**Representing a Four-Dimensional Universe:**

Terraces at the Temple of Heaven in Beijing

**Abstract**

By locating the terrace system of the Temple of Heaven within a larger religious context and comparing it with other Chinese ritual architecture and devices, this article unearths some of the seldom discussed symbolism and functions of the Temple of Heaven. The imperative of symbolically bringing the Chinese emperor “closer” to Heaven for communion with the Divine during annual religious ceremonies is a well understood function of the terrace layout. Closely related to this, however, was another equally critical function, seldom discussed by scholars, which was to bestow order upon the country by designating the passage of time through number and directional symbolism. In its religious function, these terraces played the same role in religious rituals that Mount Tai, the most sacred peak in China, had for 3000 years.  In the timekeeping function, the terraces served to represent the cycle of time, as understood through the Chinese agricultural calendar system.  Existing within a larger system of the Chinese religious-political network, the Temple of Heaven’s terraces replicated the functions of certain bronze age Chinese ritual objects and architecture, perpetuating the universal order through architectural space.  This paper argues that they were a vital and fluid three-dimensional representation of the universe, in which the Chinese emperor’s participation fulfilled the fourth, animating dimension of the cosmic order, time keeping.

**Keywords:**

Terrace, the Temple of Heaven, the Circular Mound Altar, the Hall of Prayer for Good Harvests, Mountain Tai, the Bright Hall, Chinese Calendar, the Mandate of Heaven

For many residents of Peking, this was the one time in their lives they ever saw the Son of Heaven in person. While street traffic was suspended, the normal procedure for the imperial presence, which demanded that all shops be closed and all pedestrians keep out of sight, was not followed on that day. Some of the onlookers caught a glimpse of the emperor, a nice-looking young man though already growing stout. The trek was not at all easy for Wan-li, because the day was turning steadily warmer every minute and the Altar of Heaven was four miles away from the palace entrance—the longest distance that he had ever covered on foot.

The open-air altar in the southern suburbs of Peking had been built by the reigning emperor’s grandfather in 1530. On the lower tier of the circular stone terraces Wan-li performed his kowtow. Offerings were made and the prayer spoken. The assembled officials and army officers were arrayed outside the brick wall enclosing the altar. Their kneeling and standing up was synchronized with the movements of the emperor by commands re-played through the gate by ceremonial officials (Huang, 1982, 118-119).

The foregoing paragraphs, depicting a quite unusual scene surrounding the Temple of Heaven in Beijing in the Ming Dynasty (1368-1644), took place on May 16, 1585.  Since the winter of 1584, Beijing had been suffering from droughts, and the situation was only worsening by the Spring of 1585, despite standardized religious activities conducted by the Ming officials from the Department of Rites (*libu*).  Increasingly afflicted by his anxieties over this state of affairs, Emperor Wan-li (1563 - 1620) of the Ming decided that he must therefore pray to heaven himself.  At dawn on May 16, the emperor, who was customarily carried from place to place in a sedan chair or carriage, walked out of the Daming Gate of the Forbidden City on his own two feet, accompanied by two thousand civil officials and two thousand military officers, and this vast array undertook a four-mile procession to the Temple of Heaven. The emperor then conducted his obeisance on the circular stone terrace of the open-air altar, namely, the Circular Mound Altar (*yuanqiutan*), while his officials alternately kneeled and stood outside the circular wall.  Eventually, on the 12th of June, one month after this imperial procession, the rains duly came forth, and the emperor Wan-li joyfully ordered a thanksgiving service in appreciation of Heaven’s response to his prayer (Becker, 2008; Huang,1982,118-24).

