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Church Interior Aesthetics:

The Effects of Interior Aesthetics, Within a Worship Environment,

on the Attendance of an 18 to 25 Age Population

A THESIS PAPER

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In partial fulfillment of the requirements for the degree of

MASTER OF FINE ARTS IN DESIGN

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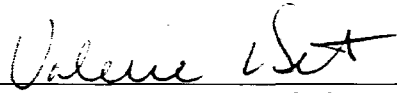
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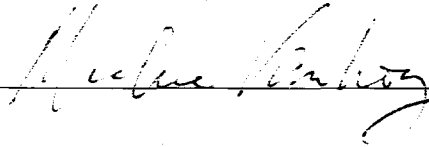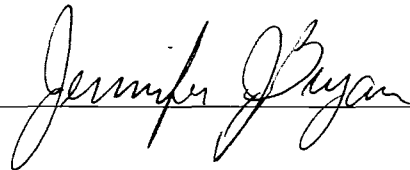
December 5, 2008

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Abstract

Protestant churches are experiencing a decline in attendance in young adults aged 18 to 25, showing little interest in attending services yet the spiritual interests among them are high. Historically, cultural shifts have necessitated change to church facilities such as spatial arrangement, technologies and interior aesthetics. Some churches however, have chosen not to make these changes to its interior design style. The purpose of this study examines the effects of the interior aesthetics within a worship environment on the attendance of the 18 to 25 age population. Using grounded theory, pretest-posttest survey results conclude that participants (N=13) prefer more contemporary interiors including darker lighting, religious symbolism, close spatial arrangement that encourages community, and the creative uses of architectural elements.

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Introduction

Thousands have sat around the base of a hill listening to a Speaker for days at a time, not leaving to feed themselves, while other small groups have gathered quietly in attic spaces, living rooms, or caves in order to be able to listen to someone, fearing for their lives. For generations, people have gathered among great cathedrals or small country churches yet still, others have congregated in high school gyms, movie theaters, city parks, or cold and dark prison cells to listen to the Gospel preached. Extremely ornate church interiors, to some, may *"display"* its grandeur as they worship the Christ, yet Christ himself was born in a stable (Zondervan, 2008), and lived in simplicity. Conversely, church *"designs"* that appear blasé, or unconcerned with interior elements may portray no sincerity of reverence to an almighty God.

Today, Protestant church attendance is declining among younger people. One solution might be to create worship spaces more appealing to this age group while maintaining design features that also welcome older members of the congregation. Younger generations report that they are drawn to dimly lit interiors, earth tones (deep color palettes such as greens, golds, and browns), and a more mystic atmosphere that *appears* more spatially intimate (McLaren, 2006). They report being less receptive however, to traditional church architectural elements such as wooden pews, cathedral ceilings, bright interiors (i.e., color or lighting applications) and "overstated" religious symbolism (McLaren, 2006; Badaracco-Padgett, 2005).

April Grieman, an interior designer, is quoted as saying, "Design must seduce, shape, and perhaps more importantly, evoke an emotional response." If interior designs can effectively "evoke an emotional response" during a worship experience, perhaps current approaches to church facilities should be reconsidered, in order to best attract and retain a younger generation not wanting to attend church. A California church's self-assessment of their facilities reflected

that, typically, visitors (on average, eight to ten percent of people in a worship service each Sunday) attending a church will decide within the first ten to fifteen minutes of entering the sanctuary whether or not they want to return. Some churches may only get one chance to make a positive first impression (Eastman, 1998, p. 2).

In the Bible (Zondervan, NIV, 2008), the book of Exodus, chapter 25, verse 8, it says, "Make for Me [God] a sanctuary, and I will dwell among them." Later in the book of Acts, chapter 20, verse 24, it says, "My life is worth nothing to me unless I use it for finishing the work assigned me by the Lord Jesus - the work of telling others the Good News about the wonderful grace of God." If the church building serves as a vehicle for instruction of the Gospel, then in fact, "God is in the details" – Ludwig Meis Van der Rohe (1886-1969).

Statement of the Problem

Throughout centuries, the church building has been affected and influenced by various factors such as country rulers, economics, building techniques and product availability, among others. However, technology, (i.e., building materials, communication, lighting, electronics, etc.) as it is seen and used today is like no other time in history (Crosbie, 2005). Although architects and designers have left their mark on societies over centuries, the constant shift and additions of cultures to communities may serve as a challenge to church growth if the building is considered out-of-date or non-functional to the people who come through its doors (Burke & Pepper, 2003).

Although there are many dynamics within any organization, church facilities attempt to serve the needs of a variety of people that differ demographically. Due to the diverse generations among regular attendees or visitors to a church, the overall aesthetics may or may not appeal to one group or the other, potentially being a reason of lowered attendance within a particular age group. Older generations typically prefer more traditionally styled church interiors and spatial

arrangements while younger generations prefer contemporary, concert-like aesthetics (Seasoltz, 2005; McLaren, 2006).

Many churches in the United States are seeing a rapid decline in the attendance within the 18 to 25 age population. A recent study produced by UCLA's Higher Education Research Institute reported that of over 14,000 students surveyed, across 136 U.S. colleges and universities, an interest in spiritual matters was still very high although college students' church attendance was in decline (Christian Century, 2008). Originally, the students were given the survey in 2004 asking questions about their spirituality. Three years later, the same students were given the identical survey and results showed that more than half of the students attended church services about as much as they did in high school. Forty percent, however, said they worshipped less than they had previously (Christian Century, 2008).

While some postulate that a more contemporary "Starbucks" interior including warm earth tones, dimmed lights, multi-media visuals, concert-like worship and little to no religious symbolism is more effective to reach this generation, others argue a less "worldly" approach is more effective (Hutchinson, 2008). Flooding the auditorium with natural light, using bright colors and religious symbolism should portray who the church is and what it stands for: "light to the world" (Hutchinson, 2008; Zondervan, 2008). Yet still, among these opinions, others state that the interior aesthetics of a worship facility should have no impact whatsoever on the attendance of a person, regardless of their age. The latest technologies many bring benefits visually but some churches are curious to know the actual causes and effects of the decline in church attendance prior to making changes to their interiors, investing potentially thousands upon thousands of dollars in the space (McLaren, 2006).

Purpose of the Study

The purpose of this study is to conduct research involving young adults, aged 18 to 25, to assess positive or negative responses, if any, to the interior aesthetics of a worship facility. Young adults, aged 18 to 25 are the future of the churches' growth therefore, specifically chosen to survey the age group's responses to church interior aesthetics. A literature review will be conducted to explore the historical significance of changes within church architecture and interior designs. The review will also examine current church design trends among traditional, contemporary and transitional church facilities. Specific attention will focus on lighting, spatial arrangement, multi-sensory aesthetics and the psychology of color palettes and their respective meanings. Within architectural and interior trends, current implications and/or theories of the rapid decline in church attendance within the 18 to 25 age population will also be reviewed. Possible correlations between the interior aesthetics of churches and the target population's attendance will be examined.

Significance of the Study

For interior designers or architects wanting to create relevant church facilities for the 18 to 25 age population, findings of this study may assist designers and decision-makers to have a better understanding of young adults' desires for church interior aesthetics which may help influence the retention of this age group. It may also provide helpful information for a ministry staff expressing similar concerns of a young adult declining attendance.

Research Question

Do the effects of interior aesthetics within a worship environment have an impact on the attendance of young adults, aged 18 to 25?

Literature Review

A Brief History of Church Architecture and Interiors

    Byzantine Period (c. 313- 900)

During the reign of Constantine the Great, (c. 285-337) the Edict of Malan was established, ending the persecution of Christians by various nations. As a result of religious freedoms, the rise of many churches began to emerge across the Roman Empire. Most Byzantine structures were externally austere and not dissimilar from secular buildings, and blended into the community (Blakemore, 1997). Although exterior walls lacked ornament, interiors were lavished with brightly colored mosaics, paintings, frescos, gilt work, tall columns and multi-story walls which were pierced with clerestory windows, allowing natural light into the space. Artistic scenes depicted biblical iconography, instructing the layperson in the Bible and the story of Christ, communicating Christianity to be the way of salvation (Abercrombie, 2008). Although pagans were converting to Christianity, many of the symbols associated with paganism were "given a fresh interpretation compatible with the Christian faith, [giving] a clear indication that enculturation was taken seriously in the early church. This visual experience assured new converts that their cultural heritage was not being exterminated but converted" (Seasoltz, 2005, p. 95). An example of that process would be the Celtic cross (Figure 1) where the pagan worship of the sun (circle) was incorporated to create a different style of cross.

    Figure 1. Celtic Cross. Byzantine Period.

As the Christian Empire (324 – 476 AD) began to flourish, multitudes of people flooded into the churches. As a result, the spatial layout evolved to accommodate larger numbers by constructing side aisles to flank the central gathering portion (nave) of the building. A transept was also added, housing symbols of the apostles, as well as the apse, adding a space where a choir would often sing (Abercrombie, 2008; Figure 2).
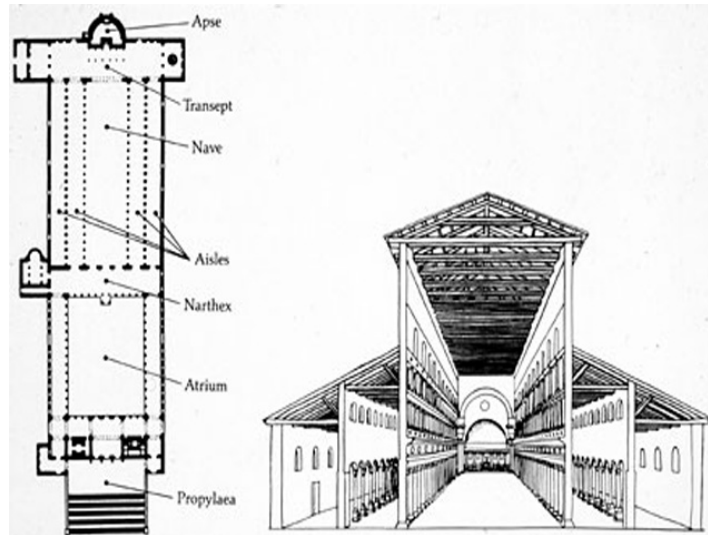
Figure 2. Transept: Old Saint Peter's Basilica. Byzantine Period.

In the later part of the fourth century, war broke out among the Roman and Persian empires, scattering Christians from places of worship. Warfare lasted for decades, creating unrest for the people (Seasoltz, 2005). During warfare, Rome became the destination of Christians, and architects began to build with more classical architectural forms, later identified as the Romanesque period, "in the manner of the Romans," (Seaslotz, 2005; Abercrombie, 2008, p. 125). The spatial layout of the basilica remained consistent until later in the seventh and eighth centuries (Harwood, 2002).

Romanesque Period (approx. 800 – 1100 AD)

Although the time was peaceful, many commoners were ill-educated, creating a chasm between clergy and layperson, due to the laity's' inability to read the Bible. If the laity were

unable to read the Bible and unable to understand the gospel through the written word, the need

for the church may not have been perceived as relevant to their lives. As a result, architects

(primarily monks) reevaluated the designs of churches' interiors to more effectively

communicate the gospel (Seasoltz, 2005). Therefore, in order to become more relevant to the

community because the culture had changed, the need to change the interior stylistic approaches

of the church was also necessary.

The cross became a very important symbol used frequently in the interiors as well as the

structure itself. With the addition of the transept, it inspired a natural spatial plan for the church:

The Latin cross or cruciform plan (Blakemore, 1997; Figure 3).

CATHEDRAL, TROIA
XI CENT.
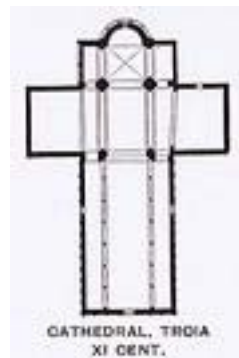
Figure 3. Latin Cross or Cruciform Plan. Romanesque Period.

Another addition to the Romanesque churches was a communion rail, placed between the nave

and the chancel. Clergy also began to face away from the congregation and toward the front of

the church, separating themselves from the people; therefore, "Dialogue between the laity and

their leaders was rendered impossible…" (Seasoltz, 2005, p. 126). A personal and

communication disconnect between the laity and priests (viewed as an intercessor between God

and man) may have occurred due to the visual separation of space (altar rail) or the priest's voice

projected away from the congregation.

Romanesque cathedrals' designs were massive, strong, and had simple exterior ornamentation. The most dramatic decorative element was the portal, or doorway, to the main sanctuary. This grand portal served as the metaphorical separation point between the earth and the heavens: leaving the earthly mind set and entering the ethereal, forming community with God and man. Kevin Seasoltz, (2005) a leading liturgical scholar describes the spatial philosophy of the church this way:

> From an architectural point of view, the early Christian [churches] manifested a profoundly symbolic interpretation of Christian life in the world. The concepts of center and path were especially important. An emphasis on interiority was common to all early Christian churches. In a sense they were convinced the interior worlds, represented the eternal city of God. A simple treatment of the exterior served to emphasize the inward thrust…their conviction was expressed as a longitudinal axis, as a road leading to the altar which symbolized Christ and union with him…(p. 42)

Although there may not be direct evidence of the masses understanding the *intended* effect of the spatial arrangement or interior changes, one might conclude that the vastness of space alluded to people feeling small in the presence of a mighty God. Seasoltz later describes the effects that purposeful designs were intended to have on the people:

> When Christians returned from the altar to their normal life in the world, they hoped that they had been somewhat transformed so as to be able to contribute to the transformation of the world into the true city of God. (p. 65)

If the people had experienced something inside the church doors that made them more inclined to share it outside its doors, then the intended effects of the newly designed interiors may have been successful in communicating the gospel.

Cistercians (late 11th -12th Centuries)

Over the course of a century, the Cistercians fomented a reform of Christianity, and focused on simplicity and a life of poverty. Church interiors were extremely simple, lacking ornamentation; this simplicity included the removal of sculptures or paintings (Seasoltz, 2005). Nothing was to appear luxurious. Likewise, some leaders protested the size and splendor of the churches, as well as the ornamentation of capitals and other architectural elements. Conceptually, the simplistic forms were intended to allow the human mind and heart to be "drawn beyond what it sees and hears." (Seasoltz, 2005, p. 145)

Gothic Period (mid 12th Century – 1530)

Church architecture and interiors of the Gothic period have often been referred to as the height of ecclesiastical forms. The Crusades, occurring between 1096 and 1270 AD, created an expansion of knowledge and caused an economic rise of trade and commerce expanding beyond European nations. Exposure to new textiles, architectural forms and other materials established an outpouring of art appreciation among the people (Abercrombie, 2008).

Artisans experimented with new ways of bringing art, light and color to the church, telling the story of Christ (Abercrombie, 2008). Where Romanesque art and architecture was intended to teach, the Gothic period was "to appeal to the emotional side of a joyless people who were steeped in ignorance and superstition" (Seasoltz, 2005, p. 167).

Light, in the Christian tradition, symbolizes God's presence, and although other periods created spaces allowing light to filter into churches, Gothic architecture revolutionized the use of light through pierced walls and stained glass in a way that "transformed it so that it became a mysterious medium that communicated the imminent presence of a transcendent God" (Seasoltz, 2005, p. 169). Clerestory windows continued to be used; however the ornamentation of open,

flame-like tracery, foils and lancet windows dramatically altered the appearance of the church

from previous architectural styles (Blakemore, 1997).

Implementing large expanses of stained glass windows produced spectacular, vivid colors,

creating a prism of interior palettes (Konemann, 2004). Biblical scenes were displayed within

the glass, telling the stories of Creation, the fall of Man, and the redemption of the world through

Christ. These images, however, were not simply for the illiterate but "revealed for all who

experienced its nuanced meanings that could not be readily expressed in written texts" (Seasoltz,

2005, p. 212). The visual experience of the church was a very important part of Christian

conversion, and was reflected in the images of Christ hanging on the cross, the cross itself,

paintings and sculptures.

A cultural shift began to emerge, however, in the way in which people approached the

church. Not only did economic deprivation force people to work more, including Sundays, but

the liturgy was being performed solely by the priests; therefore the congregation was no longer

physically participating in the worship service. The congregation was diminishing and reflected

an obligatory commitment to attend Sunday Mass or other holy days rather than a personal desire

(Seasoltz, 2005).

Renaissance and Baroque (1400-1720)

The "rebirth" of classical architecture, culture, and artistic expressions was epitomized

during the Renaissance. The spirit of the Renaissance focused on the world and valued human

individuality and personality. Artists, scientists, and philosophers began to question the authority

of the church that had proclaimed that the earth was the center of the universe and the sun

revolved around it. Apart from the church, people were free to cultivate personalities of their

own, and expressed freedom from the Pope or emperor (Seasoltz, 2005).

 Church architecture began to reflect this freedom. Artists began to combine pagan with Christian symbols, causing a stir among the people and the church. Aestheticism also found a new importance amongst the people, who were placing more value on their bodies and self indulgence, rather than a focus on the church, as it had been in the past. Artists such as Michelangelo and Brunelleschi created architectural masterpieces that reflected the expressionism of the Renaissance yet reflected the power of God and the stories of the Bible (Abercrombie, 2008).

The Baroque period is most commonly known for its lavish design elements. Ornament was oversized and adorned every architectural feature within a space. The walls were frequently covered with brocades, damasks, and velvets and patrons spared no expense. Baroque churches emphasized visual as well as auditory experiences. Words spoken and heard were "meant to balance the visual symbols, so that auditory participation relieved any sense of visual overload" (Seasoltz, 2005, p. 274).

During this period, another cultural shift began to occur and promoted the Protestant Reformation to make changes to the way the liturgy was performed. Church designs created disconnect between the layperson and the priests offering the sacraments of Holy Communion. Again, the altar rail served as a physical separation. The laity also argued the plan separated community rather than gathering it together (Seasoltz, 2005).

Many were also concerned that sacred images such as Mary or the Apostles, threatened to become idols, turning the worshipers focus away from the centrality of Christ. As a result, many sculptures and images were removed. People began to become accustomed to churches being "devoid of visual images [emphasizing] the hierarchical nature of the church" (Seasoltz, 2005, p. 304). Eventually, the success of the Protestant Reformation was dependent on religion, culture,

and more people becoming well-educated. The churches' interiors, once a *visual* vehicle of

instruction for the laity were to enhance participation. While the interiors changed, along with

the culture, the *intent* of experiencing a transformation from the earthly to the ethereal realm had

not changed.

Seventeenth, Eighteenth and Nineteenth Centuries

During the 17th and 18th centuries, colonies were being established in North America,

bringing aesthetic change to the Christian church. Puritans and Nonconformists used temporary

buildings for worship, such as cottages, farm houses, or large private dwellings. Worship spaces

were wiped clean of any ornamentation; church leaders believed it was "ostentatious

worship…unworthy of authentic Christian religion" (Seasoltz, 2005, p. 309). These farmhouse

churches had stone floors, white-washed walls, clear glass windows and bench seats. With

church leaders rejecting the cruciform floor plan and heavy ornamentation, interiors were devoid

of any symbolism, because "worship was most fitting when it was freed from all earthly

associations…[anything that] appeals to beauty, mystery or symbolism as unworthy attempts to

reintroduce the sensuous aspects of Christianity" (Seasoltz, 2005, p. 310).

The Arts and Crafts movement (1880-1910) developed a harmony with the natural

environment, and focused on textures, forms, and color schemes representative of the outdoors

(Abercrombie, 2008). Church interiors were composed of exposed wooden rafters and natural

color palettes such as creams, taupes, browns, and greens, with accents of golds and blues

(Seasoltz, 2005). Architects Bertram Goodhue (1869-1928) and Ralph Adams Cram (1863-

1942) focused the interior decoration of the churches they designed on "wood carvings

[paneling], ironwork, silver plate [ornament], and stained glass, as reflected in the Gothic period"

(Seasoltz, 2005, p. 322).

These church interiors, however, were short-lived. A disconnect between architects, artists

and the church began, where artists "suspected that science was replacing religion, and the

churchmen were suspicious of the beliefs and morals of the artists" (Seasoltz, 2005, p. 324).

In the early 1900's, the church returned to a longitudinal plan, with a main door centered on

one wall, and the pulpit elevated several feet off the ground on the opposite wall, where a

window was often placed that allowed natural light to flood the space. Later in the nineteenth

century, congregations began to move into existing buildings rather than spending funds to

construct new churches. Many of those buildings were old theaters (Loveland & Wheeler, 2003).

Theaters were typically adorned with gold leaf ornamentation, heavy draperies and box seats. A

baptistery, choir loft and grand organ, with pipes rising to the ceiling, were added later. The

floors often sloped upward from the stage to the back of the room for easier audience viewing

(Loveland & Wheeler, 2003).

Theaters' interior elements also consisted of wainscoting, lighter colors that highlighted

ceiling vaults, as well as crystal pendant chandeliers from the center of the ceiling dome. Stained

glass windows had rich, vibrant colors, carpeted floors and cushioned pews that added to the

luxury of the church. Gilt-inscribed biblical verses were also painted on the walls (Abercrombie,

2008).

With the new structural use of steel framing, secular spaces such as factories, business

complexes, department stores and exhibition buildings were created to have large, open

expanses. As a result, the characteristics of designing the space for the church were influenced

by other buildings, rather than tradition. Iron and glass allowed natural light and greater

construction expanses to permeate the churches' interiors. Architects began to experiment with

forms taken from various styles, "representing a cultural heritage of diverse meanings" (Seasoltz,

2005, p. 332).

In general, nineteenth century architecture attempted to create a sense of open space, a

limitless and continuous environment where people could act and move more freely, not for

the sake of movement but as an expression of freedom to search for, choose and create one's

own place (Seasoltz, 2005, p. 333).

Twentieth Century

Between World War I and II, a new construction style emerged known as the International

Style. This style was characterized by simple, geometric shapes, glass and plaster, austere

interiors, and lacked any obtrusive materials, textures or details. The structures generally had

ample amounts of natural light, and gave the impression of a more open space (Seasoltz, 2005).

Le Corbusier (1887-1965), a proponent of the Functionalist Style to follow, insisted on the

human need for beauty. The design movement's thought and philosophy emphasized people's

need to be in relationship with their exterior/interior surroundings. Although primary colors were

used in some buildings, neutral, lighter tones were a more common choice, and intended to blend

with the colors in nature. The Functionalist style however, was often criticized for lacking

warmth, and failed to respond to the human need for intimacy (Loveland & Wheeler, 2003).

Following World War II, diverse architectural styles began to occur and created a haphazard

approach to design. Architects, however, began to understand that building designs could

effectively relate to the humans' cultural needs of the time (Loveland & Wheeler, 2003).

Churches also began to steer away from the longitudinal plan and introduced a more auditorium

style; this created a semi-circular space surrounding the pulpit (Seasoltz, 2005). This also

allowed for larger numbers of people to view the speaker more easily because the plan allows for

more people to be in closer proximity to the speaker versus those who tried to view the service from the very back of a longitudinal plan (Seasoltz, 2005).

Architecture of the later part of the twentieth century continued to create church spaces that focused on the masses. By using technological advances, worship spaces were becoming anything but the historical, interior designs of a church. Multipurpose spaces were designed to "accomplish a variety of tasks including worship, concerts, dramas, meetings, and sometimes meals." (Seasoltz, 2005, p. 341) Furniture and fixtures were often portable so that the arrangement of space could be flexible and accommodated various needs of the church (Loveland & Wheeler, 2003). The needs of the church and its congregation varied due to the multi-generational gap between age groups.

The Generation Gap

In any given community, ages range from zero to one hundred years or older and will have seen numerous changes technologically, economically, and culturally, among themselves and globally (McLaren, 2006). These changes may influence other behaviors, world views, and belief systems to shift, remain stagnant, or die off. Trends in church design are also affected by the changes. The study of anthropology is based on the premise that there are "principles or 'laws' that underlie all behavior" and that "because the area of anthropology is the study of humans in the real world, it does not have precise tools of measurement" (Grunlan & Mayers, 1988, p. 34). Although natural sciences may be defined as having these tools, "anthropology [moves] past the definition and description stages into the area of prediction." (Grunlan & Mayers, 1988, p. 34)

One principle of Charles Darwin's theory of evolution states: "Living things change from generation to generation, producing descendents with new characteristics" (Grunlan & Mayers,

1988, p. 37). In terms of anthropology, this change may include physical alterations as well as

changes in intelligence, communication tools and thought among various cultures of people.

Although languages are spoken and heard differently, people have learned to communicate with

one another through the use of symbols, either visibly or audibly. However, "responses to these

symbols vary according to [the] understanding of and familiarity with the specific language"

(Grunlan & Mayers, 1988, p. 88).

In communities where a wide range of ages, within the same geographical location and

same spoken language, interact with one another, the span of generational gaps may serve as an

even larger communication barrier for some situations. The church may serve as a situational

barrier due to the numerous presentation style preferences among a group of people varying in

age.

Today, among United States' Protestant churches, there are various denominations and

stylistic approaches to worship. Although these approaches are too numerous to mention, in

generalities the styles of church facilities and other interiors can be broken down into three major

categories: traditional, contemporary, and transitional. Merriam-Webster (2008) defines these

terms as follows:

Traditional: An inherited, established, or customary pattern of thought, action, or behavior

(as a religious practice or a social custom); a belief or story or a body of beliefs or stories

relating to the past that are commonly accepted as historical though not verifiable.

Contemporary: Happening, existing, living, or coming into being during the same period of

time; simultaneous; marked by characteristics of the present period of time.

Transitional: Passage from one state, stage, subject, or place to another.

