ASPIRATION

INVESTIGATING THE DESIGN OF MEETINGHOUSES FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

BACHELOR'S THESIS
BALL STATE UNIVERSITY
COLLEGE OF ARCHITECTURE AND PLANNING

MAY 24, 1987

JERRY M. SUTTON
TABLE OF CONTENTS

PAGE
1. Acknowledgements
11. Introduction

1. A BRIEF INTRODUCTION TO THE CHURCH OF JESUS CHRIST OF
   LATTER-DAY SAINTS

7. IDENTIFICATION OF THE PROBLEM AND THESIS PROPOSAL

23. THE SPIRITUAL SOURCE OF THE CONCEPT

40. THE FUNCTIONAL SOURCE OF THE CONCEPT

47. BASIC INITIAL DESIGN IMPLICATIONS BASED ON OBSERVATION
    AND INQUIRY

54. INFLUENCES OF THE PHYSICAL CONTENT

60. BERLIN, NEW HAMPSHIRE

66. MANTEO, NORTH CAROLINA

72. FINAL PRESENTATION

APPENDICES
87. SAMPLE OF QUESTIONNAIRE
88. FUNCTIONAL PROGRAMMING
114. ADJACENCY MATRIX
115. ARCHITECTURAL NEWS RELEASE
116. DESIGN DEVELOPMENT SKETCHES
ACKNOWLEDGEMENTS

This project would certainly not have possible without the help of many people.

From the church: Michael W. Ellis AIA, Muncie
                       Keith W. Wilcox AIA, Salt Lake City
                       Gary F. Larsen PE, Indianapolis
                       Bishop Michael McGrew, Muncie
                       Bishop Paul Horvath
                       Glenn Buckner, Salt Lake City

From Ball State: Professor Stan Mendelsohn
                        Professor Art Schaller
                        Professor Rod Underwood
                        Professor Charlie Sappenfield
                        Professor Jeff Culp
                        Professor Ronald Hicks
                        Michaeli Chuini

From Real Life: Gooden Associates Architects
                         Gerald E. Guy, Architect

From Real Wife: Nothing would have been done without good parents and my wonderful wife, Janie.
INTRODUCTION

This project was a continuation of my 1985 Undergraduate Fellowship which detailed the development of the Synagogue. In this earlier project, the influences from the synagogue to the sanctuaries of Christianity were examined and recommendations for current design needs were developed. It was at this time that the many 'links' to The Church of Jesus Christ of Latter-day Saints became most apparent.

While this project focuses mainly on the LDS Church, it is apparent that the principles developed and examined could just as easily be applied to most, if not all Christian denominations.
A BRIEF INTRODUCTION TO THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

The Church of Jesus Christ of Latter-day Saints was established April 6, 1830. In answer to a prayer concerning which church to join, 14 year-old Joseph Smith was told that the fullness of the gospel was not on the earth following the "apostasy" and dark ages in the centuries after the death of Christ and the Apostles. He was also told that this fullness would be restored at a later date and that he would be an instrument in that restoration.

In 1827, Joseph was led to a record, buried in a hill in upstate New York which contained the account of the ancient inhabitants of the Americas.

Fig. 1 Joseph Smith, first president of the restoration
Fig. 2 Ancient plates containing the record of pre-Columbian America
This record tells of their migration from the Old World to this western hemisphere, their wars, their governments, their genealogies, and their spiritual affairs. Paramount in the spiritual record is the account of the visitation of Jesus Christ to the inhabitants of the Americas following his death and resurrection in Palestine. Just as had been done in the Old World, the church was organized with Apostles and other leaders. The record tells of great cities being established and oscillations from periods of righteousness to wickedness. Towards the end of the record, the descendents of those who built the great empires of what is now Central and South America were virtually...
annihilated by the warring tribes who themselves had fallen into "a great apostasy". One of the last prophet/leaders, named Mormon, dedicated the latter part of his life to abridging the history of his people from the time they left the Eastern Hemisphere (600 BC) until the downfall of his people (420 AD). Mormon passed the record on to his son Moroni who completed the abridgement, sealed up the record, and buried it in a hillside to come forth centuries later. This record, known as the Book of Mormon, is accepted by members of the modern church as scripture. It is a companion volume to the Holy Bible, also accepted as scripture, and both have become testaments of the divinity of Christ. It is this
additional scripture which has given the nickname "Mormons" to members of the church.

