Sacred Time as One Eternal Round: Understanding the Chiastic Pattern of Temple, Cosmos, History

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Figure 1. The silhouette of the Salt Lake Temple against a time-lapse photograph illustrating the cyclical nature of celestial movements around the North Star (Composition by author. Work is a derivative from LCGS Russ, Wikimedia Commons – CC BY-SA 3.0)

Introduction

Space, time, cosmos, and architecture are interconnected with the realm of the sacred.¹ Yet, the contemporary aesthetics of speed, newness, consumerism, and the overabundance of information have collapsed, compressed, and fragmented the human experience of sacred, cyclical time into a profane, meaningless linear conception of time. Some have even argued that mankind is not only threatened by the ‘terror of time’ but that humans have nearly lost their capacity to dwell in time because of recent developments in the built environment.² On the other

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hand, nature’s repetitive cycles and processes help to slow down, silence, and suspend time – they reveal the sacred character of time.

The natural world teaches human beings about proportions, patterns, geometry, order, and repetitive cycles which can be observed in plant growth, human anatomy, and celestial movements among others. Architectural configurations have often adapted and replicated these natural patterns into their designs ranging from Greek temples to Alberti’s theory of proportions as well as Le Corbusier’s ‘modular’ to the ‘biomimicry’ movement embraced by Autodesk. When sacred spaces have adopted this practice, the design configurations become an expression of *imago mundi* because they are “conceived as downsized replicas of the universe, or ‘images of the world.’” There is a “direct parallelism between the macrocosm (i.e., the universe at large) and the architectural microcosm (i.e., the earthly built form),” writes Lindsay Jones. For the ancient world there was an inextricable link between temple and cosmos, heaven and earth.

While the modern world and its architecture of newness, speed, information, and consumerism may be losing its sense of sacredness or the experience of sacred time, I would argue that the experiential space of time – its depth and plasticity – can be regained through design principles such as the orientation, alignment, and replication of the cosmic order in architectural form, space, and details. The objective of this study aims to help the discipline address the ‘terror of time’ by (re)gaining an existential understanding of key architectural design principles that restore sacred, cyclical time to human experience. Based on the comparative framework and methods of an earlier study published in Harvard’s *Journal of Comparative Theology,* the scope of this paper continues its focus on architectural works found within Mormonism and Judaism, and Christianity by asking: 1) How is the cyclical pattern of sacred time experienced mythically through the narrative of sacred history? 2) How is sacred time conveyed astronomically through the revolutions of the cosmos? 3) How is the cyclical time encountered spatially in the architecture of the temple? and 4) What parallels exist in the mapping of cosmos and sacred history onto the spatial frame of temple architecture throughout the religious traditions?

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5 Brandon Ro, “(Re)Interpreting the Cosmic History of the Mormon Temple Experience: Theological Connections between Jewish and Catholic Sacred Space,” *Journal of Comparative Theology* 4, no. 1 (June 2013).
Sacred History: Mythical Time

Sacred time is cyclical in nature because it is experienced in sacred space during rituals where “a primordial mythical time [is] made present,” such as the marriage of Adam and Eve in the Garden of Eden (see Fig. 2). From the anthropological perspective, myths are sacred narratives often presented in a ritual drama that answer existential questions about the origins of the cosmos. Myths also serve as vehicles of meaning and enable one to understand the design of sacred architecture and the rituals performed therein. According to Caroline Humphrey and Piers Vitebsky, “the meanings behind the structure of a sacred building, as well as the rituals that take place within it, can be explained through myth. If the order of the temple mirrors the order of the cosmos, it is through myth that we learn how this is so.” In order to improve our understanding of how the temple is a scale-model of the cosmos, we must first understand the mythicohistorical episodes pertaining to salvation history or the plan of salvation. Myths, such as the cosmic narratives portrayed in the pre-exilic Israelite or Mormon temple dramas, are circular “in the pattern of a chiasmus.” For this particular study, the following Judeo-Christian episodes of sacred history and their chiastic structure are considered:

A) the cosmogonic primordial era  
B) the paradisal world of Eden  
C) the fallen, disordered world  
B’) the Messianic paradisiacal era  
A’) the perfected Heavenly realm

6 Mircea Eliade, The Sacred and the Profane; the Nature of Religion (New York: Harcourt, 1987), 68. This aspect of mythical time has also been called cosmogonic time in Yi-fu Tuan, Space and Place: The Perspective of Experience (Minneapolis: University of Minnesota Press, 1977), 131.


