & Murrow-Jones, 2008; Kamphuis et al, 2010; Sirgy & Cornwell, 2002). Although the precise definition of 'neighborhood' varies depending on the study, it is generally agreed upon that it includes both physical and social aspects (Lupton & Power, 2004). As is the case, studies of neighborhood satisfaction have attempted to determine *which* social and physical features are the most significant in determining residents' satisfaction with their neighborhood. The results of these studies have been mixed, with contingencies regarding the definition of satisfaction and who is being asked yielding seemingly contrasting results (Hur and Morrow-Jones, 2008).

2.4.1 Neighborhood Satisfaction

Hur & Morrow-Jones' (2008) review of neighborhood satisfaction literature cites length of residence, amount of social interaction, satisfaction with traffic, and satisfaction with appearance/aesthetic as the most significant factors in determining contentment with the neighborhood. As is shown through their results, it appears *both* social and physical characteristics of neighborhoods affect satisfaction. In a comprehensive literature review of neighborhood satisfaction studies related to demographic characteristics, Kweon et al (2010) show that older, white, home-owning, higher-income, high-educated, and male individuals are typically more satisfied with their neighborhood than their respective counterparts.

Alternatively, relative to these socio-demographic characteristics, Sirgy & Cornwell (2002) find that physical factors have the most significant contribution to neighborhood satisfaction. Specifically, the better the physical conditions of an area (including maintenance of neighborhood landscapes, presence of street lights, lack of abandoned buildings, and cleanliness) the more satisfied residents were with their neighborhood. Finally, in their study regarding land-use and neighborhood satisfaction, Kweon et al (2010) additionally found that commercial-use was negatively associated with neighborhood satisfaction due to the increased traffic volume, noise, crowding, and undesirable building design. The results of these studies are inconclusive in determining whether physical factors or social factors are more important for neighborhood satisfaction, but they do offer insight into *which* factors may increase attachment of residents to their neighborhood and how certain characteristics can influence perception when neighborhoods are subject to change.

2.4.2 Neighborhood Change

By its very nature, adaptive re-use is a process which results from and necessitates change in a neighborhood. Like most developments in an urban environment, an adaptive re-use project has effects that are both physical (modifying a building) and social (functional change). However, because these changes do not take place in a vacuum, the way residents perceive and experience the effects of change is an important element in determining its eventual success or failure. Thus, adaptive re-use projects can potentially disrupt or serve to reinforce the factors that influence neighborhood satisfaction through both physical and service/amenity changes.

Socially, people may oppose an adaptive re-use project for a variety of reasons. In order to interpret the degree of potential disruption or acceptance, an adaptive re-use project could cause in a neighborhood, the amount of vested interest in the site should be considered. Vested interest in this case simply refers to how much of a stake a person feels they have in a site and degree of potential consequence they feel they might suffer in a situation involving change (Thornton & Knox, 2002). The certainty of change and immediacy of the consequences are two factors which may influence the vested interest of a person (Crano & Prislin as cited in Thornton & Knox, 2002). Therefore, a development site can become controversial when there is a high amount of vested interest. However, vested interest should not be conflated with place attachment as it encompasses a wider scope of factors, such as profitability or noise pollution, outside of sheer emotionality.

Specifying the amount of vested interest in any given urban development is difficult due to the contingencies of each project, but Dear (1992) offers six dimensions of project characteristics that can influence community response. The first is the type of development, mainly referring to

whether it is a residential development and/or the type of clientele the proposed project will attract. Residential projects are typically viewed as more disruptive by host communities because people will live there instead of businesses which have specified hours. The second factor to consider is the size of the proposed development. Applying this to adaptive re-use, the size of the project and status in the community will determine the significance attached to it. The third factor influencing community perception is the number of similar amenities or services already in the area. Dear (1992) emphasizes that saturation is a relative, not absolute, concept in that residents sometimes 'feel' that there are certain over-representations. The fourth factor affecting perceptions of development projects are the operating procedures (such as opening hours) of the future service. The fifth factor, according to Dear, is the presence (or lack) of a reputable or well known agency. If the agency handling the project is reputable or has vocal support from influential figures, it can impact the perception of the project. Finally, the appearance of the facility is important. If the facility is renovated or well done in terms of aesthetic, it can be seen as an asset to the community. Again, a mixture of social and physical facets is seen as important in effecting residents' perceptions of proposed changes.

In addition to these six points influencing the contention involved in development projects, the stream of literature related to urban redevelopment is also important to consider. As stated, adaptive re-use projects can serve as flagships in urban regeneration efforts (Johnson, 2004). Studies on urban regeneration regarding perceptions of urban change typically involve qualitative research and focus on differences in socio-economic status and length of residence within the neighborhood (Martin, 2005; Snel et al, 2011; Doucet, 2009; Freeman, 2006). The results of these studies are mixed in terms of how those interviewed feel about changes in their neighborhood. While some studies frame neighborhood regeneration as negative due to the loss of neighborhood character and displacement (Slater, 2006), others emphasize how residents are largely positive about the changes (Martin, 2005; Freeman, 2006). Still others reveal a result somewhere in the middle, with residents viewing objective improvements such as the reduction in crime and clean-up of the area as positive, while at the same time feeling that new amenities in the area were not for them and/or a sense of displacement pressure (Snel et al, 2011; Doucet, 2009).

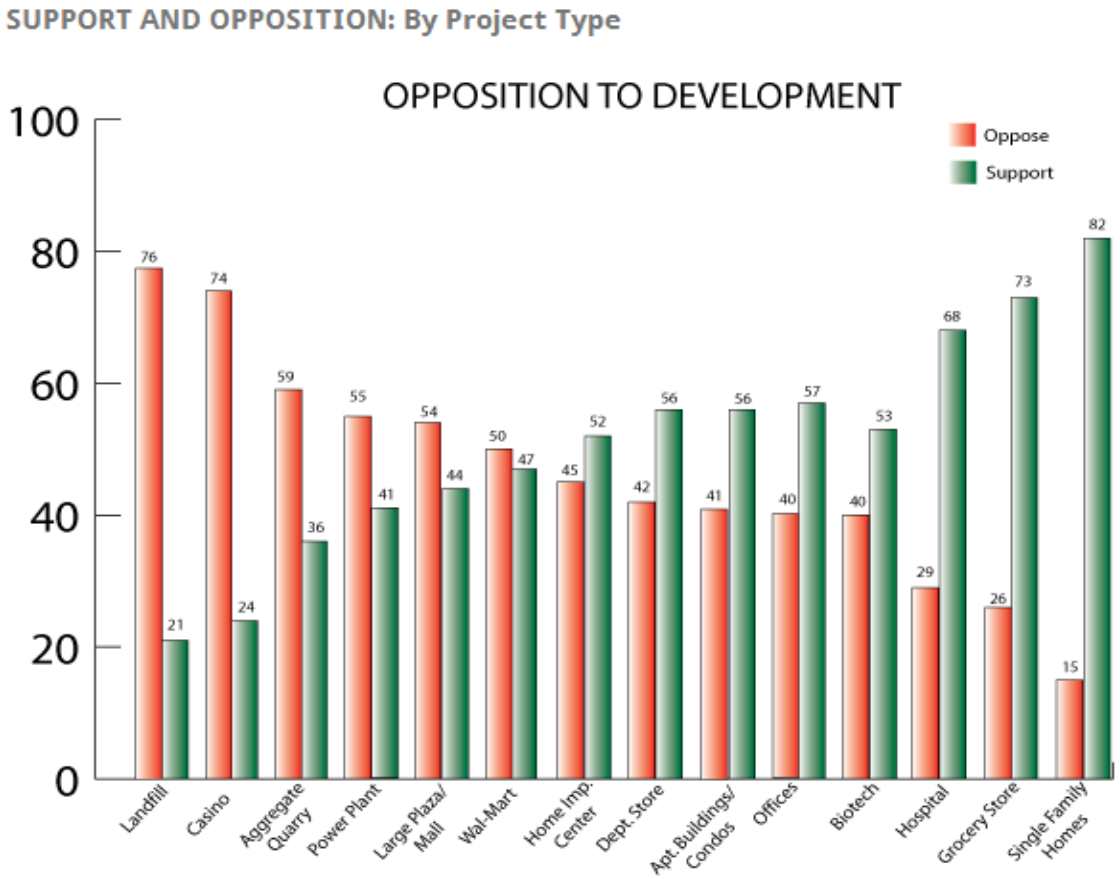
Being that these studies are qualitative, the amount of viewpoints expressed may not be representative of the entire neighborhood. A notable exception is the work of Sullivan (2007) who uses survey data from two gentrified neighborhoods in Portland, Oregon. He finds that all respondents were very positive about the changes in the neighborhood and found no difference in attitudes based on level of education or length of residence. Age and homeownership were the only significant factors, with older residents and homeowners feeling *more* positive about the changes in their neighborhoods. What is significant about these studies on neighborhood regeneration is that most residents who remained in the area viewed the physical changes to the neighborhood positively (cleaner, less decay). Returning to adaptive re-use, this is significant as it shows that many residents would like derelict spaces to be regenerated, but it is often the service or amenity that accompanies such changes that they lament. Therefore, a more sensitive stance toward function should be taken if adaptive re-use projects are to be used in a regenerative context.

2.4.2.1 Functional Changes

Quantitative studies regarding generalized preference and perception of various proposed

development projects in neighborhoods are quite rare, as qualitative, case-based research focused on specific functions in specific locations are more common. In terms of type of development, urban residents have been shown to typically be against large, industrial and commercial developments in their neighborhood (Kweon et al, 2010). However, as instances of gentrification show, small housing developments can also be subject to sharp opposition when perceived as socio-economically insensitive to local needs (Local Berlin, 2011). Clearly, it is difficult to say what function is appropriate without a situation or context. Although it is a difficult task, the Saint Consulting Group (2011) offers valuable insight with regard to attitudes toward potential large developments in relation to function. They achieve this through their ongoing longitudinal study in which they interview 1,000 adults from the across the U.S regarding their attitude toward certain commercial developments. The results of their panel with regard to function for the year 2011 are shown in Figure 2-1.

Figure 2-1: Support and Opposition to Development by project type in Saint Index



Along with the relatively high degree of opposition to large single function commercial developments, the panel study found that overall, one in four of the participants said they would like to see *absolutely no development in their community* (Saint Consulting Group, 2011). The reasons for opposing such developments included protecting community character, protecting the environment, protecting home value, too close to home, and too much attracted traffic (listed in order of magnitude). The personal characteristics most likely to be against development included

those who were between 45-65 years old, female, own their home, live in a suburb, have a high level of education (college or post-graduate), live in the Western area of the U.S, or have a household income of $100,000 or higher. In contrast, the characteristics most likely to support development projects were those between 21-45 years old, male, rent their home, live in a rural area, have a lower degree of education, or have a household income below $35,000 (Saint Consulting Group, 2011).

The study results are quite interesting with respect to adaptive re-use. The characteristics of those who were opposed to large developments match quite well with studies regarding those residents who were most satisfied (older, homeowners, high-incomes, and high educations). In addition, the reasons given for opposing development include protecting community character, protecting the environment, and protecting home value; all of which have been touted as potential benefits of shrewd adaptive re-use. The problems of applying the results of such a massive and generalized panel directly to a study on adaptive re-use are quite clear: the panel is only questioned about large scale developments, adaptive re-use is not explained to the respondents, the questions posed are all of a hypothetical nature lacking specificities about potential development sites, and most of the proposed developments are positioned as completely new to the area. Given these discrepancies, the Saint Group still manages to offer a general profile of those typically opposed to large scale developmental change and the main reasons for such opposition.

2.4.2.2 Physical Changes

In relation to adaptive re-use, one of the requisites for the process to take place is the obsolescence and physical remnants of a structure. The condition and style of the building can dictate whether it is suitable for re-use and to what extent modifications are necessary (Langston et al, 2007). Unlike new developments, many residents are already familiar with the presence and general style of buildings subject to re-use. Although redevelopment may encounter less resistance than new developments, the style and perception of the building may indeed impact the degree to which residents desire physical modifications to the building.

As shown in the review of neighborhood satisfaction and neighborhood change literature, neighborhood aesthetic is one of the most significant factors in determining satisfaction and acceptance of change. The complicated nature of the relationship between residents and aesthetic preference stems from the subjective nature of 'taste' and multiplicity of preferences. Yet, since the 1970's, environmental psychologists have worked to reveal patterns of preferences regarding which types of urban landscapes and architecture are generally more acceptable than others. One of the most revealing aspects in the literature regarding physical urban form is the general preference for older, culturally representative buildings and distaste for urban streetscapes or elements that represent post-modern or industrial style (Herzog et al, 1976; Herzog et al, 1982; Gjerde, 2011; Green, 1990; Aitken 1990). Furthermore, the studies of Herzog et al (1982) and Gjerde (2011) reveal that people generally prefer a variety of buildings, yet the variety must display some form of underlying order (style, shape, color, etc).

The importance of recognizability and identification with urban forms rooted in culture is further highlighted in Aitken's (1990) study which uses personal construct theory to analyze local residents' perception of neighborhood change. His study reveals that residents disliked new commercial and residential developments, especially large ones that were block like or repetitive,

due to the 'out of place' feeling they had in relation to the rest of the neighborhood. Furthermore, when investigating which elements residents rated as important to their town's 'character,' Green's (1999) study revealed similar results. Although natural features were rated as the most important, built historic features including buildings and landmarks were strongly associated with a positive town character image while built forms such as a new shopping arcade, large supermarket, and a new housing estate were rated as incompatible (Green, 1999). Green (1999) also concludes that the lack of town character has serious implications for feelings of placelessness and detachment. These studies offer strong evidence that new construction techniques resulting in repetitive or generic building styles are highly unfavorable and create feelings of loss in terms of community identity.

Yet, these findings regarding preference for certain urban aesthetic are again subject to social context. One of the most salient examples of aesthetic dictated by context is Zukin's (1989) profiling of loft-living in New York City's SoHo district in which she emphasizes how culture and media representations of 'loft lifestyles' revalorized demand for industrial style residences. According to the aesthetic preference studies reviewed above, these loft areas should not be favorable as they are large, lack any natural features, and are often post-modern. However, through cultural re-appropriation via media representation of what 'loft-lifestyles' entailed, this style of architecture again became desirable. Podmore (1998) expands on the work of Zukin by showing how the idea of the loft-lifestyle has generated similar demand in Montréal's inner-city. Although Montréal has a very different history than New York, the fact that the demand for similar loft-lifestyles exists shows how architecture and aesthetic can become symbols for social identity and shift preferences and attitudes toward various styles. The works of Zukin and Podmore serve to emphasize the difficulties involved in analyzing aesthetic preference in the face of a potential adaptive re-use project. Physically speaking, it would seem that warehouse style buildings in inner cities would require extensive amounts of work to make them successful projects for residents. Yet, the authenticity of the buildings is cited as a factor that actually increases desirability for the apartments (Podmore, 1998). Thus, due to cultural influence, the popular perception of lofts in urban areas has shifted from cold and un-welcoming to chic and modern. Therefore, the type of architecture most advantageous for an adaptive re-use project appears to be contingent on the context of function, building style, and neighborhood.

2.5 Relating Place Identity and the Neighborhood to Adaptive Re-use

The ideas of place-identity, place attachment, and neighborhood satisfaction provide a clearer framework for understanding the relationship between adaptive re-use and the socio-cultural well-being of a community. The physical structures and distinct features of 'places' become part of the individual identity because people find meaning and value in the physical settings associated with socialization. At the same time, these physical settings are the stage where present day significant rituals and daily activities are acted out. Physical landscapes are therefore culturally loaded and certain sites can act as 'pneumonic devices' for collective and individual identities by providing reminders of the continuity of values, beliefs, and norms that one has subscribed to (Osborne, 2001).

The continued importance of the physical landscape is reflected in the relationship between neighborhood satisfaction and place attachment. The neighborhood is the main level outside of the home at which attachment to the environment is formed (Hipp, 2009) and the degree to which residents are satisfied with their neighborhood is significantly related to levels of

attachment (Ringel & Finkelstein, 1991). Therefore, when a neighborhood is subject to significant changes of the physical or social environment, residents may feel threatened. This threat stems from associations with place-attachment, which is especially relevant in studies regarding neighborhood regeneration and gentrification where the idea of 'displacement' is frequently emphasized as a consequence (Lees, Slater, & Wyly, 2007).

Adaptive re-use serves as an innovative approach to mitigate some of the physical and social effects that can cause feelings of despondence during processes of neighborhood change. Physically, adaptive re-use can prevent demolition (and by extension threat to elements of various identities anchored by such sites) and the dereliction of certain neighborhoods or communally significant buildings (a process that can trigger negative feelings from the morale blow suffered by watching valued buildings crumble). Socially, adaptive re-use works to preserve and even strengthen communal or individual bonds to revered sites by providing the space with renewed functionality. Adaptive re-use offers a solution to alleviate the cultural damage caused by destroying the character of places and feeling of loss when sites that are significant to collective memories or individuals are threatened. Green (1999) explains that "features of the landscape are fiercely defended . . . [because] we take delight in physically distinctive, recognizable locales and attach our meanings and feelings to them. They make us feel at home, grounded" (p. 311). As conveyed in the neighborhood satisfaction literature, the appearance of the built environment and social interaction/involvement with the neighborhood are factors that contribute highly to attachment and sense of place. Both of these issues can be fostered through smart adaptive re-use in changing neighborhoods by easing the processes of change, offering a sign of permanence, and giving an increased sense of stability in turbulent times.

In the age of globalization, adaptive re-use has also begun playing an increasingly significant role in identity affirmation by preserving the 'distinctness' of places (Green, 1999; Osborne, 2001). As the forces of globalization create increasingly similar and mundane transnational models of business, food, culture, and architecture, it has simultaneously created a renewed interest in the distinctly local (Osborne, 2001). People are becoming more aware of what makes a place *their* 'place' in opposition to the homogeneity that creates feelings of 'placelessness'. Placelessness refers to "the weakening of distinct and diverse experiences and identities of places" and "marks a major shift in the geographical basis of existence from a deep association with places to rootlessness" (Ralph as cited in Green, 1999, p. 312). This placelessness is an unhealthy feeling for human beings; detachment from the culturally enriched landscape can reduce feelings of cohesion and societal well-being (Spennemann, 2006). This reduction in cohesion can in turn impact attitudes toward neighborhood satisfaction and sense of community. Adaptive re-use therefore strives to preserve what makes places distinct and by extension serves to lessen the effects of global homogeneity on individual character. This is accomplished by placing culturally relevant functions in culturally significant buildings, resulting in creative and attuned solutions to retaining 'place' in the face of change.

Although adaptive re-use is an important tool in preserving place character and identity, it is obviously not possible to preserve every element of the physical environment that every individual deems significant. Typically, studies regarding adaptive re-use tend to focus on the technical aspects involved in profitability (Bullen & Love, 2010; Heath, 2001; Langston et al., 2007; Johnson, 2004; Mason, 2005), environmental benefits (Bullen & Love, 2010; Kurul, 2007;

Langston et al., 2007; Conejos et al., 2011), and/or deal only with industrial or commercial buildings (ex. Faircloth et al, 2009; Kennedy, 2010; Suzuki, 1996). Although some studies advocate adaptive re-use as a preservation strategy (Australian Government, 2004; Langston et al., 2007), these studies fail to account for specific building types or expand on how these building types are involved in formations in moral norms and values. The relationship between place attachment, neighborhood satisfaction, identity, and adaptive re-use is underemphasized in this literature. It is clear that society attaches significance to the physical environment, but some buildings carry more significance than others. Furthermore, for a truly complete view of adaptive re-use, the socio-cultural benefits of these buildings should be further investigated. One very prevalent instance of such a building is that of Christian churches. Due to their prominence in society, recognizable form, and added level of socio-cultural reverence from both secular and religious groups, the church building will be the subject of investigation in order to highlight how functional and physical changes are even more complex when dealing with sites of elevated significance.

2.6 Adaptive Re-use and Church Buildings

In many ways, church buildings fit into the general discourse of adaptive re-use. They are subject to similar types of obsolescence, can reap the economic benefits of adaptive re-use, contribute positively to the environment when astutely re-used, and can have a major impact on the socio-cultural well being of a community when preserved or demolished. Although affected by the general issues related to re-use, churches merit a category of their own due to their unique position in society. Whereas commercial and industrial features in urban landscapes are frequently regarded as negative and/or loaded with connotations of economic failure, churches tend to be held in higher regard for reasons such as historicity, representation of morals, and aesthetic value (Dubois, 2002). Therefore, where re-use or demolition is often actively encouraged for industrial buildings or unused commercial space (as evidenced through the large body of literature on 'brownfield' sites), the decision to re-use a vacant church is not as simple. The connection to religious belief, issues of sacredness, and intense emotional attachment make the space one of the most controversial to feasibly re-use. Extending beyond religious matters, churches have also been proven to have significant meaning in the secular world for reasons ranging from aesthetic beauty to playing host to major life-events (Green, 1999). Therefore, due to the amount of vested interest in the buildings, examining the church will offer a strong example of how attitudes toward re-use can vary depending on structure type and socio-cultural status.

A good place to begin discussing the uniqueness of church buildings is by highlighting the exceptional treatment they receive in official discourses. The Council of Europe has debated the issue of church re-use and reached the conclusion that there are three solutions appropriate for the situation: adaptation for religious purposes (which allows modification to the building, such as a visitors center), adaptation that allows partial use by the religious group, and conversions forced upon redundant buildings (Eversdijk, 2000). Of most concern to the Council was the possible abuse or disrespect to religious communities if the buildings were to be used in a profane manner. The three resulting guidelines proposed by the Council are good-natured, but quite ambiguous and include: respecting the cultural significance of the building; the re-use project should be carried out "with such skill and design quality that it is self-commending, and is both creative and innovative"; and finally re-use "should be acceptable to the traditions of the

religious community, and not offend the local community . . . since opposition can be based on misunderstandings and innate conservatism which has no basis in real religious theology" (Eversdijk, 2000, par. 42). The suggestions by the Council of Europe demonstrate how projects involving religious buildings demand a higher degree of sensitivity than the typical project due to their particular place in local and wider religious communities. Although they suggest three categories of re-use, a conversion forced upon a redundant building is unspecific and needs further explanation. Furthermore, the Council fails to highlight just how the church is unique compared to other re-use projects, especially in terms of physical, economic, and socio-cultural realms.

2.6.1 Physical Considerations of Church Re-use

Some of the complications in the re-use of churches stem from their unique physical design. Churches are typically large buildings with open spaces, slanted roofs, and few partitions. While discussing adaptive re-use projects involving urban churches, Johnson (2004) notes the difficulty of finding appropriate functions that can take advantage of the space. She emphasizes that there are only so many purposes the space can serve without needing serious modifications or demolition. Compounding this difficulty is the fact that churches are frequently in very valuable locations. Historically acting as centers of congregation, churches are often located in the very centers of cities and villages (Mazumdar & Mazumdar, 2004). As this area is usually involves through competition between commercial institutions for space, a situation arises in which a very specialized building is on highly profitable land. This can intensify the desire of property developers to advocate demolishing vacant churches because the potential ground rent is very high, while the capitalized ground rent of adapting the space is most likely lower than that which can be attained through new-build construction.

In addition to the physical location of the property, the relics and artwork inside can be problematic for re-use (Rijksdienst, 2011). Depending on the style and age of the church, there may be artworks integrated into the structure of the building that are impossible or very expensive to remove such as frescoes, large organs, murals, etc. Aside from heritage protection or monument designation laws, the art works pose the practical challenge of incorporating them into the future use of the building. Such a situation can complicate possible future uses and jeopardize the sale of the church property. Alternatively, artworks and other exceptional characteristics of church buildings could provide added value to the structure by reinforcing authenticity and uniqueness of place (Australian Government, 2004). Clearly, physical complications and/or advantages of the church structure are important to take into account when discussing adaptive re-use as it relates to church buildings. The form of the church is what makes the building distinct, with features such as the steeple, stain-glass windows, and intricate detailing adding to both the aesthetic and emotional value of the church. Therefore, any adaptive re-use project involving a church building will need to take into consideration how the physical design of the church will be incorporated or modified and to what extent this is acceptable those with high amounts of vested interest.

2.6.2 Economic Considerations of Church Re-use

Although not typically considered a major factor in the economic framework of the neighborhood, the re-use of churches has in fact been cited as integral to certain urban renewal and regeneration projects (Londin, 2004**;** Green, 1999; Johnson, 2004). Often overlooked are the

services Christian church groups offer to the community that extend beyond worship. Especially in urban areas, the church frequently participates in local volunteer projects, charity work, and various initiatives to help poor and marginal residents of the area (Londin, 2004). Even though the church is sometimes scrutinized for the conditions placed on the aid, it is often one of the major private institutions providing services that would otherwise not be offered at all. In addition to their charitable work, in certain cases, the church can also provide a boost to local employment through restoration projects and tourism (Londin, 2004). The church can act as a catalyst for wider economic effects, as some churches may attract pilgrims, faith based visitors, or tourists that value the architecture. Moreover, since the church is undeniably a unique and visually interesting structure, it has been considered a valuable asset to incorporate into renewal plans as it can anchor a community and provide a ready sense of attachment to the neighborhood (Pendlebury, 2002). As in other economic regeneration projects, such buildings loaded with heritage connotations are considered as "scarce, finite, nonrenewable, and valuable" meaning they provide added worth to the area (Spennemann, 2006, p. 2).

2.6.3 Socio-Cultural Considerations of Church Re-use

Secular Communities

Physical and economic considerations notwithstanding, churches are undoubtedly considered a special case of adaptive re-use because of their socio-cultural significance. Extending beyond religious communities, the church building is seen as significant to secular society as well. In terms of place-identity and place-character, churches are often the oldest buildings in neighborhoods and therefore represent the continuity of the community identity (Londin, 2004). For the secular resident, the church is important for what Proshansky et al. (1983) refer to as the "recognition function" of place-identity. The recognition function refers to the idea that an individual's environmental past (the intertwined physical and social backdrop) provides an immediate framework from which to judge any new physical setting, enabling the identification of what is familiar or unfamiliar in a changing world. Such identification is important because it ingrains in the subconscious a sense of stability and validates the person's continuity over time; "the similarity of the world over time gives credence to and support for his or her self-identity" (Proshansky, 1983, p. 68). Furthermore, this sense of stability in the environment and identification with the familiar are foundational elements for humans' psychological well-being and rootedness (Spennemann, 2006).

As previously stated, research has shown that people generally prefer older, culturally representative buildings in urban streetscapes and landscapes (Herzog et al, 1976; Herzog et al, 1982; Green, 1999). Given such a categorization, one type of building that fits these criteria is church buildings. Herzog et al (1976) found that religious buildings were one of the most preferred building types when participants were shown a variety of slides in their local community. This can be attributed to the unique architectural detail that is often present in churches and stands in contrast to more contemporary, incoherent types of building forms. Storper & Manville (2006) partially explain this preference through the fact that older buildings often necessitated a certain form based on function due to limitations in architectural techniques and building materials. For example, in the past in order to make a wall sturdy it needed to be made out of brick, which resulted in a certain stylistic coherence. Church buildings are especially representative of this idea as the unique physical design of the buildings has created a visual continuity of form over time. Furthermore, Gjerde (2011) cites churches as an excellent example

of how social value attachments to certain building styles may influence how people favor the presence of certain forms more than others.

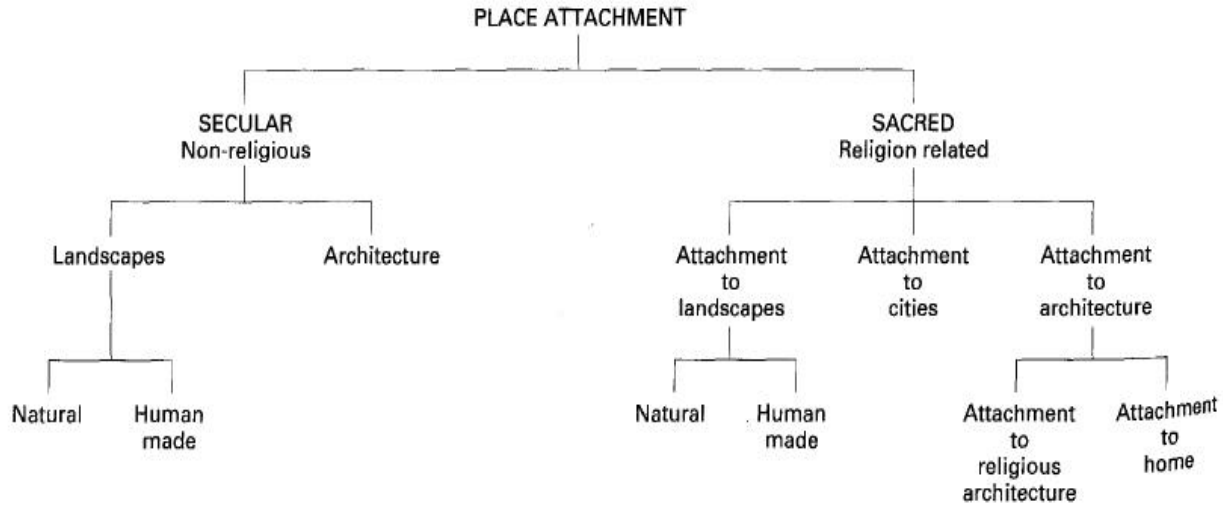
Since the institution of Christianity is so widespread and the buildings take architecturally similar forms, the church is a powerful symbol in the secular individual's place-identity as it provides an immediate sense of familiarity with. As such, the inclusion (or absence) of church buildings in an urban landscape or townscape has an impact on these secular members of the community as well as the religious. Therefore, the adaptive re-use of churches is theoretically important to each person because the physical structures anchor collective memory, preserve place character, and serve as markers of continuity of place and culture. Thus, as the Council of Europe astutely noted by reporting on the issue, churches are a specific case of adaptive re-use that deserve further attention in order to understand the relationship of the building to the secular community and how changes in function and possible physical modifications are perceived by this group.

Religious Communities

The church is clearly important to the secular community for aesthetic factors, subconscious familiarity, and place-identity, but the socio-cultural significance of such buildings to the religious communities they service is much more complicated. Within the schema of Proshansky et al. (1983), churches provide, in addition to the recognition function, what they call the "meaning function" of place-identity (p. 63). Essentially, the meaning function refers to the idea that physical settings have a primary purpose and through this primary purpose the individual learns what behavior should take place in certain settings and their relationship to the setting. These settings help define the role the individual plays (ex. hospital-doctor, home-father, university-professor, etc) and how well they fulfill that role, thereby providing a measure of meaning in their life. Therefore, the physical setting of the church socializes believers in the role of being a Christian, including the related moral code and appropriate behaviors to which one can be deemed a 'good' or 'bad' Christian. This means that the church physically symbolizes the lifestyle worshippers abide by and ritualistic visiting is an affirmation of their acceptance (Mazumdar & Mazumdar, 2004). Moreover, for individuals within the religious community, church structures often play host to major life events (such as marriages, baptisms, and funerals) that carry their own psycho-socio significance and create strong emotional attachment (Londin, 2004). Furthermore, for those of the Roman Catholic faith, the church building is a sacred place, set apart from society as a space where one can have a connection with God himself (Rijksdienst, 2011). Clearly, for members of the religious community the church building is not just a subconscious marker of place-identity, but rather an active, integral part of their identity.

Mazumdar & Mazumdar (1993) provide a classification of just how religious spaces relate to individual identity. Their text is best summarized in Figure 2-2 (Mazumdar & Mazumdar, 1993, p. 232).

Figure 2-2: Place Attachment Classification Scheme



They deconstruct the idea of place-attachment in terms of both secular and religious places. Within the sacred, three main categories of spaces foster ties with place: landscapes, cities, and architecture. Mazumdar & Mazumdar (1993) address various religions in their article and therefore include a dichotomy of 'natural vs. human made' and 'religious architecture vs. home'. This categorization is not the focus of an analysis pertaining only to Christian religions due to the fact that worship of nature is typically regarded as pagan and shrines within the home should not be worshiped. However, the idea of attachment to religious spaces at various scales is important in Christianity because believers distinguish each of them from the ordinary world by imbuing these spaces with extraordinary meaning through artifacts, stories, experiences and other socialization processes such as displaying murals, visual texts, pilgrimages, and various rituals (Mazumdar & Mazumdar, 2004). Within the context of Christianity, the church structure is the primary physical scale at which these socialization processes take place. Therefore, for religious persons, the church building is a focal point which not only affixes their individual identity, but also binds them with the international religious collective. Since the church is at the heart of these socialization processes so vital to Christians, their amount of vested interest and attachment to these buildings is extremely high.