Between 1830 and 1844, Joseph Smith received many revelations concerning the reestablishment of the Church of Jesus Christ. In 1830 the phrase "Latter-day Saints" was officially added to the name of the church to distinguish it from the members, or "saints" of a former day. Periods of unacceptance, and often persecutions, pushed the Latter-day Saints out of New York eventually to Missouri and up to Nauvoo, Illinois, where the Church membership in 1840 totalled over 20,000 while the population of Chicago was only 5,000. Such a large number of people, all bound together by common beliefs, became a

3. Doctrine and Covenants 119:1-6
political and military concerns to its adversaries. Tensions increased, and in 1844, while being held on false charges, Joseph Smith and his brother Hyrum were murdered in the Carthage, Illinois jail. Church leadership was transferred to Brigham Young shortly thereafter, and as persecutions increased, the church was forced to abandon their city of Nauvoo and move west beyond the territorial limits of the United States. The great migration west is by now a matter of well-known history. On July 24, 1847 Brigham Young stopped his wagon on a ridge overlooking the Great Salt Lake Valley and said, "It is enough; this is the right place."

Irrigation and industry reclaimed the desert and hundreds of

---

4. The Restored Church, Wm. E. Barrett, Deseret Book, Salt Lake City, 1969, p.36
settlements were established in what is now Utah, Colorado, Arizona, Nevada, California, New Mexico, Utah, Mexico, Idaho and western Canada.

Extensive missionary work resulted in rapid growth and immigration from Scandinavia and Europe well beyond the turn of the century.

In the twentieth century, persecution has given way to admiration, as members of the LDS church are lauded for their thrift and industry and widespread dedication to high standards of education, morality, health and social welfare.

Fig. 7. Statistics reflect church growth.

In the century and a half since its organization, the church has grown in membership from six in 1830 to well over six million at the close of 1986. "US News and World Report" cites it as the fastest growing major religion in the country with a 41% increase since 1970, as compared to 22% for Southern Baptists and 8% for Roman Catholics. One of the unique features of the church is its worldwide consistency. On any given Sunday, the same service is being conducted in western Nebraska as in western Samoa or West Germany. Such a global constancy necessitates a
A New Generation of Meetinghouses

...ing capacity of an additional 950
when folding doors leading to the
...ing options for the church.
...era of a fixed stage. Rather, a
...e has been designed with thirty-one teaching sections, some
...each section can also be divided
...lthough the multipurpose area
...196.

Fig. 9 A new generation of meeting houses

complex administrative system at the
World Headquarters in Salt Lake
City, Utah. The architectural
department alone is comparable to
the largest of corporations. In
1980 two new meetinghouses were
constructed every day in North
America alone. Such rapid growth
has necessitated a degree of
standardization. In 1981, a new
generation of meetinghouses was
announced for the U.S. and Canada.
These new meetinghouses were
designed to maximize energy
efficiency, speed up construction
time, and keep costs at acceptable
levels. The new church buildings
were noticeably more compact and
less expressive than their
predecessors.

6. Personal interview with Michael H. Ellis, AlA, October 1986
7. The Design of the Church of Jesus Christ of Latter-day Saints, Nov. 1981
An examination of significant architectural developments in LDS history will help clarify the current problem. In his Master's Thesis at the University of Oregon in 1953, Keith W. Wilcox presented an analysis of LDS meetinghouse architecture which is quite useful. I include here that portion of his research which supplements my own.

Joseph Smith as president of the church in its formative years was regarded as Prophet, Seer, and Revelator. Acting under the direction of the Holy Spirit, his decisions were final and complete in all matters—even architecture. Although Smith, as have all subsequent presidents of the church, surrounded himself with architectural professionals, the final decision rests in the office of the president.

Until the last decade, local congregations supplied a large percentage of the cost of the buildings through donations. It had been acceptable for local architects to submit designs to Church Headquarters. Since nearly half of the funds were from this congregation, the wishes of the local members would be carefully considered. Any deviations from accepted norms would be reviewed before authorization for construction would be issued.

Recently the policy has been adapted to meet the needs of the growing church, and local members are now responsible for only 42% of the building cost. Many changes mav
be made to the standardized plans which are issued to local architects but, not surprisingly, few actually are made. The church has not adopted any formal architectural policy, but the guidelines have always encouraged the creation of buildings which "look like churches."

The earliest structures of the church seemed to find their roots in Connecticut. Wilcox points out that Joseph Smith, acting upon inspiration gave complete instructions pertaining to the design of a temple in Kirtland, Ohio. Similar guidance was given for the temple in Nauvoo, Illinois. Both temples resemble the detailing of Early American Puritan meetinghouses in and around

9. op cit Moss
10. op cit Wilcox, p. 171
Connecticut. Which goes on to explain that Kirtland is only nineteen miles from Cleveland, which was established originally as the Capital of the Western Reserve of Connecticut. That the Puritan influence of Connecticut would be seen in Kirtland comes as no surprise.

Another source of this Puritan relationship is that the Smiths, as well as many other leaders of the church came from Vermont and Connecticut, while many were direct immigrants from England. So in the early 1800’s, there are ties through genealogy and geography to the Puritan influence of New England.