The architectural structure upon which this unprecedented act of devotion took place, the Circular Mound Altar, is an open air, empty circular terrace, featuring three layers of marble stones. [fig 1]  It is the most essential element of the Temple of Heaven complex, built in 1530 by Emperor Jiajing (1507-1567), the grandfather of Emperor Wan-li.  The round terrace was first covered with glazed slabs of deep blue, and had a circular perimeter of 534 meters, with a height of 5.2 meters.   Each year, at the Winter Solstice, the Chinese emperor communicated directly with Heaven by offering thanksgiving sacrifices on this divine terrace.  At the Spring Equinox, the emperor would go to a different structure, the Hall of Prayer for Good Harvests (Qiniandian), to pray for prosperity in the coming year (Cai, 2011, 46).  Each architectural element of the Circular Mound Altar and the Hall of Prayer for Good Harvests features its own symbolism, demonstrated through color, shape and the number of elements in their respective construction (Li, Y., 1990, 101-102).  In focusing attention on the terraces that feature in both the Hall of Prayer for Good Harvests and the Circular Mound Altar, this essay investigates two essential functions of the Temple of Heaven’s terrace system.  The well-known and foremost features are the massive staircases, whose function is to bring the emperor “closer” to Heaven for his communion with the Divine, thereby fulfilling his role as proprietor of the “mandate of heaven.”  A second imperative, no less important, but somewhat less obvious and seldom discussed by contemporary scholars, was to bestow order upon the country by designating and optimizing the passage of time through number and directional symbolism. Although the structure of the Temple of Heaven and its foremost symbolism are very familiar to Chinese nationals and a number of scholars of architectural history, this ritual architectural complex remains a resourceful topic. I argue that the complexity of its symbolism stretches far beyond functioning as a place to make offerings to heaven. My approach is to relocate this architectural structure within a larger religious context dating back to the Bronze Age of early China, and construct a logical connection with other ritual and political infrastructure, such as the legitimacy of Chinese emperors and the production and propagation of Chinese calendars. I argue that the emperor’s physical interaction with the terrace system played a vital role in fulfilling the symbolism of the Temple of Heaven, and conversely, the spatial conception of those terraces legitimized the emperor’s role, not only as the ultimate political power, but as a divine facilitator of order and upholder of society.

**Terraces as a Staircase for the Mandate of Heaven**

The Temple of Heaven is located on the east side of Yongdingmennei Street, Chongwen District, Beijing, encompassing a total area of over 10,000 square meters, three times the size of the Forbidden City (Yao, 2006, 38).  [fig 2] Its central axis runs through three major architectural units, from north to south.  These are the Imperial Vault of Heaven, the Hall of Prayer for Good Harvests and the Circular Mound Altar.  The latter two structures are each built upon promontory of marble terraces in three levels.  As with all the most spiritually significant architecture of imperial China, such as the Hall of Great Harmony in the Forbidden City, the Sacrificial Hall of the Imperial Mausoleum or the Temple of Ancestors, the Temple of Heaven’s political symbolism was expressed through the shapes, colors and numbers of its architectural units.  The Hall of Prayer for Good Harvests and the Circular Mound Altar are both round, thereby representing heaven, whereas the precincts in which they stand are squares, representing Earth.  According *Kaogongji*, a classic work on science and technology in ancient China dating from the Waring States Period (475-222 BCE), the squareness of the chariot is to represent earth; the roundness of the canopy is to represent heaven (Tseng, 2011, 23). This shape symbolism was easily translated into architecture.  The number nine appears frequently in the design of the Temples of Heaven, as it is the number of the ultimate manifestation of *yang*, the active principle in the dualistic *yin-yang* concept of the universe.  Nine further symbolized the emperor’s ultimate political power.

As the divine venue for the emperor’s conduction of annual ceremonies, the Temple of Heaven was an essential architectural complex for religious communion with Heaven, the supreme power reigning over lesser gods and human beings.  In the famous Zhou Dynasty ode, *Book of Songs*, it is written that:

Heaven, in giving birth to the multitudes of the people,

To every faculty and relationship annexed its law.

The people possess this normal nature,

And they [consequently] love its normal virtue (Legge, 1871, 541).

The emperor, who was, through his ancestors, the recipient of Heaven’s mandate to rule, was designated the Son of Heaven, and therefore charged with mediating between the Divine and human worlds.  Emperor Hongwu (1328-1398) of the Ming Dynasty once proposed that “Sacrifice to the heaven and the earth, for the common people under the heaven” combines respecting the heavens and caring for the people (Cao, 2011, 30). The emperor’s relationship with Heaven endowed him with the legitimacy to rule, and he did so by establishing and maintaining reliable societal relationships and bureaucratic systems based upon Heaven’s virtues (Mason, 1987).