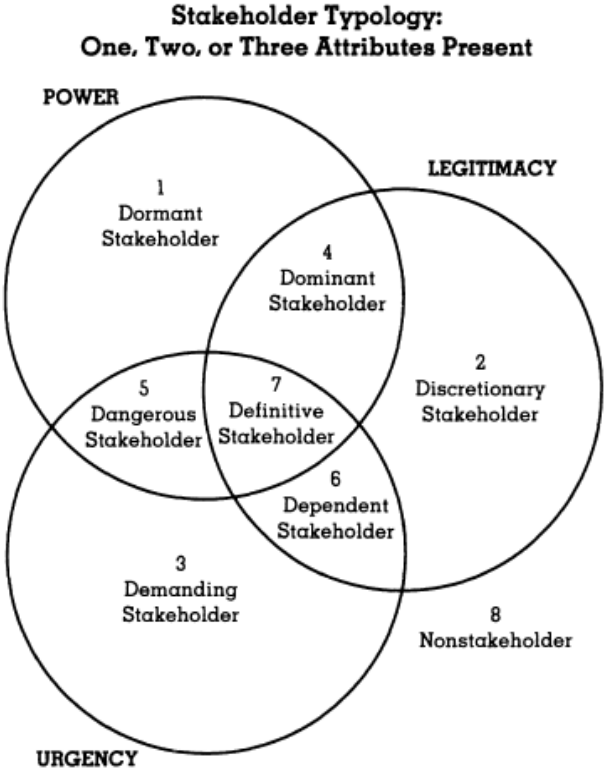
2.6.4 The Issue of Stakeholders and the Church

For believers, religion imbues churches with so much symbolic meaning that when faced with redundancy, re-using the space becomes controversial as to who or what should be allowed. As shown, the building is not just a structure, but rather serves as an affirmation of identity, represents a moral code, and has strong associations with both town character and the collective memory. Unlike cases of re-use involving industrial or commercial properties, the vacant church occupies an elevated social position that intertwines elements of the international and the local, the secular and the sacred, reverence for the past and needs of the contemporary. Questions arise regarding the future of vacant churches and the tensions between those who advocate the re-use of precious space and those who maintain that a church should never be re-used. As society

enters the global age, concessions need be made from both ends in order to find a practical solution for the cases of redundant churches.

However, precisely how these concessions are determined is often subject to imbalances in power relationships between various stakeholders. The concept of the 'stakeholder' originates in corporate theory and is used to determine which entities the firm is responsible, defined as "any group or individual who can affect or is affected by the achievement of the organization's objective" (Mitchell et al, 1997, p. 869). Although developed in the business context, the idea of stakeholders is easily extended to describe the multiple parties that have various levels of vested interest in the outcome of a particular development or situation. Mitchell et al (1997) offer a comprehensive review of the stakeholder debate and identify a classification scheme for different levels of stakeholders based on the characteristics of power, urgency, and legitimacy as shown in Figure 2-3 (Mitchell et al, 1997).

Figure 2-3: Stakeholder Typology by Characteristics



The type of stakeholder an entity or individual is depends on the combination of characteristics they display given the context of a development or situation. Although not all types of stakeholders may be present in all situations, the most important types of stakeholders are those at the intersections of the Venn diagram because they have the most salience in their demands and are most likely to take some sort of action (Mitchell et al, 1997). It should be noted that Mitchell et al (1997) emphasize that classifications of stakeholders are fluid and entities that occupy one position may very well change depending on the context.

In terms of redundant urban churches, the institution of the Christian Church has historically

been the Definitive Stakeholder by having a strong social influence (Power), owning or having a large amount of vested interest in the building (Legitimacy), and needing to find a feasible solution to their problem before they lose control of the building or dereliction occurs (Urgency). The municipality or neighborhood government where the church is located can best be described as a Dominant Stakeholder, meaning that they have a high degree of social and legal influence (Power) and a responsibility to find a socially sensitive solution for the various parties in conflict (Legitimacy). For a redundant church, private property developers would typically be regarded as Dangerous Stakeholders because they have high amounts of social and economic capital and are urgent to assume control of the property. However, private developers lack legitimacy because they typically act out of self interest motivated by profit and therefore disregard the opinions of other stakeholders, including the Determinant Stakeholder.

Finally, Dependent Stakeholders are the individuals who use church buildings in some form, either for religious purposes or in various states of re-use. These individuals show urgency because their ability to prevent or promote certain uses or modifications is of a time-sensitive nature. In other words, the church will not be vacant forever and the possibility exists that certain modifications or even destruction will be irreversible. Furthermore, this group displays legitimacy because they have a vested interest in the results of a church conversion. They are the ones who currently use such spaces and therefore hold more informed opinions regarding what constitutes successful or unsuccessful uses/modifications. What this group of individuals lacks is power in the sense that the users of church spaces are often individuals, politically disjointed, and generally do not possess capital resources to advance their opinions. This group should not be conflated with the wider community who do not actively visit churches. The surrounding community would be classified as a Discretionary Stakeholder or Non-stakeholder because they may have an opinion, but are not actively involved and may not be fully informed about the complications involved in church conversions. This is not to say that their opinion is unimportant, as the wider community can be a powerful actor when well-organized and cohesive, but in relation to the two most pertinent components of adaptive re-use (functional change and physical modifications) actual visitors of churches offer a more salient and pertinent opinion.

Whereas the dangerous, dominant, and definitive stakeholders are able to voice their opinions on redundant churches due to their ‘power’ in social, legal, economic, and/or public realms, the opinions of dependent stakeholders often remain unasked. Mason (2006) laments this dominance of ‘established authorities’ while writing about preservation theory and notes that what actually gets preserved is often misaligned with contemporary values due to the lack of consultation. He goes on to advocate a ‘value-centered’ approach to preservation that acknowledges the “multiple, valid meanings of a particular place” and “their changeability” (Mason, 2006, p. 4). Invoking preservation discourse, the fact that an imbalance in power exists between stakeholders in vacant churches means that a very important voice is being overlooked. By discounting such input, adaptive re-use projects involving churches appear negligent of considering the space from the perspective of people who will use it.

Therefore, this research seeks to make this multiplicity of viewpoints more complete by asking the question:

“What is the opinion of dependent stakeholders regarding proposed changes in function and

physical modifications accompanying the adaptive re-use of church buildings? Furthermore, which and to what extent do personal characteristics play a role in influencing these opinions?"

By reaching out to these stakeholders and asking their opinion, municipal officials, heritage specialists, property developers, and religious authorities will be more aware of the sensitivities and desires of end-users. In order to answer this question, the Netherlands is used as the site of interest because of the high amount of churches becoming redundant and subsequent opportunity for possible re-use.

III.) Churches in the Netherlands and Attitudes toward Adaptive Re-use

3.1 Vacant Churches in the Netherlands

The Netherlands offers a unique opportunity to study the opinions of dependent stakeholders regarding adaptive re-use due to the high rate of secularization and subsequent redundancy of many Christian church buildings. The reasons why this is occurring, the opinion of the Church regarding the future functions of the buildings, and their reluctance toward physical modifications will be explained in this chapter.

3.1.1 Religious trends in the Netherlands leading to church redundancy

The religious history of the Netherlands is best summarized as one of pluralism, including tensions between various Protestant factions, surges in Catholicism, periods of relative tolerance toward Jews and French Huguenots, and anxiety over Islam. For the purpose of the built religious environment, three main transitions in Dutch religious history are important in accounting for the high rates of redundancy in Christian churches: Dutch-state relations in the early 19th century that resulted in disestablishment, the system of pillarization ("verzuiling") in the late 19th century, and the secularization of society since the 1960's (Kennedy & Zwemer, 2010).

Disestablishment

Unlike the monarchies prevalent in seventeenth century Europe, the Netherlands was governed through a decentralized aristocratic system in which each province (and to some extent city) had its own system of government. One of the effects of this decentralized system was that there was no formal nation-state under which a monarch or central ruler could enforce adherence to any particular religion (Kennedy & Zwemer, 2010). Although the Reformed church was prevalent throughout the Republic, it was this gap in centralized uniformity that allowed for the toleration of Catholics, Jews, and other religions (Kennedy & Zwemer, 2010). This caused a movement away from the confessional state as the Protestant idea of the "Fatherland" as enforcer of a "moral community" took precedence over loyalties to any type of religious doctrine (Kennedy & Zwemer, 2010, p. 243). Thus, at the beginning of the nineteenth century, the Dutch Republic was one that had adopted a bourgeois morality rather than a religious one, relegating religion to the arena of the individual instead of the state. Then, in 1848, King Willem I made this the official policy of the Dutch state by issuing 'reglementen' which dictated that each religion was free to regulate affairs within their own communities and the state was officially disestablished from any sort of religion.

Pillarization

Official disestablishment created the setting for pillarization. Accompanying the separation of church and state, a renewed interest in the role of religion in both public and private life became a pressing issue as people demanded public services that were in accord with their private beliefs. Quite in-line with traditions of decentralization, instead of funding solitary state or public institutions, the Dutch government decided to filter money through various religions to provide

their own services to their respective communities, resulting in social 'pillars' supporting one united Netherlands (Lechner, 1996). Roughly, there were four pillars: the Protestant, the Catholic, the socialist (of which many Jewish people were apart of), and the liberal (a type of catch-all for those who did not subscribe to any of the former). Lechner (1996) describes the extent to which pillars were in control of services, stating:

> "Each pillar consisted of institutions that had secular functions and religious identities. Newspapers, trade unions, political parties, schools, down to proverbial associations of goat breeders, all were organized along denominational lines, directly or indirectly subject to church authority or influence" (p. 258)

The religious implications of pillarization amounted to renewed interest in faith communities, which in turn resulted in the construction of many churches throughout the Netherlands as towns typically needed one church to accommodate the Catholics and one (or two) additional churches for Protestants. Thus, as religions became the chief providers of major services, political parties, and source of socialization, their mark on the physical landscape grew as government money could be used to construct church buildings. Lasting until the mid twentieth century, pillarization is a major factor in the surplus of church buildings seen today.

Secularization

However, during the tumultuous 1960's, the Dutch system of pillarization would finally come to an end. Again as a result of social shifts, the reliance on religion for services fell out of favor. Although the exact reasons for public disillusionment remain unclear (Knippenberg, 1998), the 1960's witnessed increased secularization as a result of a more individualized society propelled by increases in mobility, access to higher education, and a cultural revolution (Lechner, 1996). Not unlike other European nations at this time, the Dutch people became largely disenfranchised with religion which resulted in a dramatic decrease in church attendance from 1966 to 1985 (Kennedy & Zwemer, 2010). The shift in moral values was accompanied by the depillarization ('ontzuiling') process as people sought other sources to provide meaning in their life. The result was that the pillars of society were replaced by the welfare state, which reshaped the bond between the individual and the collective (Lechner, 1996). The demands for schooling, media, and other services formerly the responsibility of the church could once again be provided directly by the state to the individual.

Today, according to the Central Bureau of Statistics (2012), 27% of the Dutch population identifies as Roman Catholic, 17% as Protestant, and 44% as not belonging to any religious denomination. The remaining 10% is composed of other religious denominations (Hinduism, Buddhism, Islam), mainly attributed to the rise in non-Western migrants. The effect of this shift can be seen in the built religious environment. The combined effects of these three trends have resulted in churches quickly falling into disuse and redundancy (Velthuis & Spennemann, 2007). While the era of pillarization saw a rush to build churches, the current era of secularization has witnessed a rush to leave churches. However, as shown in the analysis above, leaving a church vacant is not as simple as an ordinary building. In addition to issues of socio-cultural importance, the Netherlands is such a dense country that leaving any building a real 'ruin' with no function at all is simply not practical. Furthermore, when considering issues related to cultural preservation and the demands of contemporary society, what to do with the extraordinary amount of

redundant churches becomes an especially intricate issue for the Netherlands.

3.2 Opinion of Christian Authorities Regarding Redundant Churches

A distinguishing feature of adaptive re-use is that it entails a change in the future function of the building or landscape (Conejos et al., 2011; Velthuis & Spennemann, 2007; Australian Government, 2004). For structures such as warehouses, manufacturing plants, and office high rises it is only a matter of legality and/or economic feasibility with consideration to zoning laws, profitability, environmental effects, cost-benefit analyses, etc. However, as explained, the church additionally has to deal with an entire set of emotional attachments, moral codes, and entrenched traditions, all of which have implications for the future of the building in terms of appropriate functionality (Londin, 2004; Rijksdienst, 2011).

Throughout the modern era of church conversions, the debate over the future function of the buildings has been dominated by the definitive stakeholders, the dioceses that were giving up ownership (Lueg, 2011; Kyong Ahn, 2007). Kyong Ahn (2007) offers interesting insight into this phenomenon in her study of the re-use of church buildings by comparing the functions of historical examples of religious re-use with the functions of more contemporary examples. She finds that unlike historical examples, which were preserved primarily as symbols for major shifts in political power, recent examples of church re-use have instead acted as community symbols and have taken on a wider variety of secular, more practical functions. In the modern era, the recognition of the cultural significance of churches has encouraged localities to reach out to the religious institutions to act as consultants to try avoiding conversions deemed offensive. However, this preferential treatment of the institutional opinion has come at the expense of the dependent stakeholders. Essentially, this means that in combination with the architectural peculiarities of church buildings, those who endeavor on adapting a church building have been expected to consider the official opinion of church leaders.

Although specific guidelines on functionality vary depending on location and which particular denomination is being discussed, the general message of Christian religious groups is notably similar: the new use should not contradict the original use as a church and the values represented by the institution (Lueg, 2011). Although quite a general message, it affirms the idea that the church should be morally respected even after the religious community has left. Of particular importance is that based on the essence of this message and the Church's responses to various examples of re-use, a hierarchy can be derived in order to better understand the desires of the Church. Interestingly enough, the hierarchy of preferred functions cited in multiple sources of literature regarding various Christian denominations in different nations (including the U.S, Germany, and the Netherlands) is remarkably similar (Lueg, 2011; Kyong Ahn, 2007; Velthuis & Spennemann, 2007).

3.2.1 Preference for Church Re-use According to Function

The favorability of a given function for a church depends on how well it is aligned with the original goals of its use as a church ('goals' referring to promoting Christian ideals and assisting the public). Therefore, the most favored re-use of the church is always religious, meaning that a Christian church is re-used by another Christian denomination (Lueg, 2011; Kyong Ahn, 2007; Velthuis & Spennemann, 2007). The reasoning behind such a decision is clear; the new owners will have very similar viewpoints, the building will not be extensively modified, and there will

undoubtedly be respect for the building in a moral sense. There are countless examples of this re-use throughout the Netherlands as 25% of all re-use projects related to churches involve the transfer from one denomination to another (18% from Roman Catholic to Protestant and 7% from Protestant to Roman Catholic) (Rijksdienst, 2011).

Following religious re-use in the hierarchy are various 'extended uses' (Lueg, 2011). Extended use refers to the situation where the church maintains at least partial ownership of the space while allowing other temporary uses to take place inside the building. Churches prefer this situation because they are allowed to retain partial ownership of the space and, to a degree, control which events are allowed to take place. Examples of this type of re-use include temporary exhibitions, concerts, and town-hall meetings. If the church is in fact forced to give up all ownership of the building, then the subsequent desired functions can be categorized as "social" and "community" re-uses (Lueg, 2011; Rijksdienst, 2011; Velthuis & Spennemann, 2007). Social and community re-use refer to the church being adapted to a function which serves a purpose that is beneficial for the community and provides services in line with the social work of the church. Examples of such re-use include a community/cultural center, elderly care home, senior center, daycare centers, youth center, primary school, library, and sporting facilities (Rijksdienst, 2011). The list is not exhaustive, but the idea is that the church building should serve as a space open to the public and have a goal that is based on providing some sort of welfare service.

The next set of functions are generally less preferred by Christian institutions, but are still not completely abject and so occupy a middle ground in terms of appropriateness. The first series of functions is best categorized as "cultural-arts" (Lueg, 2011; Rijksdienst, 2011; Velthuis & Spennemann, 2007). The reason for such a position in the hierarchy is that the Christian Church historically considers itself a patron of the arts and so by extension such uses are acceptable (Velthuis & Spennemann, 2007). However, the problem with such a statement is that the Church's history with art and culture is in fact much more complex and can undoubtedly be described as a patronage of *certain* arts while rejecting others. Therefore, this complex relationship and the various messages of artists and their associated events can conflict with certain views held by the Church. Once the Church has lost ownership of the space, then certain events that may have been disallowed by the church would be allowed to take place. Examples of such re-use include theaters, art galleries, concert halls, and auditoriums. Another function occupying this middle ground is that of the café/bar/restaurant (Velthuis & Spennemann, 2007; Rijksdienst, 2011). This function is self-explanatory and can be problematic due to its commercial nature and the degree of partitioning that may be required to establish a full kitchen, seating areas, and storage facilities. Similar objections are made for the case against various retailing functions. If their primary motive is profit, then the Church sees this as a profane function that should not take place in a church (Rijksdienst, 2011).

The following functions represent the bottom of the hierarchy and are considered the most profane by the Church. The first of these functions is that of the private residence. The private residence is considered one of the most abject functions by the Church because it loses any claim to ownership, the building is substantially modified, the developer seeks to maximize profit, and the space is completely privatized (Kyong Ahn, 2007; Velthuis & Spennemann, 2007; Rijksdienst, 2011). In similar vein, corporate offices and/or industrial use is considered

undesirable as partitioning, profit motive, and the values of the corporation typically stand in contrast to what the Church seeks to promote (Kyong Ahn, 2007). Following such re-use in the hierarchy is that of a nightclub/disco which stands as an especially abject function for churches (Velthuis & Spennemann, 2007). Although the church is physically well-suited for such a function with vaulted ceilings and open interior, the degree of modification (speaker installation, bars, lighting, etc) and the activities that take place are contrary to church values. The space is only semi-public, profit is a motivating factor, and a certain degree of sexual promiscuity is usually present.

Further down the hierarchy, the conversion of a Christian Church to a mosque is frequently cited as one of the least desirable functions for future church re-use (Rijksdienst, 2011; Lueg, 2011; Velthuis & Spennemann, 2007). Although physically it is well suited to act as an Islamic space of worship, it is the historical tensions and current clash of ideologies that causes the Christian Church to be adamantly opposed to such re-use. However, this is not to say it is impossible, as currently there are 20 Christian churches in the Netherlands that have become mosques (Rijksdienst, 2011). A final re-use of church buildings that is unfavorable in the eyes of Christian institutions is re-use for any type of erotic based business or service (Squires, 2009). This type of re-use is against the moral values of the church, usually involves a high degree of modification, is motivated by profit, and is viewed as especially profane. Although not common, a recent example of such a conversion is cited with disgust by Archbishop Gianfranco Ravisi, the president of the Pontifical Council for Culture, who used the example of a strip-club in Hungary that now occupies a former church building as a warning for just how profane future uses can be (Squires, 2009).

As a result of this literature and Church's response to real examples, the hierarchy in Table 3-1 has been developed:

Table 3-1: Church's Functional Preference

Church Ranking
1.) Christian Religious Re-use
2.) Extended Use
3.) Social Re-use
4.) Community Re-use
5.) Cultural/Arts Re-use
6.) Café/Bar
7.) Retail
8.) Corporate Office
9.) Private Residence
10.) Nightclub/Disco
11.) Mosque
12.) Erotic Business

3.2.2 Specific Concerns Regarding the Adaptive Re-use Process of Churches

In addition to the social implications of the future function of the church building, there are specific issues that the Church emphasizes as particularly problematic in the re-use of churches including partitioning, privatization, any major changes to the exterior, and demolition (Kyong Ahn, 2007; Lueg, 2011; Velthuis & Spennemann, 2007; Rijksdienst, 2011). Partitioning specifically refers to the division of the interior of the church into smaller sections, rooms, and/or floors. The interior of the church and unbroken view from the nave to the altar is a defining architectural and spiritual feature of church buildings which the Church prefers to keep intact (Rijksdienst, 2011; Kyong Ahn, 2007). This preference can also affect the Church's opinion on function. For example, the Church may not be morally opposed to social housing, but it is not preferred due to the extent of partitioning and permanent alterations necessary for suitable housing units. This is why such functions as theaters, meeting centers, exhibition spaces, and those that require open space are favored over those which require more permanent subdivisions. By extension, the church prefers that, whenever possible, any modifications to the interior are reversible (Lueg, 2011). This includes the use of roll-away walls, glass as sub-dividers, and leaving the foundation/structural features intact. This can influence, for example, the preference for creating offices instead of private apartments if the office would be willing to use glass to subdivide seating areas.

Privatization is another significant issue in the eyes of the Church (Rijksdienst, 2008; Londin, 2004; Velthuis & Spennemann, 2007). Privatization refers to the process by which the church building is transferred to private ownership and public access is subsequently restricted. This can occur to a variety of degrees, from complete privatization of an individual home to quasi-privatization through businesses that cater to an exclusive clientele. The Church is primarily opposed to functions that involve restricting public access because it stands in opposition to the communal message that the Church promotes. By privatizing the structure, feelings of exclusion, alienation, and/or abandonment may be felt by the wider religious audience thereby adding to the sense that such a use is inappropriate. In addition, considerations must be made for any emotional attachments fostered with the site through weddings, baptisms, funerals, and or the presence of cemeteries (Rijksdienst, 2011; Londin, 2004). Therefore, Christian groups prefer that their churches are not privatized in a way that alienates visitors in the process of reuse.

A third issue raised in the literature regarding the factors influencing the Church's opinion toward church re-use is whether the re-use project entails significant changes to the exterior (Rijksdienst, 2011). Although adaptive re-use projects try to minimize alterations to the exterior by definition, the modifications that concern religious intuitions are those that may affect the distinguishing features of the church structure such as stained glass windows or elements of the steeple. This concern is founded in the importance of the church form and the implications it has for the streetscape or townscape. If the building is modified in a way that reduces its former status as a church, then the atmospheric qualities that endeared it to the community may also be reduced. By extension, the local community may feel offended by such a change, as it has been shown that older, unique structures such as churches are viewed as favored elements in cities and towns (Green, 1999).

A fourth and final issue important to the discussion of physical issues and adaptive re-use in

relation to churches is the possibility of demolition (Rijksdienst, 2011). More specific to the Netherlands, the RKK (Roman Catholic Church) takes an especially strong stance against the possibility of its buildings being re-used in profane manners and has historically preferred demolition over this risk. Since 1970, there have been 300 vacant Roman Catholic churches in the Netherlands, of which 55% have been demolished. This is in contrast to the Protestant Church's hesitance to demolish their buildings, as only 10% of the 550 vacant Protestant churches have been demolished since 1970 (statistics from Rijksdienst, 2011). The issue of demolition is representative of how religious institutions have been both the definitive voice and stakeholder in cases of church re-use. Demolition is the most permanent and drastic result to proposed re-use and, especially the Roman Catholic Church, has historically acted in self-interest if there is uncertainty. Yet, churches that are demolished may also be important to dependent stakeholders that oppose demolition, but this voice remains unknown. Thus, the demolition of churches without consulting dependent stakeholders is exemplary of the potential harm of preferential treatment of institutional opinion because destroying a church on moral grounds may have prevented its successful re-use in a secular setting.

As previously stated, the Christian Church has historically dominated the debate on what is functionally and physically appropriate in the re-use of church buildings. However, returning to the various conceptions of stakeholders, the question should be posited as to why the church has in fact had so much influence in determining the future of buildings it can no longer maintain. As Spennemann (2006) points out in his discussion of preservation theory, socially significant sites have different meanings for different groups, yet only certain individuals or interest groups are generally able to make their voice heard in determining the future of the sites. In the case of churches, the predominant voice has undoubtedly been that of the religious institution attached to the building. Instead of focusing only on the definitive stakeholder, the debate should be expanded to include the views of the actual users of the spaces, the dependent stakeholders. By ignoring the needs and opinions of this community, municipalities may miss valuable opportunities to re-use church buildings in a way that may not be in line with church doctrine, but is desired by the local users of the space. This more egalitarian, community oriented approach to urban space through increased consultation has lead to development projects being deemed more successful and accepted by local residents (Ha, 2001).

The case of the Netherlands offers a valuable opportunity to survey dependent stakeholders that are experiencing the processes of secularization and the subsequent increase in churches that are assuming new, non-religious functions. Therefore, the main research question seeks to address the opinions of these stakeholders and to see how these opinions differ by asking:

"What is the opinion of dependent stakeholders regarding proposed changes in function and physical modifications accompanying the adaptive re-use of church buildings? Furthermore, which and to what extent do personal characteristics play a significant role in influencing these opinions?"

IV.) Methodology

4.1 Quantitative Approach

In order to address the research questions, it was decided that a quantitative approach was most appropriate. The aim of the study is to measure participants' attitudes toward the already existing phenomenon of adaptive re-use and church buildings. This entails a deductive rather than inductive approach because religious institutions and prior examples of adaptive re-use have provided the theoretical framework on which determinant stakeholder opinion is founded. Thus, the goal is not *why* this phenomenon takes place or *why* people feel a certain way, but rather to ascertain the opinions of those witnessing a largely external social phenomenon. As a result, the chosen quantitative method to measure these attitudes is that of a survey. The survey design relies on a series of Likert scale statements. The Likert scale statement was chosen because it is an established tool that has proved effective in measuring attitudes in social science research (Bryman, 2008).

Although some sources (Bryman, 2008; Gob et al, 2007) suggest that the use of a seven-point scale is equally appropriate as a five-point scale, it is the nature of what is being measured that should determine how many points are ultimately used. Therefore, the Likert scale in this survey utilizes a five point scale that includes "strongly agree", "agree", "neither agree nor disagree", "disagree", and "strongly disagree". As the statements are meant to measure opinions toward various functions and modifications, the five point scale offers an easier and more balanced spectrum from which the participant can give his or her opinion. In other words, the seven point scale could become confusing when deciding to what extent a person finds a certain function favorable. For example, the difference between "somewhat agree" and "neutral" may not be as prominent as the difference between "strongly agree" and "agree". Thus, the five point scale provides a more equidistant division of opinion with regard to the issues being examined.

Another methodological issue considered was how the data would be treated in the analyses. There is a large academic debate surrounding Likert scales that essentially contests whether the nature of the survey produces ordinal or interval data (Knapp, 1990; Jamieson, 2004; Gob et al, 2007). The more conservative group advocates that since the measurement is not reflecting an actual interval (i.e. the difference between agree and strongly agree cannot be quantified), the results must necessarily be ordinal. However, within the social sciences such orthodox interpretations of statistics have been largely disregarded and instead "it has become common practice to assume that Likert-type categories constitute interval-level measurement" as long as they fulfill the standard assumptions of cardinal statistics (Jamieson, 2004, p. 1212). The difference in interpretation becomes important when determining how the data will be analyzed; the difference being that ordinal data uses non-parametric tests and interval data requires parametric tests. Although the debate may seem trivial, the powers of such tests differ, with parametric tests typically having greater statistical power than non-parametric tests (Knapp, 1990). As this debate remains unresolved, the data collected by the surveys is treated as interval, as it was decided that the five-point scale provides an adequate division of opinion, the scale type is not included among the assumptions for validity of the t and F sampling distributions, and the majority of social science surveys using Likert scales have treated the data as such (Knapp, 1990; Gob et al., 2007).

4.2 Survey Design

The survey itself is divided into three sections. The first contains statements pertaining to twelve possible future functions of church buildings, the second consists of statements regarding four particular issues related to the adaptive re-use of churches, and the third collects demographic information about the individual. In order to ensure that the participants understand the focus and purpose of the survey, a brief introduction to the topic and lay definition of adaptive re-use was included. It should be noted that all of the statements regarding functions and issues of adaptive re-use were framed positively. This means that if someone agreed with a statement, they viewed the function as favorable or that issue as important. Reverse wording of questions was avoided due to the possible confusion this could cause in relation to the flow of responses (full survey located in APPENDIX A).

The first section of the survey consists of twelve statements regarding possible future functions for redundant church buildings. The statements are based on the hierarchy derived from the analysis of literature on church re-use, statements by the religious institutions, and actual examples of church buildings. As opposed to other studies which choose to use general categories in their analysis of future church functions (i.e. "commercial use") (Lueg, 2011; Kyong Ahn, 2007), this survey utilizes specific examples of the categories in order to provide the subjects with a more concrete image in order to reduce variance and confusion. For example, if a statement were to reference 'commercial' as a future function, one respondent may think of a boutique clothing store, while another may imagine a chain supermarket store. The difference between these two stores is vast in terms of giving an opinion on whether the conversion would be favorable. Therefore, in order reduce variation in how the statement is perceived, specific examples of the major categories have been given as listed in Table 4-1.

Table 4-1: Functional Classification, Indicators, and Real Examples of Converted Churches

Concept:	**Indicator in Survey:**	**Example:**
Religious Re-use	Use by another Christian denomination (ex. Protestant to Catholic)	Westerkerk, Aalten, Netherlands
Extended Use	As a shared art exhibition space with the religious community still allowed to practice	Oude Kerk, Amsterdam, Netherlands
Social Re-use	As a senior center	De Goede Herder, Budel, Netherlands
Community Re-use	As a classroom for a public kindergarten	De Heilig Hartkerk, Hengelo, Netherlands to St. Plechelmus kindergarten
Cultural-Arts Re-use	As a theatre space for the performing arts	De Groate Kerk, Sint Jacobiparochie, Netherlands to Cultural Center/Performance Venue
Café/bar	As a café-bar	Jacobus Minor Kerk, Utrecht, Netherlands to Café Olivier
Retail	As a supermarket chain store	Bernadettekerk, Helmond,

		Netherlands to Super de Boer
Office	As an accountant's office	Annakerk, Breda, Netherlands to various offices
Private residence	As a private residence	Woonkerk (Sint-Jacobskerk), Utrecht, Netherlands
Nightclub/Disco	As a nightclub/disco	St. Joesphkerk, Den Bosch, Netherlands, to Orangerie Nightclub
As a mosque	As a mosque	St. Ignatius ("De Zaaier"), Amsterdam, Netherlands
Erotic business	As a brothel	Hungary, cited by Pontifical Council for Culture (Squire, 2009)

The "concept" and "indicator" columns listed in Table 4-1 are in the order of desirability according to the Church; beginning with most desirable and ending with the least desirable. However, in order to avoid leading the respondent through a series of progressively more disagreeable functions, the items were randomly re-ordered. As a result, the functions are listed in the survey as follows: accountant's office, classrooms for a public kindergarten, as a private residence, as a brothel, as a mosque, as a senior center, religious re-use by another Christian denomination, as a shared exhibition space (extended use), as a café/bar, as a theater space for performing arts, as a supermarket chain store, and as disco/nightclub.

One of the challenges in determining the indicators was to make the indicator more specific than the category, yet still generally applicable. This means that the goal of the indicator is to encourage the participants to think of similar functions, yet not be overly specific and cause confounding biases. For example, the supermarket chain remains unidentified because strong opinions towards certain brands may result in more negative or positive feelings depending on the person. For functions that require more specific examples (extended use, social re-use, community re-use, retail re-use, cultural-arts re-use, and office re-use), the indicator selected strives to remain generally neutral while maintaining a basis in reality. Theoretically, the indicators are specific enough to convey a certain image of the concept, yet vague enough that the indicators chosen should not elicit confounding biases outside of the function itself.

The second part of the survey consists of four statements pertaining to particular issues that may affect a person's attitude toward the adaptive re-use process. The four concepts being measured are the partitioning of the interior, privatization of the church, alterations to the exterior, and demolition of the church building. All of these concepts are derived from the literature and church documents regarding the re-use of religious buildings which were described previously. The statements within this section are meant to remain straight-forward and address the concept directly. Multiple-indicator measures were considered to be too complex and would only serve to divert attention from the issue through the addition of extraneous factors. This section is very similar to the first in terms of design, including the use of five-point Likert scale statements.

The survey concludes by asking demographic questions related to age, gender, religious identity,

education, and length of residence. While most of the characteristics are relatively straightforward, measuring "religiousness" is a bit more difficult. Therefore, the multiple indicator measure developed by Plante et al. (2002) was used to operationalize this concept. This was chosen because the scale was designed to measure the belief of individuals whose degree of religiousness was completely unknown rather than assuming someone identified with a particular religion at all. The measure consists of five statements and uses a four-point Likert scale (strongly agree, agree, disagree, and strongly disagree) thereby forcing participants to have an attitude toward the statement rather than remain neutral. This was left unchanged because the work of Plante et al. (2002) used this setup in their factor analysis and correlation work when verifying that the five statements do in fact accurately measure religiousness. Adding a neutral element to the series of statements may have skewed results or made the measure invalid. The result of this series of five questions is an index ranging from 5 to 20; with 5 representing a low degree of religiousness and 20 representing a high degree of religiousness.

4.3 Independent Variables

The goal of the survey is to measure the opinion of respondents. However, as previously stated, these respondents will also differ along the lines of certain personal characteristics and the difference between these groupings is important. The independent variables of interest in relation to demographic characteristics include age, education, length of residence, religiousness, and gender. Although there has not been any prior study that has addressed this topic explicitly, the variables are founded in similar studies and based on the review of literature concerning the topics of adaptive re-use, place identity, neighborhood satisfaction, and neighborhood change.