How these three categories differ may not only be evident in individual worship approach but also in architectural and interior aesthetics.

Traditional Interiors

Traditional interiors may be identified by several features: large pipe organs, choir loft, formal architectural surrounds such as steeples, tall vaulted or cathedral-like ceilings, stained glass windows, and religious iconography such as a communion table and the elements (e.g., bread and wine; Kimball, 2003). Other features include crosses and perhaps carvings or historic paintings representing biblical allegory (Sinderman, 2008). More flamboyant ornamentation may also be used with brightly lit interiors. Another typical feature is a longitudinal spatial arrangement. A longitudinal plan has a central aisle with long rows of seating, typically pews, on either side of the sanctuary/auditorium that leads to a raised platform (Martof, 2005). A large built-in or raised podium may also be seen. Overall, this style of interiors tends to attract an older generation (Seasoltz, 2005). Denominations focusing on historical, traditional services have often delayed the change to church building alternatives to better suit the technological age. As a result, some were seeing a decline in attendance (Badaracco-Padget, 2005).

John Runkle, (2003) in his book *Searching for Sacred Space: Essays on Architecture and Liturgical Design in the Episcopal Church,* states his concern for the lack of interest in church building change:

The general state of architecture and liturgical design in the Episcopal Church is in decline. Once known for its architectural leadership, our tradition now has many existing church buildings growing ever more dysfunctional to the needs of the people and its liturgy. (p. 45)

Contemporary Interiors

Conversely to the traditional style, contemporary interiors may have little to no ornamentation or "clutter", and few religious symbols (Sinderman, 2005; Frise, 2007). Color palettes may have darker, warmer earth tones such as browns, deep oranges, yellow-golds and shades of green combined with dimmed lighting, helping to visually enclose the space. Where earth tones are not used, a more neutral color scheme may be seen in order to add variation visually with the use of colored light, projected religious icons or art (Hutchinson, 2005). To serve a multitude of purposes, individual seats may be used in order to provide flexibility within the space. If the building has an additional multi-purpose facility, more permanent seating such as theater seats may be utilized within the auditorium. Runkle also comments on the contemporary style with equal concern: "Most new designs are superficial, either mimicking styles of days gone by or serving as self-absorbed, personal statements of a designer's ego." (Runkle, 2003, p. 50)

The Younger Generation: Aged 18 to 25

According to a variety of culture and demographic studies of young adults, those aged 18 to 25 are reported as being curious, self-reliant, smart, and able to adapt to situations quickly (Ko, 2006). Their awareness of global orientation and current events is more readily available to them due to their retention of information through the use of multi-media and more affordable technologies such as the computer, IPod, or cell phones, etc. (McLaren, 2006). Other scholars categorize this age group to be very sensitive to context and acutely aware of experiences that are honest and unforced however, skeptical of leadership or anything claiming to be "certain" or "established", specifically a church (Bader-Save, 2004; McLaren, 2006). Many young adults

seek and respond positively to interactivity with others in small or large spaces, while others prefer solitude or smaller, intimate settings in order to form relationships (McLaren, 2006).

Researchers show that although exploring spirituality is currently elevated in younger generations, church attendance is not. Informal studies (McLaren, 2006; Kimball, 2003; Burke 2005) involving young adults who did and did not attend church, asked them to attend several churches within the community. They were asked to comment on why they did not attend church, church interiors, and whether church related to them. The following reasons explained why participants of the focus group did or did not regularly attend church and their initial responses to the church environments:

"The church has a strict dogma."

"It's too boring."

"It's too entertainment-oriented."

"Why are they trying to act cool?"

"It's too contemporary."

"It's too traditional."

"They had no sense in color when decorating."

"Because the church is fancy, I feel like they will want more money from me. I just want
    them to want me."

"It seems fake…hyped."

"Where were the crosses? It felt more like a theater in there."

"It looked like a Wal-Mart in there…"

"I thought church would be darker."

"Why is the speaker way up on stage? It feels like he is talking down to us."

These comments offer subjective evidence that positive and negative criticisms of the church facility are occurring among this generation. It also implies that the opinions are also very diverse. Aesthetics of traditional, contemporary and transitional churches may vary and some concerned religious leaders are struggling to find a balance that involves all ages (McLaren, 2006).

A question that many churches are asking is: what happens when trends change? If churches are creating a "new gimmick" and trying to attract a younger generation, at what expense, economically and spiritually, will those changes have to be made and are they necessary? Some suggest that when the next generation comes along, the church building will have to do something different again (Bader-Save, 2005, p. 22).

Multi-Sensory Interiors

Younger generations are accustomed to several forms of interlaced layers of multi-sensory stimuli happening at the same time. They also put high value on subjective experiences, and are attracted to "atmosphere" (Bader-Save, 2005; Martof, 2005; McLaren, 2006). Merriam-Webster (2008) defines multi-sensory as "relating to or involving several physiological senses" and the senses are defined as being able to touch, taste, hear, smell and see (Merriam-Webster, 2008). If atmospherics such as "noises, sizes, shapes, scents as well as color" can help "create attention, convey messages and create feelings" (Bellizzi & Hites, 1992, p. 349), then it can be concluded that younger generations, with current technologies available, are accustomed to a variety of visuals messages present in their lives.

Visually and audibly, layered technology such as lighting, text, and still and moving imagery are at least subconsciously an expected audio or video expectations in a venue younger generations are attracted to (Kimball, 2003). Large screens with high-definition quality

projection systems may project numerous layers including still text and moving imagery in the background. Often, music will also be an underlying sensory element used in combination with projections or concert lighting with programmable fixtures that create visual patterns on walls or change colors; these add another layer of multi-sensory technology to a space (Luntsford, 2001).

Artistic depth created during the Byzantine, Romanesque, and Gothic periods was seen in architectural elements such as figural capitals, statues and carvings of saints, biblical figures or stained glass windows with allegorical surrounds within a church (Burke & Pepper, 2003). While more traditional churches may maintain the use of these elements, many church consultants suggest that such imagery, such as the cross, is "offensive" and should be all but removed from worship facilities in order to better relate to a younger generation generally unaware of church symbolism (Badaracco-Padget, 2005). Others oppose lessening or removing visual imagery because it would remove a visual reminder of what the church stands for (McLaren, 2006). Similar to a corporate logo or branding, the imagery should easily communicate what the company does, or represents.

Textures can also play a role in appealing to the senses. Historically, marble, heavy velvet or damask fabrics, gold, brass and other highly polished surfaces were considered to be a part of wealthier interiors; tumbled stone, burlap and cotton fabrics, and iron was considered to represent lower-income interiors (Abercrombie, 2008). Currently, the mixed use of various textures in an interior is no respecter of income but rather a delicate balance of the elements (Pile, 2003). People, who are motivated by sensory experiences, may have adverse reactions to hard, cold and sharp edges that trigger a defensive response, both physically and psychologically (Frise, 2007). Textures within an interior that encourage a sense of comfort or vulnerability might include soft, warm, and smooth edges. As church architect Matt Frise (2007) expressed in

an article entitled *How to: Humanize a Worship Space*, "No one can tell me that the thick band of missing fuzz where years of hands have run while passing up the staircase is just a coincidence." (p. 2)

Seating serves as an example of interior texture, be it hard, soft or a combination of the two. Hard seating requires strict posture and sitting for longer periods of time can create discomfort to the spinal column, and in turn cause frequent body weight shifting. When the body moves to avoid discomfort, the brain will tend to focus on the discomfort rather than someone speaking (McCan, 2006). Softer upholstery (implying a covered cushion) however, allows someone's body weight to be better absorbed into the seat, making longer periods of sitting more tolerable (Abercrombie, 2008).

Typically, churches have had only a few variations of seating to accommodate larger numbers of people. Beginning in the Romanesque period, seating was added to the church service in the form of backless, hard, wooden benches. Later, in the early fifteenth century, the wooden pew (wooden seat and back) became a more common form of seating because it would support numerous people (Loveland & Wheeler, 2003). In the eighteenth century, congregations began to use abandoned theaters for worship services. As was the tradition in theaters, upholstered chairs were originally limited to box seats. Later, upholstered chairs were incorporated throughout the entire space (Loveland & Wheeler, 2003). Currently, churches use various types of seating which may include wooden pews, upholstered pews (seat only, back only or both), folding metal or plastic chairs, or individually upholstered chairs that connect together or stand alone. Within the past eight to ten years, movie-theater-style seating has been incorporated into the worship facility. This trend among more contemporary facilities is commonly used for a more "everyday approach for the everyday person" (Bader-Save, 2005, p.

26). Acoustically, upholstered seating also gives as an absorbing quality, lessening the reverberation time within a space caused by conversation, music or hard, reflective architectural surrounds (Project Design, 2003).

The senses of taste and smell, even in their simplest use, can elicit a positive or negative reaction from someone. Movie theaters, as a simple example, might be an illustration of marketing techniques using the sense of taste and smell for impulse purchases. When people are gathering to see a film (or similar event) the aroma of freshly popped popcorn might increase in concession sales. Conversely, the smell of burned popcorn might have the opposite effect on consumers. Although churches typically do not serve popcorn in their worship services, the elements of Holy Communion such as bread, representing Christ's body and wine representing His blood, shed on the cross, are sensory elements. These elements connect a physiological need with religious symbolism (Kimball, 2003, Zondervan, 2008). Where textures can be found in seating, walls, or architectural surrounds, younger generations find these elements to be more approachable than the formality of other church designs (Sinderman, 2005).

Lighting

Humans have a natural, innate response to light. Because various sources of light produce different results, people are affected by it physically, psychologically and emotionally in numerous ways (Winchip, 2005). Daylighting typically refers to the sun's natural light that enters a building through the use of numerous windows. In situations where daylighting cannot occur effectively or at all other studies show that by simply altering the *quality* of the lamp source the emotional state of the end user can also change for the better (Winchip, 2005). Although efficient, most fluorescent lamps produce a light that is bluer in appearance that may be a source of eye irritation, headache and a feeling of edginess after long periods of time

(National Lighting Bureau, 1988). Typically, incandescent lamps produce a warmer, welcoming

light output but are not as energy efficient as their fluorescent counterpart. Light output is

measured in a room by footcandles, watts per square foot or lumens per watt. Table 1 shows the

recommended light outputs for the various locations/tasks below (Karlen, 2004)

Table 1

Foot Candle Lighting Levels

Average light level desired and typical application	Watts per square foot for fluorescent, compact fluorescent or HID lamps	Watts per square foot for incandescent or halogen lamps
2.5 – 5.0 fc (footcandles) Hotel corridors, stair towers	0.1 – 0.2	0.3 – 0.7
5 – 10 fc Office corridors, parking garages, theaters (house lights)	0.2 – 0.4	0.7 – 1.0
10 – 20 fc Building lobbies, waiting areas, elevator lobbies, malls, hotel function spaces, school corridors	0.4 – 0.8	1.0 – 2.0
20 – 50 fc Office Areas, classrooms, hold rooms, lecture halls, conference rooms, ambient retail lighting, industrial workshops, gyms	0.8 – 1.2	Not Recommended
50 – 100 fc Grocery stores, big box retail stores, laboratories, work areas, sport courts	1.2 – 2.0	Not Recommended

(adopted from Lighting Design Basics, Karlen, 2004, p.40)

Church auditoriums vary in size and could be categorized as lecture halls or conference rooms,

depending on the architectural surrounds (i.e., windows, skylights, spatial arrangement). As

shown in Table 1, for these spaces one watt per square foot or 35 footcandles, on average, is

recommended. This recommendation is based on output from a fluorescent light source. For this

amount of space, as noted in Table 1, incandescent lamps are not recommended due to their

inefficiency as a light source. Therefore, consideration must be given to the specific location and purpose of certain light sources in order to achieve the overall desired output and effect within a space (Karlen, 2004).

In auditorium-style locations with numerous seats, large spaces, and larger distances between the back row and speaker, maintaining adequate light control is crucial for not only the impact of the presentation but the well-being of the audience (Hutchinson, 2005). If the balance of light, between the audience, their immediate surroundings, the speaker and his or her immediate surroundings and other subordinate but important areas is not well designed, participants may experience fatigue, due to eye strain (Weygandt, 2007). In many presentations, general lighting within a room is dimmed, making the speaker more visually important. However, if the area directly behind the speaker is darker than or as equally bright as the speaker himself, the eye will counteract strain (Luntsford, 2001). The audience members' eyes will automatically steer to something else, attempting to fill the void of balanced light contrast. Eventually, eyes tire, distracting the audience from the speaker. Biologically, sight and sound are interrelated, therefore, if the eyes wander from the intended source, the audible connection will also eventually be lost, precipitating a loss of interest in the speaker all together (Strenke, 2000). Another consideration for illuminating a space is the amount of light needed for reading or writing; insufficient lighting levels can create eye strain (Jacques, 2001).

Many churches incorporate fluorescent lighting into their spaces but generally confine the use to office or classroom environments or spaces where lights remain on for longer periods of time. Fluorescent light fixtures like that found in commercial buildings, generally used for its energy efficiency and overall light output. Auditoriums, however, will often use recessed downlights. Although these fixtures provide an even distribution of illumination, they can cast a

vertical light that creates shadows on faces (Sanctuary Lighting, 2007). This can be reduced by installing perimeter lights (Winchip, 2005).

Younger generations state that darker environments reflect a more somber, emotional atmosphere and create a sense of intimacy (Kimball, 2003). They become more aware that something different is occurring or about to occur. For example, when one attends a movie at an enclosed theater, general lighting is dimmed during the previews and then dimmed further for the feature film. By simply dimming the lights within the space, the mood has been altered dramatically. To create a similar atmosphere, some church auditoriums dim the lights or incorporate candle lighting to create a "spiritual mood" (Kimball, 2003). According to Morrow (2008), seeking spiritual connection may be a private, more intimate experience for some because younger generations tend to be more "spiritual" than in generations past. With lights dimmed during a worship time, people are not as likely to look around at those who seek prayer and meditation in various ways such as standing, sitting, kneeling, raising hands, or singing (Kimball, 2003).

Others argue that a church should be filled with light in opposition to the "dark spiritual" side of the world that people already live in. Some churches incorporate many windows, flooding the space with natural light (Badaracco-Padgett, 2005). Large expanses of windows can also make a space appear larger than it actually is. The Crystal Cathedral in California, designed by world renowned architects Philip Johnson and John Burgee, is a masterful example of allowing "creation to come into the space," (Loveland & Wheeler, 2003, p. 178). The auditorium walls and ceiling are constructed of metal framing and glass. Trees are planted within the space and at the end of each service a set of doors, forty feet high open to the outdoors where a water fountain rises 100 feet in the air. The effect is inspiring (Loveland & Wheeler, 2003).

Color

Colors have associated psychological meanings and evoke various responses as a result of personal preference or cultural significance (Jacques, 2005; Guerin, Park, & Young, 1995). These preferences and their meanings may change over time. Cultural trends may also validate or influence personal preference and be predetermined as early as three to five years prior to being introduced to the public. However, there is a significant difference between preference of color and meanings associated with them. "Meaning occurs when significance is formed in the mind…it may differ for each individual; it is subjective and is based on various experiences, education and culture." (Guerin, Park & Young, 1995, p. 35) Meanings associated with a particular color may also be perceived as negative or positive environmental cues. Warm colors such as reds, yellows and oranges are typically perceived as visually loud, exciting, stimulating, and arousing. Cool colors such as blues, greens and lavenders are perceived as quiet, relaxing, soothing, and calming (Slotkis, 2006).

Whitfield (1984) determined that selection preference of wall colors within a residential environment varied by age, gender, and social status. Other studies done by Bellizzi, Crowley, and Hasty (1993) determined that in retail environments a predominant color varying from one display to another had a direct effect on shoppers' perceptions of the store, increasing sales.

According to review of literature by Guerin, Park and Young (1992), Acking and Kuller (1995), used descriptive words to evaluate color characteristics in their various studies. According to their findings, five representative factors of interior color were determined in their experiments; "pleasantness evaluation", "social evaluation", "spatial enclosedness", "complexity", and "unity" (Acking & Kuller, 1968; 1972, p. 32).   In regard to spatial enclosedness, the study described the appearance of space and light in proximity to one another. "Words that described this factor were open, light, spacious, closed, dark, and encumbered" (p.

33). The words were judged on a one-word, Likert-type scale. For example, based on chroma

strength (the intensity of a color), subjects perceived the lighter color of the walls to create a

more open space. It was also found that "color differences significantly influenced perceived

room size" (Acking & Kuller, 1992, p. 34).

Soldat, Sinclair and Mark (1997) sought to determine whether color, serving as an

environmental cue, would lead to positive or negative affective cues, and in turn lead to non-

systematic processing or a more systematic, detail-oriented form of cognitive processing. The

researchers postulated:

> …that color can also serve as a cue that provides feedback about the nature of a situation
>
> and its associated processing requirements. Some colors may convey a feeling of happiness,
>
> associated with benign situations, while other colors may convey a feeling of sadness or
>
> neutrality, associated with relatively more problematic situations (p. 57).

The question became whether or not exposure to certain colors would "influence processing

strategy much like mood, motivation or facial expressions" (p. 59). Participants of the study were

given, at random, a single colored piece of paper: red, blue, or white. A mood measure was also

included to assess whether the paper might affect mood, which could possibly affect cognitive

processing during consumer purchasing selections.

> If color affects processing through mechanisms similar to the effects of mood on processing
>
> strategy, then the color manipulation should have a stronger effect on individuals low in
>
> motivation and a weaker effect on more motivated individuals. Given that experienced
>
> feeling states can inform people about the nature of a situation and its associated processing
>
> requirements, it seems plausible that environmental affective cues may serve a similar
>
> function and inform people about the nature of a situation (e.g., benign or problematic) and

thus directly elicit processing strategy differences without affecting the perceiver's mood (p.

59).

Color did affect processing strategy without influencing mood. "Red was perceived to convey

happiness to a greater degree than blue," although, those who completed problems on red paper

were less inclined to get them correct than those who completed them on blue paper. (Sinclair &

Mark, 1997, p. 63). However, there were no conclusive results based on whether a *previous*

mood could be *altered*.

If environmental cues (i.e., color) inform people about the nature of a situation, and light has

the potential to affect mood, one can conclude the effects of color and light combined may yield

similar results. Concerts use colored lighting to enhance music visually. Music has a distinctive

arc in dynamics and lighting can enhance it by creating greater contrast between different

lighting atmospheres; the greater the contrast, the greater the effect on the audience (Jacques,

2005).

For example, with up-tempo and louder songs, brighter reds, yellows and oranges are

flashed across the stage and into the audience. Multiple images, short flashes of brighter lights

and fast exchanging "patterned tempo" lights among numerous programmable light fixtures

creates an excitement within the audience. In contrast, lighting for quieter ballads uses blues,

greens and lavenders that create deep shadows with a hint of mysticism and soft passion,

dramatically altering the mood of the room (Jacques, 2005).

A church's lighting during praise and worship services will often use the same strategy and

psychological approach to color. If the music portion of the service was to be categorized into

two different genres, these could be defined as "praise" and "worship". Praise might refer to

more fast-paced, louder instrumentation during the singing portion of the service. Worship might

refer to a slower, softer, more reverent accolade to God (Jacques, 2005). The order in which

those two types of music occur may vary among churches, and incorporate colored lighting to

reflect the "visual mood". This may have an influence, consciously or sub-consciously, on the

psychological approach to the praise and worship times (Jacques, 2005). Again, "environmental

affective cues," as suggested by Soldat, Sinclair, and Mark, (1997) "inform people about the

nature of a situation" (p. 63). The greater the contrast, the greater the effect on the audience.

Church Marketing Studies on the Population Aged 18 to 25

The spiritual interests of this age group are on average higher, but the interests in attending

regular church services are not (Kimball, 2003). College age students and young professionals

(aged 18 to 25) have shown a greater interest in a variety of religions, wanting to better

understand and explore religious and spiritual dimensions within their own lives. Many

universities offer classes in philosophy and religion, helping facilitate an atmosphere of

acceptance, while cultivating a "community of young people who are committed to their own

faith practice and committed to learning about other faith practices for the benefit of all the

practices" (Morrow, 2008, p. 17). According to Kimball (2003) George Barna, a Christian faith

researcher reports:

> Young adults today in the U.S. seem most open to exploring faiths other than Christianity.
>
> Young adults are avoiding church: Church attendance is declining by generation.
>
> Compared with teens throughout the past twenty years, today's teenagers have the lowest
>
> likelihood of attending church when they are living independent of their parents. (p. 48)

Regarding young adults, Barna's data implies the possibility that churches are losing ground in

terms of influence and may need to consider new approaches to worship in order to regain the

age groups' attendance (Kimball, 2003). Clegg and Bird, as reported by Ko (2003), reported that

"the un-churched population in the United States is so extensive that, if it were a nation, it would

be the fifth most populated nation on the planet after China, the former Soviet Union, India and

Brazil." (p. 69)

Mike Riddell, author of *Beyond Ground Zero: Resourcing Faith in a Post-Christian Era*,

suggests that many churches' interior designs are not conducive to young adults' preference in

style. As a result, when church interiors could capitalize on interior designs to encourage young

adults' attendance, many do not. Riddell remarks on the current lack of design:

> Several centuries of modernity have made the Western church aesthetically anorexic.
>
> Paganism has become an attractive option when compared to the aesthetic and colorless face
>
> of demythologized Christianity. What has become of the art, the symbolism, the mystery,
>
> the wonder and the transcendent earthiness of Christian faith? It is no surprise…church[es]
>
> which are resistant to current hemorrhaging [regarding the lack of design] are those
>
> …traditions which have preserved some color and bodily resonance in their worship…(Ko,
>
> 2006, p. 10).

Burke and Pepper (2003) reported that young adults in their early twenties and thirties will treat

religion like any other consumer product. They will comparison shop until "they find something

that meets or exceeds their personal requirements" (p. 91). Successful business organizations

identify the elements of customer satisfaction and will meet the needs more efficiently than their

competition. "Customer satisfaction goes beyond one time transactions but builds a long term

relationship" (Coleman, 2002, p. 78) and successful businesses have addressed the following for

creating a marketable exchange: Understanding what a member values. Create and deliver

programs/products in response to those values. Provide information about programs/products and

the organization (p. 79).

Therefore, if a church were to apply successful business practices as it relates to interior design, would it have a more long-term relationship with its members, knowing that the churches' "customers" are affected by the values people put on experiential happenings within a space?

Marketing studies (Bellizzi & Hites, 1992) show that without proper "packaging", an item may never be noticed let alone purchased, opened and used. Within retail environments, "atmospherics such as noises, sizes, shapes, scents as well as colors can help create attention, convey messages, and create feelings which may increase purchase probability. Music has also been demonstrated to influence retail purchases, emotional responses and behavioral intentions," (Bellizzi & Hites, 1992, p. 349). A building's interiors can make a positive, negative, or indifferent impression for those who come through its doors. Although a church may not wish to be perceived as a "properly packaged product", the philosophy may apply. Churches may benefit from not only understanding the implications of marketing strategies as they apply to interior design but the knowledge of young adults' stylistic preferences and how they relate to creating appealing worship spaces, ultimately increasing attendance.

Many churches are seeking to revitalize their declining memberships by hiring experts to help establish their identity (McLaren, 2006). Carrol and Roozen (1990) defined a church's identity to be "a persistent set of beliefs, values, patterns, symbols, stories and style that makes a congregation distinctive" (p. 360). People within an organization are not characterized by a single element but multi-dimensional. Organizations however, tend to attract the same types of people: the "select." "When an organization is so ingrown, it begins to occupy an increasingly narrow ecological niche. When this happens, organizations fail" (Natua, 2007, p. 47). Interiors will often reflect the organization and its established identity. If tradition, aesthetics, or communication style preferences within an environment are outweighed by one age group, the

minority demographic may consciously or subconsciously remove themselves from the

environment, seeking a more like-minded community (Natua, 2007).

Church building consultants, pastors, and churches with declining or rising memberships,

have begun to question the approaches made by congregations wanting to build, remodel or

make additions to a church facility in order to best accommodate their congregation and

surrounding community. With the advancement of technologies playing a major role in society,

the everyday consumer has come to expect the same approach in any building within a

community (Hutchinson, 2005). Likewise, churches may need to consider the interior aesthetics

in order to attract and increase, or at the very least stabilize, the regular attendance of young

adults aged 18 to 25, a generation that has little historical understanding of the church, symbolic

meanings, or church language and how, if at all, it is considered relevant to their lives (Baker-

Save, 2004).

Method

The perception young adults have regarding church interior aesthetics may be more

subjective rather than objective, however the formulation of gathering perceptions may provide

information for designers or architects to make better design decisions. Grounded theories were

used as the basis for the qualitative study, allowing participants to reflect on their own worship

experiences and observations of church interiors.

In order to better understand perceptions of church interiors, a pretest–posttest survey design

was given to a small sampling (N=13) of young adults aged 18 to 25. The pretest-posttest

method is a research design that "measures the behavior of a single group of subjects both before

and after a treatment" (McBurney, 2007). The objective of the pretest–posttest survey was to

record any initial responses (positive, negative, or neutral) to three church interiors (traditional,

contemporary, and transitional) using a pretest survey, and then compare responses with a

posttest survey's results, after attending a service. Responses from the surveys were assessed for

themes and changes in behavior, if any. Any potential correlations between questions such as

someone's overall impression of the space vs. whether or not they would come back were also

assessed to determine possible causes of changed behavior as they relate to a specific church

interior.