The term “mandate of heaven” has two implications. On the one hand, it justifies the emperor’s position religiously, thus legitimizing his rulership; and on the other, it charges him with responsibility for connecting his subjects with the Divine realm, as the one figure with the power to communicate directly with Heaven (Tseng, 2011, 18). Ceremonial architectural complexes such the Hall of Prayer for Good Harvest and the Circular Mound Altar, were designed to express the emperor’s ultimate authority as the sole intermediary with Heaven, a role vouchsafed to no other living individual.  The tall platforms and circular terraces of such structures facilitated the imperatives of political symbolism by symbolically bringing the emperor closer to Heaven, thereby demonstrating his ultimate authority over all human beings.   In order to have in depth understanding of the terraces, we need to compare the architecture of the Temple of Heaven to other palatial imperial Chinese architecture, such as the Bright Hall, the Ancestral Temple or the Hall of Great Harmony in the Forbidden City, all of which featured high terraces.  According to the art historian, Wu Hung, some of these imperial structures, “more than a hundred meters high, helped their owners intimidate and even terrorize political opponents (Wu, H., 1995, 12).” Thus, the terraces of these imperial structures, with their prescribed heights and symbolism based on the number 9, effectively showcased the emperor’s “mandate from heaven.”

Prior to the construction of the Temple of Heaven, Mount Tai, located in Shandong Province, had been designated as a natural altar for the emperor to directly commune with Heaven.  Rising to 1,545 meters, Mount Tai was one of the preeminent ceremonial sites, a place of worship for over 3000 years.  The emperors carried out sacrifices to pay homage to heaven on the summit, and to earth at the foot of the mountain (Lewis, 1999, 27). Within the Temple of Heaven, east of the Hall of Prayer for Good Harvest, is the Seven-Star Stone Group. These seven stones symbolized the Big Dipper in the sky, as well the seven peaks of Mount Tai.  The Temple of Heaven, Mount Tai, and other ritual objects, such as the Nine Tripod Cauldrons, functioned as symbols of the authority devolved upon the ruler by the mandate of heaven, and existed as centers where the emperor could offer ritual sacrifices to the ancestors from heaven and earth during major religious ceremonies.

With an understanding of the basic symbolism and functions of the Temple of Heaven in a larger religious network, let us now focus our discussion on the design of the Circular Mound Altar, and examine how its design fulfilled these requirements. It is a circular three leveled terrace that served as a divine location for the emperor to offer his sacrifices to Heaven at the winter solstice.  This terrace is distinguished in the sense that it was given an order around the number nine.  There are nine steps between each level.  The numbers of various elements of each level, including pillars and steps, are either nine or multiples of nine.  The top level has 72 slates, the middle has 108 slates, and the bottom level has 180 slates Altogether there are 360 slates. This denotes the 360 degrees of the complete circle and thus represents the circumference of heaven (Pletcher, 2010, 128).

In the center of the upper terrace is the Tianxin Stone (Stone of Heaven’s Heart), which is surrounded by concentrically arranged flag-stones. [fig 3] There are 9 stones in the first circle, 18 in the second, and 27 in the third.  It continues in this manner up to the ninth circle, which has 81 stones (Yao, 2005, 21-22).  Charged by the power of the number nine, the Circular Mound Altar’s terrace, despite its actual height being significantly shorter than Mount Tai, still maintains the capacity of a symbolic staircase to Heaven.  As the emperor made a short “journey” to top of a terrace built according to multiplications of the number nine, he was deemed to be spiritually and physically approaching closer to Heaven.

Another important and well-known feature of this terrace is its acoustical properties.  When religious ceremonies were performed on the Circular Mound Altar, the boulders on the top terrace could amplify a voice whispered through it.  According to the research of numerous scholars, this sound effect is caused by the extreme smoothness of the altar’s walls and floor, which facilitate sound waves proceeding in all directions toward the stone balustrades, from whence it is reflected back again.