4.3.1 Age

Based on the review of literature related to the neighborhood, the relationship between the urban environment and age is difficult to ascertain. In their literature review on neighborhood satisfaction, Kweon et al (2010) find that, in the majority of studies, age is positively related with satisfaction. However, Kweon et al (2010) also mention that there are exceptions and that describing the demographic profile of a 'satisfied' resident is difficult to generalize without linking it to a specific neighborhood. This varied relationship is further emphasized in literature regarding neighborhood change. For example, while using personal construct theory to examine local evaluations of neighborhood change, Aitken (1990) finds that older residents are more likely to be concerned about incremental changes in the neighborhood and speculative development. However, while studying local residents' perceptions in two gentrifying neighborhoods in Portland, Sullivan (2007) finds that older residents felt significantly more positive about the neighborhood changes than their younger counterparts. Finally, while examining attitudes toward large development projects, the Saint Consulting Group (2011) finds that participants aged 45-65 (the oldest group in the panel) were the most likely to oppose any type of proposed project. These results show that age is indeed a significant factor in how residents perceive their neighborhood, yet the relationship depends on the context and issue being discussed.

Of further significance in discussing the adaptive re-use of church buildings is age's relationship with religion in the Netherlands. The percentage of individuals identifying with a certain religion according to age for the year 2009 is shown in Table 4-2.

Table 4-2: Dutch Participation in Religion by Denomination and Age Group, 2009

Dutch Participation in Religion by Denomination and Age Group, 2009									
		12-17 yrs	18-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs and older
No denomination	%	46	55	52	49	45	39	30	24
Roman Catholic	%	23	19	20	25	29	32	36	36
Protestant Church of The Netherlands	%	8	4	5	4	6	8	10	10
Dutch Reformed	%	4	4	5	6	7	11	16	21
Calvinist	%	5	4	4	2	4	2	3	4
Other denominations	%	14	13	15	13	9	8	5	4

Source: Centraal Bureau voor de Statistiek, 2012

As can be seen from the table, there is a significant increase in individuals identifying with a certain religion beginning after 54 years of age. This is important to consider when measuring attitudes toward future functions of church buildings. If an individual is older, it is reasonable to expect that they may display a more conservative opinion than a younger participant due to their active identification with a religion or their association of religious institutes with Dutch culture. Even if the individual is not actively attending mass, the fact that the person is older may indicate a higher degree of conservatism in relation to how churches should be treated. Individuals above the age of 54 would have witnessed the era of pillarization, while individuals younger than 54 would have experienced the counter culture and consequences of the welfare state. Those who experienced pillarization may value the church as a more significant building due to the role it plays in their collective memory and idea of societal continuity. As such, the divide in religious identification and mixed results of neighborhood perceptions with regard to age provide significant grounds to test to see how age affects the opinions of respondents with regard to the adaptive re-use of churches.

4.3.2 Education

Again, the review of neighborhood satisfaction and neighborhood change literature provides a sound foundation for examining the level of an individual's education and their opinion on adaptive re-use of church buildings. Kweon et al (2010) show that in the majority of studies, higher levels of education are associated with higher levels of neighborhood satisfaction. This is not surprising as higher levels of education typically mean higher levels of income and better housing conditions/neighborhoods being discussed. Furthermore, in terms of perception, Kamphuis (2010) found that lower educated individuals were more likely to perceive their neighborhood has unattractive and unsafe. Describing changes to the neighborhood in the Notting Hill neighborhood in London, Martin (2005) interestingly notes how the idea of gentrification and loss of place-character is more lamented by those who were highly educated or from a higher socio-economic group than by those who are traditionally viewed as working class and displaced. However, in contrast to these studies showing the significance of education, Sullivan (2007) finds no difference in the perception of two gentrified neighborhoods between different levels of education. Therefore, the relationship between education, neighborhood perception, and neighborhood change is again shown to be significant, with results varying according to context and who is being asked.

Furthermore, the relationship between an individual's level of education and religious belief is also of importance when discussing the adaptive re-use of churches. Since the beginning of the

19th century the general consensus in sociological work is that as an individual's formal education increases, there is a subsequent decrease in religious belief, especially in regard to literal adherence to religious doctrines (Johnson, 1997). The reasoning behind the negative relationship between education and religious belief is explained by the 'decline in religion thesis' which states that, at the individual level, people become less religious as they become more educated due to the "destructive influence of science on religious faith" (Schwadel, 2011, p. 2).

Although simplified, this means that the predominant trend in formal education is to view the world as rational and the more that people adopt this belief, the more their participation and adherence to formal religion diminishes. Yet Schwadel (2011) offers an interesting study claiming the oversimplification of the 'decline in religion thesis' by positing that religion and education are not necessarily inversely related. In his analysis of data from the General Social Survey in the U.S regarding religion and education, he found that individuals who were highly educated were more likely to disregard beliefs and doctrines (such as biblical literalism and exclusivist religious views), especially when they directly conflict with theories commonly taught in higher education (i.e. evolution). However, Schwadel (2011) also finds that highly educated individuals were just as likely to hold common religious beliefs (i.e. belief in some sort of afterlife) that do not directly conflict with the viewpoints of educational institutions. Furthermore, his results indicate that those individuals with a high level of education are also more liberal in terms of orthodox obedience to religious institutions and the role of religion in public life.

Combined with education's relationship to neighborhood perception, such results are interesting when expanded to the reuse of church buildings. Schwadel's (2011) findings indicate that although a highly educated individual may not necessarily 'lose their religion', the decreased degree of literalism is different than those individuals with less formal education. The difference in attitude toward orthodoxy is significant when considering the ideas and complexity of adaptive re-use, as highly educated individuals may better understand the implicit alternatives to rejecting re-use and are more likely to form their own opinion against conventional ideas of the Church even if they are religious.

In addition, level of education was considered a significant factor to measure due to its relationship with religious identification as it pertains to the Dutch population. The percentage of individuals identifying as religious/non-religious according to level of education for the year 2009 is shown in Table 4-3.

Table 4-3: Dutch Participation in Religion by Denomination and Education Level, 2009

Dutch Participation in Religion by Denomination and Education Level, 2009						
		primary education	prevocational education (VMBO)	junior gen. sec. education (HAVO)	senior gen. sec. education (VWO)	vocational colleges,universities
No denomination	%	38	35	39	46	54
Roman Catholic	%	28	32	28	27	24
Protestant Church of The Netherlands	%	6	6	7	7	7
Dutch Reformed	%	10	14	11	8	5
Calvinist	%	3	4	3	4	3
Other denominations	%	16	9	11	9	8

Source: Centraal Bureau voor de Statistiek, 2012

As is shown, there is a significant difference between those with higher levels of education and those with lower levels of education in identifying with a certain religion. This could in turn have an impact on the attitude of the individual toward the appropriateness of certain future functions of church buildings. However, education and religion can also be intertwined, as almost 47% of highly educated people still identify with a religion and this identification may influence their attitude toward functional re-appropriation and modifications to church buildings. Considering these various bodies of literature, level of education as it relates to re-use of religious buildings is included as a potentially influential factor in the opinion of dependent stakeholders.

4.3.3 Length of Residence

Length of residence refers to how long the participant has lived at their current address. Although the survey is not linked to a specific church, the fact that it was physically distributed at three different sites makes it quite localized. With regard to length of residence, Hur & Morrow-Jones (2008) find that although there are many contradictory results in neighborhood satisfaction research, length of residence was one of the factors they found to have salience as a predictor of satisfaction. Yet, in relation to neighborhood change, Sullivan (2007) finds that when a neighborhood underwent gentrification, length of residence did not prove a significant predictor, as regardless of the length of residence the perceptions of the changes were positive. Yet, the idea of change and length of residence can also be linked to home-ownership, as those that lived in neighborhoods longer and owned property were more wary and opposed to change than their counterparts (Saint Consulting Group, 2011).

Furthermore, while conducting a study regarding the perception of residential environment quality and neighborhood attachment in Rome, Bonaiuto et al (1999) found that length of residence was "always a positive direct predictor of neighborhood attachment" meaning that the longer the resident lived in a certain neighborhood, the higher their degree of place attachment (p. 344). Building on the earlier literature on place attachment, the amount of time an individual has lived in a certain neighborhood may indeed create stronger feelings toward what happens in their community and the individual may better relate to how changes in building functions and structures can change a neighborhood. The idea of measuring length of residence is especially significant with regard to how an individual may view the status of the church structure in the overall urban landscape. By this logic, the longer a resident has lived in a given area or neighborhood, the more likely they are to form an attachment with significant structures such as the church and any change to the structure may be perceived as a threat to community stability.

4.3.4 Religiousness

Religiousness refers to the degree of religious orthodoxy an individual exhibits. This is calculated using the multiple indicator measure called the "Santa Clara Strength of Religious Faith Questionnaire." The five items together provide a valid measurement of an individual's 'religiosity' via an index (Plante et al., 2002). The relationship between religiousness and the favorable attitude toward adaptive re-use of a church is building is much more straightforward and can be explained through the adherence to religious doctrine. If an individual is deemed highly religious, they are more likely to hold certain opinions in common with Church viewpoints. As has been shown, the Church views certain functions as more favorable than others and has made their opinion regarding partitioning, privatization, alterations to the exterior of church buildings, and demolition well known. It is reasonable to expect that the more religious

an individual is, the more likely they will be to hold opinions closer to those of the Church which favors a conservative view of adaptive re-use. Furthermore, for highly religious people, the church building represents their faith, values, and traditions, thereby fostering a strong sense of place and playing an integral part in their identity. Therefore, it can be expected that re-using the church building will be met with more resistance by religious individuals than with secular individuals due to this increased significance.

4.3.5 Gender

Gender is self-explanatory and seeks to test the difference between men and women with regard to their opinion of the issues involved in the adaptive re-use process of church buildings. In reviewing the literature on neighborhood satisfaction, Kweon et al (2010) find that in most studies males are more likely than females to be satisfied with their neighborhood. Furthermore, in studying differences in neighborhood perception between socio-economic groups, Kamphuis et al (2010) find that women are significantly more likely than men to perceive their environment as disordered and unsafe when based on objective environmental elements. These studies suggest that women are generally more sensitive to negative elements in the neighborhood than their male counterparts. Furthermore, the results of Saint Consulting Group's (2011) longitudinal survey regarding proposed large developments support this conclusion in finding that women were more opposed to any proposed development than men. However, in his study of gentrified neighborhoods in Portland, Sullivan (2007) finds gender insignificant in influencing opinions of changes in the neighborhoods.

Further complicating matters in relation to gender and adaptive re-use of churches is the association between gender and religiousness. Past research has shown that women are definitively more religious than men (Stark, 2002). This is not limited to the broader sense or even contingent on culture, as women have consistently shown to be more likely in expressing interest in religion, have stronger religious commitments, and attend church more frequently than men (see Miller & Hoffman, 1995 for a condensed review of this literature). The exact reason women are consistently more religious than men remains unresolved. However, three main explanations have been posited as to why this might be the case. The first proposed explanation is centered on socialization processes and holds that females are taught to be "more passive, obedient, and nurturing" which are traits frequently associated with higher levels of religiosity (Miller & Hoffman, 1995, p. 63). The second explanation focuses on historic gender roles and references the idea that women generally participate less in the labor force. This means women would have more time to participate in church activities and view the church as a source of personal identity formation and commitment (Miller & Hoffman, 1995). However, this claim has been refuted through evidence showing that career oriented women are just as religious as so called 'housewives' (Stark, 2002).

Miller & Hoffman (1995) propose a third explanation for the difference in religiosity between genders by positioning the idea of religious belief in the framework of risk aversion. They base their theory on "Pascal's wager", which equates religious behavior to being risk averse (if you believe, even if you're wrong, there is nothing to lose) and non-religious behavior as being risk taking (if you do not believe, there is a risk that a God does exist and you will be punished). In their analysis of the 'Monitoring the Future' data set collected by the University of Michigan's Research Center, they find that "risk preference strongly attenuates gender differences in

religiosity" (p. 63). This means that since women are typically more risk averse than men (due to biological differences and gendered socialization processes), they are more likely to participate in religious activities and value aspects of religious/spiritual life more than men.

Such a conclusion is important in analyzing the adaptive re-use of churches and differences in opinion according to gender. Extending the framework of risk analysis to the urban environment, the idea of change can be perceived as 'risky' as there is inherent uncertainty found in functions and landscapes that are farther from those with which one is accustomed. Therefore, the way each gender perceives risk may also preface their initial reaction to and how they subsequently feel about change. This is generally supported by literature where gender is cited as significant, with women often being more hesitant or resistant to change than men. Therefore, this relationship between gender and risk leads to the logical expectation that men will be more likely than women to support the adaptive re-use process, especially in the case of churches.

4.4 Sampling Procedure

In choosing a sample for the survey non-probability methods were used. The reason for non-probability sampling was due to the desire of reaching certain segments of the population which are not verifiable if surveys were distributed in a truly randomized method (i.e. mail surveys or web based). Furthermore, the issue being studied is quite particular and is trying to reach those who are familiar with converted church buildings. Therefore, in order to mitigate the effects of non-response bias and to definitively reach dependent stakeholders, three church buildings were chosen as sample sites which exemplify cases of adaptive re-use to varying degrees. The sample sites chosen were the Café Olivier (formerly the Maria Minor Church) in Utrecht, the Oude Kerk in Amsterdam, and the 'Church of Utrecht' in Utrecht. Although the sample sites were not chosen at random, the purposive sampling method is effective when considering the limitations concerning access to church communities and representative examples of adaptive re-use. Additionally, even though the sites chosen are not random, the actual participants who were surveyed are random because who precisely was present was not predetermined by the researcher. Therefore, the sampling method is a variation of stratified random sampling, as each site was determined, but each participant at the location was random.

In addressing the adaptive re-use of churches, there are admitted innate biases when using a café and two churches as sampling sites. This is acknowledged, but also done with purpose. Especially in the Randstad area of the Netherlands, it was necessary to include at least one active church in order to ensure that the sample would include a decent amount of traditionally religious individuals. In terms of age, gender, education, and length of residence, the sample sites chosen pose no barriers or explicit biases. Moreover, the reason for choosing the sample sites was to get higher response rates with more thoughtful opinions, meaning respondents understood why they were being asked and had exposure to the issue. All of the sample sites are churches or former churches in varying degrees of adaptive re-use: Café Olivier (Maria Minor) in Utrecht is an example of a completed café project; the Oude Kerk in Amsterdam is an example of extended use as it is still used for religious services, but also for art exhibitions, concerts, and private celebrations; and the Church of Utrecht in Utrecht is a Roman Catholic church still holding mass at least once a day. All of the locations selected are registered national monuments, are required to maintain certain features and characteristics of the respective buildings, and are located in a central urban location.

4.4.1 Sample Site Descriptions

Café Olivier

Café Olivier is located in the former Oud Katholieke Kerk van St. Maria-Minor in the center of Utrecht in the Netherlands. St. Maria Minor began as a fortified house and came into its religious function in the year 1640. After the Protestant Reformation in the 16th and 17th century in the Netherlands, it was forbidden for Catholics to practice their religion. Thus, the 16th-18th centuries witnessed the rise of various "schuilkerken" (or "hidden churches") built throughout the Netherlands. The term refers to how unofficial masses were held in private homes of individuals, which with time, were converted to churches with seating, an altar, and various adornments (Olivier, 2007). The St. Maria Minor church was such a schuilkerk and only in 1853 were major renovations undertaken once Catholics could practice openly. In 1967 the building was declared a monument, but was already falling into disuse with most parishioners preferring to attend the Sint-Gertrudis Cathedral. In 1989, due to the quality of acoustics, the St. Maria Minor was purchased to record classical music. In 2004, the building was sold to a real estate development company and in 2007 the Café Olivier opened. The conversion of the church took place under the guidance of an architectural historian who successfully argued for the preservation of atmospheric characteristics including the elevated floors at the sanctuary, the 19th century pulpit, 18th century statues of Saints Salvator, Willibrord, and Boniface, an organ, and the diagonal rib-vault ceiling.

Figure 4-1: St. Maria Minor Church now Café Olivier, Utrecht

Café Olivier was chosen as a sample site because of its representative nature of a completed adaptive re-use project. By maintaining many of the original features, the café manages to have a 'church' feeling. Although the building may have a religious appearance, the café specializes in various beers and the addition of tables, a bar, bathrooms, kitchens, and storage areas all serve to create a special synthesis of religious dress with contemporary function. As the café is also a restaurant, all ages of visitors are to be found throughout the day. Therefore, by distributing the survey within Café Olivier, the participants immediately understand what was meant by adaptive re-use.

Oude Kerk

The second sample site chosen was the Oude Kerk in Amsterdam. Located in the center of the city, the Oude Kerk is the oldest church in Amsterdam and was consecrated in 1308. Since its construction, the church has been looted and defaced many times, most notably in the 'Beeldenstorm' (iconoclastic fury) of 1566 (Oudekerkgemeente, 2012). From the original church, only art works on the ceiling remain. The church was a Roman Catholic Church until the Protestant Reformation swept through Amsterdam in 1578 leaving the building quite bare. After a long history of additional construction, material alterations, and a panic caused by its near collapse in 1951, the building has now been thoroughly restored. Today, the Oude Kerk stands as an example of a Dutch brick Gothic church. The exterior reflects its long history and can be identified by the large stained-glass windows, 70 meter glockenspiel tower, and the ornate exterior traceries. The interior is equally historic, consisting of a large wooden barrel vault ceiling, a floor made entirely of gravestones, and a baroque organ dating from 1724. Such elements add to the distinctive feeling and magnificence of the church.

Figure 4-2: The Oude Kerk as an exhibition space, Amsterdam

The Oude Kerk was chosen as a sampling site because of its function with regard to adaptive re-use. The church is an excellent example of extended-use. The Protestant group De Oudekerkgeemente still actively holds two religious services in the Oude Kerk every Sunday (Oudekerkgemeente, 2012). However, the organization is not the sole user of the space. In co-ordination with the managing organization of the church, Stichting De Oude Kerk, the Oude Kerk also functions as an exhibition space, event hall, and museum for an array of activities throughout the week. The Protestant institution no longer has complete ownership of the building, but the group retains the right to worship there. The Oude Kerk also plays host to major events such as the World Press Photo Exhibition, Art in the Red-Light District, the yearly Museum n8, the Internationaal Sweelinck Festival, and various private functions such as weddings, receptions, and dinner events. Playfully known as "Amsterdam's Living Room", the space is exemplary of extended use and draws people from all different backgrounds depending on the event being held. The unique combination of uses, events, and people make the Oude Kerk an important, representative sample site.

Church of Utrecht

The third and final sample site chosen was that of a Roman Catholic Church in the city of Utrecht. Due to concerns of the parish, the name of the church has been withheld, and will

simply be referred to as the 'Church of Utrecht'. A Roman Catholic Church was chosen as a sampling site in order to ensure the participation of actively religious dependent stakeholders. The church is quite traditional and has not been subject to any type of re-use. It is well established in the community of Utrecht and has been open for over 160 years. In addition, the church is a listed national monument and therefore serves as an adequate comparative site to Café Olivier and the Oude Kerk. Although the lack of a traditional Protestant church is acknowledged as a shortcoming, a Roman Catholic church was chosen due to their more conservative attitude toward adaptive re-use (especially regarding mosques and demolition) and because Roman Catholicism is the predominant religion in the Netherlands (27% of the Dutch population) (CBS, 2012). By distributing the survey at the Church of Utrecht, even the most conservative viewpoint was thereby adequately represented in the sample.

4.5 Describing the Data

The data was collected at the three different sample sites described above. Each survey was distributed by the researcher directly to participants and was immediately returned upon completion. By distributing the survey in person, it was ensured that the participant was in fact a user of the space and also resulted in a very low rate of partially completed surveys. Each of the sample sites was visited on two occasions; once on a weekday and once on a weekend. In total, there were 124 respondents. The distribution is shown in Table 4-5.

Table 4-5: Distribution of Responses by Location

Location of survey

Location	Frequency	Percent
Oude kerk	46	37.1
Church of Utrecht	42	33.9
Café Olivier	36	29.0
Total	124	100.0

The sample is quite evenly distributed between the three sites with 37.1% coming from the Oude Kerk, 33.9% coming from the Church of Utrecht, and 29% coming from Café Olivier. The sample is relatively small (N=124), but this should not be problematic due to the amount of independent variables being tested (5) and the method of analysis (regression). According to his review of sample size literature, Field (2009, p. 225) explains that although the sample size depends on the size of the effect being measured, 10-15 cases of data per predictor variable in a regression model will suffice. Using this benchmark, as the actual population of dependent stakeholders is unknown, the minimum sample required to test five predictor variables is between 50-75 cases total. Since N=124, there should be little concern related to the effect of sample size in the analysis.

Independent Variable Definitions

The independent variables included in the regression model are: age, religiousness, length of residence, level of education, and gender. Age was included in the regression model as a raw value without any re-coding. As described, religiousness is calculated based on an index with a minimum value of 5 and a maximum of 20. In the regression model this value was entered as an

index without any recoding. Length of residence (measured in years at the current address) was also left un-coded and entered directly into the regression model. Level of education is a categorical variable referring to the highest level of education completed by the respondent and therefore was coded as high, medium, and low. A high level of education indicates a university level of education (WO or HBO diplomas or above); a medium level of education indicates vocational training (MBO); and low education indicates a high school diploma or below (VMBO, HAVO, VWO or below). Finally, gender is a dichotomous categorical variable and was thus recoded with "0" if the respondent was a woman and "1" if the respondent was a man.

It should be noted that in order to construct meaningful comparative tables outside of the regression models, the variables age, religiousness, and length of residence were re-organized into groupings. Age was organized into seven categories reflecting the division used by the Central Bureau of Statistics in the Netherlands (18-24 years; 25-34 years; 35-44 years; 45-54 years; 55-64 years; 65-74 years; 75+ years). Religiousness was divided based on the indicative scale, with 'low' referring to responses on the index between 5-9; 'intermediate' referring to responses on the index ranging from 10-14; and 'high' referring to responses ranging from 15-20. Length of residence did not have an established division and thus was re-coded into meaningful categories in order to reflect divisions in the data (0-5 years; 6-10 years; 11-15 years; 16-20 years; 21-25 years; 26-30 years; and 31+ years). These divisions were not used in regression analysis, but rather to offer a sense of comparison of sample composition.

Descriptive Statistics

A summary of the descriptive statistics of the sample are shown in Table 4-6.

Table 4-6: Descriptive Statistics of the Sample

Independent Variables	N	Minimum	Maximum	Mean
Length of Residence	124	.50	73.00	10.57
Age of Respondent	124	18.00	95.00	38.80
gender	124	0	1	0.52
level of education	124	1.00	3.00	2.60
How religious an individual is	124	5.00	20.00	11.28

Table 4-6 displays the minimum, maximum, and mean of each predictor variable for the entire sample according to the independent variables. The range for length of residence is quite high with a minimum of half a year and a maximum of 73 years. The mean indicates that the average length of time respondents have lived at the same address is 10.57 years. Looking at the frequency distribution for length of residence, it is clear that most of the sample has lived at their current address for 10 years or less (64.5% of the sample). In terms of the distribution of ages, it is again quite spread, with the minimum being 18 years old and the maximum being 95 years old. The average age of the sample is 38.8 years old. In terms of frequencies, people younger than 35 years old compose just about half of the entire sample (50.8%), while only 7 respondents were over the age of 65. In terms of gender, the distribution was quite equal, with a mean of .52 indicating that just over half of the sample was male (52.4% male; 47.6% female). In terms of education, the sample is skewed toward being 'highly educated' with a mean of 2.6. In terms of

distribution, 68.5% of the sample was highly educated, 23.4% had a medium level of education, and just 8.1% had a low level of education. Finally, in terms of religiousness, the sample is slightly skewed toward the ‘low’ end of the index with a mean of 11.28 (12.5 being the median). In terms of frequencies, 40.3% of the sample identified as having a low religiousness (5-9 on the index), 32.3% displayed an intermediate religiousness (10-14 on the index), and 27.4% identified as highly religious (15-20 on the index). [See B for full frequency distributions listed]

V.) Analysis

5.1 Favorability of Functions

In order to analyze the responses of dependent stakeholders with regard to the proposed change in function, the raw data has been organized and presented in Table 5-1.

Table 5-1: Tabulated results of the functional statements by percentage

Function	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Accountants Office	6.45%	13.71%	17.74%	27.42%	34.68%
Classroom for Public Kindergarten	15.32%	26.61%	17.74%	23.39%	16.94%
Private Residence	8.06%	24.19%	18.55%	23.39%	25.81%
Brothel	2.42%	1.61%	8.06%	18.55%	69.35%
Mosque	4.84%	20.97%	15.32%	21.77%	37.10%
Senior Center	17.74%	41.94%	20.97%	12.90%	6.45%
Another Christian Denomination	29.84%	46.77%	13.71%	4.84%	4.84%
Shared Exhibition Space	41.13%	37.90%	12.90%	4.03%	4.03%
Café/Bar	24.19%	22.58%	12.90%	12.10%	28.23%
Theatre Space	30.65%	32.26%	14.52%	11.29%	11.29%
Supermarket	5.65%	2.42%	4.84%	26.61%	60.48%
Disco/Nightclub	12.90%	16.13%	12.90%	12.10%	45.97%

The data shown in Table 5-1 are the calculated percentages based on the raw totals compiled from the survey per category. Looking at Table 5-2, this data has been further condensed by combining the categories “Strongly Agree” and “Agree” into one “Agree” category and the “Disagree” and “Strongly Disagree” categories into a single “Disagree” category. The functions were also rearranged by order of agreement. This combination of categories was done in order to simplify the interpretation of respondents’ opinions. In this way, the functions that were regarded overall as most agreeable and least agreeable can be more easily determined.

Table 5-2: Condensed survey results per function (in order of most agreed)

Function	Agree	Neutral	Disagree
Shared Exhibition Space	79.03%	12.90%	8.06%
Another Christian Denomination	76.61%	13.71%	9.68%
Theatre Space	62.90%	14.52%	22.58%
Senior Center	59.68%	20.97%	19.35%
Café/Bar	46.77%	12.90%	40.32%
Classroom for Public Kindergarten	41.94%	17.74%	40.32%
Private Residence	32.26%	18.55%	49.19%
Disco/Nightclub	29.03%	12.90%	58.06%
Mosque	25.81%	15.32%	58.87%
Accountants Office	20.16%	17.74%	62.10%

Supermarket	8.06%	4.84%	87.10%
Brothel	4.03%	8.06%	87.90%

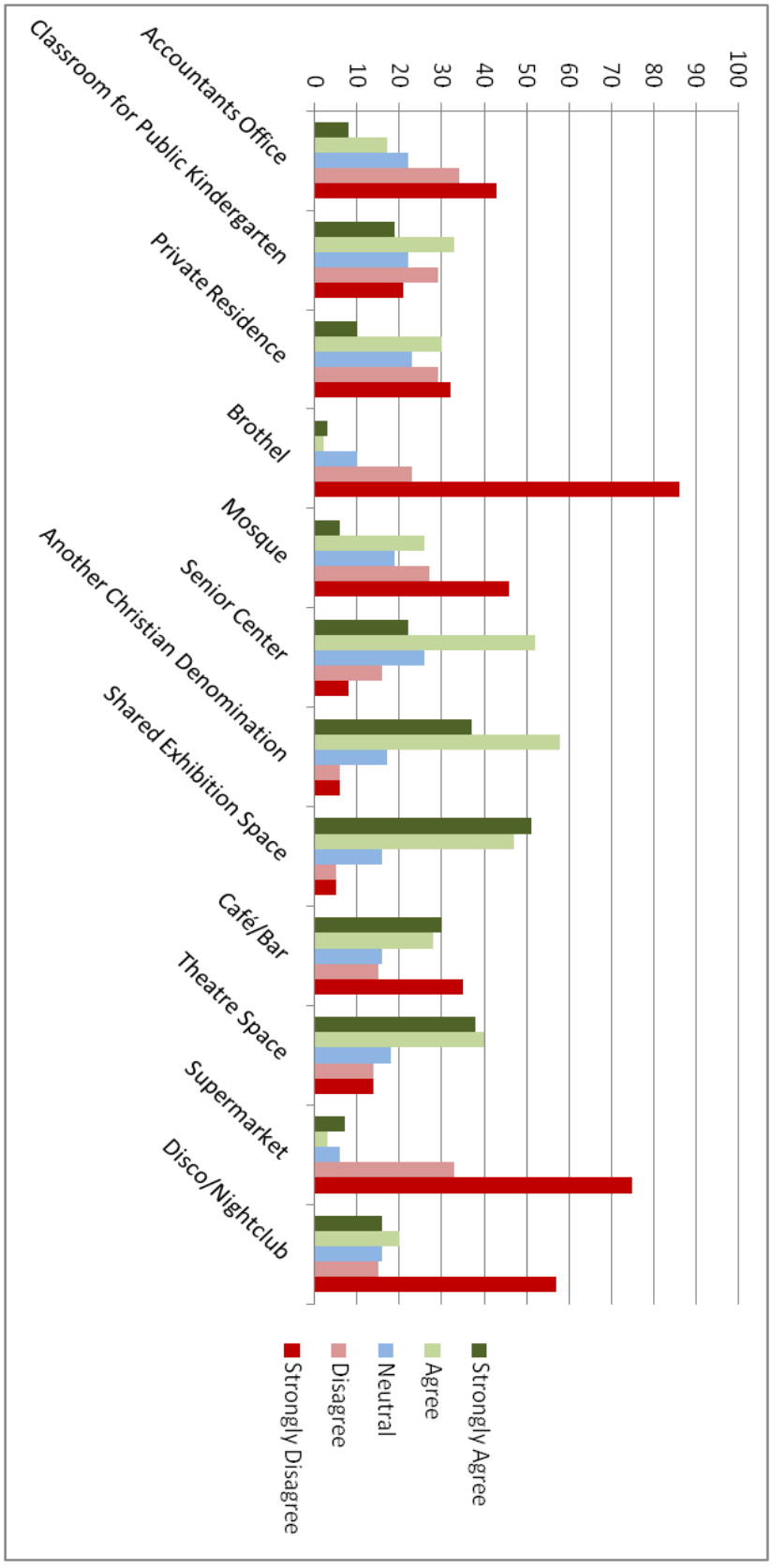
Figure 5-1 offers a more visual representation of the data by displaying the raw totals graphed per function. Looking at this graph it becomes clear that the use of extreme response categories was more frequent when respondents wanted to indicate disagreement (shown by the large red bars; especially Brothel, Supermarket, and Disco/Nightclub). When looking at the columns indicating some sort of agreement, they are relatively well divided between strongly agree and agree per function. Even the function 're-use by another Christian denomination' did not evoke a substantial difference between the agreement categories. Such skew in the difference between the extremes of the categories is another reason why the data have been aggregated into singular 'Agree' and 'Disagree' groupings in order to properly rank the functions. This re-ranking gives a good sense for where the functions stand in relation to each other. However, the magnitude of the response should not be ignored, especially in the cases of disagreement. For example, in the cases of Mosque, Private Residence, and Accountants Office, the distribution of responses between 'Disagree' and 'Strongly Disagree' is more balanced than in the cases of Brothel, Supermarket, and Disco/Nightclub. This is important because it indicates that the latter three functions are, when opposed, more intensely opposed than the former.

From Table 5-2, it is clear that the most agreeable function is that of the shared exhibition space with the religious group still being allowed to practice (extended use). Accordingly, the column indicating the most *disagreed* upon functions displays an almost perfect inverse relationship with the *agreed* upon functions (the only two functions in violation of this relationship are Theatre Space and Senior Center). Quite unsurprisingly, the most disagreed upon future function for a redundant church was that of a brothel. Just as interesting as the columns of agreement and disagreement is that of the neutral response. The neutral category serves as a gauge in indicating which functions were most polarizing in the survey, as people are less likely to mark neutral if they feel very strongly about a certain function. Following the logic of the neutral category, the item people felt most strongly about (either positive or negative) was that of the Supermarket where only 4.84% of respondents were neutral. Conversely, people were most neutral toward the church being re-used as a Senior Center, meaning people were the most indifferent regarding this function.

Summary

The tabulated results of the survey shown in Table 5-2 reveal that 're-use as a shared exhibition space' with the religious group being allowed to practice, 're-use by another Christian denomination', 'theatre space', and 'senior center' are the most favorable functions (more than 50% of people agreeing). The functions seen as acceptable (a total percentage above 50% of those who *did not disagree* by combining Agree and Neutral) are a café/bar, classrooms for public kindergarten, and as a private residence. Functions deemed unacceptable by dependent stakeholders (more than 50% of the participants disagreeing) are the disco/nightclub, mosque, accountant's office, supermarket, and brothel.

Figure 5-1: Chart of responses per function (raw scores)



5.2 Influence of Personal Characteristics on Opinion toward Function

Statistical Techniques

In order to determine how different personal characteristics affected respondents' opinions toward proposed functions, a more in-depth statistical analysis was required. The chosen methods of analysis to answer this question were multiple linear regression and binary logistic regression. Regression analysis was chosen because it provides a way to test how significant the independent variables are in predicting the outcome variable 'agreement of future function'. Both linear and logistic regressions were used because of the assumptions associated with linear regression. These assumptions were met in nine of the twelve individual models and for all four of the aggregate models. However, for three of the most polarizing individual models ('re-use by another Christian denomination', 're-use as a shared exhibition space' and 're-use as a brothel'), the assumption of linearity was violated due to the skew in the results. Therefore, the response data was transformed into binary variables for these three items.