According to Anthony N. R. Garvan, the religious architecture of New England grew out of the

12. 1818
European Plain Style in England.

Holland, Germany (et al.) and was
congruent as a protestant
reactionary rebuttal to the
flamboyant Baroque style of the
Catholic Church of the same era
(16th-17th c.). Thus the "American
Colonial" church which has become so
representative of American religion
is not truly American at all, but
rather is a descendant of a style
from Europe whose expression was
primarily determined by the
prevailing conditions of European
religion. That such stylistic
notions should prevail in early 19th
century America is certainly
understandable, but their continual
use in a church which has no direct
ties to Protestantism or Europe
seems unwarranted.
An architecture which more fully embodied the spirit of the church began to develop as the Latter-day Saints were driven out of Illinois and into the Rocky Mountains. A comparison to the Exodus of ancient Israel seems apparent. When the Israelites wandered in the wilderness they carried with them a portable tabernacle made of the finest "cedars of Lebanon" and most exquisite materials. Upon finally obtaining the promised land, they set about building the temple whose fame was known throughout the land. Embodied in the temple of Solomon was the pride of a people that had finally found refuge. When Brigham Young struck his camp to the ground and declared

13. 1 Kings 8:9
"Here we will build a temple to our God, an architectural masterpiece, was begun. Building the new temple took precedence over all else. It would be forty years in the making. Brigham Young said, "I want to see the temple built in a manner that it will endure through the millenium...I want that temple to stand as a proud monument of the faith, perseverance and industry of the Saints of God in the mountains, in the nineteenth century." The granite spires of the Salt Lake Temple stand as a monument to the unconquerable spirit of the Mormon pioneers. Many other symbolic components of the temples will be examined in the next section. Suffice it to say that church architecture of the pioneer period

14. op cit Merrick
15. R.B. Landwehr, Temples of the New High, Zion Publishing, Inc, 1944
such applied forms and details were
expression of Mormon architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.

expression of Gothic architecture.
still not uniquely Mormon, or American. Just after the First World War, with the rising popularity of Frank Lloyd Wright, a new trend developed which incorporated the simpler massing and clearer expression of the various roles of the church. The functions of worship, education, and social activity became more clearly expressed but often at the expense of a unified building or overall statement of religious meaning. Borrowing the forms of Wright's Organic Architecture was a step in the right direction, but the principles underlying those forms remained largely unaddressed. Whatever experimentation was beginning in the twenties and thirties seems to have ended with
the U.S. involvement in World War II.

A curious trend developed after the war which is reminiscent of a similar occurrence in Judaism.

Around the fourteenth century, the Moors in and around Spain treated the Jews better perhaps than any other group before or since. These periods of lesser persecution were recalled by the Jews in the architecture of their synagogues.

Many details of Moorish architecture appeared in the synagogues of later periods seemingly to remind the worshippers of happier times.

After World War II, LDS architecture made a sharp turn back to the colonial styles. While it is possible that such a shift was a hardening back to simpler times, it...
appears more likely that the simple plan, adaptability, and familiarity were the dominant reasons for its resurgent popularity. This notion is further borne out by developments of the 50's through the 70's when a more functional approach seems to have been the major design criterion. With such an issue at the fore of concern, the more stylistic details of the colonial revival gradually waned again in the late 60's, but what replaced the colonial this time was not even up to the level of expression characteristic of the Wright-influenced experimentation. It should here be pointed out that my findings are indicative of general trends and are not all-inclusive. Certainly there have been, and continue to be, examples of great
care and thought on the part of architects in all periods of the church’s history.¹⁷

There can be no doubt that the “functionalist” period, which lingers even today, provided buildings that worked very well. Time-proven arrangements of spaces, circulation, parking, and overall organization show evidence of in-depth study and evaluation. The meaningful expression of the buildings of the last few decades seems to be “Here are buildings that work, we are not Catholic, we are not Protestant, we are not Jewish. We get the job done efficiently and economically”. Any grammarian knows that a double-negative is not as desirable as a positive statement. Perhaps in their efforts to remove ¹⁷. The Church News, June 9, 1985.
Association with other religions, the LDS churches have not yet adopted a meaningful expression of their own. Therein lies the basis of my thesis. It should by now be apparent that the LDS religion is totally unique, and so the LDS churches must somehow incorporate more meaning into their architecture.