Overall, with its circular and numerical symbolism, and the special sound effects, the white marble terrace of the Circular Mound Altar functioned perfectly as a magnificent symbolic “staircase” towards Heaven.  The terrace of the Hall of Prayer for Good Harvests provided similar functions for religious ceremonies taking place at the beginning of spring.  Heaven bestowed its mandate upon whomever was most fit to rule, and the Son of Heaven was in turn responsible for the prosperity and security of his people, as he embodied the link between Heaven and his human subjects (Dull, 1990). In the words of the famous Han Dynasty Scholar, Ban Gu, “The Son of Heaven was named by Heaven as the ruling nobility; the one who is called the emperor received the order from heaven and served as [heaven’s] minister (Ban, 2021).” Ceremonies at the Temple of Heaven were carried out routinely during the Ming and Qing Dynasties.  In the year 1722, when Emperor Kangxi (1654-1722) of the Qing (1644-1912) was ill, he sent his fourth son to the Circular Mound Altar for the winter solstice ceremony.  Unsurprisingly, that fourth son succeeded as the next emperor in the coming year (Yao, 2006, 144). At the top of the divine terrace, the conduct of sacrificial ceremonies for Heaven’s blessing was not just a highly formal practice of court etiquette, but also a symbolic communication with Heaven and a demonstration of the emperor’s inherited monopoly on Heaven’s will.

**Four Dimensional Terraces as a Calendar**

In the previous section, we discussed the terraces of the Temple of Heaven, from the perspectives of shape, number and sound effect, which features endowed them with the religious functions of Mountain Tai.  In this section, we will focus on something more abstract – the cosmos (or universe) – defined as a four-dimensional entity encompassing everything heaven, earth and all of humanity, as well as time itself.  The understanding of the four-dimensional cosmos, in turn, stimulated the imperative of producing cosmological charts, such as the *bagua* diagram, religious architecture and ritual objects to represent the cosmic order.  Architectural monuments are generally considered as three-dimensional objects relating to the perceived characteristics of authority and permanence (Wu, 1995, 11).  However, a number of Chinese religious structures, including the terraces of the Temple of Heaven, seem to conduct movement within themselves, and therefore maintain an “living” nature.  In order to facilitate a sufficient discussion of the fourth-dimensional aspects of the Temple of Heaven terraces, it becomes necessary to familiarize ourselves with the design principles found in some other Chinese ritual architecture created to fulfill similar religious purposes.

According to the official *The History of Ming* (*Mingshi*), in the year 1530, Emperor Jiajing of the Ming revived ancient ritual traditions of conducting religious ceremonies outside the palace, a practice known as *jiaoji*.  In planning ritual architecture constructions, therefore, the emperor and his scholars decided that the design of the Temple of Heaven should follow the model of the Bright Hall (*mingtang*) of the Zhou Dynasty (Wu, H., 2006, 134). As the predecessor structure of the Temple of Heaven, the Bright Hall was first seen in the literature *Yi Zhou Shu* (Lost book of Zhou), a collection of Chinese historical documents of the Western Zhou Dynasty (1046–771 BCE). [fig 4] According to “Kaogongji,” *the Rites of Zhou*, the Bright Hall of the Zhou Dynasty was developed from Xia and Shang Dynasty concepts. The Zhou Dynasty Bright Hall consisted of five rooms built according to the “*yin* and yang *five* elements” configuration, which allowed the Zhou emperor to carry out the “monthly move to one room (*yueling*)” according to the “four seasons and five elements” cycle (Zhang, D., 2001,130-131).  The main significance of the Bright Hall lay in the emperor’s utilization of this structure to promote monarchical power through divine influence, and to use his divine powers to consolidate political authority.

The importance of the Bright Hall has not escaped the attention of modern scholars. Before archaeological evidence was available, scholars strove to clarify the structure’s significance from a large corpus of texts produced in the pre-Han and Han eras.  According to the ancient texts, *Huainanzi*, the Bright Hall was “the greatest thing among all things,” and “manifested the deepest meaning of all meanings (Ames, 1994, 143).” After the first Han Bright Hall site was discovered in 1956, scholars attempted to restore its above-ground structure by consulting, somewhat indiscriminately, this same corpus of texts.  According to the restoration model of the Han Dynasty Bright Hall built by Wang Mang in First Century CE, we can see that it consists of a circular platform and a highly geometric floor plan.  It was surrounded by alternating circles and squares, recalling the shapes of Heaven and earth (Liu, 2016, 2-3).