Preliminary field research

In order to select churches for the final survey model, ten, local church interiors were

observed during a worship service. (See Appendix P.) The churches were selected based on the

diversity of interior styles, traditions and observed demographics within the specific

denominations. Extensive notes were taken before, during, and after the worship services, noting

interior elements and any physical changes such as lighting, visuals, etc., within the space, if they

occurred. Gathered information included color palettes, spatial arrangements, seating types,

platform arrangements, and religious iconography. Natural and/or artificial lighting was also

observed as it applied to ambient, spot, or theatrical lighting. Observations were also made on the

number of young adults who appeared to be in the age range of 18 to 25 in attendance during the

service.

Development of Pretest Survey and Pilot Test

Fifty university students (aged 18 to 22), were interviewed about church interiors. The

students were asked questions regarding churches' interiors, what they liked or disliked and their

initial responses upon entering a worship space. Other young, professional individuals (aged 22

to 25) were asked similar questions. Those struggling to attend a church consistently, or who did

not attend at all, were asked about their particular struggles or complaints and if they were

related to the interior aesthetics of the church.

Survey questions were developed by using portions of instruments used in qualitative and

quantitative studies that focused on subjects' responses to an environment or effects of consumer

psychology (Argyle, 2000; Sinderman, 2005). Open and closed-ended questions were

considered, as well as questions requiring a four-point scale. Questions that would potentially

address emotional and observational perceptions, such as the effects of lighting, proximity to the

speaker and to others around them were also included. Other categories included seating

comfort, lighting, overall impressions of the space, and the use of religious iconography.

General, demographic information was also requested. Within each category, a space for

additional comments was provided to allow for elaboration. Four questions requested a "yes" or

"no" answer and four questions requested answers based on a four-point scale. In one of the four

questions, participants were asked to rate a series of descriptors, as they described the space, on a

scale from 1 to 4, with 1=Do not agree, 2=Slightly agree, 3=Moderately agree, or

4=Strongly agree, An abbreviated example follows:

Overall impression of the space

How would you rate the words below, as they describe this space, based on the following
scale:

1 = do not agree   2 = slightly agree   3 = = moderately agree   4 = strongly agree

Inviting	1 2 3 4	Exciting	1 2 3 4
Calming	1 2 3 4	Contemporary	1 2 3 4
Spacious	1 2 3 4	Informal	1 2 3 4

Figure 4. Overall Impression of the Space. (See Appendix A for additional descriptors.)

The first survey was distributed to five people to determine any ambiguous effect that might

occur with regard to the questions' wording and survey viability. After an informal discussion,

the wordings on some questions were revised for clarity and other questions added to or deleted

from the posttest survey. Branching items were also included (i.e. "if no, then skip to question

 #--"). The survey was also reviewed by a statistician and thesis committee members to

determine qualitative and quantitative measures within the study. (See Appendix A for the final,

distributed pretest survey.)

Development of Posttest Survey

Based on initial field research that provided a general knowledge of what the pre-service,

service, and post-service experiences would be like, questions were addressed accordingly in the

posttest survey. Suggestions provided by the statistician developed more focused questions to

assess changes in the participants' perceptions of the space, after the worship experiences.

Questions pertained to: adequate lighting for taking notes; whether the worship experience

changed their perceptions of the interior aesthetics or remained the same with a "yes" or "no"

response; their overall impression to the space with a "positive", "negative" or "not sure"

response; and whether or not they would return with a "yes", "no", or "maybe" response. Similar

descriptor words used in the pretest were also used in the same way (four-point scale) for the

posttest. This allowed for some responses to have tabled or quantified results. Other related,

open-ended questions were asked to allow freedom of thought and not confine participants'

answers to a specific option or scale. This benefited the overall qualitative nature of the study.

(See Appendix F for the final, distributed posttest survey.)

Participants

A small sample of convenience from local universities and independent solicitations were

given the surveys to complete. Participants were aged 18 to 25 due to a common age bracketing

in other studies as well as commonalities within the generation, such as a general understanding

of technology, global perspective, and interest in spiritual matters (McLaren, 2006).

Participants' individual responses to written surveys were secured in sealed envelopes, insuring

anonymity and validity. Religious preference, or lack thereof, was not a requirement for this

study, therefore the subjective opinions, rather than analytical analysis of church interiors,

benefited the study.

Procedure

Through poster solicitation and personal or phone correspondence, participants verbally

agreed to be a part of the surveys. An informed consent form was signed, describing the purpose

of the study and participation requirements. Participants were also given a copy for their records.

(See Appendix Q.) They were then given a manila envelope that included the following: copy of

informed consent form for their records, four pretest surveys, four posttest surveys, maps and

directions to each church location, as well as information regarding service time options and

specific instructions for each service. (See Appendix R.) Each envelope was addressed to the

primary researcher and postage was supplied if required for convenient delivery.

Participants attended four church services; Faith Bible Church, St. Luke's United Methodist

traditional service, St. Luke's United Methodist Life Light service, and Life Church within the

Oklahoma City area. At least one church was from each of the styles (traditional, contemporary,

or transitional) was included in the study. Participants were asked to arrive ten minutes prior to

the particular church service start time. This allowed time for the pretest survey to be completed.

After attending the service, participants were asked to fill out the posttest survey while still at the

location. Once the individual surveys were completed, respondents were instructed to place them

back into their assigned envelope to insure the results were kept together. After attending all four

church services and completing the surveys, participants were instructed to seal their assigned

envelopes and return them to the researcher for analysis. The results were then analyzed for

themes in both the pretest and posttest surveys. Questions supporting statistical analysis were

also formulated and then quantified.   The overall goal was to establish what, if any, themes

could be formulated to determine the preferred interior aesthetic environment of a worship space

for young adults aged 18 to 25. Findings would most likely weigh more heavily on individual

responses rather than quantifiable comparisons between descriptor words of the spaces due to

immeasurable narratives. The more favorable qualities of the individual church facilities, rather

than comparisons among the four churches, will be assessed in the Discussion of the results and

Conclusions.

<div align="center">Results</div>

   Out of the 20 asked to participate, 13 completed, pre- and post-test surveys were returned.

The number of respondents in each age were as follows: Age 18 had n=0; age 19 had n=3; age

20 had n=0; age 21 had n=3; age 22 had n=4; age 23 had n=0; age 24 had n=3; and age 25 had

n=0. The participants overall mean was 21 years of age. The number of female respondents was

8, with a mean age of 21.5, and the number of male respondents was 5, with a mean age of 21.6.

   For both pretest and posttests surveys, participants were asked to rate a series of descriptor

words as they described the space before and after the worship experience. The descriptor words

were as follows: Inviting; Calming; Spacious; Comfortable; Formal; Reverent; Busy; Closed-in;

Exciting; Contemporary; Informal; Intimate; Accepting; Un-accepting; Rigid; Energetic; and

Boring. The descriptors, "Ornate" and "Simple" were rated in the pretest but discarded for the

post survey, as they did not require post assessment. The words were assigned a four-point scale

rating of 1 to 4, with 1=Do not agree, 2=Slightly agree, 3=Moderately agree, or 4=Strongly

agree. "Seat Comfort", "Draws you in", and "Makes you want to leave", although not descriptor

words of space, were also assessed on the pre- and posttests. "Seat Comfort" was ranked on a

similar scale of 1 to 4 with 1=not comfortable, 2=tolerable, 3=comfortable, 4=very comfortable.

"Draws you in" and "Makes you want to leave" were ranked from 1 to 4 with 1=not at all,

2=slightly agree, 3=moderately agree, and 4=strongly agree. A *t*-test was applied, pairing two

samples of means, for each specific descriptor of seat comfort level, at each church. The

questions referring to "being drawn into the space" or "wanting to leave" were also analyzed

with a *t*-Test because of the need to compare two different descriptors.

   Below, an example of the results for a question related to "seat comfort" (pretest and posttest)

at Faith Bible Church is shown:

Table 2

Faith Bible: Seat Comfort
t-Test: Paired Two Sample for Means

	Seat comfort	post - seat comfort
Mean	2.692307692	2.692307692
Variance	0.230769231	0.397435897
Observations	13	13
Pearson Correlation	0.48683382	
Hypothesized Mean Difference	0	
Df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Based on results, there is no significant difference between the pre and posttest surveys, with

identical means of 2.692. All of the churches' seating comfort levels showed no significant

difference between the pre- and posttest; therefore there was not an obvious correlation between

the interior environment and the participants overall impression of the space, due to the comfort

level of the seats.

Although each quantifiable result was documented (See Appendices K, L, M and N.), due to

the majority of open-ended responses, and their variety, the statistical data focuses on the most

significant differences that could be tested within each church.

Faith Bible Church

Faith Bible Church is a small space and predominantly traditional in style. The seating

arrangement is a longitudinal plan with a central aisle leading to the platform. The back wall of

the platform has floor to ceiling wood paneling with a centered stained glass window. The

ceilings, although vaulted, are low, enclosing the space. Some windows on either side of the

auditorium allow for some natural light to come into the space, although they are covered with

either framed, stained glass pieces of art or screen fabric roller shades. Four skylights also allow

natural light in, but the light is blocked by a structural beam, directly under the skylight. All of

the walls, carpeting, and seating are variations of beige.

The first t-test run, comparing pre and posttests together showed that participants perceived

the interior as "boring".

Table 3

Faith Bible Church: Perceived as Boring
t-Test: Paired Two Sample for Means

	Boring - pre	Boring – post
Mean	2	2.615384615
Observations	13	13
Df	12	
t Stat	-2.551171217	

The descriptor "Boring" showed a pretest mean of 2; however, the posttest showed a mean of 2.615, implying that the level of boredom within the space increased after the worship experience.

Table 4 below shows the significant difference between how the interior aesthetics drew the participants into the space instead of making them want to leave. Tallied results for "overall impression" of the space (Table #5), also shows the "positive", "negative", or "not sure" responses.

Table 4

Faith Bible Church: Draws You In versus Wanting To Leave
t-Test: Paired Two Sample for Means

	Draws you in	vs.	Want to leave
Mean	3.846153846		1.307692308
Observations	13		13
Df	12		
t Stat	9.460805955		

In this case, more participants reported that the space initially drew them into the space, showing a significant difference between the *t*-Critical two-tail (2.178) and the *t*-Stat (9.469) values. An overall higher mean of 3.846 versus the desire to leave is shown at 1.307, at the .05 level.

Table 5

Faith Bible Church: Overall Impression

Positive	6
Negative	2
Not Sure	5

Total N=	13

Table 5 shows that almost half of the participants had a positive overall impression of the experience within the space. However, according to the posttest, open-ended responses and a tally of whether or not participants would come back, results implied that although more "overall impression" responses were positive, it was not a direct factor in wanting to return (Table 6). In other words, a "positive" correlation between the two elements did not imply there was an equal desire to return to this particular church.

Table 6

Faith Bible Church: Would You Return to This Church?

Yes	4
No	7
Maybe	2

For those who reported a positive overall impression of the space, their open-ended remarks to the following question revealed more insight:

"My experience was positive, but the space wasn't too visually appealing to me. It seemed kind of bland with beige seating, light wood & all the dark wood on the stage."

"The space didn't hinder my worship experience it just didn't facilitate the things that I'm used to."

"Positive. Even though I felt a little closed in, I did like the experience. The church setting was calm and inviting. Anyone who was traditional would definitely like space and service."

"Overall, positive but the only negative issue was with sitting and standing 5 times during singing the songs."

"No impact but not bad." (See Appendix G.)

The participants who reported having a positive experience (as listed above) later reported whether or not they would return where three said "Yes" and two said "Maybe".

St. Luke's United Methodist Traditional Service

St. Luke's United Methodist main auditorium (traditional service) has a very large and open space plan, with a three to four story-high domed ceiling that mimics a blue sky, and diffuse soft, cove lighting around the perimeter of the room. Dark wood paneling surround the perimeter walls and the stage front is separated from the congregation with the use of an altar rail. The steps and walls leading to the stage are made up of ocean green and gold mosaics with white marble flooring. The semi-circular spatial arrangement parallels the stage. A large pipe organ, choir loft, and large, colorful, stained glass windows create an interior element that participants report to appear spacious and inviting. Elevated six feet above the stage is a podium for the preacher to stand at. On average, the congregation's demographic is much older than 50 years old.

Table 7

St. Luke's United Methodist Traditional Service:
Perceived Spaciousness
t-Test: Paired Two Sample for Means

	Spacious – pre	Spacious - post
Mean	3.692307692	3.230769231
Observations	13	13
Df	12	
t Stat	2.520504151	

Although slight, the perceived spaciousness of the church interior did drop from a mean of 3.692 to 3.230. Participants commented on the seating arrangement in relationship to the openness of the space positively:

"It was comfortable. I had plenty of room for my own space."

"The space is very impressive feeling, perhaps because of the height of the ceiling, the

 stained glass or the organ."

"I like that the rows are wider, rather than the aisles longer, everyone's closer to the stage."

 "The organic, circular nature of the architecture is inviting and leads your eye to the center."

 "The room was huge with the seats/organ." (See Appendix H.)

This church facility also showed significant differences within the initial interior elements of

being "drawn into the space".

Table 8

St. Luke's United Methodist Traditional Service: Draws You In
versus Wanting To Leave
t-Test: Paired Two Sample for Means

	Draws you in	Want to leave
Mean	3.384615385	1.384615385
Observations	13	13
Df	12	
t Stat	6.676183683	

"Drawing participants into the space" ranked considerably higher (3.384) than making them

"want to leave" (1.384). Although the initial responses were positive, the "desire to return" rate

was very low. Six participants said they would not return, five said "maybe" and two said that

they would return. Additional comments provided helped to better understand those participants

who said they might or would not return:

 "It seemed way too traditional and stereotypical and it gave the impression of a dry and

  pious church building that is always made fun of on TV. The organ pipes arrangement

  really did make me feel uneasy because of their sharp points and placement."

"I had a hard time paying attention to the songs because I couldn't hear anything and it's

hard following the hymns in the books."

"I wouldn't say I hated it or that it would make me fall away from church. I think getting

involved and getting to know other people would be the key though because the service

itself was a little more formal than I prefer."

"Semi-positive – It was a good service I just can't relate very well." (See Appendix H.)

References to community and relationships, lack of technology such as large screens or

projection systems, and a "traditional and stereotypical" church interior, indicate characteristics a

younger adult generation prefers or complains about with church interior environments

(McLaren, 2006). One specific comment regarding the placement of the podium and the

observed relationship between the preacher and the audience was insightful: "It's cool but the

special "preacher box" seems a bit too "high church" for me." The participant went on to

comment about their overall impression of the space and how it did not relate to community and

interconnectedness: "It is very visually impressive but way to gaudy for me. If God was like this

space, I wouldn't fit in. It's cool to look at some stuff but hard to feel a connection with."

St. Luke's United Methodist Service: Life Light

Life Light would be considered a transitional church facility. Life Light is within the main St.

Luke's United Methodist building, however, this service is held in the old gymnasium. The

seating is arranged in a longitudinal plan with a slightly elevated platform (24 inches) for the

worship team (group of singers and or instrumentalist leading music) and preacher. A simple

wooden cross stands to one side of the platform with little to no other religious symbolism in the

space. Words to music or scripture references are projected onto a large screen behind the

platform for easy viewing by everyone in the space. A few spot lights are used for the platform

but the ambient lighting is a harsh, high intensity discharge lamp, often associated with gym or

parking lot lighting (Winchip, 2005) On average, the service has a younger demographic,

primarily those aged 35 and under. Life Light's pre- and posttests were generally reported to be

the same. Lighting was adequate for taking notes or reading the projector screen without causing

eye strain and participants agreed that the space was open, informal and inviting. They did not

believe that the space appeared to be visually formal, closed in or busy. The only t-test that

appeared to lessen significantly in anyway was that of being drawn into the space. (Table 9)

Although the mean for being "drawn into the space" (2.692) versus wanting to leave (1.230) was

not ranked high, 11 out of 13 people said that it did not make them necessarily want to leave.

Table 9

St. Luke's United Methodist Life Light Service: Draws You In versus
Wanting To Leave
t-Test: Paired Two Sample for Means

	Draws you in	Want to leave
Mean	2.692307692	1.230769231
Observations	13	13
Df	12	
t Stat	5.018570166	

Nine participants reported that their overall impression was positive and three others reported

that they were not sure. Many participants made reference to the space being very open, exciting

and easier to relate to [concert sound, projection system]. (See Appendix D and I.)

Life Church

   Life Church has what would be considered a contemporary interior among younger

generations. The interior has concert style lighting for the worship time, dark or dimmed lights

throughout the service, theater style seating and a semi-circular spatial arrangement around the

platform. The platform is elevated approximately 3.5 feet off the ground and above eye level

regardless of where someone is seated. Large, high-quality projection screens are placed on

either side of the platform for easy viewing of words to music, scriptures or notes and the

preacher himself. On occasions when smaller groups of people are in the space, floor to ceiling

cloth panels are pulled across back rows of seats to help visually enclose the space more and

subconsciously "encourage" people to gather closer together. The overall demographic is

younger, varying from high school students to thirty-year-olds.

   Life Church showed significant pre and posttest differences between interior elements such as

"perceived spaciousness", being "perceived as busy", and whether the space "drew participants

in" rather than making them "want to leave". Table 10 shows the "perceived spaciousness"

comparison between the pre- and posttest survey.

Table 10

Life Church: Perceived Spaciousness
t-Test: Paired Two Sample for Means

	Spacious – pre	Spacious – post
Mean	3.307692308	2.538461538
Observations	13	13
df	12	
t Stat	3.333333333	

The initial response to the space was that the interior was spacious. Having plenty of room

around themselves was viewed positively. (See Appendix E and J.) After the service however, it

was perceived as being more enclosed. This could be due to the lighting level being reported by

12 out of 13 people to be dark although there is not a direct correlation showing significance.

Participants commented on the intimate and personal feeling of the space that is often associated

with a more enclosed space. A few are listed below:

   "Yes, you would be free to just get into the worship. The dark lighting without having

people see or tell everything you were doing was nice."

"It became much more intimate. There was a definite shift from worship to lesson.

Great and energetic. When the service started the lights dimmed and it was very

personal…the lights were turned off to allow everyone to worship in private."

There were also negative comments regarding the lighting and overall spaciousness:

"I felt like the atmosphere [lighting] set up for worship time was leading me to

Watch or listen rather than participate."

"I didn't like the fog and lights, I think it was the actual band and concert feel to the

singing that I disliked about the worship… lights and fog machines are extremely intense.

The atmosphere is a bit sterile and since it's hard to see people's faces – it's not very

personable."

"Right now it seems spacious & the lighting is dark. The space doesn't seem intimate."

(See Appendix E and J.)

The mean perception of the interior space being visually busy also showed a lesser value (1.846)

in the posttest than the pretest (2.307).

Table 11

Life Church: Perceived Busyness
t-Test: Paired Two Sample for Means

	Busy - pre	Busy – post
Mean	2.307692308	1.846153846
Observations	13	13
Df	12	
t Stat	3.207134903	

There is no known direct statistical comparison however, between the lower values of the space appearing less busy with another specific interior element, other than individual comments made by the participants. (See Appendix J.)

Overall, Life Church's interiors were described as drawing people into the space more than causing them to want to leave. Table 12 shows a significant difference between the *t*-stat value and the *t*-critical two-tail value.

Table 12

Life Church: Draws You In versus Wanting To Leave
t-Test: Paired Two Sample for Means

	Draws you in	Want to leave
Mean	3.846153846	1.307692308
Observations	13	13
Df	12	
t Stat	9.460805955	
P(T<=t) one-tail	3.24818E-07	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	6.49636E-07	
t Critical two-tail	2.178812827	

The *t*-stat value of 9.460, versus the 2.178 *t*-critical two-tail value, implies that the space favorably invites people in. The overall impression in Table 13, being predominantly positive, also implies favorable interiors.

Table 13

Life Church: Overall Impression

Positive	10
Negative	1
Not Sure	2

Overall, Life Church received the most positive comments made by all but one of the

participants:

   "It was comfortable. My seat is like a movie seat with a cup holder. The atmosphere

    feels very trendy. The stage and lights are set for a rock concert. The space is plenty and

    people seem spread out in the audience. Different colored lights are cool.

   "This room gets straight to the point; come in, have a seat, and let's worship God! The colors

    are extremely contemporary and the entire space is high tech!! They've taken into

    consideration the rigid feel of industrial design and made it livable. The ceilings

    really cap off the space."

   "The best part is up front with the band and lights. The space is very modern. The room

    is huge and appealing because of how new [modern] it is. Everything in here looks new

    [modern] so I think people were attracted to the stage, TV's, graphics, etc."

   "The movie theater seats rock, free coffee, amazing atmosphere. Incredible multiple large

    screens. It has a big exciting feel to it. Control of the lighting really helps in not only

    conveying mood but in filling and transforming an otherwise massive amount of space."

(See Appendix J.)

<div align="center">Discussion</div>

   Results indicate that while some interior design elements such as spatial arrangement,

architectural details, and lighting levels *initially* have an impact on a younger generation's

impression of a worship facility, other specific elements do not. All churches were reported as

having enough light to adequately take notes or read, implying the overall eye comfort level was

positive. Statistical comparison results concluded that between pre- and posttest surveys,

significant changes occurred for participants' perceptions of the interiors in the following areas:

"perceived spaciousness", "boring", "exciting", "calming", "energetic", and initially being "drawn into the space" or "wanting to leave".

Faith Bible Church was reported as having a "boring" interior; as a result, although it is shown to initially draw people into the space, there was not an overall desire to stay or return. Due to the long, central aisle, the spatial arrangement may visually imply an inward thrust into the space; however, upon further assessment of the interior, relating to a lack of color or enclosed space, some participants reported they did not wish to return.

Participants reported in narrative form more specifically about their impressions of the interior at St. Luke's United Methodist's traditional service. Participants initially reported that the space was very inviting, spacious and comfortable to be in. They also provided specific details about the architectural elements of interest such as the "blue sky" domed ceiling and stained glass window. These interior elements were repeatedly discussed with favor. They did report however, that the space did not feel intimate or informal. The desire to return was low.

St. Luke's United Methodist's Life Light service was reported as having a more inviting interior, although the architectural elements were reported as being simplified or understated. Participants also reported the space to be reverent, calming and comfortable. They did not report it to have a busy interior, appear closed-in, or feel rigid or boring. Further, the church was also perceived as being more accepting of visitors. The implication of these descriptors is that although the service was held in a refurbished gymnasium, rather than a formal auditorium, the overall impression of the space was positive, and 8 out of 13 participants reported they would have returned.

Life Church, overall, received the most positive comments regarding church interiors from young adults aged 18 to 25. Not only was it statistically reported to be a positive space to

encourage worship, but participants' narratives revealed further evidence supporting the interior

elements. Responses based on Life Church reported the space to be very inviting, comfortable,

and exciting. Additionally, it was not perceived as boring, rigid or too busy visually. Although it

was initially ranked high as being spacious, the posttest responses revealed it as feeling less

spacious. It was also reported as being dim or dark within the space. Participants however, noted

that the space became more intimate after the experience, implying that the darker lighting may

have been an effect on the space visually. Many participants discussed their positive reaction to

the stage lighting, large and visually clear projection screens, as well as the overall contemporary

appearance within the space. Having a semi-circular spatial arrangement was also reported as

being positive because it created a sense of community rather than a sense of separation from the

speaker or worship team. Ten out of thirteen stated that they had positive impressions of the

interior and experience.

<div align="center">Conclusions and Recommendations</div>

The findings of this study, while diverse, imply that yes, young adults do tend to prefer a

more contemporary setting, such as that found at Life Church. The interior had multiple images

projected, concert-like stage lighting, and loud music, as well as other multi-sensory elements

happening at the same time; yet it was reported as not too busy visually. This implies that young

adults aged 18 to 25 are accustomed to many things happening simultaneously and do not find it

distracting but rather important to the overall environment and worship experience, in accord

with McLaren (2006).

Although on average, at St Luke's United Methodist traditional service, participants did not

want to return, they still felt it was inviting, due to the colorful stained glass windows,

architectural surrounds, and semi-circular spatial arrangement of the congregation. The

separation however, according to participants, occurred due to the formality of the presentation style rather than the interior itself. This may imply young adults are in fact attracted to color and interesting architectural elements. Architectural elements could be displayed as typically seen in a traditional style church interior or displayed creatively in an untraditional manner. Religious symbolism is also reported as not being distracting but rather expected; some participants suggested at a minimum, displaying a cross.

The overall impression of St. Luke's United Methodist Life Light service was positive although the interiors themselves were simplistic. Participants' narratives suggested that the informal atmosphere of a gym, rather than a formal, traditional style church interior, was also viewed as positive and inviting to younger generations. The overall age demographics within each space implied that observing commonalities with other people within the space may have played a role in choosing to return or not. Visitors may not be attracted to the existing community of the "select" if they feel as though they are too different (Natua, 2007). The results of this study indicate that the interior aesthetics of a church auditorium do have an effect on whether or not a young adult, aged 18 to 25 would return to a church.

Worship facilities that provide an interior perceived as wanting to create a sense of community and acceptance may have a higher attendance rate among 18 to 25 year olds than shown in recent history. Catering to their visual expectations by using technology, clear visual aids, lower lighting levels and methodically selected color palettes will create an environment suited to younger adults' preferences. Creatively including graphics or religious symbolism in unique ways will also contribute to the underlying focus of the space while not alienating those who may not be as familiar with religious symbols and their historical meanings.

Although the formality of traditional presentation *style* does not attract young adults, many traditional architectural elements such as stained glass windows and vaulted or domed ceilings can provide a sense of reverence, without losing a sense of intimacy or community within the space. Arranging comfortable seating in close proximity to the platform also creates a more personal connection with the speaker, engaging the members' participation during worship. Providing projection screens also allows audience members to easily follow song lyrics, passages of scripture, or sermon notes. Additionally, it creates an environment suitable for those participants who may have a variety of vision or mobility impairments. Large or scattered numbers of projection screens will provide a service to those who are unable to read small print or turn pages of a song book or Bible. It will also encourage community, as all are viewing the same materials.