In an attempt to enhance the level of meaning incorporated into the architecture of the LDS meetinghouses, the design process has been investigated at three levels of priority. First, the spiritual approach takes as its source the temples of the church. There is a clear difference between the temple and the meetinghouse. Temples are for only the highest ordinances of the church and, with few exceptions, each is unique in its architecture. The meetinghouse is attended at least weekly and is most accessible to members on a regular basis. The temples represent the highest architectural manifestation of the doctrines and beliefs within the church. Although many different forms and details have been incorporated, certain principles underlying those forms and details are manifest often enough to recognize threads of continuity running through them all. As one recognizes the role of the meetinghouse as a preparation for the temple, it seems appropriate to incorporate some of those same principles into meetinghouse architecture. The spiritual
approach to design must also include characteristics of what Frank Lloyd Wright called 'organic architecture'. The principles of unity, fluid space, continuity, tenuity, plasticity, and a respect for the nature of materials must all be addressed.18

The second level of priority, the ancillary or functional approach, incorporates the programmatic needs of the congregation as discovered through observation and research. Historically, this level has been the most critically examined area of design. One of the primary concerns of this thesis project is to inject into the functional, standardized plan additional levels of concern which will enhance the 'spirit' of designs which have been proven functionally successful.

The third level of priority analyzes the specific characteristics of two divergent sites. This analysis will also modify the standard plan somewhat, while at the same time, show how the 'spiritual' source of design can be manifest in varied ways to respond to local climates and historical contexts--without losing the initial representational ideas. This level of analysis provides the real variety to design. Once certain spiritual and functional ideas are identified and held as "given", the meetinghouses can then be varied within a given framework.

These three levels of investigation will provide the base...
from which the two designs presented in the following chapter have developed. The final step in my thesis project will combine the ideas discovered in the two schemes into more fully developed details which are not site-specific. However, such an investigation is not intended to provide a new "standardized plan". In fact, the original thinking which generated this project was that such standardization ought not to exist. As I have investigated the subject more intensely over the last year, I now recognize that such rapid growth under the direction of a single entity must necessarily involve a degree of standardization. Such a concession however does not alter my basic thesis, that investigation at more levels of priority will ultimately produce a more meaningful architecture for the Church of Jesus Christ of Latter-day Saints.
THE SPIRITUAL SOURCE OF THE CONCEPT

If one accepts the temples of the church as its most successful architectural expression, then that expression should correspond to various periods of church history. Investigation shows that this is precisely the case. The formative years of the church in Kirtland, Ohio, and Nauvoo, Illinois, saw the construction of two temples which have been introduced in the previous section. While the temple at Kirtland was certainly a derivative of the Puritan movement in New England, there was one detail striking enough to warrant mention here. The women of the church in Kirtland donated and collected their fine china and best glass which was
crushed and mixed into the plaster.

This glass produced a unique sparkle throughout the finish of the building. Such a project is reminiscent of the ancient Israelites donating their gold, silver and jewelry for the construction of the tabernacle. At this point in church history, giving up their property in the face of widespread poverty was indeed a sacrifice. This sacrifice is perhaps the single most “architectural” feature of the temple and thus its expression becomes all the more meaningful.

“It is not probably that all of the workmen engaged on the buildings were skilled artisans and yet the result is so harmonious as to raise the question if they may not have
been inspired as were the builders of old."

In the Nauvoo temple, the massing of the building, location and incorporation of the tower, and east-west axis are all similar to Kirtland but a noticeable difference is established. Whereas the spirit of the Kirtland temple was somewhat humble in its borrowing of Puritan forms and use of stucco, the Nauvoo structure was built of light grey sandstone and incorporated many classic elements such as pilasters, capitals, string courses in the stone and a more elaborate domed tower. As the number of saints had swelled to over 20,000 in 1841, this larger stone structure, in its formality and classic proportioning seemed to speak of a new pride and a
hope of permanence. It is ironic that this temple was used for only two months before the saints were driven out of Illinois. A few unique architectural details did manifest themselves at Nauvoo however. On the pilasters where classical antiquity would have placed foliated capitals, one finds unique "sun stones" whose symbolism is relevant to the actual temple ceremony. This symbolism is further developed in the Salt Lake Temple with earth stones, moon stones, sun stones and star stones. While such symbolism is still very much "applied", it coincides with a deeper level of meaning in form and materials which begins to appear. This meaning becomes very rich in the next group of temples.
The pioneer exodus period of the church is the one which produced the most widely known architectural work of the church, the Salt Lake City temple. The rock-solid permanence of the Nauvoo Temple is magnified a hundredfold in the material selection of the Salt Lake temple. Huge blocks of grey granite were hauled by oxen from a quarry 20 miles away. Work was begun in 1853 and when Brigham Young died in 1877, the massive walls had risen only 20 feet. Several new developments appeared in the architecture of this temple. The tower which had been borrowed from Medieval Christianity now became six towers with spires. This number represents the three officers in each of the two levels of priesthood. Three on the east
Fig. 25 A symbolic plan