Unlike the magnificent palace architecture of the period, the political and religious significance of the Bright Hall was not expressed through monumental scale.  As a matter of fact, Wang Mang’s Bright Hall is believed to have been completed in only twenty days (Liu, 2016, 3).  The key characteristic of the Bright Hall was its correctness: construction was required at the correct time, by the correct person, following the correct order. Chinese philosopher Xunzi (316-235 BCE), on presenting his political plan to a high lord, concluded his speech by saying “If things are done this way, then the Bright Hall can be constructed, and you can hold court there to receive the feudal lords (Wu, H., 2007, 194).” In the words of Wu Hung, “the hall’s architecture demonstrates the working of the Universe. The building itself thus becomes the source of changes and transformations….it brings all things into its unifying light (Wu, H., 2007, 191-192).” Overall, the Bright Hall’s construction symbolized a desire to perpetuate a legal and stable rulership according to the cosmic order.  The Bright Hall provided a representation of the universe and its order and required the emperor’s participation to embody and fulfill that order.

The meaning of the Bright Hall was rather complex.  Han Dynasty scholar Cai Yong （133-192）’s “Treatise on the Bright Hall and Monthly Ordinances (*Mingtang yueling lun*)” addresses the ways in which the Bright Hall embodied cosmological components and movements.

The various sections of the Bright Hall have their regulations. The whole building has a square floor plan of 144 chi on each side, a measurement determined by the numerical value assigned to Earth. The round roof is 216 *chi* in diameter, which is based on the numerical value assigned to Heaven. The Great Temple in the center is three *zhang* on each side, and the Room of Communing with Heaven is nine *zhang* in diameter, because nine and six represent the transformation of yin and yang. . . The 12 rooms correspond to the 12 zodiac constellations. Each of the nine chambers has four doors and nine windows, so that there are altogether 36 doors and72 windows. . . The building has four sides and is painted with five colors; four and five are the numbers of the four seasons and the Five Phases, which determine the activities taking place there. The structure covers an area of 24 *zhang* on each side, a figure that echoes the 24 divisions of the year [Translation Wu Hung] (Wu, H., 2007, 197).

Being a three-dimensional building, the Bright Hall invited the emperor – the Mandate of Heaven- to manifest the fourth dimension: Time.  Taking Wang Mang’s Bright Hall as an example, the structure was surmounted by an astronomical observatory called *lingtai*.  Inside the hall, there were twelve rooms corresponding to twelve months, surrounding a central chamber which symbolized the midpoint of the year.  In the words of Wu Hung: “It was the emperor who linked these static spaces into a temporal/spatial continuum: he would begin his year in the first room at the northeast corner (where the *yang*ether rose) and move clockwise through the hall. Each month he would dwell in the proper room, dress in the proper color, eat the proper food, listen to the proper music, sacrifice to the proper deities, and attend to the proper affairs of state (Wu, H., 2003, 120).”  As a living embodiment of the Mandate of Heaven, the emperor’s movements represented the symbolic movement of the universe, which could also be recorded in a calendar.  Without the emperor’s participation, the fourth dimension of the cosmic order, time keeping, could not be fulfilled.  The Mandate of Heaven was the only force that could complete the final dimension of the cosmic order.