9 LeGrand L. Baker and Stephen D. Ricks, Who Shall Ascend into the Hill of the Lord? The Psalms in Israel’s Temple Worship in the Old Testament and in the Book of Mormon (Salt Lake City: Eborn Books, 2010), 80. Broadly speaking, a chiasmus is a literary pattern or ring composition where end and beginning share the same theme with the midpoint marking where the pattern is mirrored or inverted (e.g., A-B-C-B-A). For more on chiastic structure, see Mary Douglas. Thinking in Circles: An Essay on Ring Composition (New Haven, CT: Yale University Press, 2007); John W. Welch, ed. Chiasmus in Antiquity (Provo, UT: FARMS, 1981). Available at http://publications.maxwellinstitute.byu.edu/book/chiasmus-in-antiquity/.

10 For more background on the episodes of sacred history, see Ro, “(Re)Interpreting the Cosmic History of the Mormon Temple Experience,” 28-29, 28n40.
While the Abrahamic religions “have limited the duration of the cosmos to some specific number of millennia and affirm that history will finally cease in illo tempore,” asserts Mircea Eliade, “there still survive certain traces of the ancient doctrine of the periodic regeneration of history,” such as the myth of the eternal return or sacred time as one eternal round.\textsuperscript{11} It is precisely because of its relationship with sacred space and ritual that myth helps us understand the circular characteristics of sacred time found among the five room sequence of early Mormon temples and the tripartite organization of Judeo-Christian typologies of sacred space (see Figure 3 and Table 1).

![Figure 3. Thematic similarities of sacred history among Mormon, Jewish, and Catholic architectural configurations. (Diagram by author)](image)

**Cosmos: Astronomical Time**

Astronomical time involves the cyclical patterns and repetitious movements of celestial bodies (such as the sun, moon, and stars) which human beings experience daily, monthly, and seasonally on an annual frequency.\textsuperscript{12} According to Eliade, it is a course akin to sacred time; “Since the Cosmos is a living organism, it then implies natural cyclic time, that is to say circular time which constitutes the year.”\textsuperscript{13} For instance, the constellation that rose with the sun on the spring equinox marked a particular epoch of time in the earth’s history which would last about 2,160 years until it rotated along the ecliptic to the next Zodical sign (i.e., a rate of 1° every 71 years – see Fig. 4). At present our earth is about to leave the sign of Pisces and enter the Aquarian age with the four royal constellations aligned to the four cardinal directions and four solar points of the year – a phenomenon that began around 4000 BCE and has not been


\textsuperscript{12} Tuan, *Space and Place: The Perspective of Experience*, 131. Cf. Eliade, *The Sacred and the Profane; the Nature of Religion*, 75-76.

experienced since around 2000 BCE with the birth of the Arian age of astrology. \(^{14}\) Due to its repetitive nature, however, “astronomic time is easily mapped onto a spatial frame.” \(^{15}\) Many cultures and religions have linked the four cardinal directions (i.e., north, east, south, west) to the four seasons (i.e., winter, spring, summer, fall), four solar points of the year (i.e., two equinoxes, two solstices), four royal constellations (i.e., Taurus, Scorpio, Leo, Aquarius), major lunar phases (i.e., full moon, last quarter, new moon, first quarter), as well as religious festivals (i.e., Passover, Yom Kippur).\(^{16}\)

While Table 1 illustrates how these various cosmic phenomena can be mapped onto the spatial frame of architecture, it is ultimately the role of the architect to know how to apply these principles to new buildings. According to first century BCE Roman architect, Marcus Vitruvius Pollio, each architect should “be acquainted with astronomy and the theory of the heavens” \(^{17}\) as well as possess the ability to “find the east, west, south, and north...the equinox, solstice, and courses of the stars.” \(^{18}\) Perhaps this is a reason that most temples of the ancient world were oriented to a particular direction — with many boxed to the four points of the compass. Indeed, the ancient temple was “a building specially designed for interpreting signs in the heavens—a sort of observatory where one gets one’s bearings on the universe.” \(^{19}\) The temple also functioned as a cosmic clock since everything was “tied to the calendar and the stars.” \(^{20}\) It not only gave participants a perspective of their place in

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\(^{15}\) Tuan, *Space and Place: The Perspective of Experience*, 132.


\(^{18}\) Ibid., Book1, Chapter 1.10, p.10.


the cosmos but of their precise location in time. Citing its applicability to Mormon temple foundation rites, Hugh Nibley offers the following observation: “Coordination of time and place by the stars and the compass set the earthly temple into the framework of the cosmos.”