represent the higher level and three on the west for the lesser level. The center tower at each end is higher than those which flank it, and the east central tower is higher than the west. Thus a clear order of hierarchy is established. Such factors of three occur repeatedly in church doctrine representing the three members of the Godhead, the six days of creation, the twelve tribes of Israel, the twelve apostles etc. The towers are perceived as almost independent of the main body and are scaled so as to become the prominent features. This articulation of these "granite spires" represented the independence, strength, and permanence which the Mormons felt they had finally found in the Rocky Mountains. The Rockies were also
perceived as a refuge from their adversaries, and correspondingly, the crenellations and turrets of the temple create a style which Laurel Andrews calls 'castellated gothic'. The other temples of this period (Manti, Logan and St. George, Utah) all have this same fortress character and the same expression of the six towers (although not as pronounced, especially at St. George). One final development concerns the arrangement of the interiors. As the larger temples are divided into floors, each level contains activity spaces which correspond to the ceremony within. Baptismal fonts (representing burial and rebirth) are below grade, and other ordinance rooms are located correspondingly higher in the
Fig. 27 The temples at Logan, Manti, and St. George, Utah
building as their nature would
suggest. Such integration of space
and function further develops in the
next period.

As the church expanded from a
"Utah church" to a worldwide
church, temples were constructed in
Arizona, Canada and Hawaii. The
massing and proportioning of Frank
Lloyd Wright are apparent in each,
but whereas many of the
meetinghouses (discussed earlier)
addressed only such exterior
concerns, the temples of this period
began to consider spatial concerns
which now added another level of
meaningful expression.

Wright's organic architecture
saw fluid space and horizontality as
expressive of the freedom and
democracy of America and the breadth
Fig. 28 The temples at Arizona, Canada, and Hawaii
of the open prairie. As persecution yielded to respect for the church, worldwide expansion resulted, and such Wrightian spatial expressions became appropriate to church architecture. This notion of spatial maturity can best be explained through comparison. The celestial room of the temple represents, in part, the glory of the Kingdom of God. As part of the temple ceremony, the function of this room is identical from one temple to the next. Comparing the celestial room at Salt Lake to that of Hawaii or Alberta, Canada, is revealing. In Salt Lake the richness of decor is a monument to the hard work of pioneer craftsmen. Such elaborate detail surrounds the worshipper and invokes strong
Feeling, but the feeling is primarily visual and secondarily sensual. In the second group, the Wrightian notion of the "space within coming out, and the outside coming in" creates an immediate sensual response. The detailing which is similar in concept to Wright's Unity Temple, aids in expressing the spatial qualities. The eye perceives the details and lines secondarily as feelings of space and light dominate the senses. In both cases the resultant feeling is one of inspiration, but the method by which it is achieved is quite different.

Noticeably absent in the temples of the expansion period are the spires and towers. It is reasonable to suggest that the
symbol of the spire had yielded to the meaning of aspiration. In the Idaho Falls temple of 1932, the entire building is perceived as a single aspiring form. The fortress expression is not as dominant, but the feeling of stability and permanence is still present.

After World War II, temples in Switzerland, Los Angeles, New Zealand, and London begin again to incorporate the single spire but now it is seen more as a part of an aspiring structure. The formal numbered ordering of the pioneer period seems less expressed and in Oakland, in 1964, a temple is dedicated which consists of a central aspiring mass flanked by four spires for a total of five. The Oakland temple marks the
Fig. 34  The Los Angeles Temple

Fig. 35  The New Zealand Temple

Fig. 36  The London Temple

Fig. 37  The Oakland Temple
beginning of lesser degree of emphasis on the east-west axis. Certainly the two temples which follow it (Ogden and Provo) do not express this axiality. But their four-way symmetry and strong central spire denote an idea which is centuries old. The great domed space of St. Sophia in Turkey and even the Pantheon in Rome address the traditional cruciform axes, and at the point of meeting, these axes became subordinate to the "axis mundi"—a vertical axis directing one's gaze (and emotion) to the heavens. The symbolism of the Ogden and Provo spires provides a point of departure for the spatial concept of this thesis. While the temples will probably always incorporate a spire or spires (owing to tradition as

---

22. Meaning in Western Architecture, Christian N. Shults, Rizzoli, 1980
much as anything), the new meetinghouse concept proposes to incorporate aspiring space in its place.

One final temple must be examined to fully develop the spiritual source of the concept. It is perhaps the most magnificent temple of the twentieth century. The tallest of its six spires rises 188 feet above the woods outside of Washington D.C. It's architect, Keith W. Wilcox used the ordering and massing of the Salt Lake Temple as a concept source. The numeric symbolism of the six spires was carried into other areas of design as well: There are six main floors above the entry level each with a specific function. The articulated verticality of the exterior gives an...
overall aspiring unity to its appearance. The white marble exterior (this was the first temple to use marble) added an element of beauty, but more importantly, it contributed to a new concept—ENLIGHTENMENT. Certain areas of the marble are only 1/4" thick and light from within shines through the translucent stone at night. Its clean white surface glows in the sunlight. The stone basks in the light and allows light through while still exhibiting the solidity and permanence identified earlier. The concept of "enlightenment" was seen by the architect as the one word which best describes the spirit of the Church. Combining this idea of enlightenment with the concept of aspiring space will greatly improve the design of the meetinghouse.