Though the Temple of Heaven might have differed in its physical appearance from the earlier Bright Hall, yet it faithfully carried forward its predecessor’s tradition of “communication with Heaven” and “time keeping.”   The terraces of the Temple of Heaven can therefore also be regarded as an immense Chinese calendar.   Despite its subtleties and somewhat hidden composition, the Temple of Heaven effectively expressed time keeping in its own architectural layout.  Time keeping and calendar construction served to define the greatest political authority, and with such significance, the most highly ranked ritual architecture could be utilized in the vital exercise of time keeping.  Imbued with such significance, the Temple of Heaven became a logical place for housing bells, calendars and clocks, objects designed to tabulate temporal divisions.  In the 16th year of Emperor Qianlong (1711-1799) of the Qing Dynasty, a bell tower was constructed inside the complex of the Circular Mound Altar, enshrining an enormous bronze bell.  Later, the after the bell tower was destroyed, this giant bronze bell was removed to the Zhai Palace, a small edifice within the temple.  Rather than utilizing the bell for any practical purposes, the Qianlong Emperor had installed it in the Circular Mound Altar to symbolize his Mandate from Heaven and his rulership over the unified country (Cao, 2011, 45).   Moreover, there are four gates built into the Circular Mound Altar, namely Taiyuan Gate, Zhaoheng Gate, Guangli Gate, Chengzhen Gate. The characters “Yuan, Heng, Li, Zhen” are taken from the *Book of Changes*.  The Southern Song Dynasty scholar Zhu Xi (1130-1200) explained: the newborn material is called *yuan*; the growing one is called *heng*; the grown yet not quite mature one is called li; and the mature one is called zhen (Zhang, J., 2011).  When the emperor is walking around the Circular Mound Altar, he is transforming himself into the moving hand of a huge clock, and thus the embodiment of heaven’s movement.

The Hall of Prayer for Good Harvest followed the design principles of the Bright Hall even more closely.  [fig 5] As the shape, color and number symbolism of the Hall of Prayer for Good Harvest represents Heaven’s authority, the internal structure and portals represent the cycle of spring, summer, autumn and winter, and the passage of time (Wu, H., 2008, 80). On top of the three leveled terrace, there stands a magnificent triple-gabled circular building. The hall is round, symbolizing the shape of Heaven, and the roof tiles are blue, symbolizing the blue sky. The four inner circle pillars with dragon motifs symbolized spring, summer, autumn and winter throughout the year; the twelve golden pillars in the middle circle symbolized a year of twelve months; and the twelve eaves pillars on the periphery symbolized the twelve *shichen* in a day.  [fig 6] The twenty-four pillars of the middle and outer circles symbolize the twenty-four solar terms in a year. There are a total of 28 pillars within these three circles, symbolizing the 28 essential constellations in Chinese astronomy. In addition, the eight dwarf pillars at the top make a total of thirty-six, which symbolizes the thirty-six heavenly kings. The Leigong pillar under the canopy symbolizes the emperor’s domination over the universe (Yang and Xu, 1999).

In terms of their overall layouts, the terraces of the Circular Mound Altar and the Hall of Prayer for Good Harvest are arranged in a cardinally-oriented configuration with a clearly defined center.  In terms of their contents, both terraces represent the cycle of time, in the form of a daily clock, an annual calendar, or an abstract cycle of growth, decay and rebirth.  Cyclical rather than linear, time in China had traditionally been calculated as a succession of dynasties and seasons, moving in circles.  (Zhang, S., 2012, 136). To this end, the circular shapes of these terraces corresponded to the Chinese concept of time, and so resembled the design of a traditional Chinese calendar.  [fig 7] The subdivision of time in the traditional Chinese calendar was complicated and pseudoscientific, but it was crucial that Chinese rulers understand it fully.  Understanding producing calendar was a vital component of imperial Chinese politics.  Oversized chronographs were routinely commissioned by Chinese emperors as symbols of their political control over a unified time and space (Zhang, S., 2012, 137). Generally speaking, calendar and clock prescribe appropriate human activities according to seasons, months or hours within a day. The terraces in the Temple of Heaven thus demonstrate a correlative cosmology for an ideal government, regulating the correct rituals and administrative behavior for the ruler.

**Space, Time and Political Authority**

The triangular relationship between time, space and the political authority of the Chinese emperor was translated into the terraces of the Temple of the Heaven.  Yet it was designed to function as an animate cosmic theater rather than as a staticaltar or staircase leading to heaven.  The terraces of the Temple of Heaven might be lacking magnificent of scale, compared with other palatial buildings and platforms in imperial China.  However, their utilization of number, shape, color and directional symbolism, rendered them into four dimensional representations of the universe –that is, all-inclusive entities, encompassing heaven, earth and mankind (with the emperor as mediator), as well as time and space.  They replicated the functions of the Bright Hall, perpetuating the universal order through architectural space.