In terms of the binary transformations of the dependent variables, the response categories for brothel were re-coded as "Those who did not disagree" representing the former response categories Strongly Agree, Agree, and Neutral, and "Disagree" representing the categories of Disagree and Strongly Disagree. The response categories for 're-use by another Christian denomination' and 'shared exhibition space' were also re-coded into two categories: "Did not Agree" and "Agreed", with the former representing the response categories Strongly Disagree, Disagree, and Neutral and the latter representing the response categories Agree and Strongly Agree. The alternate re-coding reflects the skewed nature of each response category as the 'brothel' function had many who disagreed, while the functions 're-use by another Christian denomination' and 'shared exhibition space' had many who agreed. To ensure validity of the logistic models, the interaction terms of age, religiousness, and length of residence were tested in each of the four logistic models and found to be not significant, indicating that the assumption of linearity of the logit was met.

In terms of entry method, each multiple linear regression uses the backward method. The backward method was chosen because there is no theoretical basis on which to order the predictor variables in the model. The process engaged is of a more exploratory nature than testing previous theory, as no prior theoretical literature on demographic characteristics and attitude toward assumed functions of redundant churches exists. It was therefore decided that the backward method was best because the model is then constantly reassessed to reveal the most significant predictors. Furthermore, the backward method is less susceptible to suppressor effects than the forward method (Field, 2009). However, for the logistic regressions, the enter method was chosen due to the fact that the data being analyzed is a result of binary transformations and the backward method could yield misleading significances of predictor variables based on the aggregations of the response categories.

The determination of significant personal characteristics is carried out in two parts. The first part involves an analysis of each function individually, treating each item as a singular measure of opinion. The second part involves grouping the opinions toward the singular items into aggregated variables which represent multiple indicator measures of opinion. The variables

referred to are based on averages that were calculated by grouping the responses of participants together according to four meaningful divisions: 'AvgGood', 'AvgMed', 'AvgBad', and 'AvgScore'. The composition of the variables is shown in Table 5-3.

Table 5-3: Composition of the aggregated scales

Variable	Items Included	Cronbach's Alpha
AvgGood	*1.) Classrooms for public kindergarten* *2.) Senior Center* *3.)Shared Exhibition Space, Extended Use* *4.) by another Christian denomination*	*.745*
AvgMedium	*1.) Accountants Office* *2.) Café/bar* *3.) Theatre Space* *4.) Supermarket*	*.795*
AvgBad	*1.) Private Residence* *2.) Brothel* *3.) Mosque* *4.) Nightclub/Disco*	*.713*
AvgScore	*All Twelve Functions*	*.882*

The variables are composed based on the hierarchy of favorability according to the Church. For example, 'AvgGood' is the result of averaging the responses of each participant for functions which the Church views as most favorable: 'Classrooms for public kindergarten', 'Senior Center', 'Shared Exhibition Space/Extended Use', and 'by another Christian Denomination'. If participant X responded "Strongly Agree" to all four functions in 'AvgGood', then his/her score for the AvgGood variable is '5' ((5 + 5 + 5 + 5) /4 = 5). This process is the same for the variables AvgMedium and AvgBad, with the former corresponding to more neutral functions and the latter to the most abject functions according to the Church. Finally, the 'AvgScore' variable is the overall average of participants' responses to all 12 functions. This is an important variable because it treats the survey as a multiple indicator measure for overall agreement of the adaptive re-use of church buildings with regard to function. Therefore, it offers a more robust perspective on attitude than the individual functions.

5.2.1 Results According to Individual Function Models

The results of the multiple linear regressions and binary logistic regressions per function have been summarized and presented in Table 5-4. For each function, the independent variables entered into the regression equation are as follows: age, religiousness, length of residence, gender, and level of education. For the multiple linear regressions, the chart displays: which variables are statistically significant per function; the standardized Beta indicating the degree to which the independent variable influenced the dependent variable; the B value showing the coefficient for the variable in the regression equation; and the adjusted R-squared to show the proportion of variance explained by the independent variables. For the logistic regressions, the chart shows: the variables which are significant in the model; the B value indicating the

coefficient for the variable in the regression equation; the odds ratio [Exp (B)]; and the Nagelkerke's and Cox & Snell pseudo R-squares.

Before discussing the significance of the explanatory variables present in the table, it is worth mentioning those models which are not significant. Looking at the final row in the logistic regression analysis table, the model for item "Shared Exhibition Space" is not statistically significant. This means that none of the characteristics have a significant influence on the opinion of respondents toward the re-use of a church building as a shared exhibition space (extended use). This result is mainly due to the amount of agreement with the statement (79.03% of respondents). With the majority of people agreeing with the statement, there is little variation left to explain based on differences between demographic groups. However, this result is not problematic, as the idea that the current religious group is allowed to remain in the church is a notion that is widely supported and does not cause much controversy. It is also important to highlight that the independent variable 'gender' appears nowhere in the table. This means that there is no significant difference between the opinions of men and women in terms of the favoring certain uses for redundant churches.

Religiousness

The most significant characteristic influencing the opinion of respondents toward church re-use is religiousness. Religiousness appears as significant in 9 of 12 models. Furthermore, in 6 out of the 7 linear models where it appears as a significant factor, it also has the largest standardized beta by magnitude, indicating that the degree of religiousness has the greatest impact on opinion. Furthermore, in the logistic regressions, religiousness appears as the only significant variable. This is important because the functions requiring logistic regression analysis were the most polarized, indicating the presence of strong feelings (either positive or negative).

Also of interest is the *type* of relationship religiousness exhibits with proposed function. With the exceptions of 're-use by another Christian denomination' and 'as a shared exhibition space', religiousness displays a *negative* association with all instances of church conversions. This is evidenced through the B value. Where these values are negative, it indicates that the more religious the person is, the further from "Strongly Agree" their response will be. For the logistic regressions, this information is found by looking at the odds ratio (Exp [B]). The odds ratio for 're-use by another Christian denomination' is greater than one, meaning that for each unit increase in religiousness, the more likely a respondent is to agree with another Christian denomination using a redundant church. For the statement regarding the brothel, the logistic regression is analyzing 'those who did not disagree'. Thus, as religiousness increases, the odds of an individual being in the group 'those who did not disagree' decreases. More simplistically, as religiousness increases, the likelihood that the person is in favor of a redundant church being used as a brothel decreases. Finally, it is also worth noting that religiousness is a significant variable in each function whose statistical model explains more than 20% of the variance in opinion. Looking at the three models with the highest R-Squared values [Theatre Space (.276), Café/Bar (.36), and Disco/Nightclub (.421)] religiousness is the most significant variable as indicated by the magnitude of the standardized Beta value. Finally, with the exception of 're-use by another Christian denomination' (which has a positive association), the models where religiousness is significant are also functions that the Church deems less favorable or abject

(accountants office, private residence, mosque, café/bar, theatre, supermarket, nightclub/disco, and brothel).

Education

After religiousness, the variable that appears most frequently as significant is that of education. Level of education was coded as two dummy variables, Medium Education and High Education, with Low Education acting as a reference category. Although most people were highly educated in the sample (68.5%), it still proved significant in 5 of the 12 models. High Education is a significant variable in three models: 'Mosque', 'Café/Bar', and 'Disco/Nightclub'. For each of these models, high education has the smallest standardized Beta, meaning that it contributes the least in explaining the variation in opinion. Those who are highly educated typically find the functions of 'Café/Bar' and 'Disco/Nightclub' *less favorable* than those who have a lower level of education. Interestingly enough, those who have a higher level of education are typically more in favor of a redundant church building becoming a mosque than those who have a lower education. However, this result should be interpreted with caution as the total amount of variation in attitude explained in the case of 'Mosque' is just 10.9%.

In two models, the dummy variable Medium Education is significant. In both instances (Classrooms for a Public Kindergarten and Senior Center) people with a medium level of education are more likely to disagree with the function in question than those with a high level of education. Just as was the case with higher education, the medium level of education dummy has the smallest standardized Beta in all the models where it is significant. This indicates that it explains a relatively small amount of variation in opinion, as the total amount of variation explained by the models 'Classrooms for Public Kindergarten' and 'Senior Center' is just 14.7% and 9.3% respectively. Therefore, although education appears as statistically significant in five models, the statistical power in explaining the variation in respondents' opinions is actually quite low. Thus, the actual significance of education in influencing opinion toward church re-use is quite small.

Table 5-4: Summary of regression results per function (Full outputs in APPENDIX C)

Functions							
Linear Regressions							
Model	**Variables**	**Significance Level**	**B**	**Std. Error**	**Standardized Beta**	**Adjusted R-Square**	
Accountants Office	*Constant*	.000	3.169	0.253		0.116	
	Length of Residence	.007	-0.024	0.009	-.236		
	Religiousness	.008	-0.055	0.020	-.234		
Classroom for Public Kindergarten	*Constant*	.000	4.706	0.507		0.147	
	Length of Residence	.000	-0.038	0.010	-.354		
	Education Middle	.019	-1.136	0.476	-.358		
Private Residence	*Constant*	.000	3.764	0.259		0.152	
	Religiousness	.000	-0.079	0.021	-.322		
	Length of Residence	.020	-0.021	0.009	-.198		
Mosque	*Constant*	.000	2.773	0.331		0.109	
	Religousness	.002	-0.067	0.021	-.276		
	High Education	.048	0.483	0.241	.173		
Senior Center	*Constant*	.000	4.985	0.433		0.093	
	Age	.001	-0.020	0.006	-.284		
	Education Middle	.011	-1.027	0.395	-.389		
Café/Bar	*Constant*	.000	6.095	0.400		0.360	
	Religiousness	.000	-0.144	0.022	-.493		
	Age	.001	-0.026	0.007	-.263		
	High Education	.015	-0.611	0.248	-.182		
Theatre Space	*Constant*	.000	5.136	0.243		0.276	
	Religiousness	.000	-0.122	0.019	-.490		
Supermarket	*Constant*	.000	2.697	0.287		0.096	
	Religiousness	.008	-0.047	0.018	-.236		
	Age	.034	-0.013	0.006	-.189		
Disco/Nightclub	*Constant*	.000	5.534	0.365		0.421	
	Religiousness	.000	-0.141	0.020	-.503		
	Age	.000	-0.032	0.007	-.328		
	High Education	.033	-0.488	0.227	-.151		
Logistic Regressions							
Model	**Variables**	**Significance Level**	**B**	**Std. Error**	**Exp(B)**	**Nagelkerke's R-Square**	**Cox & Snell R-Square**
by Another Christian Denomination	Religiousness	0.002	0.147	0.048	1.159	0.142	0.094
Brothel	Religiousness	0.023	-0.169	0.074	0.844	0.189	0.099
Shared Exhibition Space	*Model Not Significant (.170)*						

Age

The third most frequently occurring variable in the analysis characteristics and opinion is that of age. Age significantly influenced opinions of respondents toward the functions of Senior Center, Café/Bar, Supermarket, and Disco/Nightclub. In terms of impact in explaining variation in the dependent variable, age is either secondary (Café/Bar, Disco/Nightclub) or least influential (Senior Center, Supermarket) according to the standardized Beta value. In each case where age does prove to be significant, the association with agreement is negative. This means that as the age of the respondent increases, the less likely they are to find the function as favorable in terms of church re-use. Even though age is not significant in as many cases as education, the models where age is significant typically explain a larger proportion of the variation in opinion, especially in the models Café/Bar and Disco/Nightclub.

Length of Residence

The final significant characteristic in the individual functional models is length of residence. Length of residence appears as significant in 3 of the 12 models. Of these three, it is the most significant predictor variable in only one of the models (Accountants Office). Length of residence also proves to be significant in the 'Classroom for a Public Kindergarten' and 'Private Residence' models. In each of these models length of residence displays a negative association with agreement toward the function as suitable for a former church. This means that the longer the respondent lived at his or her address, the less favorable they view these functions for former church buildings. However, length of residence does not explain much of the variance as the R-squared values for Accountants Office, Classroom for Public Kindergarten, and Private Residence are .116, .147, and .152 respectively. Given that length of residence is only present in 3 of the 12 models and the amount of total variance explained by these models is so small, it is not a strong predictor of opinion toward functional re-use.

5.2.2 Results According to Aggregated Function Models

Looking at the association between the characteristics and individual functions is helpful in determining the significance of the characteristics on a per function basis, but it is also necessary to consider these characteristics in a more complete sense by grouping them. This is appropriate because the individual functions are also components of a larger hierarchy determined by the Church. Therefore, by examining the functions as a multiple indicator measure, the characteristics most significant overall becomes clearer. As explained earlier, the responses to the survey items were averaged to create four new dependent variables: AvgGood, AvgMedium, AvgBad, and AvgScore. For each respondent, AvgGood represents the average score of the four functions which the Church deemed most favorable (Shared Exhibition Space/Extended Use, by another Christian denomination, Senior Center, and Classrooms for a Public Kindergarten); AvgMedium represents the average score of the four functions which the Church views as moderately favorable (Accountants Office, Café/bar, Theatre Space, and Supermarket); AvgBad represents the average score of the four functions which the Church deemed the least favorable (Private Residence, Brothel, Mosque, and Nightclub/Disco); and AvgScore represents the average score for all twelve functions. Combined with the results of the individual functions, by analyzing the influence of the independent variables at the various aggregated levels of the

survey, it becomes clear which of these characteristics are most significant in affecting the opinion of respondents toward the adaptive re-use of church buildings.

The results of these linear regressions are summarized in Table 5-5. Just as in the previous series of regressions, the independent variables included in the regression equation are: age, religiousness, length of residence, gender, and level of education. The method of entry used was the backward method in order to retain consistency with the first set of regressions.

AvgGood

Immediately apparent in the table is that only two of the five independent variables are significant in any of the models; age and religiousness. For the model AvgGood, age is the only independent variable that is significant in explaining variation in attitude toward functions deemed favorable by the Church. However, looking at the adjusted R-square for the model, AvgGood reveals that not much variation is explained at all; just 6.3%. This is a very low value, although not entirely unexpected. Most respondents agreed with the functions that were combined to make the variable AvgGood and therefore left little variation to explain. However, age is significant and has a negative association with agreement, meaning the older the respondent, the less likely they are to agree with a function that the Church itself found favorable.

AvgMed

The results of the subsequent model, AvgMedium, are quite different. Most important in this model is the comparison to AvgGood and the large increase in the adjusted R-squared value. The independent variables of religiousness and age account for 32.3% of the variation in opinion with regard to favorability for functions deemed moderately acceptable by the Church. This is a large increase from the previous model and is best explained by the fact that the functions combined to create AvgMedium are more polarizing and beget larger differences in opinion between demographic groups. Religiousness has a larger standardized Beta than age, meaning that more of the variation in the model is explained by differences in religiousness. Furthermore, both religiousness and age are negatively associated with perceiving these functions as favorable. This means that in general, the older and/or more religious the respondent, the less likely they are to agree with a function that is moderately endorsed by the Church.

AvgBad

The third aggregated model in the table is that of AvgBad. The results of the regression for AvgBad are quite similar to that of AvgMedium; the two independent variables of significance are religiousness and age; religiousness is a stronger predictor than age based on standardized Beta values; and both religiousness and age are negatively associated with agreement toward functions deemed abject by the Church. However, in the case of abject functions, the independent variables religiousness and age explain a combined 34.5% of the variation in opinion; an increase of 2.2% over the AvgMedium model. This means that age and religiousness explain the most amount of variation in opinion when it comes to the most abject functions

according to the Church. This can best be explained by the fact that the functions in this category evoke the most divergent opinions due to their controversial nature when located in a church.

AvgScore

The final aggregated model, AvgScore, represents the overall average of the responses to all twelve proposed functions of participants. This dependent serves to reveal which personal characteristics are significant in determining a favorable view of church re-use when all functions are considered. Again, religiousness and age are the two predictor variables of significance. Furthermore, the model explains a total of 27.9% of the variation in opinion, of which religiousness is the most significant contributor. For just two predictor variables this is quite a substantial amount. Such a result is also important because the AvgScore model is testing opinions toward the entire hierarchy which is more robust than individual functions. In this way, the model offers a clearer picture of which predictor variables are most important in affecting a respondent's overall opinion toward the favorability of church re-use with regard to function. From the model it is clear that religiousness and age again have a negative association with agreement toward the functional re-use of churches. This result is supported by the rest of the models

Summary

In terms of function, religiousness and age are the most significant variables and both tend to have a negative association with agreement to new functions for redundant churches. With the exception of the AvgGood model, both variables proved to be the only significant factors in explaining large proportions of the variance in the aggregated models (AvgMedium, AvgBad, and AvgScore). This conclusion is also supported by the series of regression models involving individual functions. Religiousness and/or age are shown to be significant predictors in 10 of the 12 individual function models. Furthermore, although education is a significant factor in five of the individual predictor models, it is not significant in any of the aggregate models. Looking at the functions where education is significant (Classrooms for Public Kindergarten, Mosque, Senior Center, Café/Bar, Disco/Nightclub) it becomes clear that it is not one of the most influential predictors, as in each case it has the weakest standardized Beta (Mosque, Café/Bar, Disco/Nightclub) or the model explains very little variation (Classroom for Public Kindergarten, R-square =.147; Senior Center, R-square =.093). The same critique can be applied to length of residence. Length of residence is shown to be significant in just 3 of the 12 individual models and in none of the aggregate models. The three models where it is significant (Accountants Office, Classrooms for Public Kindergarten, Private Residence), the amount of variance explained by the model is minimal (R-square's of .116, .147, and .152 respectively). It is clear that length of residence is not influential when explaining variation in opinion toward proposed functions for redundant churches.

Table 5-5: Summary of results of the aggregated functional regression models (Full outputs in APPENDIX D)

Averages of Responses						
Model	**Variables**	**Significance Level**	**B**	**Std. Error**	**Standardized Beta**	**Adjusted R-Square**
AvgGood	*Constant*	.000	4.194	.200		0.063
	Age	.003	-0.015	.005	-.266	
AvgMedium	*Constant*	.000	4.332	.240		0.323
	Religiousness	.000	-0.089	.015	-.458	
	Age	.001	-0.018	.005	-.266	
AvgBad	*Constant*	.000	3.773	.212		0.345
	Religiousness	.000	-0.084	.013	-.480	
	Age	.001	-0.016	.004	-.265	
AvgScore	*Constant*	.000	4.125	.197		0.279
	Religiousness	.000	-0.060	.012	-.387	
	Age	.000	-0.016	.004	-.300	

5.2.3 Significant Differences within Characteristic Groups According to Function

Based on the regression analyses, in relation to attitudes toward assumed functions of churches, the most influential characteristics are religiousness and age. Although the type of association is known, a more in depth analysis of differences within these groups is merited to better understand their opinions. In order to accomplish this, one-way ANOVA tests were conducted for both religiousness and age. The ANOVA test was used because it can reveal significant differences between groups of individuals. For religiousness, the sample was divided into three groups based on their degree of religiousness according to the Santa Clara Strength of Religious Faith Questionnaire, with "Low" indicating a score from 5-9, "Medium" representing a score from 10-14, and "High" representing a score from 15-20. In terms of age, the sample was divided based on three aggregations from the Central Bureau of Statistics in the Netherlands, with "Young" indicating an individual between 17 and 34 years old, "Middle" representing an individual from 35-54, and "Old" representing an individual 55 or older. For each ANOVA, Games-Howell post-hoc tests were used to determine the exact relationships between groups where opinion significantly differed. Games-Howell tests were used mainly because the number of individuals in each group was unequal.

Religiousness

In terms of sample distribution, the frequencies per group are as follows: low religiousness (n=50), medium religiousness (n= 40), high religiousness (n=34). A summary of the ANOVA results for religiousness are shown in Table 5-6.

Table 5-6 shows the results of the ANOVA per model where religiousness was found to be a significant predictor variable in the regression analyses (refer to Table 5-4). The column labeled 'Significant Differences' shows the significant comparisons where groups held different opinions based on the post-hoc Games-Howell tests. The final column shows the significance level of the comparison of the two groups.

For each regression model where religiousness is a significant predictor, there are also significant differences in opinion *between* individuals who display a low level of religiousness, a medium level of religiousness, and/or a high level of religiousness. The most common difference in opinion is between people with a low level of religiousness and those with a high level of religiousness. With the exception of 're-use by another Christian denomination' (where religiousness has a positive association), people who have a low level of religiousness are significantly more in favor of church re-use than those with a high level of religiousness. This reinforces the idea that people with a low-degree of religious belief generally do not find the assumed functions of redundant churches as problematic as religious people.

Table 5-6: Summary of ANOVA Results for Religiousness per Functional Model (Full outputs in APPENDIX E)

Significant Models	Significant Differences	Significance Level of Difference
Accountants Office	Low vs. High	.002
Private Residence	Low vs. High	.000
	Medium vs. High	.022
Brothel	Low vs. High	.001
	Low vs. Medium	.034
Mosque	Low vs. High	.001
Re-use by another Christian Denomination	Low vs. High	.024
Café/Bar	Low vs. High	.000
	Low vs. Medium	.000
Theatre Space	Low vs. High	.000
	Low vs. Medium	.010
	Medium vs. High	.018
Supermarket	Low vs. High	.006
Disco/Nightclub	Low vs. High	.000
	Low vs. Medium	.000
AvgMed	Low vs. High	.000
	Low vs. Medium	.003
	Medium vs. High	.019
AvgBad	Low vs. High	.000
	Low vs. Medium	.001
	Medium vs. High	.013
AvgScore	Low vs. High	.000
	Low vs. Medium	.018
	Medium vs. High	.027

More revealing are the cases where there are significant differences in opinion between those with a low level of religiousness and those with a medium level (Brothel, Café/Bar, Theatre Space, Disco/Nightclub, AvgMed, AvgBad, AvgScore). For these functions and variables, respondents who have a low level of religiousness are significantly more in favor of the function for church re-use than those who have a medium or high level of religiousness. This stark divide in opinion typically occurs in more controversial functions for churches (Private Residence, Brothel, Café/Bar, Disco/Nightclub). By extension, this also means that in terms of individual functions there is often no significant difference in opinion between those who are highly religious and those who are moderately religious. There are only two functions where this comparison is significant; Private Residence and Theatre Space. Based on the associations derived from the prior regression analyses, in the case of these two functions, those who are highly religious are significantly more opposed to these activities taking place in a church than those who are low or moderately religious.

Most important about the series of comparisons of religiousness are the differences between sub-groups in relation to the aggregated variables. For each aggregate variable there are significant differences in opinion between all three levels of religiousness. This is important because it means that low or non-religious participants are significantly more accepting of church re-use in relation to function than those who are moderately or highly religious. In turn, those who are moderately religious significantly differ in their opinion from those who are highly religious or

non-religious. Consequently, those who are highly religious are the least accepting and hold significantly different opinions than low or moderately religious people. Therefore, three distinct levels of opinion exist toward functional changes in churches based on religiousness. The results of the ANOVA underscore how important this characteristic is in influencing opinion toward changes in function in the adaptive re-use of churches.

Age

In terms of sample distribution, the frequencies per group for age are as follows: young (n=63), middle (n=39), old (n=22). The summary of the ANOVA results according to age group are shown in Table 5-7. The table shows the results of the ANOVA per model where age was found to be significant in the regression analyses. Just as with religiousness, the column labeled 'Significant Differences' shows the comparisons between groups whose opinion significantly differed according to that issue. The final column again shows the significance level of the difference between the two groups. For the 'Supermarket' model, there was no statistically significant difference between the age groups (p = .052 for the model). This implies that although age is a significant factor in predicting opinion toward the re-use of a church as a supermarket, the differences are not discernible between age groupings.

Table 5-7: Summary of ANOVA Results for Age per Functional Model (Full outputs in APPENDIX E)

Significant Models	Significant Differences	Significance Level of Difference
Senior Center	Young vs. Old	.047
Café/Bar	Young vs. Old Middle vs. Old	.000 .007
Supermarket	None	None
Disco/Nightclub	Young vs. Old Middle vs. Old	.000 .000
AvgGood	Young vs. Old	.035
AvgMed	Young vs. Old Middle vs. Old	.000 .013
AvgBad	Young vs. Old Middle vs. Old	.000 .003
AvgScore	Young vs. Old Middle vs. Old	.000 .014

Based on the table, it is immediately apparent that the biggest difference between ages when it comes to opinion on the functional re-use of churches is between people who are 55 or older and those who are younger than 55. Each significant comparison consists only of differences between those who are in the 'old' grouping and those who are younger. Nowhere in the ANOVA are the opinions of those 17-34 significantly different than those 35-54. This shows that the difference in opinion according to age becomes especially significant when an individual is older than 54. Furthermore, based on the previous regressions, as the association of agreement with age is always negative, this means that if a person is older than 55 then they are much more likely to disagree with the church being reused. This is evidenced through the negative associations with each of the aggregated variables and overall AvgScore variable. Thus, the results of the ANOVA

in terms of age are important as it has shown that the difference in opinion between those who are 55 or older is much more significant than the difference in opinion between individuals younger than 55.

5.3 Particular Problematic Issues related to Church Re-use

In addition to the idea of future functions, respondents were also asked to give their opinion on four issues involved in the physical process of adaptive re-use particular to churches as derived from the literature, including: whether partitioning the interior space of the church affected the emotional value of the building (Partitioning Space); whether privatization of the church was problematic (Public Private); whether the neighborhood streetscape would suffer if the exterior of the church were to be significantly altered (Streetscape); and whether the demolition of the church would be seen as a negative change for the neighborhood (Demolition). Again there were 124 respondents in all (N=124) and statements were formed in the affirmative-positive, meaning that if a participant agreed with a statement, they supported the issue in question. For example, if the participant strongly agreed with the statement "Because it is a church, I feel that the building should remain accessible to the public", they are supporting the idea that the church building should remain open to the public and are therefore against privatization.

Multiple linear regressions were again used in the analysis of these issues to determine the significance of personal characteristics in influencing opinion. In order to retain consistency, the backward method of entry was used. Also, the same independent variables were tested as in the previous set of regression models: religiousness, age, length of residence, level of education, and gender. However, since all four statements met the assumptions of multiple linear regression (lack of multicollinearity, presence of homoscedasticity, lack of autocorrelation, normally distributed errors, and linearity), it was not necessary to carry out binary logistic regressions for this portion of the data. Moreover, the four statements regarding specific issues related to the adaptive re-use of churches were treated as singular items for analysis. Unlike the set of regressions dealing with functions which could subsequently be aggregated in order to reflect the full hierarchy from which the items were derived, the specific issues analyzed here do not have a singular underlying concept as did the functions. Therefore, the analysis of these four items is more limited.

5.3.1 Survey Results per Issue

The results of the survey regarding partitioning, privatization, streetscape, and demolition are summarized in Table 5-8 and Table 5-9.

Table 5-8: Tabulated results of the issue statements by percentage

Issue	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Partitioning Space	21.77%	28.23%	21.77%	22.58%	5.65%
Public/Private Space	28.23%	37.90%	16.94%	11.29%	5.65%
Streetscape	35.48%	42.74%	11.29%	8.06%	2.42%
Demolition	45.16%	39.52%	8.06%	6.45%	0.81%

Figure 5-2: Chart of responses per issue (raw scores)

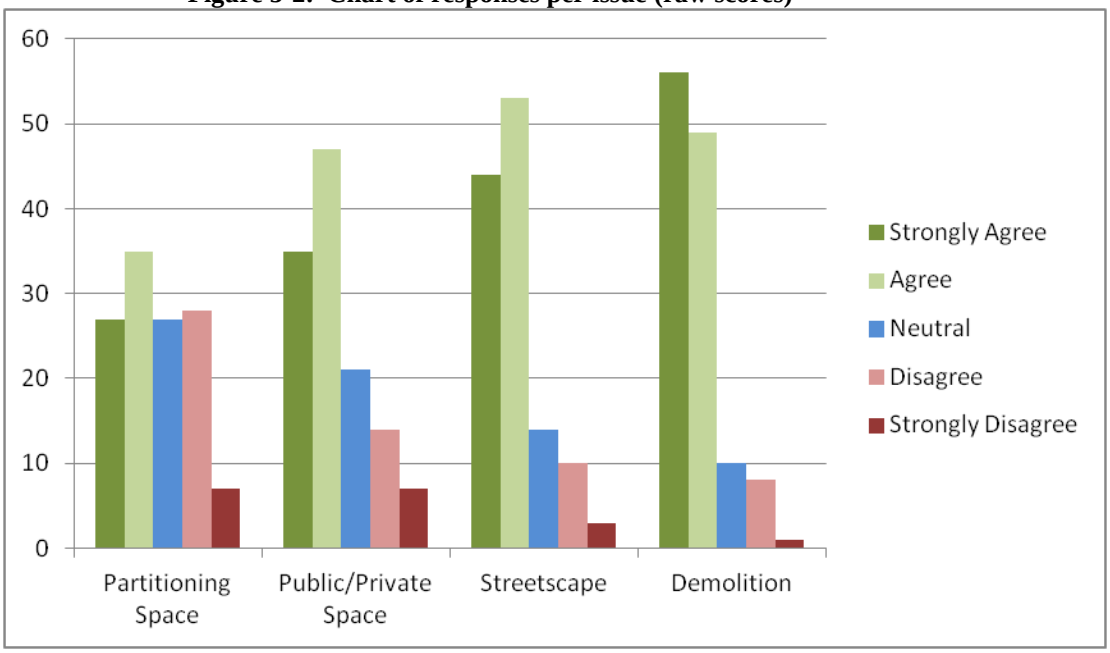


Table 5-9: Condensed survey results per issue

Issue	Agree	Neutral	Disagree
Partitioning Space	50.00%	21.77%	28.23%
Public/Private Space	66.13%	16.94%	16.94%
Streetscape	78.23%	11.29%	10.48%
Demolition	84.68%	8.06%	7.26%

The series of tables and figures summarizes the results of the survey for the four items regarding specific issues. Table 4-7 presents the percentages of respondents for the five possible response categories and Table 4-8 presents the aggregated totals of agreement (formed by combining the responses for "Strongly Agree" and "Agree"), neutral, and aggregated totals for disagreement (formed by combining the responses for "Strongly Disagree" and "Disagree"). Again, the aggregated totals allow for a more intuitive analysis of which issues are the most problematic, while the five original categories reveal instances where opinion was most divided.

As can be seen by looking at Figure 5-2, the issue respondents felt strongest about was that of demolition. The issue of demolition, meaning that they see the demolition of a church as *negatively affecting* the neighborhood, evoked the highest amount of respondents strongly agreeing with the statement (45.16%) and had the most overall agreement (84.68%). This means that 84.6% of people surveyed felt that if a church were to be demolished it would be a serious loss to the neighborhood. This implies that people felt the church structure was an important element in the neighborhood, whether for religious reasons or otherwise. Also, the small amount of neutral responses (8.06%) indicates that participants generally felt opinionated toward this issue. Furthermore, only 7.26% of the sample disagreed with this statement, meaning that they *do not* feel that a neighborhood would be negatively affected if a church were to be demolished.

Next to demolition, the issue participants felt strongest about was that of altering the exterior of the church. This is evidenced by the fact that 35.48% strongly agreed with the statement and 78.23% agreed overall with the statement. The results to this question do not display much dispersion, with only 10.48% of people disagreeing in some way (meaning that they believe the neighborhood streetscape *would not* suffer if the church exterior were to be significantly altered).

The third most pressing issue was that of privatization. Respondents were much more divided with 66.13% agreeing overall, 16.94% being neutral, and 16.94% disagreeing with the statement in some manner. This means that people did not see the issue of the church being privatized as problematic as if the exterior were to be altered or if a church were to be demolished.

The issue that respondents were most divided on was that of partitioning the interior of the church. As shown in Table 5-9, only 50% of respondents agreed with the statement, 21.77% were neutral, and 28.23% disagreed with the statement in some way. The dispersion of answers is reflected in Figure 5-2 with the bars representing Strongly Agree, Agree, Neutral, and Disagree being relatively even. Such dispersion indicates that people in the sample did not necessarily feel that emotional value would be lost if the interior of a church were to be partitioned. To reiterate, the statement specifically refers to the emotional value of the church suffering if the interior were to be divided. Therefore, when agreeing with the statement, people may not see the partitioning itself as problematic, but rather that they believe by partitioning the church interior it detracts from the emotional atmosphere of the church. Furthermore, very few people strongly disagreed with this statement (5.65%). The combination of dispersion, lack of extreme disagreement, and relatively high amount of neutral responses indicate that partitioning the interior of the church is not a very problematic issue involved in the adaptive re-use of church buildings.

Summary

Quite clearly, the idea of demolishing the church was the issue most problematic to respondents. Respondents clearly feel that the church building is an important element in the neighborhood landscape and remained steadfastly against the idea of demolishing it. The idea that the church was an important part of the streetscape is further evidenced by the second most problematic issue: that of modifying the exterior. The high percentage of respondents who agreed with the statement shows that the maintenance of the church's exterior is extremely important to respondents. Of less importance, witnessed by the dispersion in opinion, are the issues of keeping the church accessible to the public and partitioning the interior.

5.3.2 Influence of Personal Characteristics on Specific Issues in the Re-use of Churches

As stated, a series of four multiple linear regressions were performed in order to test the influence of the predictor variables on respondents' opinions toward the four issues involved in the adaptive re-use of churches. The results of the regressions are summarized in Table 5-10.