In summary then, the temples of the LDS Church have exhibited the greatest architectural expression of this religion. That expression seems to have paralleled the historical context of the circumstances of the church. Certain concepts have been manifest either physically, symbolically, or spatially. Those concepts include: industry and thrift; humility, stability, refuge, expansion, aspiration and enlightenment. Significant points of doctrine such as revelation, inspiration and recurring numbers present additional themes for exploration.
THE FUNCTIONAL SOURCE OF THE CONCEPT

In developing a functional concept of design, it is appropriate to first enumerate the typical functions of and within the meetinghouse. Historical evidence reveals that the notion of a "meetinghouse" has its roots in the synagogue of pre-Christian Judaism. Indeed the "Beth Knesset," or House of Meeting was a place where scholarly Jews would assemble to discuss and debate points of doctrine. Since Christianity first got its hearing in the synagogues of Judaism, it is likely that the early Christians used a type of assembly space with which they were familiar. Such spaces were relatively small and focused around a central
speaker's area. As the ritual became a more dominant part of religion, the early Christians developed adapted forms which addressed more linear concepts of path, journey, and axis. The vital concept which waned over the centuries was the feeling of brotherhood and togetherness, which the early synagogues promoted, in favor of a more formal arrangement where the worshipper first addressed the back of the head of the person in front of him. A more detailed analysis of the synagogue as the roots of the Christian church has been prepared under separate cover and is beyond the scope of this particular thesis. The main point to be addressed here is that the functional arrangement of the religious space can do much to promote a feeling of brotherhood and community.

The primary reason the members of the church come together on the Sabbath day is to partake of the emblems of the Sacrament. The word communion, used in other religions, contains within itself the very root of the word "community". This weekly ordinance serves as a renewal of covenants and obligations which were accepted at baptism. The Sabbath service also includes worship through prayer and study, and talks given by members of the congregation on a rotating basis. Following the Sacrament Meeting, there is a one-hour period of instruction called the Sunday School where members are taught and discuss
points of doctrine. These classes are generally assigned by age groups, with various specific classes for adults. This hour is followed by an hour of instruction and training for the men and women collectively. Men are instructed in becoming better fathers and husbands while women receive training in Motherhood and homemaking. A degree of church government and administration are conducted in this third hour, but the majority of such matters are addressed in other meetings during the week. An organization of learning and worship for children, called the Primary Association is held during the second two hours of the three hour meeting block. There are also separate classes for the youth of the church. All ages are welcome and encouraged to attend the Sacrament Meeting.

Other meetings held throughout the week include: the Mutual Improvement Association for youth (age 12-18). The Relief Society for continued instruction and training for the women of the church, various committee meetings, social gatherings, dances, dinners, lectures and activities. The scouting program has also been adopted by the church, and each ward also provides various sports teams for those who are so inclined. Members of the church are encouraged to be with their families on Monday nights, and this is often the only night of the week when the church building is unoccupied. It should
be noted that most of the weekday
meetings can be conducted without
the use of the sanctuary proper.
The design proposals contained
herein recognize this fact and
include a degree of separation for
the chapel area.

The partaking of the emblems of
the Sacrament has been explained
previously as reminiscent (among
other things) of the covenants made
at baptism. Baptism is the other
important ordinance conducted at the
meetinghouses. Of all the meetings
and ordinances performed there, only
the Sacrament and baptism have a set
prayer as a part of their ritual. Baptism is by complete immersion and
signifies a purifying and washing
away of sin, as well as the gateway
into full fellowship of the church.
The functions of baptism and the
partaking of the sacrament become
the two most important elements of
the meetinghouse. They play a key
role in the organizational concept
of design.

As mentioned previously, the
functional level of design has been
the level most often addressed in
the creation of the LDS
meetinghouse. There are at least
three possible reasons for this
seeming imbalance.

First, the nature of the Sunday
worship service is such that there
are very few specific physical
requirements other than those
concerning the shelter of the
worshippers. Even the most sacred
weekly ordinance, the administration
of the sacramental bread and water,

requires little more than a table on which to prepare it. In various periods of church history, meetings have been held in homes, schools, barns, outdoor clearings—nearly every conceivable type of structure.

Second, it has long been a "policy" of the church (and rightly so) that matters of personal and spiritual welfare are the first concern. Only after these needs are met is added concern given to the physical facilities of the meetinghouse. Of course, obtaining sufficient facilities is a goal of any congregation, but my research has turned up numerous long-time members with fond memories of the days of meeting in rented halls and private homes. The goal of this thesis is not to suggest change in meetinghouse assignment policy, but rather to encourage a good system to become better.