<div align="center">Limitations of the Study</div>

Limitations of the study relate to the potentially skewed results due to a small sample of the population in question. Based on open-ended responses provided by the participants, it is apparent that the majority have had at least some associations with a worship facility at some point or another. Had more individuals who did not attend church participated in the study, results may have revealed more difference between the pre- and posttest impressions of a church interior. Although the denominational preference was not asked of the participants, historically some church denominations have similarly designed interiors, focusing on tradition rather than modern trends. This may also have biased in participants' responses. Additional limitation to the study might be due to the location.

Various factors such as evaluation apprehension and good-subject tendency may have influenced the results. Evaluation apprehension is defined as participants having "the tendency

to alter their behavior to appear as socially desirable as possible" (McBurney, 2007). People will often change their behavior or opinions towards a given situation simply to be a part of or "fit in" with a group of people or specific community. If participants felt as though their responses would have been considered more "socially acceptable" due to the church surroundings, then the results would not have been as truthful as anticipated. Good-subject tendency refers to the tendency of participants to "act according to what they think the experimenter wants" (McBurney, 2007). This tendency skews results because complete, honest impressions of the churches' interiors may not have been reported therefore, not providing as accurate of an analysis as there could have been.

Another variable within this study includes the differing dates in which the participants attended the worship services, changing the message or worship on a given day. Due to the various schedules of the participants, they may not have been able to experience the same service and its dynamics. The differences of one weekend's service to the next may have changing elements within the service such as video projection, the amount of singing or preaching, its contents and presentation style. The content of the sermon may emotionally affect the outcome of the participants' assessments of the space. The individual emotional state before the service may also affect predispositions to their surroundings, including the space or proximity to others.

<div align="center">Opportunities for Future Study</div>

While this study gathered more open-ended responses regarding the effects of church interiors on young adults aged 18 to 25, further studies might include a larger sample of the population to eliminate any bias one small group may have. Denominational preference was not questioned in this study, which may also cause bias towards one interior style versus another. However, a study might include a specific Protestant denomination, repeating a similar pre- and posttest situation,

and assessing the changes. Other areas of interest might include a separate set of studies using a group of churches that fall within only one of the three categories of church styles: traditional, contemporary or transitional. Due to the specific age demographic of this study, important data might also be gathered by comparing an older generation's interior preferences of a worship facility to those of the younger generation within the same church facilities.

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Glossary of Terms

Aestheticism	A doctrine that the principles of beauty are basic to other and especially moral principles.
Altar	A usually raised structure or place on which sacrifices are offered or incense is burned in worship —often used figuratively to describe a thing given great or undue precedence or value especially at the cost of something else.
Apostles	One sent on a mission; one of an authoritative New Testament group sent out to preach the gospel and made up especially of Christ's 12 original disciples and Paul.
Apse	A semicircular or polygonal space, usually in a church, terminating in axis and intended to house an altar.
Architect	An individual who is engaged in the design of buildings and who supervises the construction.
Artisan	An outdated term for a craftsperson or tradesperson
Baptists	Member of a group of Protestant Christians who share the basic beliefs of most Protestants but who insist that only believers should be baptized and that it should be done by immersion rather than by the sprinkling or pouring of water.
Baroque architecture	A style named for the French word meaning bizarre, fantastic, or irregular. It was the most lavish of all styles, both in its use of materials and the effects that it achieved. Mannerist styles were often adopted and carried to the extreme as bold, opulent, and intentionally distorted. Pediments are broken and facades designed with undulating forms, while interiors were more theatrical, exhibiting a dramatic combination of architecture, sculpture, painting, and the decorative arts.
Basilica	An oblong building ending in a semicircular apse used in ancient Rome especially for a court of justice and place of public assembly.
Bible	The sacred scriptures of Christians comprising the Old Testament and the New Testament.
Brocades	A rich silk fabric with raised patterns in gold and silver.

Capital	The upper member of a column, pillar, pier or pilaster, crowning the shaft; usually decorated. It may carry an architrave, arcade or impost block. The classical orders each have their own distinctive representative capitals.
Cathedral	The principal church of a diocese, which contains the home throne of a bishop, called the cathedra.
Celtic Cross	A cross having essentially the form of a Latin cross with a ring about the intersection of the crossbar and upright shaft.
Centrality	The quality or state of being central.
Chancel	The part of a large church that is located beyond the transept, containing the altar and choir.
Christ	The Jewish religious teacher whose life, death, and resurrection as reported by the Evangelists are the basis of the Christian message of salvation.
Christians	One who professes belief in the teachings of Jesus Christ
Cistercians	A member of a monastic order founded by St. Robert of Molesme in 1098 at Cîteaux, France, under Benedictine rule.
Classical Architecture	The architecture of Hellenic Greece and Imperial Rome on which the Italian Renaissance and subsequent styles were based. The five orders; the Doric, Ionic, Corinthian, Tuscan, and Composite are a characteristic feature.
Clerestory	An upper story or row of windows rising above the adjoining parts of the building, designed as a means of admitting increased light into the inner space of the building.
Clergy	A group ordained to perform pastoral or sacerdotal functions in a Christian church.
Column	A vertical structural compression member or shaft supporting a load, which acts in the direction of its vertical axis.
Commoners	One of the common people, one who is not of noble rank.
Communion Rail	Railing separating a platform from the laity. Commonly, elements of holy communion are served from the flat surface of the rail.

Constantine the Great   The first <u>Roman</u> emperor to profess <u>Christianity</u>. He not only initiated the evolution of the empire into a Christian state but also provided the impulse for a distinctively Christian culture that prepared the way for the growth of Byzantine and Western medieval culture.

Conversions   An experience associated with the definite and decisive adoption of a religion; the process of being converted.

Conviction   The act of convincing a person of error or of compelling the admission of a truth; a strong persuasion or belief.

Creation   The act of creating such as bringing the world into ordered existence.

Cruciform   Floor plan arranged like that of a cross.

Crusades   A remedial enterprise undertaken with zeal and enthusiasm.

Damasks   A firm lustrous fabric (as of linen, cotton, silk, or rayon) made with flat patterns in a satin weave on a plain-woven ground on jacquard looms.

Doctrinal   Of, relating to, or preoccupied with doctrine.

Edict of Milan   The document so called is a circular of 313 to provincial governors issued by the Emp. Licinius. In accordance with an agreement made with Constantine at Milan, he extended to the E. provinces freedom of worship for all, including Christians, and the restitution of possessions lost by the Churches since the persecution of 303.

Enculturation   The process by which an individual learns the traditional content of a culture and assimilates its practices and values.

Divine   Of, relating to, or proceeding directly from God or a god.

Fall of man   The two were persons of innocence until Eve yielded to the temptations of the evil serpent and Adam joined her in eating the forbidden fruit, whereupon they both recognized their nakedness and donned fig leaves as garments. Immediately, God recognized their transgression and proclaimed their punishments—for the woman, pain in childbirth and subordination to man, and, for the man, relegation to an accursed ground with which he must toil and sweat for his subsistence. (Summary of Bible story).

Fresco   A mural painted into freshly spread moist lime plaster; in such work, ground water-based pigments unite with the plaster base; retouching is done after it has dried.

Gospel   The message concerning Christ, the kingdom of God, and salvation.

Gothic architecture   A revolutionary style of construction of the High Middle Ages in western Europe (1050-1530), which emerged from Romanesque and Byzantine forms. The term "Gothic" was originally applied as one of reproach and contempt. The style was characterized by a delicate balance between the lateral thrust from loads and the force of gravity. The style's features were height and light, achieved through a mixture of skeletal structures and increasing use of windows.

Guilt Work   Covered with gold or gilt; of the color of gold.

Holy Communion   The sacrament of the Eucharist received by a congregation.

Icon   An image of sacred personages that are objects of veneration; found on buildings.

Laity   The people of a religious faith as distinguished from its clergy.

Lancet window   A narrow window with a sharp pointed arch that is typical of English Gothic architecture; one light shaped in the form of a lancet window.

Last Supper   In the New Testament (Matt. 26:17–29; Mark 14:12–25; Luke 22:7–38; I Cor. 11:23–25), the final meal shared by Jesus and his disciples in an upper room in Jerusalem, the occasion of the institution of the Eucharist. According to the biblical account, Jesus sent two of his disciples to prepare for the meal and met with all the disciples in the upper room. He told them that one of them would betray him. After blessing bread and wine and giving it to them to eat and drink, Jesus told them that it was his body and his blood of the Covenant.

Latin Cross   A figure of a cross having a long upright shaft and a shorter crossbar traversing it above the middle.

Laypersons   A member of the laity.

Liturgical Scholar   A customary repertoire of ideas, phrases, or observances.

Liturgy

A rite or body of rites prescribed for public worship.

Longitudinal Axis

Angular distance measured on a great circle of reference from the intersection of the adopted zero meridian with this reference circle to the similar intersection of the meridian passing through the object

Lutheran

The branch of Christianity that traces its interpretation of the Christian religion to the teachings of Martin Luther and the 16th-century movements that issued from his reforms. It is one of the five major branches of Protestantism. Unlike the Roman Catholic Church, however, Lutheranism is not a single entity. It is organized in autonomous regional or national churches, making Lutheranism the second largest Protestant denomination, after the Baptist churches.

Michelangelo

Architect, sculptor, painter, and poet, representing the Italian Renaissance at its height. In 1546, he was appointed architect of St. Peters, Rome.

Monastery

A building complex that houses a monastic order.

Mosaics

A surface decoration made by inlaying small pieces of variously colored material to form pictures or patterns ; *also***:** the process of making it.

Motif

A part or element repeated in an ornamental design.

Natural form

Refers to those forms that include artificial foliage as well as derivations of the acanthus leaf, flowers and fruit festoons; also animal forms, such as the lion and eagle, and human forms, such as heads and figures.

Nonconformists

A person who does not conform to an established church; especially one who does not conform to the Church of England.

Ornamentation

Any adjunct or detail used to adorn, decorate, or embellish the appearance or general effect of an object.

Pagans

A follower of a polytheistic religion (as in ancient Rome).

Palettes

A particular range, quality, or use of color.

Pierced work   Decoration which consists mainly of perforations, such as a non-bearing masonry wall in which an ornamental pierced effect is achieved by alternating rectangular or any other shaped bocks with open spaces.

Protestant Reformation   The religious revolution that took place in the Western church in the 16th century; its greatest leaders undoubtedly were Martin Luther and John Calvin. Having far-reaching political, economic, and social effects, the Reformation became the basis for the founding of Protestantism, one of the three major branches of Christianity.

Pulpits   The preaching profession.

Puritans   Members of a 16th and 17th century Protestant group in England and New England opposing as unscriptural the ceremonial worship and the prelacy of the Church of England.

Renaissance architecture   An architecture (1420-1550) that developed during the rebirth of Classical art and learning in Europe and evolved through several periods. It was initially characterized by the use of the Classical orders, round arches and symmetrical proportions.

Ribbed vault   A vault in which the ribs support, or seem to support, the web of the vault.

Romanesque revival   A style (1840-1900) characterized by monochromatic brick or stone buildings, highlighted by semicircular arches over window and door openings. Facades are flanked by polygonal towers and covered with various roof shapes.

Sacramental   A Christian rite (as baptism or the Eucharist) that is believed to have been ordained by Christ and that is held to be a means of divine grace or to be a sign or symbol of a spiritual reality.

Sacraments of communion   Religious sign or symbol, especially associated with Christian churches, in which a sacred or spiritual power is believed to be transmitted through material elements viewed as channels of divine grace.

Sacred   Dedicated or set apart for the service or worship of a deity

Salvation   Deliverance from the power and effects of sin.

Scripture   The books or passages of the Bible —often used in plural.

Scrollwork   Ornamental work of any kind in which scrolls, or lines of scroll-like character are an element.

Secular   Of or relating to the worldly or temporal.

Sin   An offense against religious or moral law.

Spiritual   Of relating to or consisting of the spirit or sacred matters.

Stained glass   A window whose glass is colored.

Sunday Mass   The celebration of the Eucharist in the Roman Catholic church. The term mass is derived from the rite's Latin formula of dismissal, *Ite, missa est* ("Go, it is ended"). According to Roman Catholic teaching, the mass is a memorial in which the death and Resurrection of Jesus Christ are sacramentally reenacted; it is a true sacrifice in which the body and blood of Jesus, under the appearances of bread and wine, are offered to God; and it is a sacred meal in which the community symbolically expresses its unity and its dependence upon God and seeks nourishment in its attempt to bring the gospel message to all men.

Transept   The space that crosses at a right angle to the nave of a building; may be the same size as the nave in a cruciform building, or larger.

Transverse arch   An arched construction built across a hall or the nave of a church, either as part of the vaulting or to support or stiffen the roof.

Truss   A composite structural system composed of straight members transmitting axial tension or compression stresses along each member, joined to form a triangular arrangement.

Vault   An arched roof or ceiling or a continuous semicircular ceiling that extends in a straight line over a hall, room, or other partially enclosed space.

Velvets   A clothing and upholstery fabric (as of silk, rayon, or wool) characterized by a short soft dense warp pile.

Word-ordered   The order or arrangement of words in a phrase, clause, or sentence.

Appendices

Appendix A
Pretest Survey

Pre-Service Survey: Church Interior Aesthetics

Instructions: *Before this church service begins, please answer the following questions. In cases where the question gives a scale, please circle **only one** answer. Once you have completed this survey, please place it back into your assigned envelope.*

Please circle which service you are attending:

Faith Bible Church   Life Church

St. Luke's Life Light (9:40am service)   St. Luke's main auditorium (10:50am service)

General Questions

1. Your age _____   2. Male_____   Female _____

3. Approximately how many miles do you live from this location?   1 – 5 miles   6 – 10   11 – 15   16 – 20   21+

4. Have you ever attended this church before?   Yes   No   If yes, approximately how many times?__ _____

5. What, if anything, was the **very first thing** you noticed about this sanctuary/auditorium?_____

_____

6. How would you initially describe the space, based on the following scale?

1 = not at all   2 = slightly agree   3 = moderately agree   4 = strongly agree

Draws you in to the space   1   2   3   4

Makes you want to leave   1   2   3   4

Spatial Arrangement/Seating

7. Within the spatial arrangement of the sanctuary/auditorium, where did you choose to sit today?

          Front (within the first 5 rows)   Front to Middle   Middle to Back   Back (within the last 5 rows)

Why? _____

8. From where you are seated, is the platform/stage easily seen?   Yes   No

9. How would you describe the comfort of the seats, based on the following scale?   1   2   3   4

          1 = not comfortable 2 = tolerable 3 = comfortable 4 = very comfortable

Other comments: _____

_____

Pre-Service Survey: Church Interior Aesthetics

Lighting

10. As of right now, is the overall lighting level:

       Bright (all lights are on)   Dim (some lights are on)   Dark (most, if not all main lights are off)

11. Is there adequate lighting for taking this survey, without causing eye strain?   Yes   No   Could be brighter

12. Is there additional light helping to illuminate the space?   Yes   No   I can't tell

       If yes, where is the light coming from?_____

13. How is the quality of the projection system, if used?_____

_____

Other comments: _____

_____

Overall impression of the space

14. How would you rate the words below, as they describe this space, based on the following scale:

1 = do not agree   2 = slightly agree   3 = moderately agree   4 = strongly agree

Inviting	1 2 3 4	Exciting	1 2 3 4
Calming	1 2 3 4	Contemporary	1 2 3 4
Spacious	1 2 3 4	Informal	1 2 3 4
Ornate	1 2 3 4	Intimate	1 2 3 4
Comfortable	1 2 3 4	Accepting	1 2 3 4
Formal	1 2 3 4	Un-accepting	1 2 3 4
Simple	1 2 3 4	Rigid	1 2 3 4
Reverent	1 2 3 4	Energetic	1 2 3 4
Busy	1 2 3 4	Boring	1 2 3 4
Closed in	1 2 3 4		

Other comments: _____

_____

Iconography (religious symbolism)

15. In the sanctuary/auditorium are there any of the following: (Please check all that apply)

_____ Cross/Crucifix

_____ Banners or large graphics

_____ Elements of communion (wine, juice, bread, crackers)

_____ Candles

_____ Burning incense

_____ Other statues/carvings (generally of saints, apostles)

_____ Other _____

Other comments: _____

_____

16. How would you describe your overall impression of the space?   Please be as specific as you can:

_____

_____

_____

_____

_____

Please place this survey back into your assigned envelope. At the end of the service, please take out the "Post-Service Survey", complete it and place it back into the envelope.

Thank you again. Your participation is appreciated.

Appendix B

Faith Bible Church: Pretest Survey Results

Open-Ended Responses

FAITH BIBLE CHURCH – Pre Survey

<u>General Questions</u>

What if anything was the very first thing you noticed about this sanctuary/auditorium space?

N1 . Really long and far away from the stage

N2. How long the sanctuary was compared to the width and the height.

N3. The projector screens that put up song lyrics

N4. The chairs

N5. The beige seating & how it was all facing forward – no angled seating made the sanctuary seem long.

N6. The pitch of the ceiling/roof

N7. Long & narrow, but that screens have been put up to accommodate the viewing ease of those toward the bays, looks traditional w/stained glass & wood paneling.

N8. It looked like a place you would have a wedding, very old fashioned.

N9. Long and narrow seating, 2 flat panel TV's above my head.

N10. How bright it was.

N11. The sunlight through the windows and skylight

N12. Lots of wood, windows on the side are colorful

N13. That the "pews" were separate chairs pushed together and that everything was wooden

Spatial Arrangement/Seating

Other Comments:

N3. The choir isn't visible

N4. Although the chairs are comfortable, I think they are tacky and distracting.

N5. No real reason, just chose a spot. I like to sit somewhat near the front in church anyways

N6. It was where seating was available

N7. Front was already crowded!/service started 5 minutes early!! There was a familiar face in the row in front of us.

N8. As we walked in, the front was taken.

N10. The back is a safe place to sit when one doesn't know anybody.

N11. Its comfortable in the same way that "the view" loves pastels and earth tones. (Not exactly my taste but I'm sure the people who go here like it.)

N12. Convenience

N13. Convenience

Spatial Arrangements/Seating

Other comments

N7. The ceiling is interesting, I find myself looking up often. Skylights are pointed, and at different levels, etc. It really catches your eye. The colors are such that they don't distract, but rather feel warm. Especially since its fall, this room is very comfortable.

N8. The stage is easy to see, but you can see the stage floor

Lighting

Is there additional light helping to illuminate the space?

N6. Bright (all lights are on)

N7. It appears all lights are on, but the dark wood paneling dims the stage area, also think the lighting system may be on dimmer & right now they're not at full capacity.

N8. There are sun roof windows in the ceiling.

N12. Windows on sides and one in front

N13. Windows

Lighting

How is the quality of the projection system, if used?

N1. It is good. There are TV screens close to us since the stage and screen is kind of far away.

N2. Very good. They have big screen at the front and large flat screen tvs that show the words.

N3. It's good. They are readable

N4. Good, not overbearing.

N6. Good, there are also screens half way back in case you can't see the front screen

N7. Great, larger screen up front that is positioned so as to be seen from the back row. Again, there are two smaller screens just above the middle to help out.

N8. Very well used. The space is a big narrow room with speakers on the ceiling.

N9. Great. One large projector and 2 flat panel screens midway down the seating helps.

N10. There is a speaker in the way of the big screen. Plasma TV's are up high.

N11. They use flat screens, so it's good quality, and their design is pretty cheesy though on both sides.

N12. Good quality and readable

N13. It is very easily seen and read.

Lighting

Other Comments:

N1. Big stained glass in the middle of stage of something like group of apostles and maybe Jesus.

N5. Great, I can read what's on the screen.

N6. The graphics are dated

N7. I can see the pulpit & worship team just fine, but the projection system is certainly weak.

Overall Impression

Other Comments:

N4: The wood in front is overbearing and a bit distracting because it's all the same color and makes everything blend in.

N7. There are no bold colors, but it definitely looks like a church because of the set up you attention is faced forward. This includes the shape of the room, the chair placement & the elements of technology hung about. The chairs are very close to one another. The interior is classic nothing. That screams to the young, new generation, but also to the one that is only for the elderly. Majority of the detail is around the stage area. Again helping to focus your attention. It does make me feel like I shouldn't talk in a full voice. Even when service isn't going on. The environment appears so gentle.

N11. IT feels warm and welcoming, harmless and conservative. I think they are aimed at the 30 – 50 set of people.

Iconography (religious symbolism)

Other Comments:

N1. Big Stained glass in the middle of stage of something like group of apostles and maybe Jesus.

N5. Projection screen, can see some stained glass behind projection screen

N6. Stained glass window with iconography

N8. The windows have stain glass of bible graphics.

N9. There is a stained glass behind the projector screen up front. I thought the screen would retract during the service but it didn't.

Overall Impression

How would you best describe your overall impression of the space? Please be as specific as you can:

N1. The long narrow auditorium with lower ceilings that normal auditoriums makes me feel uncomfortable and claustrophobic like the ceiling is pressing down on you. The Columns get in the way of seeing the choir because the choir is set off to the side. Having the choir on the side where you can't see very is well is awkward.

N2. The part where the congregation sits is a little closed in and boring. There are two plain pillars toward the front that block, from where I'm sitting, the choir and whatever is on the other side of the front platform. It makes the middle and back of the sanctuary feel a bit cut off.

N3. The auditorium space seems a bit crowded and separate from the worship leader/preacher on stage. Its comfortable but not too comfortable it's all very moderate.

N4. Overall, I think the architecture and lighting are a little distracting. They are awkward spaces that are confusing because I don't feel like I can see all of the church: it's not open. I don't like the color of the lighting directly above the seats…it's too bright/fluorescent. Ironically, the light above me went out in the middle of the service and it was a nice break for my eyes, but then it was a bit too dark. The church was an odd mixture of traditional and modern because of the stained glass and wood, etc. Mixed with modern chairs and technology. The worship was also a mixture with the instruments but the songs still sounded like old hymns

N5. It seemed closed in & a lot of wood & wood detail. It makes the room seem a little darker. Not much color in the space – neutral tones mainly with darker tones all @ the stage.

N6. The design and materials used are traditional creating a very formal atmosphere. The seating is just two straight aisles back from the stage. Everything is neutral in color with the exception of the few small stained glass windows for the size and layout of the auditorium the roof seems low.

N7. There is an inherent separation from the congregation and the pulpit. Its not terrible noticeable, but the ceiling lines suggest it where the side aisles end at the front of the room. Its as if the preacher does his job, but the people don't participate. The worship area is elevated so that those in the back may see. I like that idea, however it adds to the feel of not being involved in the "important area." The east windows have solar shades on them behind the stained glass. How appropriate for the morning sun. I get the feel of a lecture hall rather than a fun, exciting atmosphere. There isn't anything significant that keeps my attention. I'm actually kind of fidgety in this room. I'm looking around at the people.

N8. The church is very calming atmosphere. It's a very narrow room; which feels closed in because of all the people. The ceiling is very low, even though it goes to a V shape. I feel like the space could be more open by making the room bigger and adding more lighting.

N9. Overall very inviting. I would return in the future.

N10. Everything on the stage appears to be very official. Dressed in nice suits, perfect hair. Doesn't seem as though anything unplanned has or is going to happen.

N11. The stained glass windows are amazing and probably the one redeeming factor other than sunlight. However there could have easily been over dramatic with a different scene [within the stained glass image]

N12. Very comfortable. Everyone faces straight forward if you are visiting for the first time, it is relaxing not pressuring. The space is sort of different, it is simple, but open enough to feel comfortable in the amount of space.

N13. It seemed very open and all of the wood gave the space a more traditional feel. The subtlety of decoration gave the space a very humble appearance.

Appendix C

St. Luke's United Methodist Traditional Service: Pretest Survey Results

Open-Ended Responses

St. Luke's Traditional Service – Pre Survey

General Questions

What if anything was the very first thing you noticed about this sanctuary/auditorium space?

N1. Organ pipes

N2. The organ

N3. Pipe Organ

N4. The organ

N5. The green seating & how it's laid out in a half circular layout

N6. (loved the lobby) the tall ceilings, 2nd level

N7. It's so traditional. Very "church" decorated. The seats are teal!!!

N8.   The organ! How art deco everything was.

N9. Very traditional and formal

N10. The very tall ceilings and much stained glass.

N11. Huge, ornately decorated room.

N12. Many colors in the stained glass, bright, everything is new

Spatial Arrangement/Seating

Other Comments:

N3. It's predominantly a crowd of older people

N4. The space is incredibly inviting, yet a bit overwhelming and distracting at the same time.

N6. That is where seating was available

N7. They were fixed auditorium seats! I'm not sure how engaged in service I'll be w/ so much going on in this room.

N8. We sat in the back, due to the seating that was already taken.

N9. Fold down seats spaced correctly.

N11. Everyone has gray hair and there is one black guy in the whole place.

N12. Comfortable, the seats are like a movie theater

<u>Lighting</u>

How is the quality of the projection system, if used?

N1. No projection system was used

N2. No projection system

N3. Above the stage/audience – spot lighting on the podium. There's also light from the window.

N8. With the organ so big you can't hear a lot.

N12. No projection system

Lighting

Other Comments:

N3. The lighting isn't so dim so bright it looks kind of like natural lighting.

N4. The lighting is perfect and comfortable.