For the four issues analyzed, neither length of residence nor education level is significant in any of the models. This is quite telling, especially with regard to length of residence due to the fact that two of the issues deal particularly with the neighborhood environment (Streetscape and

Demolition). In addition to length of residence, the lack of significance of education level is important because the issues involved are quite complex, particularly ideas of emotional values being intertwined with building construction and the relationship between streetscape and residential well-being. The lack of education in the models means that education does not strongly influence respondents' opinions and therefore highlights that people feel the church building is important to the neighborhood (due to the high levels of agreement with the demolition and streetscape statements) regardless of education level, albeit for different reasons.

Interior Partitioning

For the statement dealing with the partitioning of the interior of the church, the two significant predictor variables are that of religiousness and age. Between the two, religiousness explains more of the variation than age (standardized Beta of .383 compared to .224). Overall, the two variables explain a relatively high amount of the variation in opinion with an adjusted R-squared value of .222. This is best explained by the fact that the dispersion in opinion regarding partitioning of the interior is much higher than in any of the other three issues, meaning that the differences between individual characteristics is greater. Furthermore, both religiousness and age are positively associated with agreement toward the statement based on the B value. This means that the more religious and /or older the respondent is, the likelihood increases that he/she will agree that partitioning the interior of the church detracts from its emotional value. Thus, those that are more religious and/or older find permanent modifications to the interior of the church more problematic. With 22.2% of the variance explained by the characteristics tested, this model accounted for more variation in opinion than any of the other three models.

Privatization

The second statement deals with the issue of privatization. The more someone agreed with the statement, the more they believed that the public should be able to access the building even after reuse. Thus, the concept is designed to measure the problematic nature of privatizing the church once it is no longer in use for religious purposes. For this item, religiousness is the only significant predictor variable and accounts for 12% of the variation in opinion. Religiousness again has a positive association with the statement, meaning that the more religious an individual is the more likely he or she is to agree that because the building was a church, it should remain accessible to the public. Although the model only accounts for 12% of the variance, the fact that religiousness is the only significant predictor variable is not surprising as people who are more religious are more likely to want church buildings to remain accessible.

Table 5-10: Summary of results of the regression models per issue (Full outputs in APPENDIX F)

Issues involved in Adaptive Re-Use						
Model	**Variables**	**Significance Level**	**B**	**Std. Error**	**Standardized Beta**	**Adjusted R-Square**
Partitioning Space	*Constant*	.000	1.725	0.301		0.222
	Religiousness	.000	0.087	0.018	.383	
	Age	.007	0.017	0.006	.224	
Public/Private	*Constant*	.000	2.815	0.233		0.120
	Religiousness	.000	0.067	0.019	.310	
Streetscape	*Constant*	.000	3.485	0.242		0.106
	Age	.001	0.019	0.005	.294	
	Gender	.019	-0.406	0.172	-.202	
Demolition	*Constant*	.000	4.003	0.218		0.105
	Age	.013	0.012	0.005	.215	
	Gender	.001	-0.512	0.154	-.283	

Exterior Alterations and Streetscape Effect

The third statement pertains to the church's aesthetic role in the streetscape of a neighborhood. Participants were asked to give their opinion with regard to whether a neighborhood streetscape would suffer if the exterior of a church building were to be significantly altered, citing the examples of the church steeple being taken down or stained glass windows being removed. Overall, the predictor variables of age and gender explain 10.6% of the variation in respondents' opinions. In terms of the relative strength of the predictor variables, age is stronger. With regard to interpretation, age displays a positive association with agreement toward the statement, meaning that the older the respondent is, the more likely they are to feel that a neighborhood streetscape would suffer if the exterior of a church building were to be significantly altered. In terms of gender, a dichotomous coding of 0 for female and 1 for male was used in the regression equation. Therefore, the interpretation based on the model is from the male perspective, as female is the reference category. Thus, since the B value is negative (-.406), this means that men are more likely to disagree with the statement than women. By extension, this means that female respondents are more likely than their male counterparts to feel that a neighborhood streetscape would suffer if the exterior of a church were to be significantly modified.

Demolition

The final statement concerns the idea of demolition. Respondents were asked to indicate the extent to which they agreed that churches were important structures in a neighborhood and by demolishing them an area would be negatively affected. The statement is straightforward and indicates whether respondents felt that demolition was problematic for a church building. For this statement, the variables of age and gender are again significant, although gender contributes more to explaining the variation than age. Gender displays a negative B value (-0.512) meaning that men are less likely to agree with the statement than women. Based on this result, women are significantly more likely to find the church building important in the neighborhood and the demolition of the structure more problematic than men. The variable of age again displays a positive association with agreement meaning that the older the respondent is the more likely they are to value the church building in the neighborhood and find demolition as problematic.

Summary

It is clear that based on the series of regression analyses the characteristics of age, religiousness, and gender are significant in influencing the attitude of stakeholders toward the issues in question. Overall, age is the most pertinent predictor, appearing as significant in three of the four statements. Religiousness is the second most influential, appearing in two of the four statements. Although gender also appears as significant in two of the four statements, religiousness has the highest standardized Beta and is shown as significant in the two models which explain higher amounts of variation in opinion (Partitioning Space, R-square = .222; Public/Private, R-Square = .120). For this reason, gender is the third most important predictor, as it is shown as significant in two of models (Streetscape and Demolition). Of course, level of education and length of residence are the least important predictors, as they are not significant in any of the four

statements.

5.3.3 Significant Differences within Characteristic Groups According to Issue

Just as in the regression analyses pertaining to functions, the differences in opinion within demographic groups are important to understanding how these characteristics specifically influence opinion. This will again be determined through the use of one-way ANOVA's with Games-Howell post-hoc tests to establish the significant differences in opinion between sub-groupings of characteristics. In the case of physical issues involved in adaptive re-use, the characteristics of religiousness, age, and gender were shown to be significant. However, in the case of gender, there is no need for further analysis since the coding of the variable already reflects the difference between men and women in the regression equation. For religiousness and age, they are divided into the same sub-groups as in the functional analysis to maintain consistency: low (5-9 on index), medium (10-14), high (15-20) for levels of religiousness and young (17-34 years), middle (35-54), and old (55+) for age.

Religiousness

Religiousness was found to be significant in two of the models regarding issues of adaptive re-use; the partitioning of the interior and privatization. The summarized results of the ANOVA for these two models are shown in Table 5-11.

Table 5-11: Summary of ANOVA Results of Religiousness per Issue (Full outputs in APPENDIX G)

Significant Models	Significant Differences	Significance Level of Difference
Partitioning Space	Low vs. High	.000
	Low vs. Medium	.009
	Medium vs. High	.044
Public/Private	Low vs. High	.001
	Low vs. Medium	.010

Table 5-11 shows the significant differences in opinion according to level of religiousness per model. For the model regarding partitioning of space, the ANOVA indicates that each level of religiousness tested had significantly different opinions. This means that those who have a low level of religiousness are significantly *less likely* to see the partitioning of the church interior as problematic than those who are moderately religious. This disparity in opinion is even greater when compared to those who are highly religious. Furthermore, those who are moderately religious differ significantly in their opinion compared to highly religious people. Based on the interpretation of the regression analysis, those who are moderately religious are less likely than highly religious people to view the partitioning of the interior of a church as problematic. The results of the ANOVA indicate that there is a significant difference between each level of religiousness as to how likely they are to view interior partitioning as problematic in the adaptive re-use of churches.

Unlike the partitioning of space, the issue of privatization shows a much more distinct divide in opinion according to how religious an individual is. Since the only significant comparisons

involve individuals with a low level of religiousness, this indicates that there is a difference in opinion between those who have a low level of religiousness and the others. There is no significant comparison between medium and high levels of religiousness, meaning that the most important division in opinion between the groups surrounds the ranking of 9 on the religiousness index. With a score of 9 or below, the individual is less likely to see privatization as problematic, whereas a score above 9 indicates that the individual is more likely to see the issue of privatization as problematic, but this does not significantly increase after a score of 9.

Age

Age was found to be significant in three of the regression models. The significant comparisons between age groups are summarized in Table 5-12.

Table 5-12: Summary of ANOVA Results of Age per Issue (Full outputs in APPENDIX G)

Significant Models	Significant Differences	Significance Level of Difference
Partitioning Space	Young vs. Old	.012
	Young vs. Middle	.028
Streetscape	Young vs. Old	.017
	Young vs. Middle	.024
Demolition	None	None

As shown, differences in opinion between age groups in relation to the issue of Demolition are not significant. This is mainly due to the skewed nature of the responses. The issues of partitioning and modifications to the exterior of the building display the opposite pattern as the division between age groups in relation to function. Whereas the difference in opinion was significant between individuals 55 and above and below 54 years old, the significant divide seen here is between people 34 or younger and people 35 and older. In the regression analyses, the association with age for viewing the partitioning of church interiors and alterations to the exterior as problematic was positive for both. This means that individuals younger than 35 are not as likely to view partitioning or altering the exterior of a church as problematic as those who are older than 35. However, there is no significant increase in viewing these issues as problematic between those aged 35-54 and those who are 55 or older.

VI.) Discussion

In the previous section the results of the statistical tests were described in detail. However, the tests performed also have significant implications beyond these basic interpretations. This section seeks to provide a more in depth, interpretative analysis of the results of the last section, place the results within the context of the relevant literature, and to highlight important findings with regard to the adaptive re-use of church buildings based on the outcomes of the survey.

One of the main objectives of the survey was to examine the attitudes of dependent stakeholders towards examples of functions churches have assumed after becoming obsolete. To better put these results in context, a comparison of attitudes between the Church and dependent stakeholders is presented in Table 6-1. In the chart, colors have been added to indicate the level of agreement to each, with green indicating a high degree of favorability, yellow an intermediate, and red a low degree. It should also be noted that the actual functions from the survey are set in parentheses next to the larger category for which they acted as proxies. The far right hand column consists of the tallied results of the survey including the percentage of respondents who agreed in some way to the statement, those who did not agree nor disagree, and those who disagreed with the statement.

6.1 The Unique Place of Churches Relative to Other Re-use Projects

The chart shows that the opinions of dependent stakeholders largely match the most favored uses of the definitive stakeholder, the Church. An especially strong commonality among these favored uses is the minimal degree of actual change the most agreed with functions entail. The majority of dependent stakeholders tended to agree with functions related to extended use, Christian re-use, Cultural/Arts reuse, and Social Reuse. All of these functions entail very little reimagining in terms of the end goals of these functions and the original mission of the Church. This result supports the idea that the church is indeed important to place-identities and attachment. In their conception of place-identity, Proshansky et al (1983) specifically mention that the first property of place identity is that it is not only concerned with attachments to physical realities, but also to the social meanings and beliefs of such places. The church is an institution that is strongly rooted both in individual place-identities and powerful collective memories through its prominence in endorsed historical narratives and associated proliferation through rituals (Mazumdar & Mazumdar, 2004). Since place-identities are linked to social behaviors of place, by proposing changes in function for a former church, this in essence is a threat to the social portion of place identity. The opposition to such change founded in place-identity is evidenced through the majority of dependent stakeholders agreeing with functions most closely associated with the former function of the building.

This result stands in contrast to structures whose former functions were primarily industrial or commercial, as these types of uses have been shown to reduce neighborhood satisfaction (Kweon et al, 2010; Saint Consulting Group, 2011) and have been rated as aesthetically displeasing when used in their primary purpose (Herzog et al, 1976; Herzog et al, 1982; Gjerde, 2011; Green, 1990). This difference in degree of place attachment between churches and industrial/commercial buildings is further emphasized by comparing the way the change in

functions of such structures are regarded. While the re-use of churches is controversial, adaptive re-use projects involving former industrial sites or offices are often applauded when re-appropriated for functions much different than their original use. The examples of these laudations are numerous, including: inner city industrial sites re-used for school and university classrooms (Kennedy, 2010); the adaptive re-use of office buildings for residential use (Heath, 2001; Faircloth et al, 2009); the use of industrial shipping containers for residences (Handwerk, 2012); and former energy plants reinvented as restaurants, cafés, and/or museums (Bennett, 2009; Ikonmidis-Doumbas, 1990). This desire to see abject buildings re-used for functions other than their primary purposes approaches a type of fetishization as demand for loft-living and 'industrial chic' has gone global (Storper & Manville, 2006; Zukin, 1989; Podmore, 1998). However, as evidenced in the survey of dependent stakeholders, the majority of people agree that vacant churches should be re-used in a manner as close as possible to the original. This result held true even when a particular church was not specified. By not referring to a case-study in the survey, the results regarding function show that the ideas of place-identity can be linked to a structural form in a socio-physical way through collective narratives and memories. With most of the respondents agreeing to functions ideologically close to the original, it reveals that a heightened degree of reverence for the idea of churches is so ingrained in society that even without context people tend to agree with maintaining the institution as is.

As shown through the contrast in celebrated re-use of industrial sites, this desire to maintain function is an aspect that differentiates church buildings from average adaptive re-use projects. This further affirms the assertion of Proshansky et al (1983) that place-identity is not necessarily linked to physical realities, but also to social structures represented by identifiable forms. To offer a comparison, as economic shifts moved the majority of industrial production away from the global north, there was a subsequent reduction in 'working-class' or 'blue-collar' identities as many more jobs were created in service sectors. This change in identity was accompanied by changes in place-identities, as the industrial plant went from symbolizing prosperity to being associated with more depressive connotations such as ugliness, low wages, and job-loss. The church, however, is still entwined with many identities, both emotionally and place-based, meaning dependent stakeholders are more likely to advocate maintaining the social function of the structure. Furthermore, the desire of dependent stakeholders to re-use vacant churches in similar manners instead of advocating alternative functions questions Spennemann's (2006) assertion that physically preserving significant sites is important for community well-being. The results of the survey show that although physical aspects of preservation are important, social aspects of preservation cannot be neglected. The way those who are attached to the space see the process of re-use has both physical and social elements. While a physical structure may be well suited for a certain type of re-use, if the assumed functional component is negligent of the former social status of the structure, then the overall worth of the adaptive re-use project is reduced. Currently, it is this social component of the adaptive re-use process has been over-simplified in order to tout the environmental and financial benefits of previous projects; most of which have focused on more simple industrial or commercial conversions.

6.1.1 Functional Changes

As stated, the responses of dependent stakeholders and the Church are generally in agreement for the most preferable functions. However, there are minor differences, the first of which is the ordering of the top two functions, with dependent stakeholders preferring that the primary religious users of the space be allowed to stay and share the space (extended use) rather than have another Christian group use the building. As explained, religious institutions generally prefer another Christian group to re-use the space rather than extended use because in the process of sharing the space the Church risks losing control over what takes place in the building. Extended use also restricts the space available for worshippers and the amount of services that are able to take place during the week. The second major difference in opinion between the Church and survey respondents was the preference for cultural re-use over community re-use. In the survey, many more people agreed to the idea of the church being used as a theatre space compared to the idea of it becoming a kindergarten. Looking closely, this could be due to the exclusionary nature of the kindergarten (i.e. only those with children can utilize the space) or because children are more rambunctious thereby further detracting from the original atmosphere of the church as a quiet place for reflection/worship. This type of rejection supports the framework of Dear (1992) in his analysis for preferences of certain proposed developments. He states that one of the most frequent causes for opposition is related to the type of clientele a proposed development will attract. As seen, the dependent stakeholders generally support the idea of the church remaining as such and by changing its function to focus on children, the older population and/or those without children are excluded from the targeted clientele. Especially in the case of urban locations where many adult singles/couples without children live, primary use as a kindergarten in comparison to the potential users of a theatre results in the exclusion of the majority of residents. In contrast, the Church as an institution prefers to provide a social service rather than being subjected to potentially profane performances or exhibitions.

Continuing down the spectrum of preference, the differences become more substantial between the Church and respondents' attitudes toward functions deemed moderately abject. The first major difference is the preference of respondents for the Café/Bar function. The Church ranks this function much lower than respondents because of the extent of modifications necessary and the idea that profit is a motivating factor. A more extreme discrepancy is in the difference in ranking of the functions of nightclub/disco and private residence. In contrast to dependent stakeholders, the Church prefers retail and corporate offices as appropriate functions. This is quite a significant difference in the ranking of function and can largely be attributed to those who are not religious (as seen in the results of the regressions). Furthermore, the difference in attitude is mostly between those who have a very low level or are not religious at all and those who are moderately to highly religious (based on ANOVA analysis). As the divide in preference is mainly between those who are not religious and those are moderately/highly religious, it should be emphasized that secular respondents are known to dislike mundane commercial developments in general (Kweon et al, 2010; Saint Consulting Group, 2011) and therefore are likely to choose socially more interesting functions. This line of thought is also in accord with studies of neighborhood redevelopment, where neighborhoods deemed 'nice to live' gain this reputation by emphasizing social functions such as cafés, bars, nightclubs, and nice housing over corporate offices or mundane retail functions such as supermarkets (Lees, Slater, & Wyly, 2007). The opposition toward these functions by those who are religious shows the additional significance attached to churches for Christians, as they generally oppose very social functions that are often seen as desirable in other contexts.

At first sight it may seem that people who are not religious have a disregard for the church building by preferring functions such as nightclubs or bars over more regular office spaces or retail spaces. Yet, interpreting the results a bit further, it appears that most people actually see the church building as a very special space. The functions that were rated lowest by respondents include a mosque, office space, retail space, and erotic business. Outside of the panic toward cultural difference in the Netherlands (mosque) and deject functions (erotic business), the functions of office space and retail space represent some of the most mundane functions on the list. The supermarket and accountants office are functions that do not take advantage of the church building's unique layout, have no relation to the teachings of the Christian church, and generally serve as functions that seek to normalize the space by valuing functionality over emphasizing exceptional features of the structure. Compared to other functions on the list, these two are where very basic tasks take place; that of work and consumption. By largely disagreeing with these two functions, respondents (both religious and non-religious) show they feel that church buildings should have a function that is as unique as the structure itself; a special building should house special activities.

This is further evidenced by the high rankings of nightclub/disco, private residence, café/bar, and cultural re-use. All of the activities associated with these functions are generally more meaningful than those of offices or retail spaces: people form and reinforce social bonds in cafés and nightclubs, children are raised and familial ties are strengthened in homes, and expressions of emotion and creativity take place in cultural venues. All of these functions entail social activities that are more meaningful than retail or office space. Therefore, the opinion of respondents toward different functions shows that dependent stakeholders, regardless of religiousness, feel that the church is special and when considering the future function for a redundant church, very commonplace and morally abject uses should be avoided (mosque, retail space, office space, erotic businesses).

The results of the functional portion of the survey offer a realized example of the work of both Proshansky et al (1983) and Mazumdar & Mazumdar (1993, 2004) regarding place-identity. Dependent stakeholders agreed most to keeping the church as a church or a function very closely related to the church in terms of social mission and clientele. Such a result emphasizes that, as opposed to the advocating of functional changes seen in common industrial buildings/projects, the church remains an integral element of dependent stakeholders' place-identity. The results regarding religious and non-religious people show that there is a strong social role to place-identity in addition to the solely physical preservation frequently emphasized (Spennemann, 2006; Newman, 2001; Green, 1999). The fact that religious respondents were much less in favor of the most sociable functions acceptable to non-religious dependent stakeholders highlights that places and sites regarded as part of the religious collective memory foster a more intense level of attachment than other sites. However, when religious re-use is impossible, dependent stakeholders still saw the space as special felt only the most socially significant functions should be housed in the church. In relation to adaptive re-use, this means that social components, especially those involved with belief, play a large role in how suitable a building may be for reuse.

6.1.2 Physical Changes

Although there is no ranking for the particular physical issues involved in adaptive re-use, the most agreed with statements support the idea that even non-religious people view the church building as an important structure in their neighborhood. The most strongly agreed with statement was that of Demolition. 84.68% of dependent stakeholders felt that the church was an important structure in their neighborhood and by demolishing it the neighborhood would be negatively affected in some way. This high percentage indicates that many people feel that churches are important buildings to the neighborhood and the lack of religiousness as a significant influencing factor shows that even if they are not religious, the building is in some way significant (either for the purposes of streetscape, place identity, neighborhood character, aesthetic beauty, architecturally, etc). Additionally, the idea of modifying the exterior of the church was also extremely problematic, as 78.23% of respondents agreed. Again, the degree of religiousness was not a significant variable in influencing opinion, meaning that regardless of religious belief, dependent stakeholders valued the appearance of the church. This further supports the idea that although not necessarily for religious reasons, there is a relationship between the church structure, place character, and preferences for the built environment.

In terms of preference, the results affirm the general finding that older, culturally representative buildings are desired for both aesthetic and emotional value (Aitken, 1990; Green, 1999; Spennemann, 2006; Herzog et al, 1976; Herzog et al, 1982; Gjerde, 2011). Especially in terms of demolition, the fact that only 7.26% of respondents did not feel that demolishing the church was problematic shows that people value the physical presence of the church. This also has to do with the historicity of many churches, as Spennemann (2006) notes how stability in the environment is vital to residential well-being. Older, culturally representative buildings are manifestations of this stability. Especially in the urban context where change in both residents and the physical environment is more common, churches offer a symbol of familiarity and identity in the evolving city. Quite clearly, dependent stakeholders value the exterior appearance of the church in the neighborhood, as even alterations to the church were strongly opposed. Such a result is in accord with previous urban theory emphasizing how people generally prefer a variety of building types in streetscapes with some sense of order (Jacobs, 1961; Gjerde, 2011). The church building is a culturally embedded architectural accent that punctuates the urban landscape in a way that offers both cultural familiarity and aesthetic distinctness.

However, whereas respondents showed serious concerns for the exterior of the church, the statements related to altering and accessing the interior of the church were much more divided. Regarding the partitioning of the interior and privatization, there were various amounts of opposition depending on how religious the individual was. This difference further emphasizes how secularized people value the physical appearance and presence of the church for reasons other than the religious function. Dividing the interior of the church is a concern mainly for those who understand the value of its previous use. Furthermore, many of those who displayed a low level of religiousness were not concerned with privatization, again emphasizing that their main concern is the exterior and place of the church in the neighborhood. This concern for the exterior supports Proshansky et al's (1983) assertion that place-identity involves only passive recognition of the environment in which socialization takes place. Therefore, if the individual is not religious, it is likely that very little socialization took place within the church, thereby relegating

Table 6-1: Comparison of Church opinion and respondents' opinion with regard to function

Church Ranking		Survey Ranking	*Agree*	*Neutral*	*Disagree*
Christian Religious Re-use		Extended Use [Shared Exhibition Space]	79.03%	12.90%	8.06%
Extended Use		Christian Religious Re-use[Another Christian Denomination]	76.61%	13.71%	9.68%
Social Re-use		Cultural/Arts Re-use [Theatre Space]	62.90%	14.52%	22.58%
Community Re-use		Social Re-use [Senior Center]	59.68%	20.97%	19.35%
Cultural/Arts Re-use		Café/Bar [Café/Bar]	46.77%	12.90%	40.32%
Café/Bar		Community Re-Use [Classroom for Public Kindergarten]	41.94%	17.74%	40.32%
Retail		Private Residence [Private Residence]	32.26%	18.55%	49.19%
Corporate Office		Nightclub/Disco [Nightclub/Disco]	29.03%	12.90%	58.06%
Private Residence		Mosque [Mosque]	25.81%	15.32%	58.87%
Nightclub/Disco		Corporate Office [Accountants Office]	20.16%	17.74%	62.10%
Mosque		Retail [Supermarket]	8.06%	4.84%	87.10%
Erotic Business		Erotic Business [Brothel]	4.03%	8.06%	87.90%

it to the background of place-identity. In this way, the concern for the church to secular individuals is more likely a concern for the identity or character of the neighborhood or city. However, as Mazumdar & Mazumdar (1993) show in their typology of place attachment, sacred structures serve a much more active role in identity formation for religious individuals, which is evidenced in responses of dependent stakeholders through the divide in concern for issues related to the interior of the church versus the exterior.

This difference in concern for the interior and exterior physical changes reflects the difference in what Proshansky et al (1983) call the 'meaning function' and 'recognition function' the church plays for religious and secular individuals. For religious individuals, the church serves as the source of meaning. This refers to how the church is the immediate physical setting where a measure of how well a person fulfills his or her role as a Christian is instilled. Therefore, the church's active role in more religious peoples' lives is reflected in their concern for physical changes to the interior, which has much more immediate consequences for them than for secular people. For the secular individual, the church's passive, backdrop role in their socialization results in its association with the recognition function, providing comfort through familiarity in the physical environment. In terms of adaptive re-use projects, this complex relationship between various typologies of identity formation are either completely neglected or only touched upon in preservation discourses. However, the precise way in which individuals identify with the physical structures subject to change are important, as some buildings or landscapes will beget more important 'meaning functions' whereas others will offer a wider range of possibilities because of the prevalence of 'recognition' vested in the site.

6.2 Religion and Church Re-use

When analyzing the survey in its entirety, religiousness frequently appears as a significant factor in affecting the attitudes of respondents toward the adaptive re-use of churches. Overall, religiousness was significant in 14 of the 20 total statistical models. This included 9 out of the 12 models dealing with individual functions, 3 of the aggregated models in which functions were grouped, and 2 of the 4 models regarding issues involved in the adaptive re-use process particular to churches. Furthermore, religiousness was frequently the most significant predictor variable and was present in all of the models where the highest amount of variation in opinion was explained (based on the R-squared values for Theatre Space, Café/Bar, and Disco/Nightclub; AvgMedium, AvgBad, AvgScore; and Partitioning Space).

For each regression model where religiousness was found to be significant, its association was one that can best be described as conservative. This means that the more religious the person is, the less likely they are to view the re-use process favorably unless the re-use in question is of the most traditional nature (re-use by another Christian denomination or shared exhibition space with the Christian group allowed to remain practicing in the building). However, this conservative nature is more complex than simply grouping those who are religious and those who are not religious. According to the results of the ANOVA's for the aggregated models AvgMed, AvgBad, and AvgScore, there are at least three different levels of religiousness where opinion of functions differ significantly. This shows that the actual degree of religiousness offers better insight than simplified categories such as 'religious' and 'non-religious' as opinion especially toward the most abject functions varies significantly between various levels of religiousness.

This relationship is quite logical as shown from the literature dealing with place identity and religion (especially Mazumdar & Mazumdar, 1993, 2004). Religious physical spaces are imbued by religious individuals with an increased sense of importance which serves to differentiate them from the relatively mundane spaces of the secular world. In Christian religions, the church building is such a space. Therefore, the church physically represents the beliefs, lifestyle, norms, and moral values to which believers subscribe. By gathering as a community, the church offers a sense of affirmation for these individuals that their belief is also shared by others, strengthening the self-identity by partaking in a collective identity. Since this ritualistic worship takes place in the church, the connection between the religious individual, the community, and structure is very strong. Therefore, when the building is subject to functional uses other than those which are approved by the religious community, it can be perceived as a threat to the wider collective identity. Proshansky et al (1983) refer to this as the 'anxiety and defense function' of place-identity from which a perceived threat to the stability of significant environments can provoke feelings of malice and hostility. The fact that religiousness is the most significant factor in influencing the opinion of respondents shows just how strong the link between physical places and identity can be.

When looking at the results of the individual function models, religiousness only became a significant factor as the function became more abject according to the Church. Based on the results of the regressions, religiousness is not significant in the Shared Exhibition Space, Classroom for Public Kindergarten, and Senior Center models. The only function that is approved by the Church where religiousness does appear as significant is that of re-use by another Christian denomination where it displays a positive association. These functions correspond to religious re-use, extended use, community re-use, and social-re-use; all of which are endorsed by the Church. This result, although not terribly surprising, is significant. It shows that those who are more religious are in agreement with the Church's stance. This is further supported by looking at the results of the aggregated models. As the groupings became more abject in the view of the Church, more variation was explained and the predictor variable of religiousness became increasingly more significant in explaining the variation.

The analysis of religiousness and the proposed adaptive re-use of churches offers an example of how the social side of adaptive re-use has been overlooked. Many authors discuss the societal impact of adaptive re-use in simplistic terms, often as a secondary benefit to financial savings or as an extension of historic preservation methods (Bullen & Love, 2010; Australian Government, 2004; Langston et al, 2007; Conejos et al, 2010). However, as seen through the influence of religiousness on people's opinions, adaptive re-use is a technique that entails more than just preserving a structure for historical value; it also retains social attachments that take place in the present. By extension, since the social connection is in the present, consideration should be given to dependent stakeholders with regard to functional changes, as they may feel offended in the way a socially significant site is handled. The societal concerns of adaptive re-use projects should not be treated as secondary to financial and environmental deliberations but rather integrated into the discussion. As seen in the analysis of dependent stakeholders and churches, higher levels of religiousness in a community should mean that those projects need be carried out with extra sensitivity.

6.3 Age and Church Re-use

Based on the analysis of the regression results, age appears as a significant predictor variable in 11 of the 20 models overall. Most tellingly, in addition to 4 individual function models, age was shown to be a significant factor in all four of the aggregate models (AvgGood, AvgMedium, AvgBad, AvgScore). Since these variables are composed of the average score of participants for functions grouped according to Church favorability, the fact that age remains significant in all four of these models shows that it is very influential in respondents' opinions. Furthermore, for every model pertaining to function that age was shown to be significant, it displayed a negative association with favorability. For the series of regressions related to issues of adaptive re-use, age was significant in 3 of the 4 issues: Partitioning of Space, Streetscape, and Demolition. The interpretation of these three issues is indicative of a more conservative view of the adaptive re-use process as age increases. Given the robustness and amount of models, age clearly shows a strong, negative association with the favorability of adaptive re-use of churches with regard to both functional changes and physical modifications.

The interpretation of the age variable is more complex than that of religiousness. Although significant in many regression models, the subsequent ANOVA analyses and post hoc tests reveal that the difference in age is most significant between individuals above 54 years old and those 54 or younger. In each function model where age was influential, there was no significant difference in opinion between individuals 17-34 years old and 35-54 years old. Unlike religiousness which has three distinct levels of significant divisions, age is more clearly divided between those who are 54 or younger and those who are older. However, this relationship is reversed with regard to partitioning interior space and alterations to the exterior of the church. In both of these models, the significant difference in opinion is between those who are 34 or younger and those who are 35 and older. Taken in tandem, this divide in opinion shows that those who are older than 54 are especially conservative in relation to both the change in function and physical modifications of the adaptive re-use process of churches.

The conservative nature of older individuals in relation to proposed changes in the built environment supports the consensus found in literature related to neighborhood change (Aitken, 1990). Kweon et al (2010) show that the most satisfied residents are typically older individuals because of their strong connections to the neighborhood through home-ownership and high amounts of social contacts. Furthermore, the Saint Consulting Group (2011) consistently finds that individuals between the ages of 45 and 65 are the most likely to oppose any sort of development project. Combined with this general opposition to change is that older people, both in the sample and in the Netherlands, are significantly more religious than younger individuals. Even if not religious themselves, older individuals are more likely to have exposure to religion than the younger generation. For instance, those who are of an older generation are more likely to have experienced the era of 'pillarization' where state resources were filtered through religious institutions. This means that older individuals, due to being raised with such an association, may still hold the institution of the church in higher regard and therefore be less likely to agree to new functional uses for churches. Alternatively, due to the religious make-up of the Netherlands with regard to age, those who are older are more likely to have a social network that includes religious individuals. Therefore, the level of 'respect' for what the church represents may be more significant to older individuals by extension of friends or familial networks.

Another reason that age is negatively associated with the favorability of church re-use is due to the embedded link between the church, place attachment, and an individual's place identity. Based on the literature dealing with place-identity, it is known that an individual's attachment to certain structures in the landscape only manifests when the distinct features of the place are threatened (Proshansky et al, 1983). The results of the survey and regression model support this notion, as alterations to the exterior of the church and potential demolition were rated as the most problematic issues involved in adaptive re-use and this problematic nature is shown to increase with age. As a person ages, they become more subconsciously attached to elements in their environment that have offered a sense of stability over the years (Proshansky et al, 1983). In the Dutch context, Christian church buildings have provided this sense of stability through a century of dramatic social, economic, and physical changes; often being the oldest buildings in villages and cities. Therefore, those who are older most likely have formed an attachment with churches and perceive serious alterations or drastic functional changes to the structure as threatening. The social attachment to the church is emphasized in the degree of opposition to functional changes between the age groups. Where age is significant, the divide in opinion is at 54 years old; the same age divide in which the religiousness of the Dutch population increases (Centraal Bureau Statistiek, 2012).

However, although the negative association between age and more abject instances of re-use is largely accounted for, the model for Senior Center offers an interesting counter-example. In the model, age is a significant predictor variable and displays a negative association with favorability. One would expect that the older an individual is, the more they would agree to a church being used as a senior center. Looking at a cross-tab of the raw data (APPENDIX H), only 1 person over the age of 54 strongly agreed, 8 agreed with the statement, and 13 did not agree. Such a split in opinion is unexpected, but could possibly be explained by the fact that older people are more aware of what a senior center actually entails and therefore find the use of a church building to house such a function as disagreeable.