Third, when functional concerns are not fully addressed, they are usually the first problem to be noticed. If a worshipper can't find the chapel, the spiritual atmosphere in it has little meaning to him. The latest generation of meetinghouses builds on years of research and experience and functional concerns are presently being addressed at perhaps the highest levels ever. It is only when such needs are addressed at the expense of other levels of need, that a problem arises.

The bulk of the work I have done in the functional design levels has evolved through empirical...
research and analysis. This particular synopsis of the empirical research completed thus far will certainly not be an evaluation of the process in its entirety, but rather, will concentrate on those specific modes of investigation which have proven helpful to the project as a whole, while at the same time, providing meaningful enlightenment to me as a researcher.

The implications to the design of meetinghouses of the Church of Jesus Christ of Latter-day Saints are presented as the unifying goal for the research.

The first mode of empirical research to be examined was a series of personal interviews. These interviews had been conducted over a period of several months and included, but were not limited to the following:

1. Elder Keith Wilcox, First Quorum of the Seventy, LDS Church, Salt Lake City, UT, Sept. 25, 1986.

2. Dr. Ronald Hicks, Dept. of Anthropology, Ball State University, Muncie, In, Sept. 29, 1986.


North Stake, Muncie, IN, Oct. 28, 1986.

J. Glenn Buckner, Management
Information Dept., Financial &
Membership Office, LDS Church
Offices, Salt Lake City,
UT, Nov. 6, 1986.

These interviews will be identified
in the text by the last name in
parentheses following the
information provided.

The second mode involved a
group interview, given in the form
of a questionnaire to approximately
150 members of the LDS Church in the
two Muncie, Indiana congregations.
The questionnaires were distributed
Nov. 9, 1986, and collected the same
day, although responses continue to
arrive at the time of this writing.
A sample of the survey is presented
in the appendix.

The third mode of investigation
was a direct observational analysis
of LDS Meetinghouses, whose
functions are the same, but whose
form and arrangement are dissimilar.
The three meetinghouses are located
in the following Indiana cities:
Peru, Muncie, and Fishers.
BASIC INITIAL DESIGN IMPLICATIONS

BASED ON OBSERVATION AND INDUSTRY

The first criterion of design is the selection of the building site. While official policy dictates only that the church be located in a "relatively quiet, nice" neighborhood (Ellis), over 90% of those completing questionnaires felt that the surrounding neighborhood was very influential in determining the spiritual level of the chapels. This preference is certainly borne out by an examination of existing chapels. Each of the three examined is located in above-average-income subdivisions which (in one case even after 25 years) are on the "outskirts" of urban areas. The
proximity of clusters of trees and other landscape features is noticeable in all three sites, but none of the three is so designed to allow a view of these. Such visual (if not tactile) contact with the elements of natural creation would instill in the worshipper a greater sense of closeness to God. (Wilcox)

This leads to the next criterion which involves interaction with natural elements along the path of entry, to provide transitional spaces from the "outside world" to the sanctuary within. (Wilcox) Historically, such journeys, or sequences of passage have served to sanctify an area by increasing the amount of effort required to reach it. (Hicks) Perhaps in the entry sequence to LDS chapels this principle could be used not to
increase difficulty, but rather to increase the ‘experiential quotient’ of the approach. In explaining the concept of ‘space’ in Japanese architecture, Michael Chihuni points out that space may consist of a series of experiences as opposed to simply measured dimensions. From observational data, the entry sequence to the Peru and Fishers chapel areas involve several turns, while the Muncie entry is more rapid and direct. The level of congestion and noise around the sanctuary doors themselves is correspondingly higher in Muncie.

One additional note observed in relation to entry is that the Peru and Fishers chapels have ‘front entries’ which are rarely used. This indicates that they may be more

30. Personal Interview, Michael Chihuni, Oct. 1994
symbolic than functional, so perhaps not as necessary. Another reason may be that neither face the parking area. In Muncie where there is no 'front', and parking is equal on the two opposite sides, neither entry seems to dominate. A conclusion may be drawn that people generally enter through the entry which is most obvious from the parking area. Any manipulation of sequence should operate within that notion.