N5. No projection system

N6. Windows, lighting from lobby

N11. Crazy vaulted ceiling, huge two story stage and massive organ. It's cool but the special "preacher box" seems a bit too "high church" for me.

<u>Overall Impression of the Space</u>

Other Comments:

N1. Really like the 3 white hanging banners on the ceiling and the blue ceiling.

N3. I like that the rows are wider, rather than the aisles longer, everyone's closer to the stage.

N4. Very beautiful and a lot to take in. The organic, circular nature of the architecture is inviting and leads your eye to the center.

N7. Reminds me of the churches you see in movies. Think Sister act II

Iconography

Other Comments:

N2. There is also a trinity symbol made of wood above the preacher's head.

N3. Everyone was dressed in robes.

N4. The stained glass is an amazing contribution to the overall ambience.

N7. The lobby is awesome! Art deco, crosses in the harlequin tile. It really contributes to the overall feel of the rest of the space. Let's just say I could see what kind of auditorium I was walking into based on the lobby.

Overall Impression of the Space

How would you best describe your overall impression of the space? Please be as specific as you can:

N1. The balcony over us seems to completely separate the two levels of people into two completely different groups of people. The rigidness and silver of the organ pipes are really distracting and also really make me feel uncomfortable and the feeling of danger and caution in the way that they are arranged. I think you could arrange them in a more pleasing and inviting way or cover them up.

N2. The space is very impressive feeling, perhaps because of the height of the ceiling, the stained glass or the organ

N3. It's decorative, but clean cut. Not too over-bearing. The lighting is dramatic and there are a lot of colors, but they seem to complement each other. The large space makes you feel a bit small.

N4. Aesthetically, the space is pleasing to the eye. This particular area is a mixture of traditional and contemporary elements like Faith Bible but it is executed at a much higher level here. The chairs are almost like movie theater, less the cup holders. As I'm writing this, I'm still taken away by the architecture and overwhelming additions. I feel like I can't look at everything and there's something new every time.

N5. Filled w/lots of color from the stained glass windows – blue ceiling seems to get busy @ the altar w/all of the organ pipes

N6. The room was very formal, like walking into a catholic church. High ceilings, round auditorium, second level, emphasis on stage, organ, choir seating

N7. There were pretty mosaic tiles at the front, bright accents, but not overwhelming. The large pipe organ made a huge impression on my assumptions of service. Lots of detail. Heavy mahogany wood. Reminds me of church w/ Grandma. You can date the building by looking at it.

N8. The room was huge with the seats/organ. I noticed the room was gigantic and the organ made your eyes appeal to something new. The windows were inviting because of their scenes in them.

N9. Lots of seating and very spacious.

N10. Large, ornate, pretty, lots of wood.

N11. It is very visually impressive but way to gaudy for me. If God was like this space, I wouldn't fit in. It's cool to look at some stuff but hard to feel a connection with.

N12. It was extravagant, there were many bright colors, there was plenty of space, but stage was high us and the seating felt very removed from stage. Not an intimate setting.

Appendix D

St. Luke's United Methodist's Life Light: Pretest Survey Results

Open-Ended Responses

St. Luke's Life Light – Pre Survey

<u>General Questions</u>

What if anything was the very first thing you noticed about this sanctuary/auditorium space?

N1. Projector Screen

N2. It's an auditorium

N3. I saw chairs and people

N4. The choir

N5. The area was spacious

N6. It was a gymnasium

N7. It was very much reminiscent of a gym, but was adequately mad to look like a church w/ the soft fabrics, etc. It's open, but seats are close together. Projection screen had a picture of a stained glass window

N8. I noticed it was very modern. It was a wide open room with a lot of detail to the walls

N9. That is was an old basketball gym

N10. That is was a gym

N11. It's a remodeled gym

N12. Big screen in front, stage in front

N13. Big open on the stage

Spatial Arrangement/Seating

Within the spatial arrangement of the sanctuary/auditorium, where did you choose to sit today?

N5. I like to sit near the front

N6. Sitting really close to people around you

Spatial Arrangement/Seating

Other Comments:

N1. Not nearly as comfortable as the main auditorium seats

N7. Seats are close, but it encouraged me to make conversation w/ the person next to me. The green color of the seats seems very welcoming.

N9. The seats are very small and close to each other. I kept bumping elbows with people on both sides.

N11. Everyone seems to be in their early 30's. Pretty warm and welcoming group.

N12. Closest available

N13. Convenience

Lighting

How is the quality of the projection system, if used?

N1. Good. It is big enough for the space but it is tucked away a little bit.

N2. Good. There is a projector behind the stage

N3. Ok, sometimes the slides are slow

N4. Clear and the music was loud

N5. Ok, it's a little dark, could be a little lighter

N6. Average – nothing fancy

N7. Its fair. I can tell what's up there b/c it goes along w/ what he's talking about, but a couple of the images are poor quality. There is only one screen

N8. The quality is great! The speakers are on the ceiling pointing to the audience.

N9. Fair

N10. The projection system is good, clear and easily seen.

N11. Lots of lag [referring to the timing of the slides]

N12. Good

N13. Good

Lighting

Other Comments

N5. The space seems somewhat dark in certain areas

N6. Stained glass image reflected on projection screen

N7. The lights let off quite a lot of heat. It's cold today so its not distracting, but I wonder what its like in the summer?!

N11. Cheesy electric drum set = looks dumb, sounds bad

Overall Impression

Other Comments

N7. There are sound boards on all the walls and all over the ceiling to help w/ the openness of the room, but the color fits perfectly with the rest of the design. It's not distracting at all.

Iconography (religious symbolism)

Other Comments

N6. There isn't much added to the space

N7. There isn't a lot of decoration, but it is well designed. It seems that the comfort of the people was well thought over. It screams peacefulness and gentleness

Overall Impression

How would you best describe your overall impression of the space? Please be as specific as you can:

N1. The colors are boring and plain. These are not a color that is warm too add the feeling of comfort. Space is a little long and narrow that makes it a little awkward. The brick is busy and not very pleasing.

N2. Rather than plain and boring. I think they tried to make it more "churchy" with the plain white banners coming off the sides, but those just contribute to the plainness of the room.

N3. It's cozy and relaxed. The lights are dimmed when the speaker began and spotlighted the stage. They use video clips.

N4. It's very contemporary and energetic. The lighting is preferable because its not overbearing yet I am able to read clearly without eye strain. The space is very simple because it's not in a traditional church building, which I almost prefer because nothing is distracting. The space is small, yet very open and comfortable.

N5. It's pretty spacious. The colors seem to go well.

N6. This space serves the purpose of the contemporary service but it has the feel of temporary which leaves a certain unsettled feeling.

N7. I very much enjoy sitting in this room. I'm not distracted or uncomfortable, but am experiencing a sense of encouragement. I can see, hear, and am able to pay attention. The color scheme is very warm. There are banners on the 2 side walls, but they don't seem to contribute to the effects of the sound.

N9. Stuffy – very close seating and not very much room to move.

N10. It was definitely an attempt to not be overly formal or stuffy. The area was very laid back and felt appropriate for the service.

N11. It has a casual feel that's cool. It's not as "made up" because they're just using an old gym. That's "we don't pay much for this" community centered feel is nice. I felt like I could get to know people here, not like I have to stay hushed and quiet.

N12. Fairly open, ceiling is high and does not come to a point. There are many doors leading out of this main room

N13. It's pretty simple and the area is full of whites and grays that make it feel a bit more modern.

Appendix E

Life Church: Pretest Survey Results

Open-Ended Responses

Life Church– Pre Survey

General Questions

What if anything was the very first thing you noticed about this sanctuary/auditorium space?

N1. Really dark. Concert like feel with music and dark auditorium.

N2. The huge screen and the large stage with all the instruments

N3. It looked like a rock concert

N4. Fog and lights

N5. How dark the room is

N6. The sloping of the auditorium seating

N7. Led/black, rank, big, several projection screens/televisions, large stage, movie seats!

N8. The large room. The large seating.

N9. Large room and lots of seating.

N10. Very dark.

N11. Fantastic stage lights

N12. Huge stage

Spatial Arrangement/Seating

Other Comments:

N1. I like the Theater style seating

N4. The seats are exactly like theater seats, but St. Luke's were more comfortable.

N7. Hardly any ornamentation, church logo, you can tell it's a "production" –camera stands, etc, sound room

N8. The best part is up front with the band and lights.

N11. The movie theater seats rock, free coffee, amazing atmosphere.

N12. Comfortable

<u>Lighting</u>

How is the quality of the projection system, if used?

N1. Very good. Big and easy to see. Clear and not washed out.

N2. Very Good

N3. Way excellent. Very high quality.

N4. Very good.

N5. The middle screen is bright & the two sides are a little dark & could be brighter

N7. I think they're HD-it's excellent. You can tell that money has been spent to make sure everyone gets a good view of what's happening.N6. High quality

N8. There are speakers all up front so the speakers are easy to hear.

N9. Excellent – 4to 6 screens to look at and they are big and high def [inition].

N10. Excellent.

N11. Incredible multiple large screens.

Lighting

Other Comments:

N2. The lighting during the worship was like a concert.

N3. They have these cool box lights that say "practical atheist" – must be a lesson but they look awesome.

N7. They have a full band w/ contemporary environment. The room is very dark. We were lead in by flashlight

N11. Fantastic band and sound system. Modern music/lights/presentation and incredible video.

N12. Very high quality

Overall Impression

Other Comments:

N3. It's like a concert

N7. This auditorium looks as if its been designed toward several age groups, but perhaps young marrieds in particular. There is a lot of signage for kids etc. I like the illuminated life church logo.

N11. I felt like I was at a big conference or concert – cool feel.

Iconography (religious symbolism)

Other Comments:

N1. I like the banner over the current series.

N6. Everything is really contemporary no symbolism except things relating

N7. Little to no decoration, other than solid colored sound panels and church logo. I think the stage lighting is contributing to the décor more than anything else.

Overall Impression of the Space

How would you best describe your overall impression of the space? Please be as specific as you can:

N1. Very inviting. Very modern and appealing.

N2. It's a large nice space. When the space if full, it would be nice. I could imagine when its empty, it feels empty

N3. It was comfortable. My seat is like a movie seat with a cup holder. The atmosphere feels very trendy. The stage and lights are set for a rock concert. The space is plenty and people seem spread out in the audience. Different colored lights are cool.

N4. Lights are very dim, feels like a concert. Lights and fog machines are extremely intense. The atmosphere is a bit sterile and since it's hard to see people's faces – it's not very personable.

N5. Right now it seems spacious & the lighting is dark. The space doesn't seem intimate.

N6. Seems like everything is modern and seeking a younger demographic or at least a modern era of church goers

N7. This room gets straight to the point; come in have a seat and let's worship God! The colors are extremely contemporary and the entire expensive is high tech!! They've taken into consideration the rigid feel of industrial design and made it livable. The ceilings really cap off the space.

N8. The space is very modern. The room is huge and appealing because of how new it is. Everything is in means of new so I think people we attracted to the stage, TV's, graphics, etc.

N9. Great and energetic. When the service started the lights dimmed and it was very personal.

N10. Very dark and intimate. Very media driven. Plasma screen tvs everywhere and the band is playing.

N11. It has a big exciting feel to it. Control of the lighting really helps in not only conveying mood but in filling and transforming an otherwise massive amount of space.

N12. Very interesting, bright and modern. Somewhat distracting, not very intimate.

Appendix F

Posttest Survey

Post–Service Survey: Church Interior Aesthetics

Instructions: *Now that you have completed this church experience, please answer the following questions. Once you have completed the survey, please place it back into your assigned envelope.*

<u>Spatial Arrangement/Seating</u>

Based on where you sat today, could you <u>clearly</u> see facial expressions of the speaker/worship leader(s)?   Yes   No

       If yes, was it due to: (check all that apply)

       _____ Your distance away from the speaker

       _____ Good lighting

       _____ There were no obstructions in the way

       _____ The shape of the room and seating arrangement

       _____ Other - Please explain: _____

       If no, was it due to: (check all that apply)

       _____Your distance away from the speaker

       _____ Bad lighting

       _____There was an obstruction, such as a column, etc. Please be specific: _____

       _____ The shape of the room and seating arrangement

       _____ Other - Please explain: _____

After sitting for awhile, how would you describe the comfort of the seats, based on the following scale?   1   2   3   4

1 = not comfortable   2 = tolerable   3 = comfortable   4 = very comfortable

If people sat around you, in close proximity, based on how the seats were arranged, how would you describe your comfort level, based on how the seats were arranged? _____

Did the people (choir, instrumentalists, worship leader(s), preacher) move off and onto the platform: (Check all that apply)

       _____ Quietly

       _____ Loudly

       _____ Did not interfere with what happened next

       _____ Interfered with what happened next

       _____ Didn't notice either way

Post–Service Survey: Church Interior Aesthetics

Lighting

Was the overall lighting level during the worship time (music):

      Bright (all lights were on)   Dim (some lights were on)   Dark (most, if not all main lights were off)

Before the service started, how would you have described your mood? _____

How would you describe your mood after the service? _____

If there was a change in lighting, did it _change the mood_ of the room during the worship time (music)?   Yes   No

    If yes, please elaborate on the difference of mood change?_____

    _____

    If no, can you describe why?_____

    _____ _____

If you chose to participate, or would have chosen to participate, in the worship time (music), did/would the lighting level or spatial arrangement help facilitate that choice? Please explain:

_____

_____

Was there adequate lighting for reading/writing during the sermon, without causing eye strain?

        Yes   No   Could have been brighter

Iconography (religious symbolism)

Did any of the symbolism, in your opinion, serve a purpose? Why or why not? Please be specific:

_____

Overall impression of the space

After completing the service, how would you rate the words below, as they describe your impression of the space, based on the following scale: 1 = do not agree   2 = slightly agree   3 = moderately agree   4 = strongly agree

Inviting	1 2 3 4	Exciting	1 2 3 4
Comfortable	1 2 3 4	Informal	1 2 3 4
Formal	1 2 3 4	Intimate	1 2 3 4
Reverent	1 2 3 4	Accepting	1 2 3 4
Busy	1 2 3 4	Un-accepting	1 2 3 4
Boring	1 2 3 4	Energetic	1 2 3 4
Spacious	1 2 3 4	Closed in	1 2 3 4
Rigid	1 2 3 4	Calming	1 2 3 4

Post–Service Survey: Church Interior Aesthetics

Did the overall aesthetics change your impression of the space after the sermon/worship time?   Yes   No

Why? _____

_____

_____

(Please continue on the back of this page if you need more room)

What, if anything, did you *expect* **aesthetically** but did not see? (in other words, did you have expectations of something physically being present but it wasn't?)

_____

_____

What *didn't* you expect to see, but did? _____

_____

Did this space meet your expectations for the purposes of a worship experience?   Why or why not?

_____

_____

Overall, is your impression of your worship experience in this space: Positive   Negative   Not Sure

 Please explain your answer:

_____

_____

_____

What, aesthetically, would you consider suggesting for this space? _____

_____

Other comments: _____

_____

Would you come back?   Yes   No   Maybe   Only if _____

If you are willing to be a part of a discussion group, please provide your name and contact information:

Name : _____   Phone Number: _____

Please place this survey back into your assigned envelope. Once you have completed/attended all assigned churches, please contact Amy as soon as possible in order to collect your surveys.

Thank you again for your participation. The information you provide is very helpful.

If you have questions regarding this survey or study, please feel free to contact: Amy @ 405.425.5556 or 405.706.1441

Please circle which service: Faith Bible   Life Church   St. Luke's Life Light   St. Luke's Traditional Service

Appendix G

Faith Bible Church: Posttest Results

Open-Ended Reponses

FAITH BIBLE POST SURVEY

<u>Spatial Arrangement/Seating</u>

If people sat around you, in close proximity, based on how the seats were arranged, how would you describe your comfort level?

N1. There was enough room that it was not crowded

N2. There was enough width in the seats to allow room without feeling uncomfortable

N3. No one really sat too close.

N4. Very comfortable.

N5. I was comfortable.

N6. Comfortable – there was adequate space between the rows

N7. Never very close. I felt like everyone knew I had a survey in my lap. It made me uncomfortable

N8. I felt closed in a little because they were all close and facing forward. The room was narrow which made them that way.

N9. Good

N10. I was not uncomfortable.

N11. Pretty decent.

N12. Very comfortable, but space felt odd.

N13. Tolerable

Lighting

If there was a change in lighting, did it change the mood of the room during the worship time?

N1. There was no change in lighting.

N3. No change in lighting.

N4. There was no change in lighting.

N5. There was not any light change that I was aware of.

N6. No change in lighting.

N7. No change in lighting

N8. Yes, if there were more lights, I think my mood would have been up.

N10. There was no change in lighting.

N12. There was variations of sitting and standing but no lighting changes.

N13. No lighting change

Lighting

If you chose to participate, or would have chosen to participate, in the worship time, did/would the lighting level or spatial arrangements help facilitate that choice? Please explain:

N1. How loud and how the people around me are participating effect how I would worship.

N2. I felt a little like being a spectator

N3. I couldn't get into the music. Maybe the lighting would have helped.

N4. Possibly, the lighting was a little too bright for me, but I don't think it decides whether or not I participate in worship.

N5. I do think that the lighting level helped facilitate the worship time.

N6. The lighting was bright but it wouldn't have made not participating however the church was set up really formally and that made me feel like there was some sort of rule I should be following

N7. No- I participated, but would have rather it was a dark. Or not. In that environment the lighting seemed to have little or no involvement. It didn't give any such gesture

N8. Yes, because my mood was calm not upbeat.

N10. I don't believe the lighting spatial arrangement could have been changed to improve the service.

N11. The sunlight was nice but it was blocked.

N12. As the lighting just remained the same, I would feel more comfortable just standing and reading the words on the screen.

N13. Only slightly, I prefer lower lighting for worship

Iconography (religious symbolism)

Did any of the symbolism, in your opinion, serve a purpose? Why or why not? Please be specific:

N1. Yes, they were all things Christians would know the purpose and reason for.

N2. The stained glass by the stage was of the lame man being taken to Jesus.

N3. I felt like the stained glass was pretty but the symbols/pictures on them I didn't get. I don't get what they were of or trying to portray.

N4. It was ironic how the only symbolism was not even practiced – the stained glass window had bread and wine, yet we didn't take the communion.

N5. Yes, it showed the reason why we were here in the service.

N6. All the symbolism seemed purely decorative

N7. There wasn't much symbolism that was easily visible

N8. Yes, so people who believe can see what they study.

N9. I could not see any purpose.

N10. I believe it helped serve as reminders of what people were coming together for.

N11. The stained glass kept it classy and served as a good reminder.

N12. The space was simple a stained glass image of Jesus was up in the front. It was beautiful, light coming through the earth tones.

N13. It

Overall Impression

Did the overall aesthetics change your impression of the space after the sermon/worship time? Why?

N1. If you mean the people and atmosphere then yes, It made the space more negative by reflecting the vibe you get.

N3. Yes, it changed. It seemed more unorganized. There was a random pole – the choir stairs weren't visible and off to the side. It was crowded. I like the skylight but there was only one so the building just felt off beat….and I noticed this more throughout service.

N4. No, I think my impression of the space stayed constant even after the service.

N5. I thought that the aesthetics went quite well with the sermon/worship time

N6. My first impression of the space being formal was only re-emphasized throughout the service with the way in which the sermon was displayed on the screens

N7. The sermon was very much geared toward the act of a speech rather than engaging in any sort of relationship. The wood paneling, man in a suit , "t.v." made me feel like I was watching the news. The thoughts I had about being limited by age were truly made after service. I felt very unenthused.

N8. I had the same mood even after the service.

N10. Yes, really the only thing that was overly noticeable was that I felt as though I was watching a congressional speech. The wood paneling behind the preacher in a nice suit – especially on screen, it felt that way.

N11. Yes, it sort of set the tone for what was coming and I think the service remained true to that. It's a nice place but I don't think that I left here impacted or changed.

N12. There were few aesthetic extras. The room was pretty simple

N13. No, because everything was appropriate and suitable for what was going on

Overall Impression

*What, if anything, did you <u>expect</u> **aesthetically** but did not see? (in other words, did you have expectations of something physically being present but it wasn't?)*

N1. Pews

N2. I didn't have any expectations.

N3. I never saw a cross anywhere, and I expected to see that.

N4. From the look of the church, I would have expected to see a cross somewhere.

N5. A cross being more visible. The crosses here are carved out of the wood on the stage. It took me maybe ½ to notice them.

N6. Communion was not present but I didn't really expect something different

N7. The room felt very traditional, but symbolism wasn't present. I guess stereotypically I expected to see a communion table and some banners but I did not.

N8. I expected to see a cross but didn't.

N9. I expected to see more religious symbolism.

N10. I did not have any expectations.

N11. Crosses and other symbols of faith.

N13. I really expected a cross to be near the front.

Overall Impression of the Space

What <u>didn't</u> you expect to see, but did?

N1. 2 Flat screen TV's

N2. The stained glass

N3. I think everything else was expected or typical.

N4. The TVs that displayed the power point – surprising technology

N5. An instrumental section w/violins, etc. I've never seen a church use French horns, violins in a worship service before.

N6. I didn't expect the large pit area for a band.N8. I didn't expect to see Bible people portrayed on windows.

N9. Flat screen TV's and a lot of speakers – 10 or more

N10. Such formal clothing and instrument selection during the service (drum set, trumpets).

N11. Choir risers.

N13. I honestly did not expect stained glass.

Overall Impression of the Space

Did this space meet your expectations for the purposes of a worship experience?   Why or why not?

N1. Yes it reminded me of other auditoriums but it wasn't very practical and efficient for the choir and to clearly see.

N2. Yes, because it's a similar space to some churches I've been to before.

N3. No it didn't draw me in or engage me

N4. No, I didn't enjoy the worship because of the music itself and the environment.

N5. Yes

N6. Yes it was sufficient but I don't know that it provided the most comfortable environment

N7. No. I didn't feel the experience. It was the uncertain check out son of atmosphere? No one said hello. Worship was un-engaging. I felt like I just watched the morning happen.

N9. Yes, there was room for everyone to worship.

N10. I did not feel like it met or did not meet any expectations I had or did not have.

N11. It was a good, friendly space, so close enough.

N12. In some ways it was not exactly right because in the back, I felt removed from the experience in a way.

N13. Yes, all of my expectations were met because it was all pretty predictable.

Overall Impression of the Space

Overall, is your impression of your worship experience in this space: Please explain your answer:

N1. The people not being friendly and ridged confirm the people by long narrow auditoriums and the ceiling pressing down. These seem to be a bit of irony in the people and the building maybe.

N2. It wasn't a bad space but it was too narrow feeling to be positive.

N3. I don't know if I'd say the atmosphere was negative, it was just dull and not very engaging. It was very impersonal and disconnected.

N4. I don't judge a church based on its lighting, but I didn't like how the front of the church was dimmer and how there wasn't a change in lighting, ever. I wasn't in the right "mood" to worship and I didn't enjoy the music.

N5. My experience was positive, but the space wasn't too visually appealing to me. It seemed kind of bland w/beige seating, light wood & all the dark wood on the stage.

N6. The space didn't hinder my worship experience it just didn't facilitate the things that I'm used to

N7. I hate to say negative because it seems like they do have a community. Its just not necessarily the environment I would prefer to call home. The appearance, people, I experience don't ask me to come back.

N8. Positive. Even though I felt a little closed in, I did like the experience. The church setting was calm and inviting. Anyone who was traditional would definitely like space and service.

N9. Overall, positive but the only negative issue was with sitting and standing 5 times during singing the songs.

N10. I'm not sure – I did not like the congregsional feeling I left with but my impression wasn't negative.

N11. No impact, but not bad.

N12. I am used to having lights more dim at times of worship. I also feel better worshiping in a closer, more intimate setting.

N13. It was simple and had lots of subtle decorations that comforted me.

Overall Impression of the Space

What, aesthetically, would you consider suggesting for this space?

N1. Taller ceilings, wider auditorium where you don't feel closed in and things aren't off to the side and hard to see.

N2. Removing the pillars

N3. Opening it up, maybe more skylights

N4. One thing that bothered me the most was the light used by the pianist – I found it very distracting and it should be turned the other way.

N5. I think it would help if the seating near the front was angled. As it is now, everything is just facing straight forward, making the room seem longer to me.

N6. Adding some color and life to the space so it doesn't look so drab. I know its just a building but it should welcome its attendance.

N7. Different lighting, color on the wall, less of an aisle sort of seating arrangement

N8. A little more lighting. Making the room more open as it is.

N9. More symbolism and turning the lights down during worship.

N10. I did not like the wooden walls.

N11. Some community element that puts people together

N12. Opening up the room somehow or moving closer to the stage.

N13. I would only suggest brighter lights and more open.

Overall Impression of the Space

Other comments:

N3. The people weren't very friendly. Only one person introduced themselves to us. Also, as the preacher preached, I had to watch him on a screen and he couldn't hold my attention so I just looked at my surroundings and felt kind of tired and couldn't wait to leave.

N4. I think the color of lighting was inconsistent and annoying.

N5. I would go back to this church, but only because to hear the sermon.

N11. Nice place, I just don't get anything out of it.

Appendix H

St. Luke's United Methodist Traditional Service: Posttest Results

Open-Ended Responses

St. Luke's Traditional Service POST SURVEY

Spatial Arrangement/Seating

If people sat around you, in close proximity, based on how the seats were arranged, how would you describe your comfort level?

N1. It was comfortable. I had plenty of room for my own space

N2. Just great

N3. Comfortable but no one really sat by me.

N4. Very Comfortable – the seats are spaced out nicely.