In relation to the wider topic of adaptive re-use, the significance of age shows that projects potentially affecting a population of older dependent stakeholders should be thoroughly explained and consideration given for their opinion. However, as evidenced by the older generation's opposition to functions endorsed by the Church (AvgGood), it seems that the idea of any change in general is opposed by this generation. Therefore, although age is a significant factor, it is the oldest generation that shows the most opposition. As seen in other studies of neighborhood satisfaction and development, older generations are often opposed to change regardless of the type proposed. Therefore, in projects involving the possible productive re-use of church buildings, the degree of opposition based on an aging population should not hinder fruitful developments. Sociable functions such as nightclubs, cafés, and exhibitions should not be completely disregarded based on the grounds that older generations disagree with the change because they may not disagree with the fact that it is in a church, but rather possess a negative view on change in general.

6.4 Level of Education and Church Re-use

Education level was found to be a significant predictor in only 5 out of the 20 total statistical

models, all of which were regression models for a single function. In three of the models (Mosque, Café/Bar, and Disco/Nightclub) a high level of education was a significant factor and in two of the models an intermediate level of education was significant (Classrooms for Public Kindergarten and Senior Center). In each model high education was shown as significant, it had the lowest standardized Beta meaning that it contributed the least to the variation in opinion explained by the model. In contrast, in the models where an intermediate level of education was shown to be significant, it had the highest standardized Beta indicating it was the largest contributor to the amount of variation explained. However, considering the amount of variation explained in the models that included an intermediate level of education as significant (Classrooms for Public Kindergarten R-squared = .147; Senior Center R-squared = .093) this is actually a very small amount.

In most cases where education is significant, the higher the level of education of the individual, the more likely they are to disagree with the proposed function. However, it is difficult to generalize the influence of education on people's opinions toward church re-use because of the mixed results and the lack of significance in the aggregated models. What also needs to be taken into account is the educational composition of the sample. Most of the people surveyed (68.5%) had a high level of education, while very few had a low level of education (just 8.1%). This differentiation may have implications in terms of significance, as the population of lower educated people is under-represented.

The results of the regression models are much liked the mixed results found in literature regarding the relationship of education level and perceptions of neighborhood change and satisfaction. As Kweon et al (2010) find that higher education levels are associated with higher degrees of neighborhood satisfaction, it is reasonable to assume that because higher educated individuals in the sample are satisfied with their neighborhood, they will therefore be less accepting of functions that could disrupt the neighborhoods. For results such as a Café/Bar and Disco/Nightclub, this explanation is logical, as the introduction of these functions to a neighborhood can attract noise, traffic, and disrupt the character of the community (Saint Consulting Group, 2011). Whereas Kamphuis (2010) finds that lower educated individuals are more likely to perceive their neighborhoods as unsatisfactory, the results of the survey indicate that differences in education level are not significant when asking individuals their opinion about the potential re-use of churches. The overall result of the survey is more in line with the findings of Sullivan (2007) whose empirical work regarding gentrification shows that there is no difference in the perception of urban change between residents with different levels of education. It appears as if level of education is very much contingent on the specific context in which urban change is being discussed, as even within the survey the relationship of education and opinion of church re-use is quite mixed.

However, one of the most interesting results in terms of education is the instance where education is positively associated with agreement toward adaptive re-use: that of the mosque. As stated in the literature review, the relationship between education and religion is complex, with higher levels of education not necessarily related to lower levels of religiousness, but rather to lower levels of biblical literalism and adherence to doctrines. The regression result for the mosque seems to be an example of this complex relationship. What is so interesting about this case is the current socio-political context of the Netherlands (and much of Europe) with regard to

Islam when combined with the view of the Christian (more specifically Catholic) church on this type of conversion. The Netherlands is experiencing a tension with assimilation processes as it pertains to Muslim immigrants, which some media outlets have termed "Islamophobia" (Hooghiemstra, 2012). At the same time, the Catholic Church in the Netherlands makes their opinion adamantly clear by deeming the adaptive re-use of Catholic churches for mosques as completely unacceptable (Rijksdienst, 2011). Yet amidst these socio-political and religious tensions, the results of the survey show that those who have a higher level of education are more likely to see the re-use of church buildings as mosques as favorable than those with a lower level of education. Although it is impossible to determine the reasoning of the respondents based solely on the survey, a Christian church is physically well suited to become a mosque, as the new religious use is not far from the prior use. Thus, there is little modification necessary and little structural damage done to the church. The clash between cultures is what is seen as controversial and it appears that education mitigates the effects of stereotypes and 'Islamaphobia' when it comes to the issue of re-appropriating a Christian church as a mosque. Of course, further research is required to confirm such a result and reveal the reasoning behind the conclusion.

6.5 Gender and Church Re-use

Based on the results of the regression models, the only significant difference between men and women in their opinion of church re-use is related to physical changes. The overall influence of gender is minimal, as it was only shown to be significant in 2 out of the 20 models. The two models where gender did prove to be a significant factor were those of Streetscape and Demolition. In both of these models, gender has a negative B value, meaning that women in the sample are more likely to find the issues of altering the exterior and/or demolishing the church building as problematic than males. However, these models only explain 10.6% and 10.5% of the variation in opinion respectively, meaning that the explanatory power of gender is quite low. The fact that gender is insignificant in any of the models regarding function shows that only when the physical appearance of the church is subject to change, women are less likely to agree than men.

The exact reason women are more likely to see exterior alterations and demolition of the church building as more problematic than men remains unclear. It may be that women tended to be more religious than men in the sample (having a mean of 12.12 on the religiousness scale compared to 10.52 for men) and therefore held more conservative views on change in relation to the church. Alternatively, since women tend to be more religious than men in general, the social networks of the women in the sample may have been more religiously oriented and therefore influenced their opinion on alterations to the church. However, the result does support other studies on neighborhood perception and attitude toward change that found gender as a significant variable. Kweon et al (2010) find that women are less likely to be satisfied with their neighborhood when compared to men and Kamphuis et al (2010) find that women are more likely than men to perceive disorder and unsafe elements in their neighborhood. Such conclusions infer that women are more sensitive to the physical condition of the neighborhood than men are. By extension, women may be more likely to oppose changes to the neighborhood in general. The results of the Saint Consulting Group (2011) survey offer support for this argument, as women were much less likely than men to support any type of proposed developments in their neighborhood. The fact

that gender only appeared as significant in statements related to physical modification of the church gives credence to the argument that women are more likely than men to oppose changes to the built environment, but not necessarily opposed to functional changes.

An interesting addendum to this argument arises when considering the work of Miller & Hoffman (1995). In their review of the literature pertaining to risk and gender, they find that "females perceive greater risk in virtually all aspects of life" (p. 65). This is interesting, as when considered in the framework of risk, changing the exterior of a building or demolishing it entirely can be perceived as inherently risky due to the uncertainty of the effects of the outcome. Therefore, extending the argument of risk aversion, women are more likely to see exterior alterations and possible demolition of a church as problematic because of the uncertainty involved. Additionally, the sense of risk in changing a church would be enhanced because of its role in the collective memory regarding morality and its prominent position in the urban landscape; often being central, architecturally unique, and old. These factors combined with inherent differences in risk perception according to gender support and may partially account for the differences in opinion regarding physical modifications to the church building.

6.6 Length of Residence and Church Re-use

Similar to the case of gender, length of residence is not an influential variable in respondents' opinions toward church re-use as it is only significant in 3 of the 20 models. Moreover, all of these models are regressions pertaining to singular functions including Accountants Office, Classrooms for a Public Kindergarten, and Private Residence. In terms of explanatory power, these models are also relatively weak, accounting for just 11.6%, 14.7%, and 15.2% of the variation in opinion with multiple predictors. However, the association between length of residence and finding the functions favorable is negative in each case, meaning that the longer the respondent had lived at their current address, the more likely they are to find the re-use of a church as an accountants office, classrooms for a public kindergarten, or as a private residence as unfavorable.

What is most interesting about the results of the length of residence is the lack of significance in the models. In studies of neighborhood attachment and neighborhood change, length of residence is frequently cited as significant in affecting the degree of attachment to place (Bonaiuto et al, 1999), satisfaction (Marans & Rodgers, 1975; Parkes et al, 2002 as cited in Kweon et al, 2010), and how changes in the neighborhood are perceived (for example Snel et al, 2011). However, as shown through the overall lack of significance, opinions of dependent stakeholders regarding the reuse of churches are not influenced by how long a resident has lived at his or her address. The result reveals that people consider the idea of church buildings in the landscape with elevated importance, but when a specific church is not mentioned, length of residence is not significant. By considering the church out of context, the non-significance of length of residence illustrates that individuals can show attachment to 'places' even when divorced of an actual place. This comes as a result through the general support of functions closer to that of the original and the averseness to destruction or modifying the church. The responses of dependent stakeholders are therefore in relation to the idea of church buildings, not one specifically. This is possible because of the similarity in form and meaning attached to the church. With length of residence proving insignificant, the idea of attachment to building form is divorced from the specificities of neighborhood or location is given credence.

VII.) Conclusions

As shown throughout the analysis of dependent stakeholders' opinions, the adaptive re-use of church buildings is undoubtedly both an intricate and sensitive subject. The topic is intricate due to the multiplicity of opinions and power relationships stemming from the desires of various stakeholders engaging with the idea from different perspectives. Too frequently lost in the discourses surrounding adaptive re-use are the socio-cultural implications associated with changing emotionally significant spaces and geographies. As shown, the church is a strong representative example of such a site. The site of the church lies at the intersection of cultural shifts, remaining a strong symbol valued by both religious believers and secular individuals for the role it plays in identity formation, attachment to place, aesthetic beauty, and symbolic stability in the urban environment. Although adaptive re-use has been praised as beneficial from both economic and environmental standpoints by dominant or dangerous stakeholders, little research has looked at how dependent stakeholders view the re-use of culturally sensitive sites. In terms of churches, the two most problematic socio-cultural components of adaptive re-use were shown to be the appropriateness of the assumed function and the subsequent physical modifications to the building. Thus, in order to address this gap in research, the question was asked:

"What is the opinion of dependent stakeholders regarding proposed changes in function and physical modifications accompanying the adaptive re-use of church buildings? Furthermore, which and to what extent do personal characteristics play a role in influencing these opinions?"

To address this question of opinion, a survey was distributed to reach dependent stakeholders directly at three relevant sites representing various degrees of adaptive re-use as it applies to churches. In the survey, participants were asked to indicate their agreement with 12 representative functions of various types of church reuse and to specify how problematic they felt four physical issues particular to church re-use were.

7.1 Conclusions Regarding Functional Changes

In terms of change in function, those most agreed upon by dependent stakeholders were largely the same as those of the church (extended use, Christian religious re-use, and social re-use). The only discrepancy between the top four most agreed upon functions was that more respondents agreed with cultural/arts re-use over community re-use. However, as the functions became more abject, there was greater discrepancy between the preferences of dependent stakeholders and the Christian Church. Typically, more dependent stakeholders found functions with increased social significance more favorable than those that connote very mundane life tasks. This was evidenced through the amount of agreement with the functions of café/bar, private residence, and nightclub/disco and the accompanied amount of disagreement with the functions corporate office and general retail space. Among the most disagreeable functions, both the Church and dependent stakeholders indicated that churches being re-used as a mosque or erotic business is generally unfavorable. This shows that in terms of function, the opinion of dependent stakeholders is more divergent from church opinion as the potential function becomes less similar to the original use.

Overall, dependent stakeholders preferred more unique, sociable functions than commonplace commercial or retail functions, reinforcing the notion that dependent stakeholders view church buildings as special spaces which should be used for activities that have special meanings (expanding cultural offerings, reinforcing social bonds, or raising a family). Therefore, although the Church fears that when its houses of worship become redundant that they are at a serious risk to become centers of immorality, the results of the survey with regard to functions show that dependent stakeholders also have vested interest in the building. Rather than allow the church to fall into abject or overtly normative uses, dependent stakeholders favor socially meaningful re-use of the space if a use similar to the original is no longer possible.

7.2 Conclusions Regarding Physical Changes

Regarding the four modifications particular to the adaptive re-use of churches, dependent stakeholders found the presence and exterior appearance of the church most important. The majority of the sample found the prospect of demolishing the church or significantly modifying distinct exterior features of the building as highly problematic. In terms of the interior space, opinion was more divided regarding partitioning of the building and privatization. After conducting the regression analyses and ANOVA tests, the divide in opinion regarding the interior is mostly explained by the degree of religiousness of the respondent, with the largest division of opinion arising between those who have a low level of religiousness and those who are moderately and highly religious. The results regarding the physical modifications to the building reveal insight into the role the church building plays in place-identity and aesthetic preference. For religious individuals, the building plays a much more active role in their socialization and individual identity as the church symbolizes a sense of meaning in their lives. Therefore, both the interior and exterior of the building take on a heightened significance. In contrast, the majority of secular individuals find the exterior and presence of the church in their neighborhood as significant, yet issues pertaining to the interior less so. For these individuals, the church clearly plays a strong role in providing a sense of stability, historicity, and a readily recognizable form which contributes to place character and enhances attachment to the neighborhood or city. In general, respondents found the church a significant structure in an urban landscape, showing that both secular and religious individuals value both the social and physical nature of the church.

7.3 The Role of Personal Characteristics in Church Re-use

Finally, with regard to the relationship between personal characteristics and opinion toward church re-use, the most significant characteristics were definitively religiousness and age. In terms of religiousness, the ANOVA results revealed that for the various functions, the opinions of low/not religious individuals, moderately religious individuals, and highly religious individuals were distinctly different as the functions entailed uses further from the original. This means that the significance of religiousness is not dichotomous between none religious and religious people, but rather that various incremental levels of belief alter how favorable a certain function is viewed. Therefore, in terms of church re-use, the variable of religiousness should not be over-simplified, as degrees of religious belief significantly differ in terms of opinion. However, in terms of partitioning the interior of the church and potential privatization, the relationship between degrees of religiousness was the opposite, with the most significant

difference occurring between those who were low/not religious and those who were at least moderately religious. While both religious and secular individuals valued both social and physical elements of the church, the more religious respondents in the survey often displayed a more conservative opinion on adaptive re-use than their secular counterparts. The importance of religiousness in effecting the opinion of dependent stakeholders further emphasizes how socio-cultural considerations are important in the determination of successful adaptive re-use projects.

Age was found to be the second most influential characteristic in determining the opinion of dependent stakeholders toward the proposed adaptive re-use of churches. Overall, age was negatively associated with viewing the adaptive re-use of churches as favorable, meaning that as age increased, the individual was significantly less likely to agree with a new function, partitioning the interior, or altering the exterior. However, unlike religiousness, the largest difference in opinion in terms of function occurred between those who were 54 years old or younger and those who were over 55. In terms of a church assuming a new function, the oldest generation was significantly more conservative than those who were younger. However, with regard to the issues of partitioning the interior and altering the exterior of the church, the most significant difference in opinion was between those who were 34 years old or younger and those who were 35 or older. Such differences in opinion support prior research that has found older generations to be more opposed to change in general and is not limited to church conversions. Additionally, the difference in opinion regarding function is especially significant in the Netherlands, as those who were older than 54 experienced the effects of pillarization, which may influence their attachment to the church building. The significance of age is an important result because it means that the opposition to more liberal functions in churches stems mostly from those who are 55 or older. While those who are younger still value the church building, it is also evident that they are open to its re-use in a manner that is more relevant to the demands of contemporary society.

The characteristics of education, length of residence, and gender were found to be of only minor significance in influencing respondents' opinion toward adaptive re-use. Notably, those who were highly educated found the prospect of converting a Christian church to a mosque as more acceptable than those with a lower education. In the Netherlands especially, this is a revealing insight not only into the relationship between religious literalism and the possible mitigating effects of education, but also as a reflection of the different stances on 'tolerance' between socio-economic classes. Interestingly, the effect of length of residence on opinion was minimal. Although often cited as significant in neighborhood change and place attachment literature, it was only of minor importance in relation to opinion on the re-use of churches. This was probably because the survey took a de-contextualized approach rather than focusing on a specific example. However, this also shows that the idea of place-attachment can be extended to representative forms of places, as many dependent stakeholders felt that the idea of the church structure was both socially and physically important to place-identity and urban landscape even without a context. Finally, gender only proved to be significant when examining physical changes to the church in terms of the exterior or complete demolition. In the sample women were significantly more opposed to these possibilities than men, which supports previous research that finds women generally more attentive to the urban environment and opposed to developments. Since gender is only significant in terms of changes to the exterior, the result also offers an interesting interpretation in the framework of 'risk', where women are generally more risk averse than men,

meaning they would be more likely to oppose changes to the built environment. However, the relationship between risk, gender, and the urban environment needs to be investigated further before definitive conclusions can be drawn.

7.4 Wider Scientific Relevance

The discussion of adaptive re-use all too frequently relies on examining the process from economic or environmental perspectives in order to emphasize the potential benefits in comparison to destroy and re-build or completely new construction techniques. Clearly, adaptive re-use deserves much of this attention as the world struggles to become more environmentally conscious while simultaneously cutting costs. However, the adaptive re-use discourse often over-simplifies or completely neglects the socio-cultural elements of what makes 'place' significant to individuals. The strong relationship between the built environment and socio-cultural well-being is evidenced in the societal desire to preserve historically significant sites, buildings, streetscapes, and neighborhoods. Yet, the method of preservation and determination of what is significant is often dominated by 'symbolic bankers' who possess the fiscal and social capital to advance their ideas and agendas. Such preservation techniques often run the risk of being impractical or out of touch with the way those who have vested interest in the site feel the space should be preserved or used. By examining the opinions of dependent stakeholders with regard to the adaptive re-use of church buildings in the Netherlands, this research highlights how the socio-cultural idea of place needs to be emphasized in discussions of adaptive re-use and how consultation of the 'silent majority' can result in a more effective, community based approach to preserving spaces of significance in a way that corresponds to the desires of its users.

The case of vacant churches offers a powerful example of a socially significant space that when subject to re-use can evoke emotion and strong sentiment from both former and current end-users. Unlike more common examples of industrial or commercial properties that are often lauded when re-used, many dependent stakeholders of church buildings feel that the church should not be re-used in a way very different from its original function or for very commonplace tasks. Whereas a former industrial site is celebrated when it becomes a more functional supermarket, the idea of shopping for daily groceries in a former house of worship is a strongly detested idea. This difference in opinion toward how change is perceived shows that adaptive re-use is a more complex process when applied to sites with strong social attachments such as churches. It is not to say that re-use of churches is impossible, but rather that the scope of what is deemed appropriate by engaged communities is much narrower than for sites that have lost their place of significance in the collective social conscious. Even when de-contextualized, the idea of the church is so deeply embedded in the collective memories and place-identities of individuals that it provides clear evidence as to how adaptive re-use projects must, in addition to being environmentally and economically aware, also be socially attune to the sites they are working with and the attitudes of those who have vested interest in said sites. By consulting the dependent stakeholders of redundant churches, it becomes immediately apparent which types of functions are desirable, how the building is physically significant, and what should be avoided in the process of re-use.

Although adaptive re-use is a construction technique that can be applied in all types of locations, the sites that will undoubtedly be the most controversial are those in central urban areas. With the rapid amount of residential turnover and change taking place in cities, the need for space and

the variety of ways properties can be re-imagined makes these locations more valuable and highly contested. Especially in the case of churches, those located in urban areas are often in historic central areas and occupy space that could potentially be re-used for a multitude of functions. Accompanying the increased demand for inner city is space is an increased amount of vested interest and types of stakeholders development of a site will potentially affect. Since it is in the city where adaptive re-use has the most potential in terms environmentally conscious and fiscally responsible construction, it too is in the city where the social attachments to and symbolic nature of churches will be greatest. The 'urban church' stands as an example of how the social importance of place needs to be considered from a variety of perspectives in the discussion of adaptive re-use and, furthermore, reveals how sites that act as emotional anchors must be treated differently than adaptive re-use projects involving more mundane buildings or landscapes.

Furthermore, the results of this research serve as an affirmation of the foundational work done by Proshansky et al (1983) and Mazumdar & Mazumdar (1993, 2004) with regard to place-identity and religious spaces. While measuring the attitudes of dependent stakeholders regarding functional and physical changes of church re-use, respondents were very much in favor of functions that remained quite close to the previous use of the church regardless of religious belief. Furthermore, both secular and religious respondents were highly opposed to changes involving the exterior physical appearance or presence of the church. This opinion is very much expected based on the importance of the church in providing the recognition function for secular individuals and the meaning function of religious individuals. The strong opposition to changing the exterior shows that people have an attachment to churches in the built environment. Furthermore, the results confirm the idea of Proshansky et al (1983) that place-identity involves attachments to both the physical reality and social meanings of place. The high amounts of agreement to functions that re-use the church in a manner similar to its original function emphasize how many of the respondents were attached both to the building and to the symbolic social meaning. The degree of attachment appears to be influenced by the religiousness and age of the individual. In almost all cases of proposed church re-use, individuals who were older or more religious evidenced a higher degree of attachment to the church through a more conservative stance of appropriate re-use.

However, the idea of place-identity is also expanded upon by combining the works of Proshansky et al (1983) and Mazumdar & Mazumdar (1993, 2004). These authors work with the idea of place-identity in terms of a specific site or place. Yet, the unique position of the church is that both the institution and building form are so widespread that a 'church' is readily recognizable and identifiable in a multitude of locations. This intertwining of social institution and repetitive building form highlights how the idea of place-identity may be more fluid than attachment to a distinct place. Without examining a specific case, respondents still displayed significant attachment to the church building. Therefore, people revered the idea of the church and the social meaning that it stood for in general. This leads to the belief that place-identity may also be linked to certain typologies of landscape elements in addition to site-specific locations where actual experiences have occurred. The examination of the church exemplifies how place-identity incorporates many churches in different landscapes because of the identifiable forms and multiplicity of physical representations of a single social institution. The idea of place-identity

incorporating certain repetitious landscapes, elements, or scenes may also play a role in the development of aesthetic preference for certain natural and/or built environments.

In relation to neighborhood change, the results indicate that many individuals are opposed to drastic alterations to their neighborhood, especially when it is a unique and meaningful building in question. As highlighted in the literature regarding neighborhood satisfaction and change, both social and physical factors contribute to how neighborhoods are perceived. In terms of physical changes, adaptive re-use is a valuable technique that allows the function of a building to change while retaining a sense of stability by reducing the necessity of drastic change. Especially in the case of redundant churches, this sense of stability through retaining the building was something that dependent stakeholders found very important. Yet, as seen through the opposition to drastic functional changes in the opinion of dependent stakeholders, adaptive re-use projects need to take into consideration for whom the development is meant for. Just as in instances of neighborhood developments that lead to displacement pressure, an insensitive church conversion could lead to similar feelings if a controversial function is chosen, especially among older and more religious communities. However, the results of this research also reveal how important context is to analyzing specific cases of neighborhood change. It is very difficult to generalize which factors will be most important because, as shown, length of residence, level of education, and gender (all of which have been previously cited as significant determinants of residential satisfaction) were shown to be of minimal significance when discussing the idea of church conversions. In the context of vacant churches in the Netherlands, the characteristics of religiousness and age are far more important to consider in determining the opinion of respondents.

7.5 Wider Social Relevance

The results of the study highlight just how adaptive re-use can be beneficial in terms of economic, environmental, and socio-cultural considerations. As a construction technique, adaptive re-use offers benefits that extend into the social well-being of communities and offering stability in the built environment while meeting the functional demands of contemporary society. Specifically in the case of churches, it should be clear that because of the elevated social significance of the buildings, they should be treated differently than conventional adaptive re-use projects. The opinions of dependent stakeholders serve to underscore how they do indeed value the building, but in a different way than the Church. The situation of vacant churches should be seen as an opportunity by municipal or local planners to act as a mediator in the process of determining the future of the church.

Based on the scheme of stakeholders, those deemed as dependent lack the necessary ‘power’ to voice their opinions in an influential manner. While the Church is often consulted due to the institution’s status as the definitive stakeholder, the actual futures of vacant churches have typically been decided as a result of the debates between the definitive stakeholder and dangerous stakeholders. Planners are considered part of the larger governmental stakeholder; in most cases a dominant stakeholder that possesses legitimacy, legal power, and capital assets. Although local governments have intervened in the status of vacant churches through avenues such as monument designation, zoning, and tax credits, they are not typically active enough to take over the role of the determinant stakeholder. However, as seen through the analysis of dependent stakeholders’ attitudes, the local government should strive to consult these end-users

of church spaces to determine their opinion and concerns regarding prospective church re-use projects and then use their privileged position to provide a way of voicing the opinion of the dependent stakeholders. By taking a more active role in mediating between the various levels of stakeholders, resulting re-use projects involving vacant churches have the potential to be more attune to local sensitivities and more successful for all parties involved.

This community oriented approach to development is what socially significant sites, such as churches, demand when they have fallen into disuse. Especially in urban areas where land is often much more valuable than the ruined building on top of it, local governments need to take action to ensure dangerous stakeholders do not subdue the demands of dependent stakeholders. Furthermore, based on the results of the survey it is clear that individuals in the Netherlands prefer to see the church re-used in a similar manner prior to its vacancy and if this is not possible, then a function that is more socially meaningful is desired. Moreover, dependent stakeholders most certainly do not want to see a church destroyed. Thus, local planners should strive to develop the spaces in a creative manner that suits the desires of actual end users while finding a solution to prevent the space from being destroyed or ruined. As shown, the most agreed with function was extended use, meaning the religious group is still allowed to use the space while sharing it with another function. This preference should encourage local planners in being creative, as the possibilities of sharing such a unique space can encourage fruitful re-use in the form of public ventures or public-private partnerships. Although each case is undoubtedly unique, a more community oriented approach to finding solutions for redundant churches through considering the multiplicity of stakeholder demands will result in a more creative and constructive result.

Outside of discussions regarding the mediating influence of governments and church re-use, it is also necessary to consider the two characteristics that were most opposed to church re-use; those who were highly religious and those who were 55 or older. Practically speaking, these two demographic groups are quickly diminishing in both the Netherlands and other Western European countries. As the processes of secularization combine with the unavoidable death of older individuals, it may signify the necessity for the Church to be more lenient in its attitude toward redundant churches and also lead planners to view heritage in a different light. By ignoring the opinion of younger and/or less religious dependent stakeholders, the risk is run that the Church as an institution continues to hold too much influence in determining the future of redundant churches and a serious discrepancy between stakeholders' desires and the opinion of the Church arises. If the Church is seen as 'out of touch' with what potential users of the space want, then it may leave a feeling that an opportunity to use valuable space has been wasted, leaving the Church with no other option than to sell the building or let it fall into further disrepair. These two results could in the end turn out to be more disappointing and less acceptable than if a community oriented course of action had been taken. However, if the Church sees that many stakeholders value the building and would like to re-use the structure for a socially significant function, it may benefit both the Church and the wider community. This way, the church building is maintained in a manner that extends its useful life and the building remains a beloved feature of the neighborhood landscape.

This also relates to further work that can be done in the burgeoning field linking adaptive re-use as a construction technique and the socio-cultural benefits, especially as it relates to place-

attachment and identity. Churches are certainly a prominent example of how the built environment plays a role in the lives of individuals that is deeper than aesthetic preference. As globalization takes its course and more homogenous building forms become the norm for new build construction, the technique of adaptive re-use is powerful in allowing the past to become contemporary while maintaining place-character. However, adaptive re-use need not be applied blindly. Just as in the case of churches, further research needs to be done to discover what types, forms, and elements of environments people feel most attached to and desire preserving. Although not all buildings will be as prominent as the church in place identities, this type of consultation of those who use urban spaces should be extended to areas such as green spaces and natural features in historic city parks and monuments that may be slipping into irrelevance for younger generations. These two areas especially have histories that are overlooked or forgotten, but by creatively linking the past with modern functionality, the spaces can become twice as effective because they are already distinct. Adaptive re-use has been viewed quite simplistically until now, but by paying more attention to the histories of significant sites, it can be a powerful tool in redevelopment that entails more than just shining facades; it can help foster more personal bonds between human beings, the culturally enriched landscape, and their individual identities.

The results of the survey confirm that the church building remains an important structure to contemporary society. From identity formation and religious attachment to contributing to place-character and neighborhood appeal, people see the church as a unique building in an ever modernizing landscape. Even in secularizing societies, the church stands as a manifestation of the past; of formative moral codes and a tangible link with an institution that was ever-present in the development of Western society. Although society has changed and is no longer as dependent on the Church for morals and mandates, the building still fosters strong feelings both to place and tradition. Through adaptive re-use this tradition can be honored instead of forgotten and by considering the opinion of dependent, determinant, and dangerous stakeholders instead of a singular voice, the religious buildings deemed redundant can once again become vibrant places within their communities.

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APPENDIX A
SURVEY USED IN STUDY

Onderzoek naar publieksvoorkeuren voor toekomstig gebruik/hergebruik van overtollige kerkgebouwen

De vragen gaan over de herbestemming van leegkomende kerkgebouwen. Herbestemming slaat op het proces waardoor kerken andere functies kunnen krijgen dan waarvoor ze zijn gebouwd.

Kerkbesturen hebben duidelijke voorkeuren wat er van moet worden. Toch weten we nog weinig tot niets van wat het publiek voelt voor een nieuwe toekomst van kerken die vrijkomen. Om die reden zijn uw antwoorden meer dan welkom. Dank voor uw vrijwillige deelname!

Uw antwoorden zijn vertrouwelijk en anoniem.

Benjamin Garstka, MA Student Stadsgeografie, Universiteit Utrecht

1. **De volgende vragen brengen in kaart wat volgens u een goede toekomstige functie zou zijn voor leegstaande kerkgebouwen. Kruis uw antwoord aan.**

   Elke vraag begint met:

"Ik zie graag dat een leegstaand kerkgebouw wordt hergebruikt...."

Functie	**Helemaal mee eens**	**Mee eens**	**Eens noch oneens**	**Oneens**	**Totaal Oneens**
als een accountantskantoor	☐	☐	☐	☐	☐
als lokaal voor een kleuterschool	☐	☐	☐	☐	☐
als een privé-woning	☐	☐	☐	☐	☐
als een bordeel	☐	☐	☐	☐	☐
als een moskee	☐	☐	☐	☐	☐
als een ouderencentrum	☐	☐	☐	☐	☐
door een andere christelijke stroming (bv. protestant naar katholiek)	☐	☐	☐	☐	☐
als een tentoonstellingsruimte met medegebruik door een nog actieve kerkgemeenschap of parochie	☐	☐	☐	☐	☐
als een café/bar	☐	☐	☐	☐	☐
als theaterruimte voor podiumkunsten	☐	☐	☐	☐	☐
als filiaal van een grote supermarktketen	☐	☐	☐	☐	☐
als een discotheek of nachtclub	☐	☐	☐	☐	☐

2. De volgende vier vragen gaan over kwesties die van invloed kunnen zijn op hoe u staat tegenover een mogelijke herbestemming van kerkgebouwen *bij u in de buurt*.

Herbestemmingkwesties	**Helemaal mee eens**	**Mee eens**	**Eens noch oneens**	**Oneens**	**Totaal Oneens**
Ik vind dat de emotionele waarde van een kerkgebouw te lijden heeft van aanpassingen die de kerkruimte voorgoed opdelen (bv tussenverdiepingen, scheidingswanden tussen altaar en schip).	☐	☐	☐	☐	☐
Omdat het een kerk is, vind ik dat het gebouw voor het publiek toegankelijk moet blijven.	☐	☐	☐	☐	☐
Ik vind dat de waarde van het gebouw in de buurt achteruitgaat als de buitenkant van de kerk sterk zou worden veranderd (bv. glas-in-lood ramen verdwijnen, toren of torenspits worden afgebroken).	☐	☐	☐	☐	☐
Ik vind de kerkgebouwen karakteristiek voor de buurt en dat de buurt achteruitgaat als ze verdwijnen.	☐	☐	☐	☐	☐

3. Tot slot, sommige vragen over demografische kenmerken:

1.) **Uw leeftijd: _____ jaar**

2.) **Geslacht:** ☐ man ☐ vrouw

3.) **Hoogste voltooide opleiding:**
- ☐ Basisschool/lagere school
- ☐ VMBO
- ☐ HAVO / VWO
- ☐ MBO
- ☐ HBO
- ☐ Universiteit

4.) **Ik woon _____ jaar al op mijn huidige adres.**

5.) **Wilt u een van beide antwoorden aankruisen:**

☐ Ik ben niet verbonden aan een kerkelijke stroming

☐ Ik ben verbonden aan een kerkelijke stroming en wel de volgende:
_____

6.) **Stip hieronder aan waarmee u het meer of minder eens of oneens bent**

	Helemaal mee eens	Mee eens	Oneens	Totaal Oneens
Ik bid elke dag.	☐	☐	☐	☐
Mijn geloof geeft zin aan mijn leven.	☐	☐	☐	☐
Ik ben actief bezig met mijn geloof en/of mijn kerk.	☐	☐	☐	☐
Ik ben graag met anderen die mijn geloof delen.	☐	☐	☐	☐
Mijn geloof beïnvloedt veel van mijn beslissingen.	☐	☐	☐	☐

Einde van van de enquête. Wilt u uw enquête na het invullen weer bij mij inleveren?
Hartelijk dank voor uw medewerking!