Once inside the building, the first space encountered is the foyer. The social aspects of the church are a very real part of the doctrine. (Ellis) The movement from entry to sanctuary should be clear and direct so as to not lose the 'spirit' of the journey along the way. (Wilcox) The foyers of the Muncie building are not adequate, as witnessed by the congestion noticed during the observational phase. People leaving the sanctuary, or exiting from the building frequently had to pass between people engaged in conversation. Conversation groups, attempting to clear the foyer traffic lanes moved up the hallway, adding to the congestion in these areas. The furniture along the foyer walls is divided by the major axis of traffic and becomes ineffective in promoting conversation. The major difficulty in the Fishers foyer arrangement, as noted above, is the distance from the most-used entries of the building. While their size (each of two, similar to the one at Peru) is
adequate; their position in relation to the building as a whole is too isolated; they become, in effect, crying rooms for parents with young children, and are most used during the meeting. Also observed in all three locations was the tendency for parents with crying children to move only to the rear of the chapel to quiet them, as opposed to going out into the foyer. This would indicate a desire for the parent to wish to remain involved in the meeting—hoping to quickly quiet the child and return to their seat without actually missing part of the meeting. Such a situation might be more sensitively handled by including a cry-room with visual and one-way audio contact with the chapel proper. Many of the questionnaire responses alluded to the problem of noisy children.

Concerning the form of the churches, the questionnaires demonstrated an agreement of opinion concerning temple form. The two most prevalent responses were that the spires are the most significant feature, or that identifying the building as LDS was most important. John Zeisel refers to the latter as a basic need for group membership or identification. Certainly the building should represent the LDS concept of aspiration and progression. (Ellis) While the spire may not be the only way to achieve this, Dan Woodfin points out

31. See appendix
33. Personal critique, Dan Woodfin, Ball State University, Muncie, IN
that many times a symbol evolves which becomes significant to its people. The absence of a spire at an LDS church may prove to be too foreign to the congregation. While other means may reinforce the notion of aspiration, the spire may prove to be too important to omit.

Concerning identification, such recognition is in keeping with missionary emphasis of the LDS Church. (Wilcox)

In summary, the research thus far has provided implications for design of site selection, interaction with nature, transitional entry sequences, social and organizational points of gathering and dispersion (foyers), and elements of form—particularly those representing identification and aspiration. The more specific criteria of functional design may be found in the appendix.
Influences of the Physical Context

In the early development of this thesis, I proposed to incorporate two very different sites and show how certain elements of design could provide the variety that I felt was lacking in many of the LDS meetinghouses. Because of the availability of my data base (the Indianapolis Area office) both sites were located along the eastern portion of the United States. The widespread applicability of the project was demonstrated more fully since these were projects which clearly had to succeed "outside of Utah". My initial thinking was that if the same message could be stated in two contextually different ways, then why not ten, or a hundred? I have since concluded (with no little assistance) that perhaps I was
putting the cart before the horse.
The more recent thrust of my work
has been to more fully explore the
expression of the initial design
concept. If this concept proves
valid, then its applicability to any
number of different sites will
become apparent.

The first site chosen was near
the small town of Berlin, New
Hampshire. It was not far from this
area that Joseph Smith began his
life's work. Since my design
concept seeks to explore the roots
of LDS architectural expression,
this site certainly fit the pattern.
The immediate site is an area along
a logging road with an abundance of
light-barked birch trees. The
quality of light among these trees
is reminiscent of the glowing beauty
with which Joseph Smith described the Sacred Grove where he received his first vision. The play of light among the gold/green leaves and white bark of the birches provides the kind of beauty which transcends contemporary contexts. In an address given at the University of Michigan Vincent Scully Jr. referred in part to the contextualism of the work of Frank Lloyd Wright.

Wright's success, he states, was due in part to the fact he did not address the man-made context (Cultural Contextualism) as much as the natural context. He went on to state that so much of art is too dependent on the art of previous eras. Wright was certainly aware of the work of others, but he condensed those works to their roots and began

34. The Pearl of Great Price, JI 24:17-19
35. A Frank Lloyd Wright Symposium, The University of Michigan, April 8-12, 1987
fresh, at the fountainhead of creativity. Such condensation goes beyond the need to 'reinvent the wheel' while at the same time, bypassing the need to imitate. It is for this reason that both of my sites are somewhat isolated in nature. Their real context consists of 1) the immediate natural surroundings and 2) the spiritual context of the LDS people.

The second site was on the sandy outer banks of North Carolina near the small town of Manteo. The pleasant windy weather of Manteo is a marked contrast to the long winters of New Hampshire. The area is rich in maritime history, but the site was chosen because of the fresh air, abundant sunlight, and its position on the coast, which might have served equally well for a
lighthouse. Such a site is in keeping with the spiritual concepts of enlightenment and expansive space.

So if the man-made historical context is considered of secondary importance, what influence does the physical context provide? First, the native materials of the area, if used properly, will enhance the 'fit' of the structure. Such use of materials must respect the nature of the materials themselves. The LDS concept of the Creation recognizes that God blessed different areas with different materials and gave Man the intelligence to figure out what to do next. Secondly, the marked differences in climate will dictate various design solutions. This is one area where man-made