N5. I was comfortable

N6. Ok comfort level- lighting makes it more uncomfortable I think

N7. I was indeed comfortable. The room was very open and welcoming for everyone in attendance.

N8. I had enough space to feel comfortable.

N9. Very comfortable.

N10. Comfortable, with arm rests between us.

N11. There wasn't anyone really around.

N12. Extremely comfortable (too comfortable, I became very sleepy)

<u>Lighting</u>

If there was a change in lighting, did it change the mood of the room during the worship time?

N4. No change in lighting.

N5. I didn't notice any change in the lighting

N7. The area where worship went on was very well lit as if it were to be the focal point.

N8 The lighting did not change

N9. The lighting did not change much.

N10. No lighting change.

N12. All lights stayed on during service very bright.

Lighting

If you chose to participate, or would have chosen to participate, in the worship time, did/would the lighting level or spatial arrangements help facilitate that choice? Please explain:

N1. The auditorium reminded me too much of an old school traditional type, stereotypical church.

N2. No, it wouldn't.

N3. No, I just couldn't get into the music

N4. No, I don't think it had anything to do with it. There was a lot to take in and it was distracting, but I didn't like the music itself.

N5. Yes, I think the lighting was appropriate

N6. I think it is less comfortable and more formal with the lighting used. Dimmer lights would have been better.

N7. No we were queued to do so when appropriate. I stood when everyone else did.

N8. The level stayed the same through the services so my mood changed because of the worship.

N10. No, it had very traditional songs. Dark lighting would have been strange.

N11. Yes, you had to follow a special program to keep up.

N12. We stood and sang because everyone else did, I was so bright that I felt little freedom.

Iconography (religious symbolism)

Did any of the symbolism, in your opinion, serve a purpose? Why or why not? Please be specific:

N1. Yes, the stained glass was of apostles and Jesus were there just as reminders and focusing on their faith.

N2. The stained glass showed images from the Bible; not sure what the open Bible on the stand is for.

N3. I think the stained glass was pretty – maybe to just remind you saints and the image of to let us remember Jesus.

N4. I think everything seemed appropriate considering how traditional they were.

N5. Yes, I think the lighting was appropriate

N6. I think to display their beliefs, otherwise just decorative

N7. Yes the stained glass windows especially gave it that traditional church feel along with the burning candles, etc. This may be cliché, but it was very pretty-felt like home.

N8. The organ was

N10. They were good reminders of why members meet.

N11. All of the windows and stained glass helped keep the "high church" reverent feel.

N12. The symbols purpose was to make the service seem very traditional.

Overall Impression of the Space

Did the overall aesthetics change your impression of the space after the sermon/worship time? Why?

N3. No – I didn't think it really mattered, it was more of what happened inside the space rather than the space itself at that point.

N4. Although there were distractions, I just didn't enjoy the style of worship.

N6. First Impression says a lot and really sets the tone for the rest of the service

N7. The service went right along w/ the appearance of the room. There was a specific order/arrangement as to how everything was to be carried out. I got that when I first walked in to the space.

N8. After a while I got use to the space so my worship wasn't so awkward. I enjoyed watching and singing better because I got use to it.

N9. Yes, very inviting atmosphere.

N11. Yes, it felt a little less gaudy afterwards but still pretty detached.

N12. It was exciting to see all of the elaborate decorations upon arrival, but I grew tired of it very quickly and was disinterested by the end.

Overall Impression of the Space

*What, if anything, did you <u>expect</u> **aesthetically** but did not see? (in other words, did you have expectations of something physically being present but it wasn't?)*

N2. Communion Stuff

N3. I didn't have any expectations

N5. Communion

N6 I did not have any initial expectations

N8. Everything I saw was there that I expected.

N9. Nothing.

N10. No expectations

N11. Screens for some presentation

N12. I expected song lyrics projected, they had to be looked up instead.

Overall Impression of the Space

What <u>didn't</u> you expect to see, but did?

N1. A free podium, floating, raised for the preacher to stand on. It was almost like he was close to hovering in the air.

N2. The trinity symbol over the pulpit

N3. The size of the pipe organ surprised me

N4. The extravagant organ, amazing architecture, and bell show. Also, the raised podium was very interesting.

N5. The bells, organ pipes

N6. The organ and choir seating

N8. The organ. I can see why it was there but I didn't really think about there being one.

N10. N/A

N11. Fancy preacher robes = weird

N12. I didn't expect the robes, and other formal features of the service.

<u>Overall Impression of the Space</u>

Did this space meet your expectations for the purposes of a worship experience?   Why or why not?

N1. Yes, they had a place for a choir and chairs for people on stage.

N2. Yes, I've worshipped in places like this before.

N3. The space was nice, the speaker was good but the praise music and other stuff was rigid, boring and dry and almost mechanical feeling.

N4. No, I didn't enjoy the worship, but I don't think it was necessarily attributed to the space.

N5. Yes, it did.

N6. Yes it was adequate for the style and purposes of the worship experience they were trying to achieve

N7. The space itself was comfortable and inviting, but as service went on I became less interested in the sermon and more so aware of the space around me.

N8. Yes because the service was more conservative and look and feel of the church went along with that.

N9. Yes, very formal environment.

N10. Yes, I really didn't have any expectations. It was a normal traditional Methodist sanctuary.

N11. I wish it helped connect people with community and "church". I felt like God was unapproachable.

N12. In some ways, this setting seemed to make it difficult to engage deeply with worship

Overall Impression of the Space

Overall, is your impression of your worship experience in this space: Please explain your answer:

N1. It seemed way too traditional and stereotypical and it gave the impression of a dry and pious church building that is always made fun of on tv. The organ pipes arrangement really did make me feel uneasy because of their sharp points and placement.

N2. It wasn't positive or negative. There weren't a lot of people there, so I wonder how it would feel with a full house?

N3. I thought the space was itself was nice and open but maybe certain things could have been tweaked to make it more appealing.

N4. I had a hard time paying attention to the songs because I couldn't hear anything and its hard following the hymns in the books.

N5. It's somewhat calming but also a little busy.

N6. It wasn't overwhelmingly uncomfortable but it was different from my normal experience.

N7. I wouldn't say I hated it or that it would make me fall away from church. I think getting involved and getting to know other people would be the key though b/c the service itself was a little more formal than I prefer

N8. Even though it seemed old fashion with the way things looked it was everything new because I didn't expect the organ.

N9. I was able to enjoy the worship with everyone else.

N10. Not sure – It was expected. I don't normally worship in a Methodist congregation. The space was fitting for the service and was to be expected.

N11. Semi-positive – It was a good service I just can't relate very well.

N12. It may be that I am just not used to this, but I really felt removed, and did not feel intimate or engaged deeply in any part.

Overall Impression of the Space

What, aesthetically, would you consider suggesting for this space?

N1. Getting rid of some clutter on stage and covering up the pipe organ.

N3. Maybe it's TOO spacious, maybe if it were more intimate it would be more affective.

N4. I don't have any suggestions.

N5. Unsure

N6. I think they achieve the traditional service that they are hoping for with their current set up

N8. More color

N9. Dimming the lights

N10. No suggestions.

N11. Take the preacher out of the "high and mighty" pulpit.

N12. Fewer elements, I enjoy the colors. Lower stage to put on same level. Lower top of auditorium seating too removed from everything.

Appendix I

St. Luke's United Methodist's Life Light: Posttest Results

Open-Ended Responses

St. Luke's Life Light POST SURVEY

Spatial Arrangement/Seating

If people sat around you, in close proximity, based on how the seats were arranged, how would you describe your comfort level?

N1. It was fine but not exactly spacious but not cramped at all

N3. Cozy, but not uncomfortable.

N4. It was a bit tight, but not uncomfortable

N5. Comfortable

N6. I was so closed to the person next to me

N7. The man's elbow next to me touched my elbow the entire time!

N8 I had good space around me.

N9. The seats were too close.

N10. The seats weren't very comfortable. I was very close to those around me. Also, when the projector was not displaying his face, I was too far away to see his facial expressions.

N11. Pretty good and lined up

N12. Very comfortable. Not pressuring position.

Lighting

If there was a change in lighting, did it change the mood of the room during the worship time?

N2. Yes – They dimmed the lights when the speaker spoke which focused my attention on him.

N4. There wasn't a change during worship but the large overhead lights turned on during the sermon – I did not like the increased lighting and it was distracting.

N5. There wasn't a change in the lighting.

N7. One thing followed the next. The music was lively so I'm not sure I paid strict enough attention to the lighting.

N8 Excited before and after calmed because the service was calming.

N9. No – there wasn't much of a difference when all lights were out.

N10. No change in the lighting.

N11. None really.

N12. The lighting remained the same. If it changed, I may have felt more drawn in to the worship.

N13. No changes in lighting.

Lighting

If you chose to participate, or would have chosen to participate, in the worship time, did/would the lighting level or spatial arrangements help facilitate that choice? Please explain:

N1. Yes if it's dim it's a little more intimate and personal.

N3. Yes, it was intimate and the lights were on so I felt I could be a part of it.

N4. Possibly, I felt comfortable and nothing distracted me from engaging into worship.

N5. Yes, I do think the lighting level helped.

N6. Seems like everyone was content listening, the lighting didn't prove otherwise therefore that is how engaged in worship

N7. Yes, we were at the back and were so close to the people next to us I think we would have stood out like a sore thumb if we didn't stand b/c the lights stayed fairly bright

N8. Not really because I was use to the light by the time I sat down so nothing really changed.

N9. No, the music was done by the people on the stage.

N10. I don't believe so. I think that the lighting level was most appropriate for the service.

N11. The whole "show" was pretty accessible and open – easy to participate in.

N12. I sang because the mood of the room was comfortable. I felt no pressure.

N13. Yeah, it could have been dimmer.

Iconography (religious symbolism)

Did any of the symbolism, in your opinion, serve a purpose? Why or why not? Please be specific:

N1. Yes, the one big cross on stage was simple and straight to the point.

N2. Not really, there was the cross which symbolized Christ's death but that was is.

N3. There wasn't really any symbolism.

N5. Yes, it showed why we were there.

N6. The cross was decoration, there was a white flag in a frame used during the service

N7. The wooden cross definitely stood out on the stage. They didn't use it for anything other than a symbol, but I think it was truly a part of the environment. The preacher talked about sharing the word. What better way than showing them?

N8. There wasn't any symbolism, except for the cross up front and it was to portray the idea of Christ.

N9. Yes, there was a cross and white banners – not sure what they are for.

N10. I don't remember there being any.

N12. The crosses in front made the nontraditional room feel more like a church.

N13. Yes, it seemed to be a symbol of Christ as it helped the sermon

Overall Impression of the Space

Did the overall aesthetics change your impression of the space after the sermon/worship time? Why?

N2. It seemed the same as before

N3 – Yes, there was a huge difference between the two services and it was just relaxed and cozier.

N4. I think the aesthetics made it a comfortable environment for me to worship

N5. I think that the space went well with the sermon/worship time.

N6. I think with arrangement of seating I became more uncomfortable as the service continued

N7. The wooden cross definitely stood out on the stage. They didn't use it for anything other than a symbol, but I think it was truly a part of the environment. The preacher talked about sharing the word. What better way than showing them?

N8 Because there wasn't a lot of décor or anything catching to the eye.

N9. No, they stayed the same

N11. Yes, everyone left way to fast, kind of killed the community.

N12. My first impression was that it was pretty informal, that didn't change too much later on

N13. Everything was appropriate for the service.

Overall Impression of the Space

*What, if anything, did you <u>expect</u> **aesthetically** but did not see? (in other words, did you have expectations of something physically being present but it wasn't?)*

N1.Another formal, dry auditorium (speaking of the previous church attended)

N2. I wasn't expecting any of the auditorium to be so formal.

N3. I don't think I really expected anything…it was just kind of just your typical contemporary service.

N4 I expected it to be more traditional as far as the atmosphere.

N5. Wasn't expecting anything.

N6. I didn't expect anything

N7. I think I expected more iconography b/c of the exterior of the building even though the life light sign/banner was graphically contemporary

N8. With the name of the church I thought I would see pews or more symbolism.

N10. I expected a more formal area.

N11. More set up of the "space" as opposed to the stage.

N12. The space was a little too boring, the space may have needed more decorations.

N13. I had no expectations

<u>Overall Impression</u>

What <u>didn't</u> you expect to see, but did?

N1. Informal, more modern and less busy, more inviting room

N3. A woman leading the service.

N4. A full blown choir and an extremely simple atmosphere

N5. N/A

N8 chairs instead of pews

N9. A basket ball score board

N10. I was not expecting a gym.

N11. Singers that were so enthusiastic were helpful to the worship experience

N12. I was surprised to see the cross.

Overall Impression of the Space

Did this space meet your expectations for the purposes of a worship experience?   Why or why not?

N1. Yes, it was suppose to be new, modern and edgy and it was really close to what they were going for.

N2. Sure, because you can worship anywhere.

N3. Yes it did because it felt comfortable and I felt like I could be a part of it.

N4. Yes, I felt very comfortable worshipping.

N6. It served the purpose of the service but as stated earlier, its seemed temporary

N7. Yes. There was adequate seating, a stage at the front to them your attention to, and plenty of welcoming colors.

N8. Yes, because the room wasn't old fashion and it brought more unique space to the service

N9. Too crowded.

N10. The space did meet my expectation. The service was informal enough that it all fit in well.

N11. Yes, it was friendly and open. I felt like I could be myself here.

N12. Yes, I expect to worship with enthusiastic song leaders.

N13. Yes the space was simple and down to earth. It was really good for a contemporary service.

Overall Impression of the Space

Overall, is your impression of your worship experience in this space: Please explain your answer:

N1. It was modern and more inviting

N2. It wasn't wonderful but it wasn't terrible.

N3. I liked the lesson and the people were warm and greeted me and the space was comfortable.

N4. For the most part, I enjoyed the worship even though I didn't feel like I could engage in the songs since 70% were solos or the choir singing.

N6. I was able to enjoy the service but I think a more intimate space would have been more comfortable

N7. I don't have anything to complain about. I was never terribly uncomfortable. I experienced uplifting worship and didn't ever get bored either by the space or the service

N8 Lights, chairs, informal attitude, brought a positive spin to how I worship. The bright lights made me more awake.

N9. I could not get comfortable to join in the worship

N10. I'm not sure – It's just different than I am usually used to.

N11. Positive – It wasn't ornate or sophisticated but it served its purpose and helped the community.

N12. It was comfortable and of all Church services, it was the easiest to engage with during worship.

N13. It seemed sort of real and "grungy" not too ornate, just church

<u>Overall Impression of the Space</u>

What, aesthetically, would you consider suggesting for this space?

N1. A warm color that makes you feel more at ease and comfortable. (I think they need to look or talk to Life Church – they did it perfect

N2. Adding something a bit more fun to the walls/space

N3. It was a little chilly.

N4. Nothing, even though it was held in a gym, I think it was still a pleasing environment.

N6. Whatever would make the seating arrangement and spacing more comfortable

N7. A little more elbow room! There was room to the back to add more seats. AT that point though they may need an extra screen or two.

N8. Pictures on the wall

N9. More room

N10. I have no suggestions.

N11. Different lighting for the room, rearrange the chairs in groups as opposed to lines.

N12. Bright colors of any kind used on walls, addition of flowers or decorations

Overall Impression

Other comments:

N6. It was an enjoyable service

Appendix J

Life Church: Posttest Results

Open-Ended Responses

Life Church Service POST SURVEY

<u>Spatial Arrangement/Seating</u>

If people sat around you, in close proximity, based on how the seats were arranged, how would you describe your comfort level?

N1. There was plenty of space for each person

N2. Comfort level was fine. There were arm rests!

N3. Comfortable

N4. Comfortable – seating is spaced out

N5. I was comfortable

N6. Very comfortable – I was very comfortable

N7. Perfectly comfortable, plenty of leg room too!

N8. There were enough spaces in between to feel comfortable.

N9. Seats are large and spacious.

N10. Fairly comfortable.

N11. Pretty good – like a movie theater.

N12. Very close to one another

Lighting

If there was a change in lighting, did it change the mood of the room during the worship time?

N1. Yes, you would be free to just get into the worship. The dark lighting without having people see or tell everything you were doing was nice.

N2. Since it was darker with stage lights moving about, it was like a concert with an energetic feel.

N5. It was really dark for worship music then for the lesson the lights brightened so I could take notes and the feel changed from the rock concert to devo[tional].

N7. It became much more intimate. There was a definite shift from worship to lesson

N8. The lighting stayed the same so the mood of it did not change.

N9. Yes, the lights were turned off to allow everyone to worship in private.

N10. There was no change in lighting.

N11. Exited to pensive and onwards.

N12. The mood didn't have much to do with the lighting changes. Though it did have to do with lighting.

Lighting

If you chose to participate, or would have chosen to participate, in the worship time, did/would the lighting level or spatial arrangements help facilitate that choice? Please explain:

N2. Yes, the lighting level helped because of it feeling like a concert.

N3. I felt like the atmosphere set up for worship time was leading me to watch/listen rather than participate.

N4. No – it's just the way they worship that turned me off

N5. Yes, I think that the lighting helped facilitate the worship time.

N6. The lighting – being dark with stage lights brings the focus on worship instead of on me and how I worship

N7. It helped make the experience between me and God. I didn't feel like anyone was looking at me or expecting anything of me. It was purely a time of worship and deep concentration.

N8. If the light level went down it would change how I would see things because of how it effects my mood.

N9. Yes, darker areas allow for more private experiences.

N10. I felt the dim lighting was beneficial to the worship experience.

N11. Yes, it helped set the tone for the community's worship.

N12. Darker setting made engaging with worship easy.

Iconography (religious symbolism)

Did any of the symbolism, in your opinion, serve a purpose? Why or why not? Please be specific:

N1. There wasn't really any symbolism around

N2. Not really. There wasn't any symbolism

N3. I didn't see much.

N4. No, the only thing on stage was graphics – maybe it just reinforces the message?

N5. Not really, communion was on a side table off to the left of the stage. It seems like it was just there.

N6. To illustrate the series message

N8. There really isn't a lot of symbolism, just up front on graphics.

N10. There was no symbolism

N12. Communion was there to be taken/eaten

<u>Overall Impression of the Space</u>

Did the overall aesthetics change your impression of the space after the sermon/worship time? Why?

N3. Yes – It felt comfortable but the atmosphere didn't allow much community. It was very inviting and really drew you in and kept your attention

N4. No – Although I didn't like the fog and lights, I think it was the actual band and concert feel to the singing that I disliked about the worship.

N5. I think that the aesthetics fit the space for the sermon/worship time

N6. The lighting is kept consistent and the stage presence is not distracting in any way so I was not affected either way

N7. I didn't feel distracted or overwhelmed. My impression didn't change at all. I expected to stay involved and that exactly what happened.

N8. The room really is simple. Up front is where all the activity is. The stage always has lights & TV's.

N9. No, it was the same before as in the end.

N11. Yes, the feel of the room makes you feel like you're part of something bigger.

N12. The contemporary feel was consistent and did not waiver.

Overall Impression of the Space

What, if anything, did you expect **aesthetically** *but did not see? (in other words, did you have expectations of something physically being present but it wasn't?)*

N1. A podium. Maybe some sort of Christian symbol of their logo

N2. Maybe a cross

N3. Nothing

N4. I think I saw everything I expected – although I thought the church would be bigger

N6. The minister is not present – all video

N7. I didn't look like "stereotypical" church, but it certainly felt like church. There wasn't any iconography, but I certainly got the message that was in their hearts.

N8. I thought more crosses would be seen but not, there weren't

N9. A cross

N11. Crosses and the like

Overall Impression of the Space

What <u>didn't</u> you expect to see, but did?

N1. Movie type seats with cup holders

N3. The word "atheist" in bold on stage.

N4. The fog and crazy lights

N5. The rock walls around the altar

N8. Smoke

N9. Lots of TV screens.

N12. Didn't expect communion

Overall Impression of the Space

Did this space meet your expectations for the purposes of a worship experience?   Why or why not?

N1. Yes, the stage was high enough to elevate the people's faces over everyone's heads.

N2. Yes because I went to a church of this size and design for about 6 years.

N3. Yes, it was nice – comfortable, inviting.

N4. No, I didn't enjoy it because it was too distracting to get anything out of it.

N5. I think it did

N6. Yes, the way that they are seeking people the space reflects that inviting modern

N7. Most definitely! Warm place to sit, people to share experiences with, attention drawn only to the front, encouraged to have moments with God.

N8. Yes the space is very large. To hold the amount of people it has, it is required to have that big of a space.

N9. Yes, worship was not distracting by other people.

N10. It was cool.

N11. Yes, it's a room people can worship in.

N12. Not intimate enough although it was entertaining.

Overall Impression of the Space

Overall, is your impression of your worship experience in this space: Please explain your answer:

N1. Environment was just something my age could fit into and feel comfortable.

N2. Because it was familiar, it was positive

N3. It was different but enlightening. The energy was positive, upbeat, uplifting and it all flowed.

N4. I feel like I'm being repetitive, but because I felt like I was at a concert and the atmosphere was not very personable, I did not get the worship experience I would have hoped for.

N5. I feel that the sanctuary fit well w/ the worship experience

N6. The environment provided is how I am comfortable expressing myself

N7. There's not much to look at on the walls, but the speaker and announcements through projection sure keep your attention. Everything about it seems well thought out. People are people and in this environment you can tell people love God

N8. Everything is very positive and upbeat in the service. The lights are out but the lights on stage allow you to be more positive in worship.

N9. It was positive because I allowed myself to worship anyway I wanted.

N11. Very open, exciting worship, can sometimes feel distant and "too big" but the message was down to earth.

N12. This worship experience is good for young people, or people new to the church, but eventually more intimacy in worship should be explored.

<u>Overall Impression of the Space</u>

What, aesthetically, would you consider suggesting for this space?

N1. Nothing

N2. Revising the white tarps behind the seats but I think they were for construction so they'll be removed later anyway.

N3. Something maybe to connect the audience to each other more

N4. The lighting is too dim to see anyone's face.

N5. For the lighting to be a little brighter

N6. Nothing it is visually appealing

N8. Make the walls have something on the sides. Paintings.

N9. More lighting

N11. Someway of incorporating a more "community feel"

N12. Fewer complex elements

Overall Impression of the Space

Other comments:

N6. Life Church is at the forefront of the modern world. They are constantly seeking innovative ways to do things at their facility and it shows

N11. Acoustics for crowd vocals could be better.