Val Brinkerhoff claims that even “the creation drama presented inside [Latter-day Saint] temples is thus tied to the earth’s seasons and the cycles of the heavens.” Similar features are also characteristic of Judeo-Christian sacred spaces with examples ranging from representations of the Zodiac and seasons in mosaics and sculptural friezes to the choreography and synchronization of ritual with astronomical events due to a building’s particular orientation.

**Temple: Spatial Time**

Architecture captures not only three-dimensional space but it reveals spatial time. According to Juhani Pallasmaa, “Architecture is our primary instrument in relating us with space and time, and giving these dimensions a human measure.” Sacred architecture is particularly unique in its ability to temporarily suspend the fast-paced quality of profane linear time and allow one to “experience the slow, healing flow of time” (or what we are describing as “sacred time”). Karsten Harries similarly remarks how “architecture deals with the terror of time first of all by wrestling from an unstable, uncertain environment a more stable order, transforming chaos into cosmos.” In order for architecture to (re)gain its existential foothold, however, Harries advocates the need for the profession to “reappropriate the wisdom buried in the traditional understanding of architecture as repetition and image of the cosmos.” The mapping of the annual lunar phases around the base of the Mormon temple in Salt Lake City along with their cosmic alignments to cardinal directions, solar points of the year, seasons, and religious festivals (Figure 5) or how the building’s western tower sculptural panel of the big dipper points to the “real” pole star – the sure nail of the cosmos around which all things revolve – may be one step towards this direction.

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26 Ibid., 52.
28 Harries, The Ethical Function of Architecture, 228.
Figure 5. Four major lunar phases on the exterior of the Salt Lake Temple. A total of 50 moonstones encompass the temple with those for April (near vernal equinox) on the east and October (near autumnal equinox) on the west. (Courtesy of Val Brinkerhoff)

While many biblical scholars agree that the Jerusalem temple was a miniature replica of the universe, the cosmic symbolism goes back even further to the twelve tribes and the Mosaic tabernacle in the wilderness. The insignia embroidered on each of the banners of the twelve tribes (Numbers 2:2, 17, 34), for instance, likely corresponded to a particular Zodiacal constellation. This is especially apparent for the four chief tribes who were placed at the cardinal directions around the tabernacle (Numbers 2:3, 10, 18, 25). “According to rabbinical tradition,” writes Carl Friedrich Keil and Franz Delitzsch, “the standard of Judah bore the figure of a lion, that of Reuben the likeness of a man or of a man’s head, that of Ephraim the figure of an ox, and that of Dan the figure of an eagle.” Thus, the four insignias of the chief tribes are connected to

30 For more on how the Salt Lake Temple serves as a scale-model of the universe, see Richard G. Oman, “Exterior Symbolism of the Salt Lake Temple: Reflecting the Faith That Called the Place into Being,” BYU Studies 36, no. 4 (1996-1997).
33 While in this paper I only focus on the cosmic symbolism attached to the tribes and their placement around the tabernacle, there are other features of this sacred structure that have symbolism related to the constellations. For examples dealing with the twelve stones in the breastplate of the high priest, the twelve oxen under the brazen sea, and the twelve loaves on the table of shewbread, see the comments made by Josephus in Wars of the Jews, Bk. V, 5:5 and Antiquities of the Jews, Bk. III, 7:7; Bk. VIII, 3:5, in Flavius Josephus, The Works of Flavius Josephus, the Learned and Authentic Jewish Historian and Celebrated Warrior, trans. William Whiston (Baltimore: Armstrong & Berry, 1839). For similar comments made by Philo, see On the Life of Moses, bk 3, chap. 12 and A Treatise on Monarchy, Bk. II, Chap. 5, in C.D. Yonge, The Works of Philo Judaeus, the Contemporary of Josephus, vol. 3 (London: H. G. Bohn, 1855). Cf. William F. Albright, Archaeology and the Religion of Israel (Louisville: Westminster John Knox Press, 2006), 150; C.T. Robert Hayward, The Jewish Temple: A Non-Biblical Sourcebook (New York: Taylor & Francis, 2002), 150.
the four royal constellations and cardinal directions: Judah’s lion to Leo in the east, Reuben’s man to Aquarius in the south, Ephraim’s ox to Taurus in the west, and Dan’s eagle to Scorpio in the north (Table 1). Several scholars have likewise noted that this cosmic imagery carries over into the apocalyptic visions and prophecies found in Numbers 24, Ezekiel 1 and 10, and Revelation 4-5 with their reference to cherubim, beasts, or living creatures.36