According to Wu Hung, architecture did not replace ritual objects such as bronzes or jades, to express the very soul of social and political power until the Eastern Zhou Dynasty (Wu, H., 1995, 78). The use of monumental buildings and tombs to exhibit political authority emerged during the Eastern Zhou and Qin Dynasties.  We can therefore relate the Temple of Heaven, not only to other architectural complexes of Imperial China, but to earlier ritual objects as well, along with other political practices such as urban planning, calendar making and monthly ordinances.  In other words, the Temple of Heaven functioned, not simply as a self-contained architectural complex, but demonstrated a political system consolidating the country into an interrelated political network. Within this political network, the emperor abided at the center of the temporal/spatial structure of the universe.  The *Book of Documents (Shang shu),*one of the Confucian classics written during the second and first millennia BCE, begins with stories of Emperor Yao, who was a legendary sage flourishing in the time of Great Harmony, establishing a system which allowed him “to compute and delineate the sun, moon and stars, and the celestial markers, and so to deliver respectfully the seasons to be observed by people (Wu, H., 2003, 113).” Under this system, the emperor connected the spatial and temporal order with his governance, securing the harmony between heaven and men.

[fig 8] The final religious usage of the Temple of Heaven took place on Dec 23, 1914, in the third year of the Republic of China.  At dawn, the new president, Yuan Shikai, dressed in a military uniform, led a procession of men in ancient attire to the Temple of Heaven.  Approaching the Circular Mound Altar, Yuan cloaked himself in the imperial habiliments, and stepped onto its terrace. Ancient music was played, and traditional dancers responded (Li, J., 2012).  This religious ceremony was a forerunner of Yuan’s Enthronement, which took place a year later, after he declared himself emperor of the Great Chinese Empire, dissolved China’s Parliament, abandoned the Gregorian calendar, re-adopted the traditional calendar and assumed the era name “Hongxian.”  But due to pressure from various sources, Yuan was forced to abandon his new title after a reign of only 83 days.  The Temple of Heaven ceremony failed to secure for him the Mandate of Heaven, but alerted his rivals to his overweening ambitions. Yuan thus became the last individual to employ the Temple of Heaven for communication with the Divine.

**References**

Ames, R.T., 1994. *The Art of Rulership: A Study of Ancient Chinese Political Thought*. NY Albany: SUNY Press.

Ban, G.(32-92CE), *Bai Hu Tong*. <https://ctext.org/bai-hu-tong/zhs> (accessed Sep 4, 2021).

Becker, J., 2008. *City of Heavenly Tranquility: Beijing in the History of China*. Oxford: Oxford University Press on Demand.

Cai, Y., 2011. *Chinese Architecture* (Vol. 30). Cambridge: Cambridge University Press.

Cao, P., 2011. *Mingdai ducheng tanmiao jianzhu yanjiu* [Research on the Altar Temple Architecture of the Capital Cities in the Ming Dynasty]. Doctoral Dissertation: Tianjin University.

Dull, J.L., 1990. The evolution of government in China. *Heritage of China: Contemporary Perspectives on Chinese Civilization*, pp.57.

Guan, X. & Zhang, B., 2017. *Zhongguo sida huiyi gujianzhu shengxue jiyi yanjiu yu chuancheng* [Research and Inheritance of Acoustic Techniques of China's Four Echoes Ancient Buildings]. Hefei, China: Anhui keyi chubanshe.

Huang, R., 1982. *1587, A Year of No Significance*. New Haven: Yale University Press.

Legge, J., 1871. *The Chinese Classics, vol. 4: The She King, or The Book of Poetry*. Oxford: Clarendon Press.

Lewis, M.E., 1999. *Writing and Authority in Early China*. Albany, NY Albany: SUNY Press.