APPENDIX B
FREQUENCY DISTRIBUTIONS FOR INDEPENDENT VARIABLES

TABLE B-1: Frequency Distribution Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	59	47.6	47.6	47.6
	Male	65	52.4	52.4	100.0
	Total	124	100.0	100.0	

TABLE B-2: Frequency Distribution Level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	low	10	8.1	8.1	8.1
	intermediate	29	23.4	23.4	31.5
	high	85	68.5	68.5	100.0
	Total	124	100.0	100.0	

TABLE B-3: Frequency Distribution of Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	19	15.3	15.3	15.3
	25-34	44	35.5	35.5	50.8
	35-44	18	14.5	14.5	65.3
	45-54	21	16.9	16.9	82.3
	55-64	15	12.1	12.1	94.4
	65-74	6	4.8	4.8	99.2
	75-100	1	.8	.8	100.0
	Total	124	100.0	100.0	

TABLE B-4: Frequency Distribution of Religiousness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low Religiousness (5-9)	50	40.3	40.3	40.3
	Medium Religiousness (10-14)	40	32.3	32.3	72.6
	High Religiousness (15-20)	34	27.4	27.4	100.0
	Total	124	100.0	100.0	

TABLE B-5: Frequency Distribution Length of Residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	61	49.2	49.2	49.2
	6-10	19	15.3	15.3	64.5
	11-15	15	12.1	12.1	76.6
	16-20	9	7.3	7.3	83.9
	21-25	5	4.0	4.0	87.9
	26-30	6	4.8	4.8	92.7
	31+	9	7.3	7.3	100.0
	Total	124	100.0	100.0	

APPENDIX C
REGRESSION OUTPUTS FOR INDIVIDUAL FUNCTIONAL MODELS

TABLE C-1: Accountants Office

Model Summary[f]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.366[a]	.134	.090	1.19816	
2	.366[b]	.134	.097	1.19308	
3	.366[c]	.134	.105	1.18831	
4	.365[d]	.133	.111	1.18375	
5	.360[e]	.130	.116	1.18100	1.659

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

c. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling

d. Predictors: (Constant), Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling

e. Predictors: (Constant), How religious an individual is, Amount of time respondent has lived at their current dwelling

f. Dependent Variable: Accountants Office

Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics

		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.332	.552		6.038	.000		
	How religious an individual is	-.051	.021	-.219	-2.412	.017	.894	1.119
	Age of Respondent	-.007	.010	-.082	-.683	.496	.510	1.961
	Amount of time respondent has lived at their current dwelling	-.019	.012	-.186	-1.506	.135	.488	2.051
	gender	.056	.223	.022	.252	.801	.936	1.069
	EduMiddle	-.073	.468	-.025	-.156	.876	.295	3.385
	EduHigh	-.017	.430	-.006	-.040	.968	.291	3.436
2	(Constant)	3.316	.383		8.657	.000		
	How religious an individual is	-.051	.021	-.219	-2.430	.017	.902	1.108
	Age of Respondent	-.007	.009	-.083	-.707	.481	.530	1.887
	Amount of time respondent has lived at their current dwelling	-.019	.012	-.184	-1.589	.115	.548	1.825
	gender	.057	.220	.023	.261	.795	.953	1.049
	EduMiddle	-.058	.260	-.020	-.222	.825	.945	1.058
3	(Constant)	3.300	.375		8.810	.000		
	How religious an individual is	-.052	.021	-.222	-2.508	.014	.926	1.080
	Age of Respondent	-.006	.009	-.081	-.691	.491	.535	1.869
	Amount of time respondent has lived at their current dwelling	-.019	.012	-.183	-1.589	.115	.549	1.823
	gender	.062	.218	.025	.284	.777	.961	1.040
4	(Constant)	3.333	.355		9.400	.000		
	How religious an individual is	-.053	.020	-.226	-2.598	.011	.951	1.051
	Age of Respondent	-.006	.009	-.076	-.663	.509	.544	1.838
	Amount of time respondent has lived at their current dwelling	-.019	.012	-.186	-1.628	.106	.553	1.808

5	(Constant)	3.169	.253		12.512	.000		
	How religious an individual is	-.055	.020	-.234	-2.718	.008	.969	1.032
	Amount of time respondent has lived at their current dwelling	-.024	.009	-.236	-2.735	.007	.969	1.032

a. Dependent Variable: Accountants Office

TABLE C-2: Classrooms For Public Kindergarten

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.431[a]	.186	.144	1.24287	
2	.425[b]	.181	.146	1.24144	
3	.417[c]	.174	.147	1.24112	1.656

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

c. Predictors: (Constant), EduHigh, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

d. Dependent Variable: Classrooms for public kindergarten

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.644	.572		8.112	.000

	How religious an individual is	-.035	.022	-.140	-1.587	.115
	Age of Respondent	-.009	.010	-.100	-.855	.395
	Amount of time respondent has lived at their current dwelling	-.030	.013	-.281	-2.355	.020
	gender	.249	.231	.093	1.079	.283
	EduMiddle	-1.021	.485	-.323	-2.105	.037
	EduHigh	-.709	.446	-.246	-1.590	.114
2	(Constant)	4.504	.548		8.220	.000
	How religious an individual is	-.039	.022	-.154	-1.772	.079
	Amount of time respondent has lived at their current dwelling	-.038	.010	-.349	-3.935	.000
	gender	.221	.228	.083	.968	.335
	EduMiddle	-1.066	.482	-.337	-2.212	.029
	EduHigh	-.783	.437	-.272	-1.793	.076
3	(Constant)	4.706	.507		9.286	.000
	How religious an individual is	-.041	.022	-.165	-1.920	.057
	Amount of time respondent has lived at their current dwelling	-.038	.010	-.354	-3.990	.000
	EduMiddle	-1.136	.476	-.359	-2.386	.019
	EduHigh	-.830	.434	-.288	-1.913	.058

a. Dependent Variable: Classrooms for public kindergarten

TABLE C-3: Private Residence

Model Summary[r]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson

1	.438[a]	.192	.150	1.21048	
2	.437[b]	.191	.157	1.20576	
3	.433[c]	.187	.160	1.20366	
4	.420[d]	.177	.156	1.20620	
5	.407[e]	.165	.152	1.20954	1.470

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

c. Predictors: (Constant), EduHigh, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

d. Predictors: (Constant), EduHigh, How religious an individual is, Amount of time respondent has lived at their current dwelling

e. Predictors: (Constant), How religious an individual is, Amount of time respondent has lived at their current dwelling

f. Dependent Variable: Private residence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.142	.558		5.636	.000
	How religious an individual is	-.072	.022	-.294	-3.344	.001
	Age of Respondent	-.008	.010	-.093	-.796	.428
	Amount of time respondent has lived at their current dwelling	-.010	.013	-.096	-.809	.420
	gender	.064	.225	.024	.283	.778

	EduMiddle	.619	.472	.200	1.311	.193
	EduHigh	.809	.434	.287	1.863	.065
2	(Constant)	3.193	.526		6.067	.000
	How religious an individual is	-.073	.021	-.298	-3.443	.001
	Age of Respondent	-.007	.010	-.088	-.766	.445
	Amount of time respondent has lived at their current dwelling	-.011	.012	-.101	-.857	.393
	EduMiddle	.597	.464	.193	1.287	.201
	EduHigh	.792	.428	.281	1.849	.067
3	(Constant)	3.050	.491		6.207	.000
	How religious an individual is	-.076	.021	-.309	-3.622	.000
	Amount of time respondent has lived at their current dwelling	-.017	.009	-.160	-1.823	.071
	EduMiddle	.567	.462	.183	1.227	.222
	EduHigh	.733	.421	.260	1.744	.084
4	(Constant)	3.497	.331		10.560	.000
	How religious an individual is	-.074	.021	-.304	-3.559	.001
	Amount of time respondent has lived at their current dwelling	-.020	.009	-.192	-2.279	.024
	EduHigh	.307	.237	.109	1.293	.198
5	(Constant)	3.764	.259		14.509	.000
	How religious an individual is	-.079	.021	-.322	-3.811	.000
	Amount of time respondent has lived at their current dwelling	-.021	.009	-.198	-2.350	.020

a. Dependent Variable: Private residence

TABLE C-4: Mosque

Model Summary[f]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.399[a]	.159	.116	1.22284	
2	.397[b]	.157	.122	1.21906	
3	.388[c]	.150	.122	1.21887	
4	.370[d]	.137	.115	1.22361	
5	.351[e]	.123	.109	1.22800	1.935

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, EduMiddle

c. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is

d. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is

e. Predictors: (Constant), EduHigh, How religious an individual is

f. Dependent Variable: Mosque

Coefficients[a]					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.516	.563		4.468	.000

	How religious an individual is	-.056	.022	-.229	-2.556	.012
	Age of Respondent	-.007	.010	-.079	-.661	.510
	Amount of time respondent has lived at their current dwelling	-.007	.013	-.063	-.522	.603
	gender	.323	.227	.125	1.422	.158
	EduMiddle	.374	.477	.122	.783	.435
	EduHigh	.765	.438	.274	1.744	.084
2	(Constant)	2.502	.561		4.461	.000
	How religious an individual is	-.056	.022	-.229	-2.563	.012
	Age of Respondent	-.010	.007	-.120	-1.361	.176
	gender	.339	.225	.131	1.509	.134
	EduMiddle	.446	.455	.146	.981	.329
	EduHigh	.841	.412	.301	2.039	.044
3	(Constant)	2.879	.409		7.047	.000
	How religious an individual is	-.055	.022	-.228	-2.556	.012
	Age of Respondent	-.011	.007	-.130	-1.493	.138
	gender	.310	.223	.119	1.392	.167
	EduHigh	.513	.241	.184	2.128	.035
4	(Constant)	3.057	.390		7.847	.000
	How religious an individual is	-.060	.021	-.248	-2.804	.006
	Age of Respondent	-.010	.007	-.119	-1.367	.174
	EduHigh	.518	.242	.186	2.141	.034
5	(Constant)	2.773	.331		8.387	.000
	How religious an individual is	-.067	.021	-.276	-3.197	.002
	EduHigh	.483	.241	.173	2.001	.048

a. Dependent Variable: Mosque

TABLE C-5: Senior Center

Model Summary[e]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.378[a]	.143	.099	1.06535	
2	.373[b]	.139	.103	1.06309	
3	.363[c]	.132	.103	1.06322	
4	.340[d]	.115	.093	1.06885	1.588

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

c. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is, EduMiddle

d. Predictors: (Constant), EduHigh, Age of Respondent, EduMiddle

e. Dependent Variable: Senior Center

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.138	.491		10.471	.000
	How religious an individual is	-.026	.019	-.123	-1.356	.178

	Age of Respondent	-.013	.009	-.185	-1.545	.125
	Amount of time respondent has lived at their current dwelling	-.010	.011	-.112	-.910	.365
	gender	.140	.198	.062	.706	.481
	EduMiddle	-1.077	.416	-.408	-2.590	.011
	EduHigh	-.776	.382	-.322	-2.031	.045
2	(Constant)	5.249	.464		11.313	.000
	How religious an individual is	-.028	.019	-.133	-1.488	.140
	Age of Respondent	-.012	.008	-.173	-1.463	.146
	Amount of time respondent has lived at their current dwelling	-.011	.011	-.123	-1.015	.312
	EduMiddle	-1.125	.409	-.426	-2.748	.007
	EduHigh	-.812	.378	-.337	-2.151	.034
3	(Constant)	5.246	.464		11.305	.000
	How religious an individual is	-.028	.019	-.135	-1.508	.134
	Age of Respondent	-.018	.006	-.253	-2.845	.005
	EduMiddle	-1.010	.393	-.382	-2.567	.011
	EduHigh	-.690	.358	-.286	-1.927	.056
4	(Constant)	4.985	.433		11.513	.000
	Age of Respondent	-.020	.006	-.284	-3.271	.001
	EduMiddle	-1.027	.395	-.389	-2.599	.011
	EduHigh	-.641	.358	-.266	-1.789	.076

a. Dependent Variable: Senior Center

TABLE C-6: Café/Bar

Model Summary[e]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.621[a]	.385	.354	1.26138	
2	.621[b]	.385	.359	1.25607	
3	.619[c]	.383	.362	1.25366	
4	.613[d]	.376	.360	1.25516	1.414

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling

c. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling

d. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is

e. Dependent Variable: cafe/bar

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.110	.581		10.516	.000

	How religious an individual is	-.147	.022	-.501	-6.529	.000
	Age of Respondent	-.018	.010	-.178	-1.752	.082
	Amount of time respondent has lived at their current dwelling	-.015	.013	-.121	-1.166	.246
	gender	-.174	.234	-.055	-.740	.461
	EduMiddle	-.048	.492	-.013	-.097	.923
	EduHigh	-.696	.452	-.207	-1.538	.127
2	(Constant)	6.072	.430		14.113	.000
	How religious an individual is	-.147	.022	-.501	-6.558	.000
	Age of Respondent	-.018	.010	-.179	-1.780	.078
	Amount of time respondent has lived at their current dwelling	-.015	.012	-.118	-1.194	.235
	gender	-.170	.230	-.054	-.737	.463
	EduHigh	-.659	.252	-.196	-2.618	.010
3	(Constant)	5.981	.411		14.538	.000
	How religious an individual is	-.144	.022	-.492	-6.536	.000
	Age of Respondent	-.019	.010	-.188	-1.893	.061
	Amount of time respondent has lived at their current dwelling	-.014	.012	-.112	-1.135	.259
	EduHigh	-.659	.251	-.196	-2.623	.010
4	(Constant)	6.095	.400		15.252	.000
	How religious an individual is	-.144	.022	-.493	-6.542	.000
	Age of Respondent	-.026	.007	-.263	-3.546	.001
	EduHigh	-.611	.248	-.182	-2.464	.015

a. Dependent Variable: cafe/bar

TABLE C-7: Theatre Space

Model Summary[f]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.553[a]	.305	.270	1.13721	
2	.552[b]	.305	.276	1.13267	
3	.552[c]	.304	.281	1.12841	
4	.548[d]	.300	.283	1.12698	
5	.536[e]	.288	.276	1.13257	1.780
a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle					
b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling					
c. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling					
d. Predictors: (Constant), gender, How religious an individual is, Amount of time respondent has lived at their current dwelling					
e. Predictors: (Constant), How religious an individual is, Amount of time respondent has lived at their current dwelling					
f. Dependent Variable: theatre space					

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.393	.524		10.296	.000
	How religious an individual is	-.122	.020	-.492	-6.036	.000
	Age of Respondent	-.008	.009	-.097	-.896	.372
	Amount of time respondent has lived at their current dwelling	-.008	.012	-.078	-.710	.479
	gender	-.274	.211	-.103	-1.294	.198
	EduMiddle	.109	.444	.035	.244	.807
	EduHigh	.156	.408	.055	.384	.702
2	(Constant)	5.478	.388		14.120	.000
	How religious an individual is	-.122	.020	-.492	-6.058	.000
	Age of Respondent	-.008	.009	-.094	-.878	.382
	Amount of time respondent has lived at their current dwelling	-.009	.011	-.086	-.820	.414
	gender	-.282	.208	-.106	-1.358	.177
	EduHigh	.074	.227	.026	.325	.746
3	(Constant)	5.528	.356		15.540	.000
	How religious an individual is	-.123	.020	-.497	-6.253	.000
	Age of Respondent	-.007	.009	-.087	-.834	.406
	Amount of time respondent has lived at their current dwelling	-.010	.011	-.092	-.891	.375
	gender	-.282	.207	-.106	-1.363	.176

4	(Constant)	5.344	.279		19.130	.000
	How religious an individual is	-.126	.019	-.507	-6.464	.000
	Amount of time respondent has lived at their current dwelling	-.016	.008	-.149	-1.916	.058
	gender	-.304	.205	-.115	-1.485	.140
5	(Constant)	5.136	.243		21.145	.000
	How religious an individual is	-.122	.019	-.490	-6.284	.000
	Amount of time respondent has lived at their current dwelling	-.016	.008	-.148	-1.896	.060

a. Dependent Variable: theatre space

TABLE C-8: Supermarket

Model Summary[f]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.345[a]	.119	.074	1.03312	
2	.344[b]	.119	.081	1.02905	
3	.343[c]	.118	.088	1.02511	
4	.339[d]	.115	.093	1.02251	
5	.333[e]	.111	.096	1.02082	2.092

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle
c. Predictors: (Constant), Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle
d. Predictors: (Constant), Age of Respondent, How religious an individual is, EduMiddle
e. Predictors: (Constant), Age of Respondent, How religious an individual is
f. Dependent Variable: supermarket

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.928	.476		6.154	.000
	How religious an individual is	-.047	.018	-.233	-2.540	.012
	Age of Respondent	-.016	.008	-.237	-1.951	.053
	Amount of time respondent has lived at their current dwelling	.005	.011	.058	.470	.639
	gender	-.064	.192	-.030	-.331	.741
	EduMiddle	-.264	.403	-.105	-.655	.514
	EduHigh	-.099	.370	-.043	-.268	.789
2	(Constant)	2.837	.330		8.587	.000
	How religious an individual is	-.046	.018	-.231	-2.536	.013
	Age of Respondent	-.017	.008	-.243	-2.050	.043
	Amount of time respondent has lived at their	.006	.010	.069	.595	.553

	current dwelling					
	gender	-.057	.190	-.026	-.298	.766
	EduMiddle	-.175	.225	-.069	-.778	.438
3	(Constant)	2.805	.312		9.002	.000
	How religious an individual is	-.045	.018	-.227	-2.529	.013
	Age of Respondent	-.017	.008	-.248	-2.108	.037
	Amount of time respondent has lived at their current dwelling	.006	.010	.073	.628	.531
	EduMiddle	-.169	.223	-.067	-.757	.451
4	(Constant)	2.739	.293		9.362	.000
	How religious an individual is	-.045	.018	-.224	-2.509	.013
	Age of Respondent	-.014	.006	-.200	-2.241	.027
	EduMiddle	-.172	.222	-.068	-.773	.441
5	(Constant)	2.697	.287		9.400	.000
	How religious an individual is	-.047	.018	-.236	-2.690	.008
	Age of Respondent	-.013	.006	-.189	-2.146	.034

a. Dependent Variable: supermarket

TABLE C-9: Disco/Nightclub

Model Summary[e]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.661[a]	.437	.408	1.15895	
2	.661[b]	.437	.413	1.15403	
3	.661[c]	.437	.418	1.14937	
4	.659[d]	.435	.421	1.14669	1.530

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, EduMiddle

c. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is

d. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is

e. Dependent Variable: disco/nightclub

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.687	.534		10.654	.000

	How religious an individual is	-.144	.021	-.511	-6.963	.000
	Age of Respondent	-.031	.009	-.326	-3.355	.001
	Amount of time respondent has lived at their current dwelling	7.894E-005	.012	.001	.007	.995
	gender	-.145	.215	-.048	-.672	.503
	EduMiddle	-.086	.452	-.024	-.190	.849
	EduHigh	-.549	.415	-.170	-1.321	.189
2	(Constant)	5.687	.531		10.712	.000
	How religious an individual is	-.144	.021	-.511	-6.993	.000
	Age of Respondent	-.031	.007	-.325	-4.521	.000
	gender	-.145	.213	-.048	-.681	.497
	EduMiddle	-.087	.431	-.025	-.202	.840
	EduHigh	-.550	.390	-.170	-1.409	.161
3	(Constant)	5.614	.385		14.572	.000
	How religious an individual is	-.144	.020	-.511	-7.023	.000
	Age of Respondent	-.031	.007	-.324	-4.549	.000
	gender	-.139	.210	-.046	-.663	.508
	EduHigh	-.486	.227	-.150	-2.140	.034
4	(Constant)	5.534	.365		15.160	.000
	How religious an individual is	-.141	.020	-.503	-7.024	.000
	Age of Respondent	-.032	.007	-.328	-4.639	.000
	EduHigh	-.488	.227	-.151	-2.155	.033

a. Dependent Variable: disco/nightclub

TABLE C-10: Re-use by Another Christian Denomination

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	122.601[a]	.094	.142

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	age	-.026	.020	1.664	1	.197	.975	.938	1.013
	religiousness	.147	.048	9.251	1	.002	1.159	1.054	1.274
	lengthresidence	.031	.030	1.107	1	.293	1.032	.973	1.094
	EduMiddle	.325	1.035	.099	1	.753	1.384	.182	10.514
	EduHigh	.331	.938	.125	1	.724	1.392	.221	8.758
	gender	.544	.472	1.324	1	.250	1.722	.682	4.346
	Constant	-.235	1.171	.040	1	.841	.791		

a. Variable(s) entered on step 1: age, religiousness, lengthresidence, EduMiddle, EduHigh, gender.

TABLE C-11: Brothel

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	78.600[a]	.099	.189

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	age	-.031	.028	1.250	1	.263	.969	.917	1.024
	religiousness	-.169	.074	5.164	1	.023	.844	.730	.977
	lengthresidence	.011	.042	.068	1	.795	1.011	.931	1.097
	EduMiddle	.652	1.367	.227	1	.633	1.919	.132	27.986
	EduHigh	.702	1.268	.306	1	.580	2.017	.168	24.196
	gender	.953	.656	2.110	1	.146	2.592	.717	9.371
	Constant	-.586	1.535	.146	1	.703	.556		

a. Variable(s) entered on step 1: age, religiousness, lengthresidence, EduMiddle, EduHigh, gender.

TABLE C-12: Shared Exhibition Space

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	118.293[a]	.070	.110

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	age	-.012	.019	.356	1	.551	.989	.952	1.027
	religiousness	-.035	.045	.601	1	.438	.966	.884	1.055
	lengthresidence	-.023	.024	.938	1	.333	.977	.933	1.024
	EduMiddle	-1.353	1.018	1.767	1	.184	.259	.035	1.900
	EduHigh	-.298	.965	.096	1	.757	.742	.112	4.915
	gender	-.059	.471	.016	1	.900	.942	.374	2.374
	Constant	3.081	1.248	6.094	1	.014	21.773		

a. Variable(s) entered on step 1: age, religiousness, lengthresidence, EduMiddle, EduHigh, gender.

APPENDIX D
REGRESSION OUTPUTS FOR AGGREGATED FUNCTIONAL MODELS

TABLE D-1: AvgGood

Model Summary[g]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.341[a]	.116	.071	.82703	
2	.341[b]	.116	.079	.82361	
3	.331[c]	.110	.080	.82312	
4	.314[d]	.099	.076	.82482	
5	.301[e]	.090	.075	.82505	
6	.266[f]	.071	.063	.83056	1.627

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, Amount of time respondent has lived at their current dwelling, EduMiddle

c. Predictors: (Constant), EduHigh, Age of Respondent, Amount of time respondent has lived at their current dwelling, EduMiddle

d. Predictors: (Constant), Age of Respondent, Amount of time respondent has lived at their current dwelling, EduMiddle

e. Predictors: (Constant), Age of Respondent, EduMiddle

f. Predictors: (Constant), Age of Respondent

g. Dependent Variable: AvgGOOD

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.453	.381		11.689	.000

	How religious an individual is	-.002	.015	-.014	-.156	.876
	Age of Respondent	-.010	.007	-.189	-1.552	.123
	Amount of time respondent has lived at their current dwelling	-.011	.009	-.153	-1.233	.220
	gender	.137	.154	.080	.888	.376
	EduMiddle	-.561	.323	-.278	-1.738	.085
	EduHigh	-.328	.296	-.178	-1.105	.272
2	(Constant)	4.429	.348		12.726	.000
	Age of Respondent	-.011	.007	-.192	-1.613	.109
	Amount of time respondent has lived at their current dwelling	-.011	.009	-.153	-1.238	.218
	gender	.140	.151	.082	.928	.356
	EduMiddle	-.561	.321	-.278	-1.746	.083
	EduHigh	-.323	.294	-.175	-1.099	.274
3	(Constant)	4.521	.334		13.556	.000
	Age of Respondent	-.010	.006	-.179	-1.516	.132
	Amount of time respondent has lived at their current dwelling	-.012	.008	-.169	-1.375	.172
	EduMiddle	-.611	.317	-.303	-1.929	.056
	EduHigh	-.356	.291	-.194	-1.223	.224
4	(Constant)	4.218	.224		18.872	.000
	Age of Respondent	-.011	.006	-.204	-1.743	.084
	Amount of time respondent has lived at their current dwelling	-.008	.008	-.120	-1.034	.303
	EduMiddle	-.289	.176	-.143	-1.639	.104
5	(Constant)	4.300	.209		20.569	.000
	Age of Respondent	-.016	.005	-.284	-3.248	.002
	EduMiddle	-.286	.176	-.142	-1.623	.107
6	(Constant)	4.194	.200		20.969	.000
	Age of Respondent	-.015	.005	-.266	-3.046	.003

a. Dependent Variable: AvgGOOD

TABLE D-2: AvgMedium

Model Summary[f]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.586[a]	.343	.310	.86280	
2	.586[b]	.343	.315	.85929	
3	.584[c]	.341	.319	.85718	
4	.582[d]	.338	.322	.85530	
5	.578[e]	.334	.323	.85451	1.753
a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle					
b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling					
c. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling					
d. Predictors: (Constant), Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling					
e. Predictors: (Constant), Age of Respondent, How religious an individual is					
f. Dependent Variable: AvgMED					

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.441	.397		11.174	.000
	How religious an individual is	-.092	.015	-.473	-5.973	.000
	Age of Respondent	-.012	.007	-.184	-1.756	.082

	Amount of time respondent has lived at their current dwelling	-.009	.009	-.112	-1.042	.300
	gender	-.114	.160	-.055	-.708	.480
	EduMiddle	-.069	.337	-.028	-.205	.838
	EduHigh	-.164	.309	-.074	-.530	.597
2	(Constant)	4.386	.294		14.902	.000
	How religious an individual is	-.092	.015	-.473	-5.999	.000
	Age of Respondent	-.012	.007	-.187	-1.796	.075
	Amount of time respondent has lived at their current dwelling	-.009	.009	-.105	-1.031	.305
	gender	-.108	.158	-.052	-.687	.494
	EduHigh	-.111	.172	-.050	-.646	.520
3	(Constant)	4.312	.270		15.958	.000
	How religious an individual is	-.090	.015	-.464	-5.999	.000
	Age of Respondent	-.013	.007	-.199	-1.958	.053
	Amount of time respondent has lived at their current dwelling	-.008	.008	-.094	-.938	.350
	gender	-.108	.157	-.052	-.688	.493
4	(Constant)	4.254	.256		16.603	.000
	How religious an individual is	-.088	.015	-.455	-5.979	.000
	Age of Respondent	-.014	.007	-.208	-2.069	.041
	Amount of time respondent has lived at their current dwelling	-.007	.008	-.088	-.881	.380
5	(Constant)	4.332	.240		18.042	.000
	How religious an individual is	-.089	.015	-.458	-6.030	.000
	Age of Respondent	-.018	.005	-.266	-3.505	.001

a. Dependent Variable: AvgMED

TABLE D-3: AvgBad

Model Summary[f]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.604[a]	.365	.333	.76269	
2	.604[b]	.365	.338	.75973	
3	.602[c]	.362	.340	.75835	
4	.600[d]	.359	.343	.75662	
5	.596[e]	.355	.345	.75584	1.802

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, EduMiddle

c. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is

d. Predictors: (Constant), gender, Age of Respondent, How religious an individual is

e. Predictors: (Constant), Age of Respondent, How religious an individual is

f. Dependent Variable: AvgBAD

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.452	.351		9.826	.000
	How religious an individual is	-.080	.014	-.460	-5.901	.000
	Age of Respondent	-.015	.006	-.249	-2.411	.017
	Amount of time respondent has lived at their current dwelling	-.002	.008	-.031	-.292	.770
	gender	.127	.142	.068	.894	.373
	EduMiddle	.189	.298	.086	.634	.527

	EduHigh	.232	.273	.116	.847	.399
2	(Constant)	3.447	.350		9.861	.000
	How religious an individual is	-.080	.014	-.460	-5.924	.000
	Age of Respondent	-.016	.005	-.269	-3.515	.001
	gender	.132	.140	.071	.945	.347
	EduMiddle	.214	.284	.098	.755	.451
	EduHigh	.258	.257	.129	1.005	.317
3	(Constant)	3.628	.254		14.271	.000
	How religious an individual is	-.080	.013	-.459	-5.929	.000
	Age of Respondent	-.016	.005	-.276	-3.642	.000
	gender	.118	.139	.064	.854	.395
	EduHigh	.101	.150	.050	.672	.503
4	(Constant)	3.703	.228		16.274	.000
	How religious an individual is	-.082	.013	-.469	-6.182	.000
	Age of Respondent	-.016	.004	-.271	-3.599	.000
	gender	.120	.138	.064	.867	.388
5	(Constant)	3.773	.212		17.765	.000
	How religious an individual is	-.084	.013	-.480	-6.421	.000
	Age of Respondent	-.016	.004	-.265	-3.538	.001

a. Dependent Variable: AvgBAD

TABLE D-4: AvgScore

Model Summary[f]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.548[a]	.300	.264	.70695	
2	.547[b]	.299	.270	.70430	

3	.546[c]	.298	.275	.70194	
4	.545[d]	.297	.279	.69974	
5	.539[e]	.291	.279	.69979	1.909

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

c. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling

d. Predictors: (Constant), Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling

e. Predictors: (Constant), Age of Respondent, How religious an individual is

f. Dependent Variable: AvgScore

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.117	.326		12.644	.000
	How religious an individual is	-.058	.013	-.374	-4.575	.000
	Age of Respondent	-.012	.006	-.236	-2.178	.031
	Amount of time respondent has lived at their current dwelling	-.008	.007	-.113	-1.023	.309
	gender	.053	.131	.032	.402	.688
	EduMiddle	-.148	.276	-.076	-.536	.593
	EduHigh	-.088	.253	-.050	-.345	.730
2	(Constant)	4.036	.226		17.849	.000
	How religious an individual is	-.057	.012	-.372	-4.581	.000
	Age of Respondent	-.013	.006	-.243	-2.297	.023

	Amount of time respondent has lived at their current dwelling	-.007	.007	-.101	-.966	.336
	gender	.059	.130	.036	.455	.650
	EduMiddle	-.069	.154	-.036	-.449	.654
3	(Constant)	4.017	.221		18.155	.000
	How religious an individual is	-.058	.012	-.377	-4.729	.000
	Age of Respondent	-.013	.006	-.239	-2.272	.025
	Amount of time respondent has lived at their current dwelling	-.007	.007	-.099	-.956	.341
	gender	.064	.129	.039	.500	.618
4	(Constant)	4.052	.210		19.328	.000
	How religious an individual is	-.059	.012	-.384	-4.890	.000
	Age of Respondent	-.012	.005	-.232	-2.233	.027
	Amount of time respondent has lived at their current dwelling	-.007	.007	-.104	-1.008	.315
5	(Constant)	4.125	.197		20.976	.000
	How religious an individual is	-.060	.012	-.387	-4.940	.000
	Age of Respondent	-.016	.004	-.300	-3.829	.000

a. Dependent Variable: AvgScore

APPENDIX E
ANOVA OUTPUT FOR FUNCTIONAL COMPARISONS

TABLE E-1: ANOVA Results for differences between levels of religion according to function

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Accountants Office	Between Groups	16.222	2	8.111	5.522	.005
	Within Groups	177.738	121	1.469		
	Total	193.960	123			
Classrooms for public kindergarten	Between Groups	16.245	2	8.122	4.777	.010
	Within Groups	205.755	121	1.700		
	Total	222.000	123			
Private residence	Between Groups	28.151	2	14.076	9.259	.000
	Within Groups	183.937	121	1.520		
	Total	212.089	123			
Brothel	Between Groups	10.907	2	5.454	7.492	.001
	Within Groups	88.085	121	.728		
	Total	98.992	123			
Mosque	Between Groups	18.516	2	9.258	5.909	.004
	Within Groups	189.573	121	1.567		
	Total	208.089	123			
Senior Center	Between Groups	5.009	2	2.504	2.021	.137
	Within Groups	149.959	121	1.239		
	Total	154.968	123			
by another Christian denomination	Between Groups	6.476	2	3.238	3.141	.047
	Within Groups	124.718	121	1.031		

	Total	131.194	123			
shared exhibition space, extended use	Between Groups	.603	2	.301	.279	.757
	Within Groups	130.591	121	1.079		
	Total	131.194	123			
cafe/bar	Between Groups	83.032	2	41.516	22.845	.000
	Within Groups	219.895	121	1.817		
	Total	302.927	123			
theatre space	Between Groups	50.878	2	25.439	18.436	.000
	Within Groups	166.961	121	1.380		
	Total	217.839	123			
supermarket	Between Groups	9.195	2	4.598	4.196	.017
	Within Groups	132.579	121	1.096		
	Total	141.774	123			
disco/nightclub	Between Groups	81.595	2	40.797	24.983	.000
	Within Groups	197.591	121	1.633		
	Total	279.185	123			
AvgScore	Between Groups	16.142	2	8.071	14.491	.000
	Within Groups	67.394	121	.557		
	Total	83.536	123			
AvgGOOD	Between Groups	1.289	2	.644	.874	.420
	Within Groups	89.272	121	.738		
	Total	90.560	123			
AvgMED	Between Groups	33.568	2	16.784	20.499	.000
	Within Groups	99.070	121	.819		
	Total	132.637	123			
AvgBAD	Between Groups	28.901	2	14.450	22.318	.000