At first glance, it is uncertain as to whether the four constellations correspond to the periods of sacred history found in the spatial layout of both the Jewish and Mormon temple.37 However, by re-reading the mythicohistorical narrative as it processes through the temple in a clockwise direction (beginning and ending in the western Holy of Holies and summarized in Figure 3 and Table 1) and then comparing those themes to the symbolism of the four royal constellations for each chief tribe and cardinal direction, it is evident that the cosmos speak of the same cyclical and chiastic pattern – particularly how the plan of salvation is one eternal round. Taurus, for instance, is first connected to the cosmogonic primordial era or war in heaven as well as to the western Holy of Holies or the Mormon temple Creation room. Scorpio, with its adjacent constellations, reflects the scene of the paradisal world of Eden and is connected to the Mormon Garden room and northern part of the Holy Place. Leo’s reference to the fallen, disordered world brings us back to the ancient temple’s eastern courtyard and porch or the contemporary World room in Mormonism. The constellation Aquarius reminds us of the living water associated with the paradisiacal Messianic era which is connected to the Mormon temple’s Terrestrial room or the southern side of the Holy Place with its Menorah. Lastly, we return to the Holy of Holies and the constellation Taurus which represents the final battle of Gog and Magog prior to a return to the perfected heavenly realm – symbolized in Mormonism by the Celestial room.38 This interpretation suggests that the mythicohistorical episodes of the plan of salvation were written in the stars as another witness that God’s course is one eternal round. Thus, by mapping the narrative of the constellations onto the spatial frame of the temple, sacred time is renewed; in the words of Mircea Eliade, “in building the temple, not only was the world constructed but cosmic time was also constructed.”39

By understanding the chiastic pattern of spatial time in the temple, astronomical time in the cosmos, and mythical time in sacred history, architects learn that the temple must continue to serve as a microcosm or miniature model of the universe – the ultimate macrocosm – in order to preserve the human experience of sacred time as one eternal round.

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37 The possibility that episodes of the plan of salvation could be linked to the four living creatures of John’s apocalyptic vision and the cosmos was brought to my attention after reading a passage from Mormon scripture. Doctrine and Covenants 77:3 explains that the “four individual beasts, which were shown to John...represent the glory of the classes of beings in their destined order or sphere of creation, in the enjoyment of their eternal felicity.” In Mormon cosmology, “destined order” may suggest a final destination point in one of the three degrees of glory (Celestial, Terrestrial, or Telestial) whereas “sphere of creation” might indicate a specific sphere of progression or episode of sacred history, such as the Garden of Eden period which is the equivalent of a Terrestrial realm. Cf. 1 Corinthians 15:39-41; Alma 30:44; D&C 76:70-71, 81, 93:30; Moses 3:9, 6:63. Applying this interpretation to the temple was a discernable next step.

38 While a similar conclusion was reached in an earlier study between the three religions, the meaning of their architectural sequences, and episodes of sacred history, the mapping of the cosmos onto this same framework is a new finding. For a summary of the earlier findings, see Ro, “(Re)Interpreting the Cosmic History of the Mormon Temple Experience,” 63-65.

39 Eliade, Symbolism, the Sacred, and the Arts, 115.
Table 1: Comparative matrix mapping the parallels of cosmos and sacred history onto the spatial frame of the temple typologies for Mormon, Jewish, and Catholic traditions. (Table by author)

<table>
<thead>
<tr>
<th>TEMPLE</th>
<th>COSMOS</th>
<th>HISTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mormon (Cosmology)</td>
<td>Jewish (Festival Tribe- Inner)</td>
<td>Catholic</td>
</tr>
<tr>
<td>Creation Room (Sun)</td>
<td>Holy of Holies (Yom Kippur- Sobarim Ox)</td>
<td>Aps/ Sanctuary</td>
</tr>
<tr>
<td>Garden Room (Moon)</td>
<td>Holy Place/ Table of Showbread (Boz Serpent/ Eagle)</td>
<td>Nane/Inner Nethex</td>
</tr>
<tr>
<td>World or Celestial Room (Stars)</td>
<td>Perch/ Courtyard (Passover Judah Lion)</td>
<td>Outer Nethex/ Courtyard</td>
</tr>
<tr>
<td>Terrestrial Room (Moon)</td>
<td>Holy Place/ Menorah (Reuben Man)</td>
<td>Nane/Inner Nethex</td>
</tr>
<tr>
<td>Celestial Room (Sun)</td>
<td>Holy of Holies (Yom Kippur- Sobarim Ox)</td>
<td>Aps/ Sanctuary</td>
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