Li, J., 2012. Yishi yu zuizheng: 1914 nian Yuan Shikai de jitian dianli [Ceremony and “Criminal Evidence”: Yuan Shikai's Ceremony of Sacrifice to Heaven in 1914]. *Yanzhou daxue xuebao: renwen shehui kexueban*, 1: pp. 106.

Li, Y., 1990. *Huaxia yijiang: Zhongguo gudian jianzhu sheji yuanli fenxi* [Masters of *Huaxia*: Analysis of Chinese Classical Architecture Design Principles]. Taipei: mingwen shuju.

Liu, J., 2016. Wang Mang shidai de liyi jianzhu yu guojia chongzao [The Etiquette Architecture and the Reconstruction of the Country in the Wang Mang Era]. *Hangzhou shifan daxue xuebao: shehui kexue ban*, 38(6): pp. 1-9.

Manson, W.C., 1987. Incipient Chinese Bureaucracy and Its Ideological Rationale: The Confucianism of Hsün Tzŭ. in *Dialectical Anthropology*, *12*(3), pp.271-284.

Pletcher, K., 2010. The Geography of China: Sacred and Historic Places. New York: Britannica Educational Publishing.

Tseng, L.L.Y., 2011. *Picturing Heaven in Early China*. Cambridge: Harvard University Press.

Wu, C., 2008. Qiniandian jiedu [Interpretation of the Hall of Prayer for Good Harvests]. *Zhonghua yichan*, 1: pp.80.

Wu, H., 1995. Monumentality in early Chinese art and architecture. Stanford: Stanford University Press.

Wu, H., 2003. Monumentality of Time: Giant Clocks, the Drum Tower, the Clock Tower. In R. Olin & N. Rose (Eds.), *Monuments and Memory, Made and Unmade*. Chicago: University of Chicago Press, pp.107-132.

Wu, H., 2007. Picturing or Diagramming the Universe. In F. Bray, V.Dorofeeva-Lichtmann and G. Métailie (Eds.), *Graphics and Text in the Production of Technical Knowledge in China.* Leiden: Brill. Pp 191-214.

Wu, J., 2006. Ming Jiajing chao kongmiao jidian gaizhi kaoxi [An Analysis of the Reform of Confucian Temple Sacrifices in the Jiajing Era of the Ming Dynasty]. *Chengda lishi xuebao*, 31: pp. 113-152.

Yang, Z. and Xu, Z., 1999. Tiantan qiniandian zhu yu zhu zhi jian zhi yuyi [The Implications of Pillars and Pillars in the Temple of Heaven’s Hall of Prayer for Good Harvests]. *Beijing yuanlin*, 2: pp 40-41.

Yao, A., 2006. *Tanji* [Altar Sacrifice]. Beijing: Beijing chubanshe.

Yao, A., 2005. *Qingdai Beijing jitan jianzhu yu jisi yanjiu* [Research on Beijing Altar Architecture and Sacrifice in Qing Dynasty]. Doctoral Dissertation: Zhongyang Minzu University.

Zhang, D., 2004. *Kaogongji zhushi* [Kaogongji Notes]. Xi’an: Shanxi renmin meishu chubanshe.

Zhang, J., 2011. Cong manzu tangzi jitian dao tiantan yuanqiu jitian – shilun qingchao ruguan qianhou jisiguan de bianhua [From Manchu Tangzi Sacrifice to Heaven Sacrifice at the Temple of Heaven—On the Evolution of Sacrifice Concept before and after Qing Entering the Pass]. In *Duowei shiye xia de qinggong shi yanjiu – dishijie qinggong xueshu yantaohui wenlunji*. Beijing: Xiandai chubanshe.

Zhang, S., 2012. The Supremacy of Modern Time: How Shanghai Calendars Re-shaped the Image of China (1860-1930). In M. Munro (Ed.), *Modern Art Asia Selected Research Papers*. Cambridge, UK: Enzo Arts and Publishing. pp. 133-152.

Zhang, Y., 2004. *Mingtan zhidu yanjiu -mingtang zhidu de yuanliu* [Research on the Bright Hall System——The Origin of the Bright Hall System]. Doctoral Dissertation: Jilin University.