	Within Groups	78.345	121	.647		
	Total	107.246	123			

Multiple Comparisons

Games-Howell

Dependent Variable	(I) ReligGroup	(J) ReligGroup	Mean Difference (I-J)	Std. Error	Sig.
Accountants Office	Low Religiousness (5-9)	Medium Religiousness (10-14)	.36000	.26852	.377
		High Religiousness (15-20)	.89529*	.25663	.002
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.36000	.26852	.377
		High Religiousness (15-20)	.53529	.25199	.092
	High Religiousness (15-20)	Low Religiousness (5-9)	-.89529*	.25663	.002
		Medium Religiousness (10-14)	-.53529	.25199	.092
Classrooms for public kindergarten	Low Religiousness (5-9)	Medium Religiousness (10-14)	.04000	.28241	.989
		High Religiousness (15-20)	.82824*	.28316	.012
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.04000	.28241	.989
		High Religiousness (15-20)	.78824*	.29250	.024
	High Religiousness (15-20)	Low Religiousness (5-9)	-.82824*	.28316	.012
		Medium Religiousness (10-14)	-.78824*	.29250	.024
Private residence	Low Religiousness (5-9)	Medium Religiousness (10-14)	.44500	.27712	.249
		High Religiousness (15-20)	1.17882*	.25336	.000
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.44500	.27712	.249
		High Religiousness (15-20)	.73382*	.27019	.022
	High Religiousness (15-20)	Low Religiousness (5-9)	-1.17882*	.25336	.000
		Medium Religiousness (10-14)	-.73382*	.27019	.022
Brothel	Low Religiousness (5-9)	Medium Religiousness (10-14)	.49000*	.19213	.034
		High Religiousness (15-20)	.69294*	.18115	.001
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.49000*	.19213	.034
		High Religiousness (15-20)	.20294	.12354	.235
	High Religiousness (15-20)	Low Religiousness (5-9)	-.69294*	.18115	.001

		Medium Religiousness (10-14)	-.20294	.12354	.235	.0929
Mosque	Low Religiousness (5-9)	Medium Religiousness (10-14)	.34500	.27756	.431	1.0072
		High Religiousness (15-20)	.95529*	.26288	.001	1.5832
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.34500	.27756	.431	.3172
		High Religiousness (15-20)	.61029	.27546	.075	1.2695
	High Religiousness (15-20)	Low Religiousness (5-9)	-.95529*	.26288	.001	-.3274
		Medium Religiousness (10-14)	-.61029	.27546	.075	.0489
Senior Center	Low Religiousness (5-9)	Medium Religiousness (10-14)	.15000	.22732	.787	.6920
		High Religiousness (15-20)	.49412	.26127	.148	1.1187
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.15000	.22732	.787	.3920
		High Religiousness (15-20)	.34412	.23977	.329	.9196
	High Religiousness (15-20)	Low Religiousness (5-9)	-.49412	.26127	.148	.1305
		Medium Religiousness (10-14)	-.34412	.23977	.329	.2314
by another Christian denomination	Low Religiousness (5-9)	Medium Religiousness (10-14)	-.20000	.23046	.662	.3496
		High Religiousness (15-20)	-.56471*	.21001	.024	-.0626
	Medium Religiousness (10-14)	Low Religiousness (5-9)	.20000	.23046	.662	.7496
		High Religiousness (15-20)	-.36471	.17749	.107	.0604
	High Religiousness (15-20)	Low Religiousness (5-9)	.56471*	.21001	.024	1.0668
		Medium Religiousness (10-14)	.36471	.17749	.107	.7898
shared exhibition space, extended use	Low Religiousness (5-9)	Medium Religiousness (10-14)	.04000	.21155	.980	.5443
		High Religiousness (15-20)	.16941	.24337	.767	.7519
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.04000	.21155	.980	.4643
		High Religiousness (15-20)	.12941	.23450	.846	.6920
	High Religiousness (15-20)	Low Religiousness (5-9)	-.16941	.24337	.767	.4130
		Medium Religiousness (10-14)	-.12941	.23450	.846	.4332
cafe/bar	Low Religiousness (5-9)	Medium Religiousness (10-14)	1.23500*	.28680	.000	1.9203
		High Religiousness (15-20)	1.96000*	.29670	.000	2.6715
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-1.23500*	.28680	.000	-.5497
		High Religiousness (15-20)	.72500	.32910	.078	1.5129
	High Religiousness (15-20)	Low Religiousness (5-9)	-1.96000*	.29670	.000	-1.2485

		Medium Religiousness (10-14)	-.72500	.32910	.078	.0629
theatre space	Low Religiousness (5-9)	Medium Religiousness (10-14)	.71000*	.23534	.010	1.2735
		High Religiousness (15-20)	1.58353*	.27443	.000	2.2456
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.71000*	.23534	.010	-.1465
		High Religiousness (15-20)	.87353*	.31100	.018	1.6191
	High Religiousness (15-20)	Low Religiousness (5-9)	-1.58353*	.27443	.000	-.9215
		Medium Religiousness (10-14)	-.87353*	.31100	.018	-.1279
supermarket	Low Religiousness (5-9)	Medium Religiousness (10-14)	.36000	.24157	.301	.9359
		High Religiousness (15-20)	.66588*	.21002	.006	1.1684
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.36000	.24157	.301	.2159
		High Religiousness (15-20)	.30588	.18428	.228	.7479
	High Religiousness (15-20)	Low Religiousness (5-9)	-.66588*	.21002	.006	-.1633
		Medium Religiousness (10-14)	-.30588	.18428	.228	.1362
disco/nightclub	Low Religiousness (5-9)	Medium Religiousness (10-14)	1.39000*	.28946	.000	2.0808
		High Religiousness (15-20)	1.86941*	.25911	.000	2.4881
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-1.39000*	.28946	.000	-.6992
		High Religiousness (15-20)	.47941	.27945	.207	1.1484
	High Religiousness (15-20)	Low Religiousness (5-9)	-1.86941*	.25911	.000	-1.2508
		Medium Religiousness (10-14)	-.47941	.27945	.207	.1896
AvgScore	Low Religiousness (5-9)	Medium Religiousness (10-14)	.44350*	.15987	.018	.8248
		High Religiousness (15-20)	.88776*	.16446	.000	1.2810
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.44350*	.15987	.018	-.0622
		High Religiousness (15-20)	.44426*	.16817	.027	.8469
	High Religiousness (15-20)	Low Religiousness (5-9)	-.88776*	.16446	.000	-.4945
		Medium Religiousness (10-14)	-.44426*	.16817	.027	-.0417
AvgGOOD	Low Religiousness (5-9)	Medium Religiousness (10-14)	.00750	.17965	.999	.4358
		High Religiousness (15-20)	.23176	.19651	.469	.7012
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.00750	.17965	.999	.4208
		High Religiousness (15-20)	.22426	.18139	.436	.6591
	High Religiousness (15-20)	Low Religiousness (5-9)	-.23176	.19651	.469	.2377

		Medium Religiousness (10-14)	-.22426	.18139	.436	.2105
AvgMED	Low Religiousness (5-9)	Medium Religiousness (10-14)	.66625*	.19262	.003	1.1264
		High Religiousness (15-20)	1.27618*	.19920	.000	1.7537
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.66625*	.19262	.003	-.2061
		High Religiousness (15-20)	.60993*	.21925	.019	1.1348
	High Religiousness (15-20)	Low Religiousness (5-9)	-1.27618*	.19920	.000	-.7987
		Medium Religiousness (10-14)	-.60993*	.21925	.019	-.0850
AvgBAD	Low Religiousness (5-9)	Medium Religiousness (10-14)	.66750*	.18096	.001	1.0992
		High Religiousness (15-20)	1.17412*	.16556	.000	1.5694
	Medium Religiousness (10-14)	Low Religiousness (5-9)	-.66750*	.18096	.001	-.2358
		High Religiousness (15-20)	.50662*	.17323	.013	.9212
	High Religiousness (15-20)	Low Religiousness (5-9)	-1.17412*	.16556	.000	-.7788
		Medium Religiousness (10-14)	-.50662*	.17323	.013	-.0920

*. The mean difference is significant at the 0.05 level.

TABLE E-2: ANOVA Results for differences between age groups according to function

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Accountants Office	Between Groups	13.665	2	6.832	4.585	.012
	Within Groups	180.295	121	1.490		
	Total	193.960	123			
Classrooms for public kindergarten	Between Groups	18.893	2	9.447	5.628	.005
	Within Groups	203.107	121	1.679		
	Total	222.000	123			
Private residence	Between Groups	14.876	2	7.438	4.564	.012
	Within Groups	197.213	121	1.630		
	Total	212.089	123			
Brothel	Between Groups	3.089	2	1.545	1.949	.147
	Within Groups	95.903	121	.793		
	Total	98.992	123			
Mosque	Between Groups	8.831	2	4.415	2.681	.073
	Within Groups	199.258	121	1.647		
	Total	208.089	123			
Senior Center	Between Groups	8.011	2	4.005	3.298	.040
	Within Groups	146.957	121	1.215		
	Total	154.968	123			
by another Christian denomination	Between Groups	.559	2	.279	.259	.772
	Within Groups	130.635	121	1.080		
	Total	131.194	123			
shared exhibition space, extended use	Between Groups	5.441	2	2.721	2.618	.077
	Within Groups	125.752	121	1.039		
	Total	131.194	123			

cafe/bar	Between Groups	36.865	2	18.433	8.383	.000
	Within Groups	266.062	121	2.199		
	Total	302.927	123			
theatre space	Between Groups	13.924	2	6.962	4.131	.018
	Within Groups	203.915	121	1.685		
	Total	217.839	123			
supermarket	Between Groups	6.760	2	3.380	3.029	.052
	Within Groups	135.014	121	1.116		
	Total	141.774	123			
disco/nightclub	Between Groups	47.493	2	23.746	12.401	.000
	Within Groups	231.693	121	1.915		
	Total	279.185	123			
AvgScore	Between Groups	10.728	2	5.364	8.915	.000
	Within Groups	72.808	121	.602		
	Total	83.536	123			
AvgGOOD	Between Groups	5.165	2	2.583	3.659	.029
	Within Groups	85.395	121	.706		
	Total	90.560	123			
AvgMED	Between Groups	15.739	2	7.869	8.145	.000
	Within Groups	116.898	121	.966		
	Total	132.637	123			
AvgBAD	Between Groups	13.793	2	6.897	8.929	.000
	Within Groups	93.453	121	.772		
	Total	107.246	123			

Multiple Comparisons

Games-Howell							
						95% Confidence Interval	
Dependent Variable	(I) AgeGroupPost	(J) AgeGroupPost	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Accountants Office	Young (0-34)	Middle Age (35-54)	.10745	.24865	.902	-.4851	.7000
		Old Age (55+)	.90115*	.26537	.004	.2607	1.5416
	Middle Age (35-54)	Young (0-34)	-.10745	.24865	.902	-.7000	.4851
		Old Age (55+)	.79371*	.27392	.015	.1321	1.4553
	Old Age (55+)	Young (0-34)	-.90115*	.26537	.004	-1.5416	-.2607
		Middle Age (35-54)	-.79371*	.27392	.015	-1.4553	-.1321
Classrooms for public kindergarten	Young (0-34)	Middle Age (35-54)	.20269	.25863	.714	-.4139	.8193
		Old Age (55+)	1.07215*	.31810	.005	.2974	1.8469
	Middle Age (35-54)	Young (0-34)	-.20269	.25863	.714	-.8193	.4139
		Old Age (55+)	.86946*	.33126	.032	.0649	1.6740
	Old Age (55+)	Young (0-34)	-1.07215*	.31810	.005	-1.8469	-.2974
		Middle Age (35-54)	-.86946*	.33126	.032	-1.6740	-.0649
Private residence	Young (0-34)	Middle Age (35-54)	-.05250	.25873	.978	-.6693	.5643
		Old Age (55+)	.88456*	.29268	.011	.1752	1.5939
	Middle Age (35-54)	Young (0-34)	.05250	.25873	.978	-.5643	.6693
		Old Age (55+)	.93706*	.30504	.010	.1987	1.6754
	Old Age (55+)	Young (0-34)	-.88456*	.29268	.011	-1.5939	-.1752
		Middle Age (35-54)	-.93706*	.30504	.010	-1.6754	-.1987
Brothel	Young (0-34)	Middle Age (35-54)	.22466	.17368	.402	-.1886	.6380
		Old Age (55+)	.40765	.19596	.103	-.0642	.8795
	Middle Age (35-54)	Young (0-34)	-.22466	.17368	.402	-.6380	.1886
		Old Age (55+)	.18298	.18565	.590	-.2669	.6328
	Old Age (55+)	Young (0-34)	-.40765	.19596	.103	-.8795	.0642
		Middle Age (35-54)	-.18298	.18565	.590	-.6328	.2669
Mosque	Young (0-34)	Middle Age (35-54)	-.02686	.26879	.995	-.6690	.6152
		Old Age (55+)	.68759	.29470	.062	-.0291	1.4043
	Middle Age (35-54)	Young (0-34)	.02686	.26879	.995	-.6152	.6690

		Old Age (55+)	.71445	.32561	.082	-.0724	1.5013
	Old Age (55+)	Young (0-34)	-.68759	.29470	.062	-1.4043	.0291
		Middle Age (35-54)	-.71445	.32561	.082	-1.5013	.0724
Senior Center	Young (0-34)	Middle Age (35-54)	.29426	.22691	.401	-.2481	.8366
		Old Age (55+)	.68470*	.27635	.047	.0083	1.3611
	Middle Age (35-54)	Young (0-34)	-.29426	.22691	.401	-.8366	.2481
		Old Age (55+)	.39044	.30299	.409	-.3445	1.1253
	Old Age (55+)	Young (0-34)	-.68470*	.27635	.047	-1.3611	-.0083
		Middle Age (35-54)	-.39044	.30299	.409	-1.1253	.3445
by another Christian denomination	Young (0-34)	Middle Age (35-54)	.14774	.22533	.790	-.3916	.6871
		Old Age (55+)	.01371	.22925	.998	-.5440	.5714
	Middle Age (35-54)	Young (0-34)	-.14774	.22533	.790	-.6871	.3916
		Old Age (55+)	-.13403	.26761	.871	-.7792	.5111
	Old Age (55+)	Young (0-34)	-.01371	.22925	.998	-.5714	.5440
		Middle Age (35-54)	.13403	.26761	.871	-.5111	.7792
shared exhibition space, extended use	Young (0-34)	Middle Age (35-54)	.43956	.22691	.138	-.1072	.9864
		Old Age (55+)	.37662	.26294	.339	-.2747	1.0279
	Middle Age (35-54)	Young (0-34)	-.43956	.22691	.138	-.9864	.1072
		Old Age (55+)	-.06294	.32058	.979	-.8383	.7124
	Old Age (55+)	Young (0-34)	-.37662	.26294	.339	-1.0279	.2747
		Middle Age (35-54)	.06294	.32058	.979	-.7124	.8383
cafe/bar	Young (0-34)	Middle Age (35-54)	.38706	.31129	.431	-.3560	1.1301
		Old Age (55+)	1.50361*	.32056	.000	.7281	2.2791
	Middle Age (35-54)	Young (0-34)	-.38706	.31129	.431	-1.1301	.3560
		Old Age (55+)	1.11655*	.35104	.007	.2699	1.9632
	Old Age (55+)	Young (0-34)	-1.50361*	.32056	.000	-2.2791	-.7281
		Middle Age (35-54)	-1.11655*	.35104	.007	-1.9632	-.2699
theatre space	Young (0-34)	Middle Age (35-54)	.42735	.26163	.238	-.1980	1.0527
		Old Age (55+)	.88889*	.34549	.039	.0403	1.7375
	Middle Age (35-54)	Young (0-34)	-.42735	.26163	.238	-1.0527	.1980

		Old Age (55+)	.46154	.37358	.440	-.4475	1.3706
	Old Age (55+)	Young (0-34)	-.88889*	.34549	.039	-1.7375	-.0403
		Middle Age (35-54)	-.46154	.37358	.440	-1.3706	.4475
supermarket	Young (0-34)	Middle Age (35-54)	.26740	.21844	.442	-.2530	.7878
		Old Age (55+)	.62987*	.20930	.010	.1277	1.1320
	Middle Age (35-54)	Young (0-34)	-.26740	.21844	.442	-.7878	.2530
		Old Age (55+)	.36247	.21589	.222	-.1572	.8821
	Old Age (55+)	Young (0-34)	-.62987*	.20930	.010	-1.1320	-.1277
		Middle Age (35-54)	-.36247	.21589	.222	-.8821	.1572
disco/nightclub	Young (0-34)	Middle Age (35-54)	.61661	.29613	.099	-.0895	1.3227
		Old Age (55+)	1.69120*	.24127	.000	1.1149	2.2675
	Middle Age (35-54)	Young (0-34)	-.61661	.29613	.099	-1.3227	.0895
		Old Age (55+)	1.07459*	.26386	.000	.4399	1.7093
	Old Age (55+)	Young (0-34)	-1.69120*	.24127	.000	-2.2675	-1.1149
		Middle Age (35-54)	-1.07459*	.26386	.000	-1.7093	-.4399
AvgScore	Young (0-34)	Middle Age (35-54)	.25580	.16222	.261	-.1315	.6431
		Old Age (55+)	.80895*	.17286	.000	.3898	1.2281
	Middle Age (35-54)	Young (0-34)	-.25580	.16222	.261	-.6431	.1315
		Old Age (55+)	.55315*	.18922	.014	.0963	1.0100
	Old Age (55+)	Young (0-34)	-.80895*	.17286	.000	-1.2281	-.3898
		Middle Age (35-54)	-.55315*	.18922	.014	-1.0100	-.0963
AvgGOOD	Young (0-34)	Middle Age (35-54)	.27106	.17697	.282	-.1525	.6946
		Old Age (55+)	.53680*	.20630	.035	.0316	1.0420
	Middle Age (35-54)	Young (0-34)	-.27106	.17697	.282	-.6946	.1525
		Old Age (55+)	.26573	.23277	.494	-.2978	.8293
	Old Age (55+)	Young (0-34)	-.53680*	.20630	.035	-1.0420	-.0316
		Middle Age (35-54)	-.26573	.23277	.494	-.8293	.2978
AvgMED	Young (0-34)	Middle Age (35-54)	.29731	.20615	.324	-.1947	.7893
		Old Age (55+)	.98088*	.21227	.000	.4675	1.4943
	Middle Age (35-54)	Young (0-34)	-.29731	.20615	.324	-.7893	.1947

		Old Age (55+)	.68357*	.23198	.013	.1241	1.2431
	Old Age (55+)	Young (0-34)	-.98088*	.21227	.000	-1.4943	-.4675
		Middle Age (35-54)	-.68357*	.23198	.013	-1.2431	-.1241
AvgBAD	Young (0-34)	Middle Age (35-54)	.19048	.18253	.552	-.2451	.6260
		Old Age (55+)	.91775*	.19517	.000	.4450	1.3905
	Middle Age (35-54)	Young (0-34)	-.19048	.18253	.552	-.6260	.2451
		Old Age (55+)	.72727*	.21076	.003	.2183	1.2362
	Old Age (55+)	Young (0-34)	-.91775*	.19517	.000	-1.3905	-.4450
		Middle Age (35-54)	-.72727*	.21076	.003	-1.2362	-.2183

*. The mean difference is significant at the 0.05 level.

APPENDIX F
REGRESSION OUTPUTS FOR ISSUES INVOLVED IN ADAPTIVE RE-USE OF CHURCHES

TABLE F-1: Partitioning Space

Model Summary[f]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.486[a]	.237	.198	1.08725	
2	.486[b]	.236	.204	1.08280	
3	.485[c]	.235	.210	1.07892	
4	.484[d]	.235	.216	1.07494	
5	.484[e]	.235	.222	1.07056	1.730

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

c. Predictors: (Constant), EduHigh, Age of Respondent, How religious an individual is, EduMiddle

d. Predictors: (Constant), Age of Respondent, How religious an individual is, EduMiddle

e. Predictors: (Constant), Age of Respondent, How religious an individual is

f. Dependent Variable: Issue: Partitioning Space

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.824	.501		3.642	.000
	How religious an individual is	.087	.019	.386	4.516	.000
	Age of Respondent	.019	.009	.247	2.181	.031
	Amount of time respondent has lived at their	-.004	.011	-.041	-.356	.723

	current dwelling					
	gender	.039	.202	.016	.192	.848
	EduMiddle	-.171	.424	-.060	-.403	.687
	EduHigh	-.161	.390	-.062	-.413	.681
2	(Constant)	1.855	.473		3.924	.000
	How religious an individual is	.087	.019	.383	4.560	.000
	Age of Respondent	.019	.009	.250	2.240	.027
	Amount of time respondent has lived at their current dwelling	-.004	.011	-.044	-.386	.700
	EduMiddle	-.185	.417	-.065	-.443	.659
	EduHigh	-.171	.385	-.066	-.445	.657
3	(Constant)	1.853	.471		3.936	.000
	How religious an individual is	.087	.019	.383	4.570	.000
	Age of Respondent	.017	.006	.221	2.656	.009
	EduMiddle	-.140	.399	-.049	-.351	.726
	EduHigh	-.124	.363	-.047	-.340	.734
4	(Constant)	1.732	.308		5.631	.000
	How religious an individual is	.087	.019	.385	4.637	.000
	Age of Respondent	.017	.006	.223	2.685	.008
	EduMiddle	-.030	.234	-.011	-.128	.898
5	(Constant)	1.725	.301		5.733	.000
	How religious an individual is	.087	.018	.383	4.706	.000
	Age of Respondent	.017	.006	.224	2.754	.007

a. Dependent Variable: Issue: Partitioning Space

TABLE F-2: Public/Private

Model Summary[†]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson

1	.386[a]	.149	.105	1.09596	
2	.383[b]	.147	.111	1.09272	
3	.380[c]	.144	.115	1.08969	
4	.374[d]	.140	.118	1.08804	
5	.367[e]	.135	.120	1.08667	1.725

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling

c. Predictors: (Constant), EduHigh, gender, How religious an individual is, Amount of time respondent has lived at their current dwelling

d. Predictors: (Constant), gender, How religious an individual is, Amount of time respondent has lived at their current dwelling

e. Predictors: (Constant), How religious an individual is, Amount of time respondent has lived at their current dwelling

f. Dependent Variable: Issue: Public/Private Space

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.154	.505		6.248	.000
	How religious an individual is	.060	.020	.279	3.090	.002
	Age of Respondent	.006	.009	.076	.638	.525
	Amount of time respondent has lived at their current dwelling	.007	.011	.080	.653	.515
	gender	-.194	.204	-.084	-.954	.342
	EduMiddle	-.236	.428	-.086	-.551	.583
	EduHigh	-.375	.393	-.151	-.954	.342
2	(Constant)	2.968	.374		7.931	.000

	How religious an individual is	.060	.019	.278	3.096	.002
	Age of Respondent	.005	.009	.069	.583	.561
	Amount of time respondent has lived at their current dwelling	.009	.011	.099	.854	.395
	gender	-.176	.200	-.076	-.878	.382
	EduHigh	-.195	.219	-.079	-.892	.374
3	(Constant)	3.074	.327		9.414	.000
	How religious an individual is	.062	.019	.288	3.266	.001
	Amount of time respondent has lived at their current dwelling	.014	.008	.145	1.679	.096
	gender	-.161	.198	-.070	-.813	.418
	EduHigh	-.171	.214	-.069	-.798	.426
4	(Constant)	2.928	.270		10.855	.000
	How religious an individual is	.065	.019	.299	3.441	.001
	Amount of time respondent has lived at their current dwelling	.014	.008	.149	1.731	.086
	gender	-.165	.198	-.071	-.834	.406
5	(Constant)	2.815	.233		12.078	.000
	How religious an individual is	.067	.019	.310	3.605	.000
	Amount of time respondent has lived at their current dwelling	.014	.008	.149	1.739	.085

a. Dependent Variable: Issue: Public/Private Space

TABLE F-3: Streetscape

Model Summary[f]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.367[a]	.135	.090	.96140	
2	.366[b]	.134	.097	.95781	

3	.359[c]	.129	.100	.95644	
4	.357[d]	.127	.105	.95347	
5	.348[e]	.121	.106	.95300	1.890

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, EduMiddle

c. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, EduMiddle

d. Predictors: (Constant), gender, Age of Respondent, How religious an individual is

e. Predictors: (Constant), gender, Age of Respondent

f. Dependent Variable: Issue: Streetscape

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.631	.443		8.200	.000
	How religious an individual is	.016	.017	.083	.910	.364
	Age of Respondent	.015	.008	.238	1.976	.050
	Amount of time respondent has lived at their current dwelling	.003	.010	.043	.346	.730
	gender	-.393	.179	-.196	-2.200	.030
	EduMiddle	-.303	.375	-.128	-.808	.421
	EduHigh	-.223	.345	-.103	-.647	.519
2	(Constant)	3.639	.441		8.257	.000
	How religious an individual is	.016	.017	.083	.913	.363
	Age of Respondent	.017	.006	.266	2.977	.004
	gender	-.401	.176	-.200	-2.274	.025
	EduMiddle	-.341	.358	-.144	-.954	.342

	EduHigh	-.263	.324	-.122	-.811	.419
3	(Constant)	3.373	.294		11.469	.000
	How religious an individual is	.017	.017	.090	1.005	.317
	Age of Respondent	.017	.006	.269	3.016	.003
	gender	-.387	.175	-.193	-2.208	.029
	EduMiddle	-.106	.209	-.045	-.507	.613
4	(Constant)	3.342	.287		11.654	.000
	How religious an individual is	.016	.017	.083	.939	.349
	Age of Respondent	.018	.006	.276	3.142	.002
	gender	-.379	.174	-.189	-2.178	.031
5	(Constant)	3.485	.242		14.382	.000
	Age of Respondent	.019	.005	.294	3.449	.001
	gender	-.406	.172	-.202	-2.368	.019

a. Dependent Variable: Issue: Streetscape

TABLE F-4: Demolition

Model Summary[f]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.380[a]	.144	.100	.86007	
2	.380[b]	.144	.108	.85642	
3	.373[c]	.139	.110	.85519	
4	.372[d]	.139	.117	.85203	
5	.346[e]	.120	.105	.85778	1.946

a. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an individual is, Amount of time respondent has lived at their current dwelling, EduMiddle

b. Predictors: (Constant), EduHigh, gender, Age of Respondent, How religious an

individual is, EduMiddle
c. Predictors: (Constant), gender, Age of Respondent, How religious an individual is, EduMiddle
d. Predictors: (Constant), gender, Age of Respondent, How religious an individual is
e. Predictors: (Constant), gender, Age of Respondent
f. Dependent Variable: Issue: Demolition

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.524	.396		8.895	.000
	How religious an individual is	.025	.015	.146	1.612	.110
	Age of Respondent	.011	.007	.188	1.574	.118
	Amount of time respondent has lived at their current dwelling	.000	.009	.003	.023	.981
	gender	-.452	.160	-.250	-2.830	.005
	EduMiddle	.276	.336	.129	.821	.413
	EduHigh	.237	.308	.122	.770	.443
2	(Constant)	3.524	.394		8.945	.000
	How religious an individual is	.025	.015	.146	1.618	.108
	Age of Respondent	.011	.005	.190	2.144	.034
	gender	-.453	.158	-.250	-2.870	.005
	EduMiddle	.273	.320	.128	.855	.394
	EduHigh	.235	.290	.121	.811	.419
3	(Constant)	3.762	.263		14.307	.000
	How religious an individual is	.023	.015	.138	1.544	.125
	Age of Respondent	.011	.005	.188	2.117	.036
	gender	-.466	.157	-.257	-2.968	.004

	EduMiddle	.063	.187	.029	.337	.737
4	(Constant)	3.780	.256		14.754	.000
	How religious an individual is	.024	.015	.143	1.625	.107
	Age of Respondent	.011	.005	.183	2.098	.038
	gender	-.470	.156	-.260	-3.022	.003
5	(Constant)	4.003	.218		18.350	.000
	Age of Respondent	.012	.005	.215	2.518	.013
	gender	-.512	.154	-.283	-3.315	.001

a. Dependent Variable: Issue: Demolition

APPENDIX G
ANOVA OUTPUT FOR ADAPTIVE RE-USE ISSUE COMPARISONS

TABLE G-1: Significant differences between levels of religiousness per issue

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Issue: Partitioning Space	Between Groups	35.895	2	17.948	14.947	.000
	Within Groups	145.290	121	1.201		
	Total	181.185	123			
Issue: Public/Private Space	Between Groups	19.836	2	9.918	8.260	.000
	Within Groups	145.285	121	1.201		
	Total	165.121	123			

Multiple Comparisons

Games-Howell

Dependent Variable	(I) ReligGroup	(J) ReligGroup	Mean Difference (I-J)	Std. Error	Sig.
Issue: Partitioning Space	Low Religiousness (5-9)	Medium Religiousness (10-14)	-.74500*	.24572	.009
		High Religiousness (15-20)	-1.30824*	.22731	.000
	Medium Religiousness (10-14)	Low Religiousness (5-9)	.74500*	.24572	.009
		High Religiousness (15-20)	-.56324*	.22978	.044
	High Religiousness (15-20)	Low Religiousness (5-9)	1.30824*	.22731	.000
		Medium Religiousness (10-14)	.56324*	.22978	.044
Issue: Public/Private Space	Low Religiousness (5-9)	Medium Religiousness (10-14)	-.71000*	.23838	.010
		High Religiousness (15-20)	-.90706*	.24084	.001
	Medium Religiousness (10-14)	Low Religiousness (5-9)	.71000*	.23838	.010
		High Religiousness (15-20)	-.19706	.20512	.604
	High Religiousness (15-20)	Low Religiousness (5-9)	.90706*	.24084	.001
		Medium Religiousness (10-14)	.19706	.20512	.604

*. The mean difference is significant at the 0.05 level.

TABLE G-2: Significant differences between age groups per issue

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Issue: Partitioning Space	Between Groups	15.991	2	7.996	5.857	.004
	Within Groups	165.194	121	1.365		
	Total	181.185	123			
Issue: Streetscape	Between Groups	10.338	2	5.169	5.455	.005
	Within Groups	114.654	121	.948		
	Total	124.992	123			
Issue: Demolition	Between Groups	4.430	2	2.215	2.772	.067
	Within Groups	96.691	121	.799		
	Total	101.121	123			

Multiple Comparisons

Games-Howell

Dependent Variable	(I) AgeGroupPost	(J) AgeGroupPost	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Issue: Partitioning Space	Young (0-34)	Middle Age (35-54)	-.63492*	.24267	.028	-1.2145	-.0553
		Old Age (55+)	-.83189*	.27428	.012	-1.4997	-.1641
	Middle Age (35-54)	Young (0-34)	.63492*	.24267	.028	.0553	1.2145
		Old Age (55+)	-.19697	.30019	.790	-.9232	.5292
	Old Age (55+)	Young (0-34)	.83189*	.27428	.012	.1641	1.4997
		Middle Age (35-54)	.19697	.30019	.790	-.5292	.9232
Issue: Streetscape	Young (0-34)	Middle Age (35-54)	-.50061*	.18803	.024	-.9482	-.0530
		Old Age (55+)	-.67893*	.23669	.017	-1.2533	-.1045
	Middle Age (35-54)	Young (0-34)	.50061*	.18803	.024	.0530	.9482

		Old Age (55+)	-.17832	.23303	.726	-.7457	.3890
	Old Age (55+)	Young (0-34)	.67893*	.23669	.017	.1045	1.2533
		Middle Age (35-54)	.17832	.23303	.726	-.3890	.7457
Issue: Demolition	Young (0-34)	Middle Age (35-54)	-.37851	.16620	.064	-.7740	.0169
		Old Age (55+)	-.37734	.23096	.243	-.9394	.1847
	Middle Age (35-54)	Young (0-34)	.37851	.16620	.064	-.0169	.7740
		Old Age (55+)	.00117	.22192	1.000	-.5424	.5447
	Old Age (55+)	Young (0-34)	.37734	.23096	.243	-.1847	.9394
		Middle Age (35-54)	-.00117	.22192	1.000	-.5447	.5424

*. The mean difference is significant at the 0.05 level.

APPENDIX H

CROSS-TAB FOR SENIOR CENTER x AGE GROUP

Table H-1: Senior Center * AgeGroupPost Crosstabulation

Count

		AgeGroupPost			Total
		Young (0-34)	Middle Age (35-54)	Old Age (55+)	
Senior Center	Strongly Disagree	2	3	3	8
	Disagree	7	6	3	16
	Neither Agree nor Disagree	13	6	7	26
	Agree	25	19	8	52
	Strongly Agree	16	5	1	22
Total		63	39	22	124