Appendix K

Faith Bible Church: Quantitative Analysis

Faith Bible

Table 1

Faith Bible Church: Seat Comfort

t-Test: Paired Two Sample for Means

	Seat comfort	post - seat comfort
Mean	2.692307692	2.692307692
Variance	0.230769231	0.397435897
Observations	13	13
Pearson Correlation	0.48683382	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 2

Faith Bible Church: Inviting
t-Test: Paired Two Sample for Means

	Inviting - Pre	Inviting - Post
Mean	2.615384615	2.461538462
Variance	0.756410256	1.102564103
Observations	13	13
Pearson Correlation	0.940588298	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.477097892	
P(T<=t) one-tail	0.082703353	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.165406706	
t Critical two-tail	2.178812827	

Table 3

Faith Bible Church: Calming

t-Test: Paired Two Sample for Means

	Calming - Pre	Calming - Post
Mean	2.538461538	2.076923077
Variance	0.769230769	0.743589744
Observations	13	13
Pearson Correlation	0.49159604	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.897366596	
P(T<=t) one-tail	0.041048716	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.082097433	
t Critical two-tail	2.178812827	

Table 4

Faith Bible Church: Spacious

t-Test: Paired Two Sample for Means

	Spacious - pre	Spacious - post
Mean	2.846153846	2.769230769
Variance	1.307692308	1.692307692
Observations	13	13
Pearson Correlation	0.926448778	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.561951487	
P(T<=t) one-tail	0.292246439	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.584492877	
t Critical two-tail	2.178812827	

Table 5

Faith Bible Church: Comfortable

t-Test: Paired Two Sample for Means

	Comfortable - Pre	Comfortable - Post
Mean	2.923076923	2.846153846
Variance	0.41025641	0.641025641
Observations	13	13
Pearson Correlation	0.625	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.433012702	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 6

Faith Bible Church: Formal

t-Test: Paired Two Sample for Means

	Formal - Pre	Formal - Post
Mean	2.230769231	2.384615385
Variance	1.692307692	1.756410256
Observations	13	13
Pearson Correlation	0.910938043	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 7

Faith Bible Church: Reverent
t-Test: Paired Two Sample for Means

	Reverent - pre	Reverent - post
Mean	2.307692308	2.384615385
Variance	1.064102564	1.08974359
Observations	13	13
Pearson Correlation	0.80958118	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.433012702	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 8

Faith Bible Church: Busy
t-Test: Paired Two Sample for Means

	Busy - pre	Busy - post
Mean	2.076923077	2.153846154
Variance	1.41025641	1.307692308
Observations	13	13
Pearson Correlation	0.849661776	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.433012702	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 9

Faith Bible Church: Closed In
t-Test: Paired Two Sample for Means

	Closed in - Pre	Closed in - post
Mean	2	1.692307692
Variance	1.5	0.897435897
Observations	13	13
Pearson Correlation	0.790067307	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.477097892	
P(T<=t) one-tail	0.082703353	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.165406706	
t Critical two-tail	2.178812827	

Table 10

Faith Bible Church: Exciting
t-Test: Paired Two Sample for Means

	Exciting - pre	Exciting - post
Mean	2.230769231	1.846153846
Variance	1.525641026	1.307692308
Observations	13	13
Pearson Correlation	0.735210079	
Hypothesized Mean Difference	0	
Df	12	
t Stat	1.59448201	
P(T<=t) one-tail	0.068406131	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.136812263	
t Critical two-tail	2.178812827	

Table 11

Faith Bible Church: Informal
t-Test: Paired Two Sample for Means

	Informal - pre	Informal - post
Mean	2.461538462	2.461538462
Variance	1.935897436	2.269230769
Observations	13	13
Pearson Correlation	0.963397359	
Hypothesized Mean Difference	0	
Df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 12

Faith Bible Church: Intimate
t-Test: Paired Two Sample for Means

	Intimate - pre	Intimate - post
Mean	2.076923077	2.153846154
Variance	0.91025641	1.141025641
Observations	13	13
Pearson Correlation	0.723341974	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.365148372	
P(T<=t) one-tail	0.360677672	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.721355344	
t Critical two-tail	2.178812827	

Table 13

Faith Bible Church: Accepting

t-Test: Paired Two Sample for Means

	Accepting - pre	Accepting - post
Mean	2.538461538	2.307692308
Variance	0.602564103	0.897435897
Observations	13	13
Pearson Correlation	0.775821949	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.38873015	
P(T<=t) one-tail	0.095075715	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.190151431	
t Critical two-tail	2.178812827	

Table 14

Faith Bible Church: Un-accepting

t-Test: Paired Two Sample for Means

	Un-accepting - pre	Un-accepting - post
Mean	1.615384615	1.615384615
Variance	0.58974359	0.423076923
Observations	13	13
Pearson Correlation	0.846989554	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 15

Faith Bible Church: Rigid
t-Test: Paired Two Sample for Means

	Rigid - pre	Rigid - post
Mean	1.769230769	1.846153846
Variance	0.858974359	1.141025641
Observations	13	13
Pearson Correlation	0.718721404	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.365148372	
P(T<=t) one-tail	0.360677672	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.721355344	
t Critical two-tail	2.178812827	

Table 16
Faith Bible Church: Energetic
t-Test: Paired Two Sample for Means

	Energetic - pre	Energetic - post
Mean	2.307692308	2.153846154
Variance	1.397435897	1.474358974
Observations	13	13
Pearson Correlation	0.893177616	
Hypothesized Mean Difference	0	
df	12	
t Stat	1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 17

Faith Bible Church: Boring

t-Test: Paired Two Sample for Means

	Boring - pre	Boring - post
Mean	2	2.615384615
Variance	1	1.58974359
Observations	13	13
Pearson Correlation	0.727022577	
Hypothesized Mean Difference	0	
df	12	
t Stat	-2.551171217	
P(T<=t) one-tail	0.012705455	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.025410909	
t Critical two-tail	2.178812827	

Table 18

Faith Bible Church: Draws You In versus Want to Leave

t-Test: Paired Two Sample for Means

	Draws you in	Want to leave
Mean	3.846153846	1.307692308
Variance	0.141025641	0.397435897
Observations	13	13
Pearson Correlation	-0.83937206	
Hypothesized Mean Difference	0	
df	12	
t Stat	9.460805955	
P(T<=t) one-tail	3.24818E-07	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	6.49636E-07	
t Critical two-tail	2.178812827	

Table 19

Faith Bible Church: Post Aesthetics

Did the interior aesthetics change your impression of the space?	
Yes	5
No	8

Table 20

Faith Bible Church: Overall Impression

Positive	6
Negative	2
Not Sure	5

Table 21

Faith Bible Church: Would You Return?

Yes	4
No	7
Maybe	2

Table 22

Faith Bible Church: Enough Light for Notes?

Yes	13

Appendix L

St. Luke's United Methodist Traditional Service: Quantitative Analysis

St Luke's United Methodist: Traditional Service

Table 1

St. Luke's United Methodist: Seat Comfort
t-Test: Paired Two Sample for Means

	Seat comfort	post – seat comfort
Mean	3.692307692	3.692307692
Variance	0.397435897	0.230769231
Observations	13	13
Pearson Correlation	0.762000762	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 2

St Luke's United Methodist: Inviting
t-Test: Paired Two Sample for Means

	Inviting - Pre	Inviting - Post
Mean	2.923076923	3.230769231
Variance	0.41025641	1.025641026
Observations	13	13
Pearson Correlation	0.415048943	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.17108009	
P(T<=t) one-tail	0.132148033	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.264296066	
t Critical two-tail	2.178812827	

Table 3

St. Luke's United Methodist: Calming
t-Test: Paired Two Sample for Means

	Calming - Pre	Calming - Post
Mean	2.538461538	2.076923077
Variance	0.935897436	0.743589744
Observations	13	13
Pearson Correlation	0.545573072	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.897366596	
P(T<=t) one-tail	0.041048716	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.082097433	
t Critical two-tail	2.178812827	

Table 4

St. Luke's United Methodist: Spacious
t-Test: Paired Two Sample for Means

	Spacious - pre	Spacious - post
Mean	3.692307692	3.230769231
Variance	0.230769231	0.525641026
Observations	13	13
Pearson Correlation	0.460131359	
Hypothesized Mean Difference	0	
df	12	
t Stat	2.520504151	
P(T<=t) one-tail	0.013442148	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.026884296	
t Critical two-tail	2.178812827	

Table 5

St. Luke's United Methodist: Comfortable
t-Test: Paired Two Sample for Means

	Comfortable Pre	*Comfortable - Post*
Mean	3.076923077	3.153846154
Variance	0.41025641	0.307692308
Observations	13	13
Pearson Correlation	0.433012702	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.4330127	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 6

St. Luke's United Methodist: Formal
t-Test: Paired Two Sample for Means

	Formal - Pre	Formal - Post
Mean	2.230769231	2.384615385
Variance	1.692307692	1.423076923
Observations	13	13
Pearson Correlation	0.904618915	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 7

St. Luke's United Methodist: Reverent
t-Test: Paired Two Sample for Means

	Reverent - pre	Reverent - post
Mean	2.769230769	2.615384615
Variance	0.858974359	0.58974359
Observations	13	13
Pearson Correlation	0.567406409	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.692820323	
P(T<=t) one-tail	0.250805443	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.501610886	
t Critical two-tail	2.178812827	

Table 8

St. Luke's United Methodist: Busy
t-Test: Paired Two Sample for Means

	Busy - pre	Busy - post
Mean	2.307692308	2.307692308
Variance	1.064102564	0.897435897
Observations	13	13
Pearson Correlation	0.747802288	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 9

St. Luke's United Methodist: Closed In
t-Test: Paired Two Sample for Means

	Closed in - Pre	Closed in - post
Mean	1.384615385	1.538461538
Variance	0.423076923	0.602564103
Observations	13	13
Pearson Correlation	-0.11426326	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.51929079	
P(T<=t) one-tail	0.30650079	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.613001579	
t Critical two-tail	2.178812827	

Table 10

St. Luke's United Methodist: Exciting
t-Test: Paired Two Sample for Means

	Exciting - pre	Exciting - post
Mean	2.692307692	2.923076923
Variance	1.064102564	0.91025641
Observations	13	13
Pearson Correlation	0.905350163	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.8973666	
P(T<=t) one-tail	0.041048716	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.082097433	
t Critical two-tail	2.178812827	

Table 11

St. Luke's United Methodist: Informal
t-Test: Paired Two Sample for Means

	Informal - pre	Informal - post
Mean	2.461538462	2.461538462
Variance	1.102564103	1.435897436
Observations	13	13
Pearson Correlation	0.810044526	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 12

St. Luke's United Methodist: Intimate
t-Test: Paired Two Sample for Means

	Intimate - pre	Intimate - post
Mean	2	1.923076923
Variance	0.666666667	0.91025641
Observations	13	13
Pearson Correlation	0.748825371	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.433012702	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 13

St. Luke's United Methodist: Accepting
t-Test: Paired Two Sample for Means

	Accepting - pre	Accepting - post
Mean	2.923076923	2.692307692
Variance	0.576923077	0.897435897
Observations	13	13
Pearson Correlation	0.775057602	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.38873015	
P(T<=t) one-tail	0.095075715	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.190151431	
t Critical two-tail	2.178812827	

Table 14

St. Luke's United Methodist: Un-accepting
t-Test: Paired Two Sample for Means

	Un-accepting pre	Un-accepting post
Mean	1.384615385	1.384615385
Variance	0.256410256	0.423076923
Observations	13	13
Pearson Correlation	0.525486787	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 15

St. Luke's United Methodist: Rigid
t-Test: Paired Two Sample for Means

	Rigid - pre	Rigid - post
Mean	1.538461538	1.692307692
Variance	0.602564103	0.897435897
Observations	13	13
Pearson Correlation	0.810690351	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 16

St. Luke's United Methodist: Energetic
t-Test: Paired Two Sample for Means

	Energetic - pre	Energetic - post
Mean	2.538461538	2.846153846
Variance	1.769230769	1.474358974
Observations	13	13
Pearson Correlation	0.932715949	
Hypothesized Mean Difference	0	
df	12	
t Stat	-2.30940108	
P(T<=t) one-tail	0.019759526	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.039519051	
t Critical two-tail	2.178812827	

Table 17

St. Luke's United Methodist: Boring
t-Test: Paired Two Sample for Means

	Boring - pre	Boring - post
Mean	1.846153846	1.692307692
Variance	0.641025641	0.397435897
Observations	13	13
Pearson Correlation	0.558800559	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.805387266	
P(T<=t) one-tail	0.218132315	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.436264629	
t Critical two-tail	2.178812827	

Table 18

St. Luke's United Methodist:
Draws You in versus Want to Leave
t-Test: Paired Two Sample for Means

	Draws you in	Want to Leave
Mean	3.384615385	1.384615385
Variance	0.423076923	0.423076923
Observations	13	13
Pearson Correlation	-0.378787879	
Hypothesized Mean Difference	0	
df	12	
t Stat	6.676183683	
P(T<=t) one-tail	1.13638E-05	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	2.27276E-05	
t Critical two-tail	2.178812827	

Table 19

St. Luke's United Methodist: Post Aesthetics

Do the interior aesthetics change
<u>your impression of the space?</u>

Yes	5
No	8

Table 20

<u>*St. Luke's United Methodist: Overall Impression*</u>

Positive	4
Negative	2
Not Sure	7

Table 21

<u>*St. Luke's United Methodist: Would You Return?*</u>

Yes	8
No	0
Maybe	4

Table 22

<u>*St. Luke's United Methodist: Enough Light for Notes*</u>

Yes	13
No	0

Appendix M

St. Luke's United Methodist's Life Light: Quantitative Analysis

Life Light

Table 1

Life Light: Seat Comfort
t-Test: Paired Two Sample for Means

	Seat Comfort	Post-Seat Comfort
Mean	2.416666667	2.333333333
Variance	0.628787879	0.787878788
Observations	12	12
Pearson Correlation	0.947167868	
Hypothesized Mean Difference	0	
df	11	
t Stat	1	
P(T<=t) one-tail	0.169400348	
t Critical one-tail	1.795884814	
P(T<=t) two-tail	0.338800696	
t Critical two-tail	2.200985159	

Table 2

Life Light: Inviting
t-Test: Paired Two Sample for Means

	Inviting - Pre	Inviting - Post
Mean	3.461538462	3.153846154
Variance	0.435897436	0.641025641
Observations	13	13
Pearson Correlation	0.48507125	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.477097892	
P(T<=t) one-tail	0.082703353	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.165406706	
t Critical two-tail	2.178812827	

Table 3

Life Light: Calming
t-Test: Paired Two Sample for Means

	Calming – Pre	Calming - Post
Mean	3	2.307692308
Variance	0.5	0.730769231
Observations	13	13
Pearson Correlation	0.551446795	
Hypothesized Mean Difference	0	
df	12	
t Stat	3.323470256	
P(T<=t) one-tail	0.003035524	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.006071049	
t Critical two-tail	2.178812827	

Table 4

Life Light: Spacious
t-Test: Paired Two Sample for Means

	Spacious - pre	Spacious - post
Mean	3.230769231	3.230769231
Variance	1.025641026	0.692307692
Observations	13	13
Pearson Correlation	0.722689486	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 5

Life Light: Comfortable

t-Test: Paired Two Sample for Means

	Comfortable - Pre	Comfortable - Post
Mean	3.153846154	3.307692308
Variance	0.974358974	0.564102564
Observations	13	13
Pearson Correlation	0.717653756	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.80538727	
P(T<=t) one-tail	0.218132315	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.436264629	
t Critical two-tail	2.178812827	

Table 6

Life Light: Formal

t-Test: Paired Two Sample for Means

	Formal - Pre	Formal - Post
Mean	2.692307692	3
Variance	1.397435897	1.5
Observations	13	13
Pearson Correlation	0.863372946	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.75976538	
P(T<=t) one-tail	0.051945385	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.103890769	
t Critical two-tail	2.178812827	

Table 7

Life Light: Reverent

t-Test: Paired Two Sample for Means

	Reverent - pre	Reverent - post
Mean	2.692307692	2.923076923
Variance	0.730769231	0.91025641
Observations	13	13
Pearson Correlation	0.581614362	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 8

Life Light: Busy

t-Test: Paired Two Sample for Means

	Busy – pre	Busy - post
Mean	2	2.230769231
Variance	0.666666667	0.858974359
Observations	13	13
Pearson Correlation	0.660732294	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.14763808	
P(T<=t) one-tail	0.136741781	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.273483563	
t Critical two-tail	2.178812827	

Table 9

Life Light: Closed In
t-Test: Paired Two Sample for Means

	Closed in - Pre	Closed in - post
Mean	1.307692308	1.615384615
Variance	0.397435897	1.08974359
Observations	13	13
Pearson Correlation	0.827939533	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.75976538	
P(T<=t) one-tail	0.051945385	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.103890769	
t Critical two-tail	2.178812827	

Table 10

Life Light: Exciting
t-Test: Paired Two Sample for Means

	Exciting - pre	Exciting - post
Mean	2.615384615	2.692307692
Variance	1.58974359	1.064102564
Observations	13	13
Pearson Correlation	0.734355554	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.32163376	
P(T<=t) one-tail	0.37663178	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.753263561	
t Critical two-tail	2.178812827	

Table 11

Life Light: Informal
t-Test: Paired Two Sample for Means

	Informal - pre	Informal - post
Mean	2.076923077	2.076923077
Variance	1.41025641	1.243589744
Observations	13	13
Pearson Correlation	0.876125598	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 12

Life Light: Intimate
t-Test: Paired Two Sample for Means

	Intimate - pre	Intimate - post
Mean	2.538461538	2.384615385
Variance	1.102564103	1.256410256
Observations	13	13
Pearson Correlation	0.517405864	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.519290787	
P(T<=t) one-tail	0.30650079	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.613001579	
t Critical two-tail	2.178812827	

Table 13

Life Light: Accepting
t-Test: Paired Two Sample for Means

	Accepting - pre	Accepting - post
Mean	3.384615385	3.076923077
Variance	0.423076923	0.91025641
Observations	13	13
Pearson Correlation	0.754061418	
Hypothesized Mean Difference	0	
df	12	
t Stat	1.75976538	
P(T<=t) one-tail	0.051945385	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.103890769	
t Critical two-tail	2.178812827	

Table 14

Life Light: Un-accepting
t-Test: Paired Two Sample for Means

	Un-accepting - pre	Un-accepting - post
Mean	1	1.076923077
Variance	0	0.076923077
Observations	13	13
Pearson Correlation	#DIV/0!	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 15

Life Light: Rigid
t-Test: Paired Two Sample for Means

	Rigid - pre	Rigid - post
Mean	1.615384615	1.615384615
Variance	0.58974359	0.58974359
Observations	13	13
Pearson Correlation	0.293478261	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 16

Life Light: Energetic
t-Test: Paired Two Sample for Means

	Energetic - pre	Energetic - post
Mean	2.461538462	2.461538462
Variance	1.602564103	1.435897436
Observations	13	13
Pearson Correlation	0.836702712	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 17

Life Light: Boring
t-Test: Paired Two Sample for Means

	Boring - pre	Boring - post
Mean	1.307692308	1.307692308
Variance	0.397435897	0.230769231
Observations	13	13
Pearson Correlation	0.48683382	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 18

Life Light: Draws You In versus Want to Leave
t-Test: Paired Two Sample for Means

	Draws you in	Want to leave
Mean	2.692307692	1.230769231
Variance	0.730769231	0.192307692
Observations	13	13
Pearson Correlation	-0.239394949	
Hypothesized Mean Difference	0	
df	12	
t Stat	5.018570166	
P(T<=t) one-tail	0.000149924	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.000299848	
t Critical two-tail	2.178812827	

Table 19

Life Light: Post Aesthetics

Did the interior aesthetics change
your impression of the space?

Yes	4
No	9

Table 20

Life Light: Overall Impression

Positive	9
Negative	0
Not Sure	3

Table 21

Life Light: Would You Return?

Yes	7
No	3
Maybe	3

Table 22

Life Light: Enough Light for Notes

Yes	12
No	1

Appendix N

Life Church: Quantitative Analysis

Life Church

Table 1

Life Church: Seat Comfort
t-Test: Paired Two Sample for Means

	Seat comfort	post - seat comfort
Mean	3.5	3.583333333
Variance	0.272727273	0.265151515
Observations	12	12
Pearson Correlation	0.507092553	
Hypothesized Mean Difference	0	
Df	11	
t Stat	-0.560611911	
P(T<=t) one-tail	0.293149653	
t Critical one-tail	1.795884814	
P(T<=t) two-tail	0.586299307	
t Critical two-tail	2.200985159	
t Critical two-tail	2.228138842	

Table 2

Life church: Inviting
t-Test: Paired Two Sample for Means

	Inviting - Pre	Inviting - Post
Mean	3.230769231	3.076923077
Variance	0.358974359	0.743589744
Observations	13	13
Pearson Correlation	0.124072917	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.561951487	
P(T<=t) one-tail	0.292246439	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.584492877	
t Critical two-tail	2.178812827	

Table 3

Life Church: Calming

t-Test: Paired Two Sample for Means

	Calming - Pre	Calming - Post
Mean	2.846153846	2.846153846
Variance	1.474358974	0.807692308
Observations	13	13
Pearson Correlation	0.740152746	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 4

Life Church: Spacious

t-Test: Paired Two Sample for Means

	Spacious - pre	Spacious - post
Mean	3.307692308	2.538461538
Variance	0.897435897	1.102564103
Observations	13	13
Pearson Correlation	0.657312559	
Hypothesized Mean Difference	0	
df	12	
t Stat	3.333333333	
P(T<=t) one-tail	0.002980602	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.005961204	
t Critical two-tail	2.178812827	

Table 5

Life Church: Comfortable

t-Test: Paired Two Sample for Means

	Comfortable - Pre	Comfortable - Post
Mean	3.230769231	3.153846154
Variance	0.525641026	0.474358974
Observations	13	13
Pearson Correlation	0.590520591	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.433012702	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 6

Life Church: Formal

t-Test: Paired Two Sample for Means

	Formal - Pre	Formal - Post
Mean	2.461538462	2.615384615
Variance	1.935897436	1.923076923
Observations	13	13
Pearson Correlation	0.963460467	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.477097892	
P(T<=t) one-tail	0.082703353	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.165406706	
t Critical two-tail	2.178812827	

Table 7

Life Church: Reverent

t-Test: Paired Two Sample for Means

	Reverent - pre	Reverent - post
Mean	2.538461538	2.769230769
Variance	0.769230769	0.692307692
Observations	13	13
Pearson Correlation	0.755432997	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.38873015	
P(T<=t) one-tail	0.095075715	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.190151431	
t Critical two-tail	2.178812827	

Table 8

Life Church: Busy

t-Test: Paired Two Sample for Means

	Busy - pre	Busy - post
Mean	2.307692308	1.846153846
Variance	1.064102564	0.807692308
Observations	13	13
Pearson Correlation	0.864312306	
Hypothesized Mean Difference	0	
df	12	
t Stat	3.207134903	
P(T<=t) one-tail	0.003766074	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.007532147	
t Critical two-tail	2.178812827	

Table 9

Life Church: Closed In
t-Test: Paired Two Sample for Means

	Closed in - Pre	Closed in - post
Mean	1.538461538	1.692307692
Variance	0.769230769	0.897435897
Observations	13	13
Pearson Correlation	0.817807755	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 10

Life Church: Exciting
t-Test: Paired Two Sample for Means

	Exciting - pre	Exciting - post
Mean	2.153846154	2.230769231
Variance	0.974358974	1.025641026
Observations	13	13
Pearson Correlation	0.711772482	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.365148372	
P(T<=t) one-tail	0.360677672	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.721355344	
t Critical two-tail	2.178812827	

Table 11

Life Church: Informal

t-Test: Paired Two Sample for Means

	Informal - pre	Informal - post
Mean	2.153846154	2.076923077
Variance	1.307692308	1.076923077
Observations	13	13
Pearson Correlation	0.831861445	
Hypothesized Mean Difference	0	
df	12	
t Stat	0.433012702	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 12

Life Church: Intimate

t-Test: Paired Two Sample for Means

	Intimate - pre	Intimate - post
Mean	2.692307692	2.846153846
Variance	0.897435897	0.641025641
Observations	13	13
Pearson Correlation	0.811348085	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1	
P(T<=t) one-tail	0.168524529	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.337049058	
t Critical two-tail	2.178812827	

Table 13

Life Church: Accepting

t-Test: Paired Two Sample for Means

	Accepting - pre	Accepting - post
Mean	3.307692308	3.307692308
Variance	0.397435897	0.397435897
Observations	13	13
Pearson Correlation	1	
Hypothesized Mean Difference	0	
df	12	
t Stat	#DIV/0!	
P(T<=t) one-tail	#DIV/0!	
t Critical one-tail	#DIV/0!	
P(T<=t) two-tail	#DIV/0!	
t Critical two-tail	#DIV/0!	

Table 14

Life Church: Un-accepting

t-Test: Paired Two Sample for Means

	Un-accepting - pre	Un-accepting - post
Mean	1	1.307692308
Variance	0	0.397435897
Observations	13	13
Pearson Correlation	#DIV/0!	
Hypothesized Mean Difference	0	
df	12	
t Stat	-1.75976538	
P(T<=t) one-tail	0.051945385	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.103890769	
t Critical two-tail	2.178812827	

Table 15

Life Church: Rigid
t-Test: Paired Two Sample for Means

	Rigid - pre	*Rigid - post*
Mean	1.615384615	1.692307692
Variance	0.58974359	0.564102564
Observations	13	13
Pearson Correlation	0.644603625	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.433012702	
P(T<=t) one-tail	0.336343137	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.672686273	
t Critical two-tail	2.178812827	

Table 16

Life Church: Energetic
t-Test: Paired Two Sample for Means

	Energetic - pre	Energetic - post
Mean	2.384615385	2.384615385
Variance	1.256410256	0.923076923
Observations	13	13
Pearson Correlation	0.470238095	
Hypothesized Mean Difference	0	
df	12	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	1	
t Critical two-tail	2.178812827	

Table 17

Life Church: Boring
t-Test: Paired Two Sample for Means

	Boring - pre	Boring - post
Mean	1.538461538	1.692307692
Variance	0.435897436	0.730769231
Observations	13	13
Pearson Correlation	0.613319648	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.805387266	
P(T<=t) one-tail	0.218132315	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	0.436264629	
t Critical two-tail	2.178812827	

Table 18

Life Church: Draws You In versus Want to Leave
t-Test: Paired Two Sample for Means

	Draws you in	*Want to leave*
Mean	3.846153846	1.307692308
Variance	0.141025641	0.397435897
Observations	13	13
Pearson Correlation	-0.83937206	
Hypothesized Mean Difference	0	
df	12	
t Stat	9.460805955	
P(T<=t) one-tail	3.24818E-07	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	6.49636E-07	
t Critical two-tail	2.178812827	

Table 19

Life Church: Post Aesthetics

Did the interior aesthetics change
your impression of the space?

Yes	2
No	11

Table 20

Life Church: Overall Impressions

Positive	10
Negative	1
Not Sure	2

Table 21

Life Church: Would You Return?

Yes	6
No	3
Maybe	4

Table 22

Life Church: Enough Light for Notes

Yes	8
No	1
Could have been brighter	4

Appendix O

Means of Total Participants' Ages, Female Ages, and Male Ages

Table 1
Participants Ages

Mean	21.53846154
Standard Error	0.501477108
Median	22
Mode	22
Standard Deviation	1.808101427
Sample Variance	3.269230769
Kurtosis	-0.893830764
Skewness	-0.073347833
Range	5
Minimum	19
Maximum	24
Sum	280
Count	13

Table 2
Female Participants Ages

Mean	21.5
Standard Error	0.681385144
Median	21.5
Mode	19
Standard Deviation	1.927248223
Sample Variance	3.714285714
Kurtosis	-1.010650888
Skewness	0
Range	5
Minimum	19
Maximum	24
Sum	172
Count	8

Table 3
Male Participants Ages

Mean	21.6
Standard Error	0.81240384
Median	22
Mode	22
Standard Deviation	1.816590212
Sample Variance	3.3
Kurtosis	1.074380165
Skewness	-0.266900307
Range	5
Minimum	19
Maximum	24
Sum	108
Count	5

Appendix P

Prospective Church Interiors for Survey Use

Prospective Church Interiors for Survey Use

1. Bridgeway Church, Oklahoma City, OK

2. Edmond Christian Church, Edmond, OK

3. Faith Bible Church, Edmond, OK

4. Life Church, Edmond, OK

5. New Covenant, Edmond, OK

6. People's Church, Oklahoma City, OK

7. Quail Springs Church of Christ, Oklahoma City, OK

8. St. Luke's United Methodist: Life Light Service, Oklahoma City, OK

9. St. Luke's United Methodist: Traditional Service, Oklahoma City, OK

10. Westwood Church of Christ, Edmond, OK

Appendix Q

IRB Application Process

Contents: IRB Application Cover Sheet, IRB Completed Application Form,
Informed Consent Form, Survey Participant Flyer

University of Central Oklahoma

Institutional Review Board

Application for Review of

Human Subjects Research

Project Title:

Church Interior Aesthetics:

Do the effects of interior aesthetics, within a worship environment, have an impact on the attendance of young adults in an 18 to 25 age population.

Primary Investigator:

Amy Beauchamp *20128083

1001 Crown Dr.

Edmond, OK 73034

UNIVERSITY OF CENTRAL OKLAHOMA
INSTITUTIONAL REVIEW BOARD

APPLICATION FOR REVIEW OF HUMAN SUBJECTS RESEARCH
(Pursuant to Title 45 - Code of Federal Regulations – Part 46)

TITLE OF PROJECT: Church Interior Aesthetics: Do the affects of interior aesthetics, within a worship environment, impact the attendance of young adults in an18 to 25 age population.

PRINCIPAL INVESTIGATOR(S):

Amy Beauchamp
Name of Primary PI   Dr. ☐   Ms. ☒   Mr. ☐

PI Status: (check one): ☐ Faculty ☒ Graduate Student ☐ Undergraduate Student
☐ Staff   ☐ Other _____

Design   Arts, Media and Design
Department   College

N/A   N/A   amy.beauchamp@oc.edu
Campus Box   Campus Phone   E-Mail (required)

1001 Crown Dr., Edmond, OK 73034
Preferred Mailing address

405.706.1441
Daytime phone

Co-PI or Faculty Sponsor (if applicable)

Valerie Settles
Name of Co-PI   Dr. ☐   Ms. ☒   Mr. ☐

PI Status: (check one): ☒ Faculty ☐ Undergraduate Student ☐ Graduate Student
☐ Staff: ☐ Other: _____

Design   Arts, Media and Design
Department   College

#195   405.974.5219   vsettles@ucok.edu
Campus Box   Campus Phone   E-Mail (required)

8009 NW 30th, Bethany, OK 73008
Preferred Mailing address

405.974.5219   405.613.0109
Daytime phone   Cell phone

1

Funding Information
☐ External Grant ☐ UCO Grant ☐ Other Award ☒ Unfunded project

SIGNATURE / AFFIRMATION / REPRESENTATION OF PRINCIPAL INVESTIGATOR(S):

(Primary PI must read and initial by hand at each of the below.)

1. _____ *(initial)* This application represents an accurate and complete description of my (our) proposed research project.

2. _____ *(initial)* I (we) agree to provide the proper surveillance of this project to ensure that the rights and welfare of the human subjects are properly protected.

3. _____ *(initial)* I (we) agree to comply fully with any requirements made by the UCO IRB.

4. _____ *(initial)* The human contact portion of my (our) research will not begin until the UCO IRB has given its written approval.

5. _____ *(initial)* Any additions to or changes in procedures affecting the human subjects after the project has been approved will be submitted to the IRB for further review.

(Primary and Co PI must sign below.)

Name of Primary PI: Amy Beauchamp

Date: 10/15/08
Signature of Primary PI

Name of Co-PI: Valerie Settles

Date: 10/15/08
Signature of Co-PI

If additional Co-PIs are associated with this project, please attach an additional sheet with name, signature, and date.

2

1. Describe the purpose of the research and the research problem in the proposed study.

> Many churches are seeing a gradual decline in the worship attendance within the 18-25 age range. Although the technological age brings many benefits visually, some churches are curious to know the actual causes and affects of making changes to their interiors prior to investing potentially thousands upon thousands of dollars to the space. The purpose of this study is to conduct research on young adults, ages 18 to 25 and their positive or negative responses to the interior aesthetics of a worship facility. Possible correlations between the aesthetics and this age groups' preferences, within church facilities will be considered between subjects who attend and do not attend church.

2. Describe the research subjects in this proposed study and, at a minimum, provide the following information:

a. Describe the prospective research subjects.
> Ages 18 – 25, collegiate or non-collegiate, young professionals, who do and/or don't attend church.

b. The procedures to be used to recruit subjects.
> Participants in the 18 - 22 range will be recruited from local universities by use of an informational flyer and/or other non-college age students may be recruited by others aware of the study but unknown to the PI.

c. Inclusion/exclusion criteria (if any).
> N/A

d. Site of recruitment.
> UCO, Rose State

e. Do you plan to recruit research subjects from classes, churches, businesses or other organizations?

☐ Yes   ☒ No
If "yes", please attach a copy of the required written permission (by email or letter) from the course instructor or appropriate person authorized to grant such permission.

f. Do you plan to recruit research subjects via email or conduct any of your research via the internet?
☐ Yes   ☒ No

If "yes", you must give a copy of your IRB application to the UCO Office of Information Technology for authorization. This may be done simultaneous to OR&G submission.

3

g. Do you intend to use an oral script or any documentary information (flyer, letter, advertisement, announcements, e -mail) as part of the recruitment of research subjects?

⊠ Yes ☐ No

If "yes", please attach a copy of these scripts/documents.

     _____

h. What is the maximum number of subjects you expect to participate?
30

i. Will any of your research subjects be? (Check all that apply)

☐ pregnant women   ☐ minors (less than 18 yr old) ☐ cognitively impaired
☐ prisoners   ☐ psychologically impaired   ☐ over 65 years old
☐ Native Tribes   ☐ non-English speaking
☐ students in Investigator's class

If "yes", you must contact the IRB Chair to discuss the special responsibilities and requirements for this type of subject before you complete and submit this IRB application form.

     _____

3.   a. Describe each proposed condition, intervention, manipulation, measurement and/or observation of human subjects or their environments which are planned for this study, i.e., what will subjects experience.

     Participants will be asked to attend 4 various churches, varying in style, and complete a pre-survey, at the church(es) ten minutes prior to the worship service beginning. Participants will be assessing their intial responses to the interiors. After the service has ended, they will fill out a post-survey, to assess any physical interior changes noticed during the service and reflect on impressions that may or may not have changed. The participants will be asked to remain on location until the post-survey is completed. Participants may also be asked to participate in a concluding discussion to allow elaboration on the participants' experiences, although not required. Participants volunteering for this discussion group will be indicated on the survey(s). This discussion will be audio taped; name or voice recognition will not be revealed. This discussion will take place after all of the surveys have been recovered and will be held in the Art and Design conference room at Oklahoma Christian University. The date will be determined at a later date and those willing to participate will be notified via phone/email. Directions to the location will be given at a later date.

b. Will you be using questionnaires, surveys, tests or other written instruments?

⊠ Yes ☐ No

If "yes", please attach a copy of these documents.

c. Where will data be collected?

     After the surveys have been completed, participants will place their survey results into the sealed envelope (provided). If students attend the University of Central Oklahoma, the envelopes with completed surveys may return them to the Art and Design building on campus, northwest of the University Center. The office manager will notify the PI once they have been received. All other participants are asked to mail the envelope to the PI to the following address: Attn: Amy Beauchamp, Oklahoma Christian University, 2501 E. Memorial Road, Edmond, OK 73013. This information and postage will be provided to them on the envelope they are given.

4

d. Will you be using existing data?
☐ Yes   ☒ No

If *"yes"*, are data de-identified?
☐ Yes   ☒ No

Are data available to the public?
☐ Yes   ☒ No

e. Projected Start Date: <u>10/15/08</u>

Projected End Date: <u>11/15/08</u>

---

4. Will the subjects encounter the possibility of stress or psychological, social, physical, or legal risks which are greater, in probability or magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests?
☐ Yes   ☒ No
If "yes", describe the situation, <u>justify</u> your position and indicate <u>what provisions you have made</u> to help those subjects who want help (e.g., contact information for counseling services listed on the Informed Consent Form, etc.)

---

5. Will medical clearance be necessary for subjects to participate because of tissue or blood sampling, or administration of substances such as food or drugs, or physical exercise conditioning?
☐ Yes   ☒ No
If "yes", please explain how the medical clearances will be obtained.

---

6. Will the subjects be deceived or misled in any way?
☐ Yes   ☒ No
If "yes", please describe the situation and <u>justify</u> your position and explain how and when subjects will be debriefed.

---

7. Will information be requested which subjects might consider to be personal or sensitive?
☒ Yes   ☐ No
If "yes", please describe the situation and <u>justify</u> your position.

<u>Participants will have previously been informed about being exposed to a religious setting and any religious symbolism associated with the space.</u>

---

8. Will the subjects be presented with materials which might be considered offensive, threatening, or degrading?

☐ Yes ☒ No

If "yes", please describe the situation and <u>justify</u> your position.

———

9. Will any inducements be offered to the subjects for their participation?

☐ Yes ☒ No

a. If "yes", please describe the inducements.

———

b. If extra course credit is offered to research subjects who are students, what alternative means of obtaining additional credit are available to those students who do not wish to participate in the research project?

———

10. a. Will a written consent form be used?

☒ Yes ☐ No

If "yes", please attach a copy of your consent form. (You are urged to read and follow the Informed Consent Form Guidelines.)

If "no", please indicate why not; and also indicate how voluntary participation will be secured.

———

b. Who will be consented? (Check all that apply)

<u>X </u>Participant _____ Child (<18) _____ Parent/Legal Guardian

c. Is a Waiver of Consent requested or obtained?

☐ Yes ☒ No

d. Where will consenting occur?

———

11. a. Will any aspect of the data be made a part of any record that can be identified with the subject?

☐ Yes ☒ No

If "yes", please describe the situation and <u>justify</u> your position.

———

b. Will any data be coded?

☐ Yes ☒ No

If "yes", please explain the process and protection of code sheets.

———

6

c. Does the study involve?
Audio taping   ☒ Yes   ☐ No
Video taping   ☐ Yes   ☒ No
Taking Photographs   ☒ Yes   ☐ No
If *"yes",* please explain protections.

Audio taping may be done during discussions with participants for recapturing exact quotes or comments. No name or voice recognition will be revealed. Photographs may be taken by the PI of the physical space in the worship facility however no facial recognition will occur. The photographs are for final thesis presentation purposes only. Permission granted from the churches has been granted via phone:
St Luke's United Methodist Church - contact   .
Life Church - contact
Faith Bible church - contact   .

12. Please describe, in detail, the steps you will take to ensure the confidentiality of the data you collect, especially regarding the following:
a. how will the data be reported (e.g., single vs. aggregate);
Aggregate

b. where and how will the data be stored;
The information will be stored in the PI's private, locked, office.

c. who will have access to the data;
Only the PI, Co-PI and statistician will have access to the data.

d. what will be the length of time the data will be kept;
The data will be kept up to one year of the thesis completion date; No later than December 31, 2009.

e. how and when will the data will be destroyed; (be sure to include electronic data, paper data, and code sheets as relevant).
Electronic data will be deleted from their files and all paper data and code sheets will be shredded by no later than December 31, 2009. Any audio recordings will also be erased at that time.

f. provide any other information in this regard you deem pertinent.
_____

13. Will the fact that a subject did or did not participate in a specific experiment or study be made a part of any record available to supervisor, teacher, or employer?
☐ Yes   ☒ No
If "yes", please describe the situation and <u>justify</u> your position.
_____

14. Describe the benefits that might accrue to both the subjects (if any) and society.

       For those designing a church facility, wanting to relate to ages 18-25, findings may assist decision makers in selecting/designing interior aesthetics to aid the retention of this age group. It may also provided information to a ministry staff with the same concerns of a declining attendance within the age group. There are no immediate known benefits to the subjects.

The information in this application is true, to the best of my knowledge and I agree to comply fully with any requirements made by the UCO IRB.

REQUIRED AUTHORIZATION SIGNATURES

Title of Project: Church Interior Aesthetics: Do the affects of interior aesthetics, within a worship environment, impact the attendance of young adults in an18 to 25 age population.

Signature of Primary Principal Investigator:

Signature of Co-Principal Investigator(s):

I have reviewed this *Application For Review of Human Subjects Research*, and, subject to approval by the UCO Institutional Review Board, I authorize the Principal Investigator(s) to conduct this research. My signature acknowledges that I am aware of this research project.

Department: Design
Name of Department Chair: Larry Hefner

Signature of Department Chair   Date

College: Arts Media and Design
Name of College Dean: Dr. John Clinton

Signature of College Dean   Date

Office of UCO Office of Information Technology *(for all e-based research)*
Name of UCO IT Representative:

Signature of UCO IT Representative   Date

CHECKLIST FOR IRB APPLICATION SUBMISSION:

Please mark which documents you have attached to your IRB Application.

	Attached	Not applicable
Research Proposal	☒	☐
Solicitation script/documents	☒	☐
Informed Consent Form	☒	☐
Instrument(s) (questionnaires, surveys, etc)	☒	☐
Written authorization – classes, organizations	☐	☒
Protecting Human Research Participants (PHRP) Training Certificate(s)	☒	☐

CONTACT INFORMATION FOR IRB QUESTIONS OR CONCERNS:

Please submit one hard copy of your IRB application, with all required signatures to:

Dr. Jill A. Devenport
Chair, UCO Institutional Review Board
ADM 216, Office of Research & Grants
Campus Box 159
Edmond, OK 73034

405-974-5479 phone
405-974-2526
405-974-3825 fax

In addition, please submit one electronic version (Microsoft Word Document) without signatures to: irb@ucok.edu. Please note your application will not be processed until the original application with all required signatures is received in the Office of Research & Grants.

APPENDIX A

List all study personnel who will interact with subjects or private, identifiable data

Research Staff (Last, First)	Degree (PH.D., Ed.D.)	Affiliation (UCO or other)	Role in this research (PI, Co-investigator, Data Entry, Conduct Interviews, etc.)	PHRP* Training Completion Date	E-mail Address
Beauchamp, Amy	**BS**	**UCO grad student**	**PI**	**10/03/08**	**amy.beauchamp@ oc.edu**
Settles, Valerie	**MFA**	**UCO faculty**	**Co-PI**	**10/04/08**	**vsettles@ucok.edu**
Bryan, Jennifer	**PhD**	**Other**	**Statistician**		**jennifer.bryan@oc. edu**

*Protecting Human Research Participants (PHRP) is a National Institute of Health on-line training course as required by the Department of Health and Human Services regulations. Visit http://phrp.nihtraining.com/users/login.php

APPENDIX B
For Student Investigators

Purpose of project:

☐ Senior Thesis   ☒ Masters Thesis   ☐ Independent Research Project

☐ Capstone research class.*

This application has been reviewed and approved by:

<u>X</u> Thesis Chair   _____ Faculty Sponsor (student grant)

_____ Faculty Mentor   _____ Course Instructor *

_____ Other

All personnel (working with subjects in any capacity) have completed online PHRP** training. Visit http://phrp.nihtraining.com/users/login.php

☒ Yes   ☒ No

If no, explain: The statistician will only be working with the coded information and/or data. No direct communication with the subjects will occur at all on his/her part. *Include copies of certificates.*

Student Qualification to conduct research: (Check all that apply)

<u>X</u> Currently in or completed research methods course

<u>X</u> Protecting Human Research Participants (PHRP) training completed

_____ Prior experience as an independent or supervised Research Assistant

_____ Other: (specify)

*[See Student Research Guidelines]

**Protecting Human Research Participants is a National Institute of Health on-line training course as required by the Department of Health and Human Services regulations. Visit http://phrp.nihtraining.com/users/login.php

Survey Participants Needed…

Impressions of Church Interior Aesthetics

Those needing or wanting to participate in a research study, please contact the primary investigator below.

<u>Purpose of the Study:</u> To assess the affects of interior aesthetics within a worship environment, on the attendance of young adults, ages18 to 25.

<u>Research Conditions:</u> Participants will be asked to attend 4 – 5 assigned church services, some of which can be completed in the same weekend and/or same location, and complete a pre-service survey, as well as a post-service survey. After completing all surveys, a final discussion group may be requested for more detailed assessments. *Anyone who does or does not regularly attend church is welcome to participate.*

For more details contact:

Amy @ 405.425.5556 or 405.706.1441

Amy.beauchamp@oc.edu

UNIVERSITY OF CENTRAL OKLAHOMA

INFORMED CONSENT FORM

Research Project Title: <u>Church Interior Aesthetics: Do the effects of interior aesthetics within a Worship environment, have an impact on the attendance of young adults in an 18 to 25 age population.</u>

Researcher (s): Amy Beauchamp, graduate student

A. Purpose of this research: *The purpose of this study is to conduct research on young adults, ages 18 to 25 and their positive or negative responses to the interior aesthetics of a worship facility. Possible correlations between the aesthetics and the population's attendance within churches will be considered.*

B. Procedures/treatments involved: *Subjects who choose to participate will be attending 4 different, Christian affiliated churches and complete a pre-service survey as it relates to initial impressions of the space, and what, if any, effects the environment may have on the perception or retention of the 18 to 25 age population. Participants will begin the survey on location ten minutes prior to the beginning of the worship service. This survey will question spatial arrangements, color palettes, lighting, and iconography (religious symbols) as well as some open ended questions. After the church service, participants will be completing a post-service survey, on location, assessing any physical interior changes noticed during the service and then asked to reflect on whether an overall impression was altered regarding the experience, due to the aesthetic changes. Participants may also be asked to participate in a concluding discussion to allow elaboration on the participants' experiences, although not required. Participants volunteering for this discussion group will be indicated on the survey(s). This discussion will be audio taped; name or voice recognition will not be revealed. This discussion will take place after all of the surveys have been recovered and will be held in the Art and Design conference room at Oklahoma Christian University. The date will be determined at a later date and those willing to participate will be notified via phone/email. Directions to the location will be given at a later date. Participants may be exposed to religious symbolism, generally found within a worship space. Participants' religiosity, individual beliefs, the sermon, or worship (music) time is not being questioned. The participants are only being asked questions regarding the physical space itself.*

C. Expected length of participation: *The length of this study will take **approximately 4 to 5 hours**. Approximately one hour per church service, over the duration of **2 weeks of Sundays**. Due to the numerous options of service times, two services will need to be attended on the same day, allowing for ample driving time between each service. These two churches are less than 3 miles apart. For the other two services, they are held at different times within the same facility, but different areas on the same day.*

D. Potential benefits: *Designers/Architects, specifying worship facility interiors, may gain a better understanding of young adults' desires for church interior aesthetics, which may effect the possible attendance rate within the 18 – 25 age brackets at a given church. Results may also benefit church leaders/decision makers in having a more successful attendance within this age bracket. There are no known immediate benefits to the participant(s).*

E. Potential risks or discomforts: N/A

F. Medical/mental health contact information (if required): N/A

G. Contact information for researchers or questions regarding this study:

Researcher: Amy Beauchamp or   Dr. Jill Devenport

2501 E. Memorial Road   Chair, Institutional Review Board

 Edmond, OK 73013   Office or Research and Grants, Academic Affairs

405.425.5556   Campus Box #159

amy.beauchamp@oc.edu   University of Central Oklahoma

Edmond, OK 73034   405.974.5479

H. Explanation of confidentiality and privacy: *All data will be reported as aggregate. Once the data has been collected, it will be secured in the office of the primary investigator (PI). The PI and Co-PI will be the only ones to have access to any confidential information. The data will be stored for up to one year (no later than December 31, 2009) upon which all data and confidential information/coding sheets will be shredded and/or deleted from its data base.*

I. Assurance of voluntary participation: *Participation in this research study is voluntary. Should someone refuse to participate, or discontinue participation in this study at any time, there will be no penalty or loss of benefit.*

AFFIRMATION BY RESEARCH SUBJECT

I hereby voluntarily agree to participate in the above listed research project and further understand the above listed explanations and descriptions of the research project. I also understand that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty. I have read and fully understand this Informed Consent Form. I am at least 18 years of age. I sign it freely and voluntarily. I acknowledge that a copy of this Informed Consent Form has been given to me to keep.

Research Subject's Name: _____

Signature: _____   Date _____

Appendix R

Survey Maps and Church Information

Life Church TV Ok City -
4600 E 2nd St, Edmond, OK - (405) 478-5433

Life church offers a variety of church services and you are welcome to attend any of the following times:

Saturday 5:00pm, 6:30pm, Sunday 8:30am, 10:00am, 11:30am and 6:00pm.

Coming from I-35 north to 2nd street, take the 2nd street exit. Turn right. You can stay on that road until it takes you to the main entrance of the church campus or turn right immediately onto the I-35 service road and the entrance will be on the left. The worship space is in the furthest south portion of the campus.
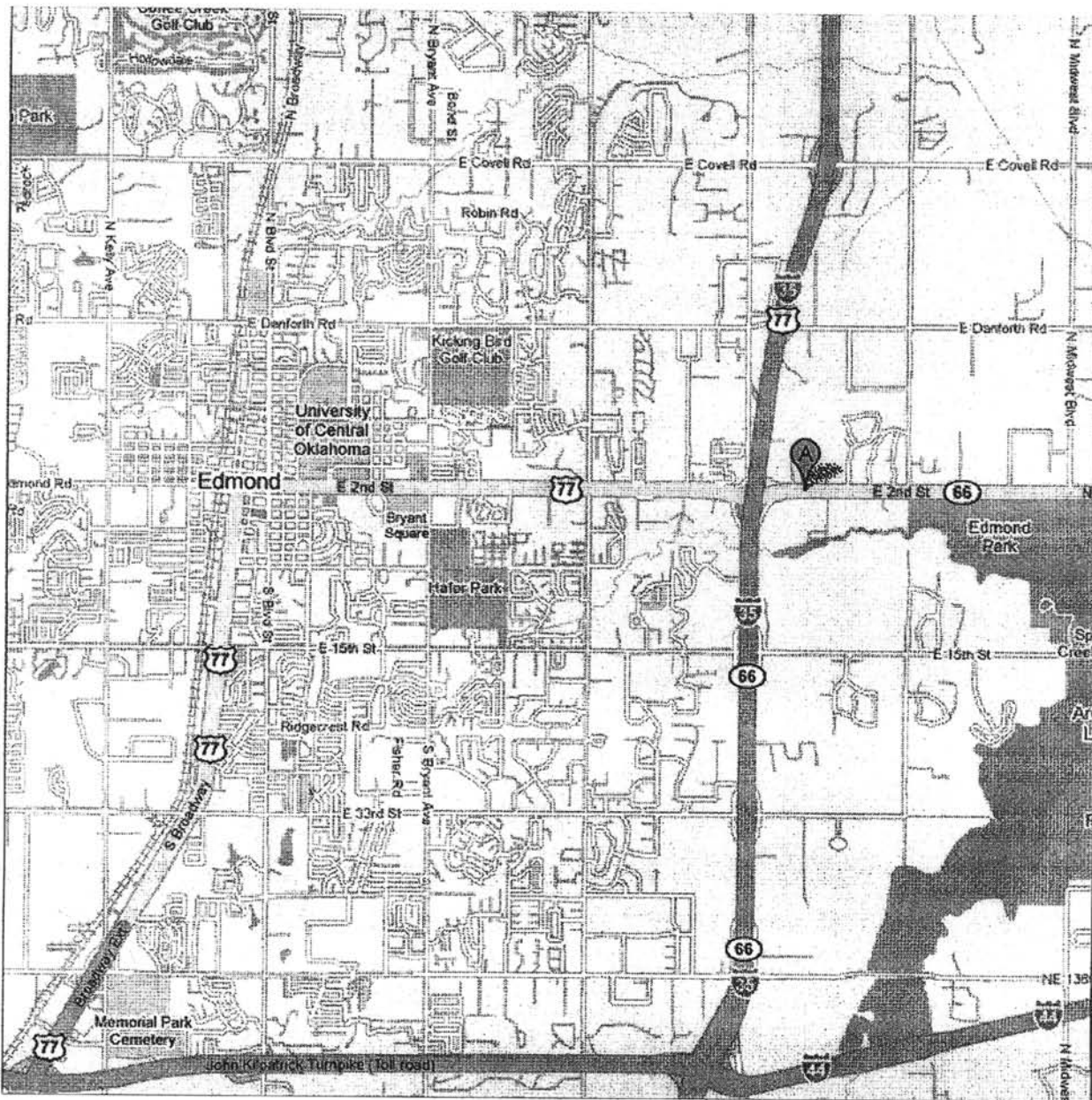
St Luke's United Methodist Church -

222 NW 15th St, Oklahoma City, OK - (405) 232-1371
(you will be entering from 14th street)

LIFE LIGHT service: *You need to arrive at **9:30** in order to complete the pre service survey.*

Take Broadway Extension (77 or 235) south to the 23rd street exit. Go through the light headed south. You will veer around a fire station. A few blocks south is **14th** street. Turn right onto **14th** street. Go a block and the church will be on the right. There is a parking lot directly to the left of the doors to the church. You will be entering, more or less, the back doors of the church. These doors (playground on the left) will lead you into the LifeLight service.

After the LifeLight service, please fill out the post survey. Once you have completed that, as you are looking at the stage, go through the doors on the right side. Down the end of that hallway, you will turn right and go into the main sanctuary. Please arrive there as close to 10:40 as possible to fill out the next pre-service survey.

Faith Bible Church-
600 N Coltrane Rd, Edmond, OK - (405) 340-1000

Faith Bible Church offers 2 services. You are welcome to attend either of the following times:

8:30am or 10:50am.

Coming north from I-35 – take the 2nd street exit. At the light on 2nd street, turn left. At the intersection of 2nd street and Coltrane, turn right. Half a mile north, Faith Bible Church is on the right.

From Coltrane, proceed through the light on 2nd street and the church will be on the right half a mile north.