

The Principle of Capital Construction and the Location of the Palace Discovered through the Annotation of *Zhouli*(周禮)

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Abstract According to previous studies, the form of a city mentioned in *Kaogongji*(考工記) of *Zhouli*(周禮) does not exist in reality. Only Beijing during Ming(明) and Qing(清) Dynasties is discussed as an example, making it lose its worth as a theory. But of all the annotation of *Zhouli* throughout the 2,000 years before the modern era, core theory related to capital construction had never been stated from the aspect of the present day. Such discussion can be found depicted in *Yingzaofashi*(營造法式), a specialized book about architectural technology. Unlike what is known until now, the principle of capital construction has a link to the theory of Fengshui(風水), in that it implies the logic of ‘Yi(易)’.

Keywords: *Kaogongji* (Record of Trades), *Zhouli* (Rites of Zhou), *Yingzaofashi*, Fengshui, Yi

1. INTRODUCTION

Qing scholar Ruan yuan(阮元: 1764 ~ 1849) said, “When a person with a will reads a book, he/she should start from Confucian classics. And reading of the Confucian classics should start from Zhu(注)-Shu(疏).” This means reading scriptures without annotation is impossible. In particular, Confucian scriptures were consisted of language characters and history and culture of the Pre-Qin period; therefore, it is impossible to understand a single line if you try to read the original text without relying on annotation(傳注) of the past.¹ Still, the annotation of *Zhouli* has never been properly reviewed in relation to building a capital. In fact, there is a considerable gap between the conventional idea rigidified during the modern and contemporary eras and

the discourse formed during the premodern times.

The phrase “匠人營國，方九里，旁三門。國中九經九緯，經涂九軌。左祖右社，面朝後市，(市朝一夫。)” has usually gotten a lot of attention as it has usually been called ‘*Zhouli*(周禮) *Kaogongji*(考工記)’’. The interpretation of the phrase has a serious problem in that the result was essentially derived from analysis of the figure, *Wangchengtu*(王城圖). The differences between ‘discussion of the premodern era’ and the existing interpretation are as follows:

First, the square castle based on “方九里”: the shape of the castle was not discussed. Understandably, it has nothing to do with ‘天圓地方’. Here, “方” means the four directions(四方). In interpreting “方九里”, “方” is just a requirement for estimating the size and has no special meaning. The focus is on “九里”. If the scale of a castle is too large, it is unfavorable to defense; if it is the opposite, it is undignified for the ‘Son of Heaven’. There is a view that the castle of ‘Son of Heaven’ was actually 12li(里).²

Second, ‘flat lands’ as a site condition: as the shape of the castle is not discussed, such a premise does not exist. But in *Daisitu*(大司徒), “求地中” is discussed in relation with *Sangtaek*(相宅: looking for a site for a building).³

Third, grid roads based on “旁三門。國中九經九緯，經涂九軌。”: the road system on the basis of the three gates was an interpretation rigidified after the Tang Dynasty. But it was already disproved in the late Qing Dynasty due to a logical

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¹ SIM Kyeongho (2007) *Hanbagimun*, Hwangsojari, 230

² [Sun Yirang, 3423-3424, “匠人營國，方九里，旁三門。”]

³ [Sun Yirang, 715-716, “以土圭之灋測土深，正日景，以求地中。日南則景短多暑，日北則景長多寒，日東則景夕多風，日西則景朝多陰。”]

fallacy.⁴

Fourth, the location of the palace in the castle: It is not included in the original text. This is the topic raised while interpreting “左祖右社，面朝後市”. The symmetrical structure centering on the palace is not discussed. The phrase ‘The palace is at the center of a castle’ is just a premise derived from the process of interpreting “左祖右社，面朝後市”. It is not up for discussion.⁵ The real meaning of ‘中 (zhong: center)’ can be found in *Daisitu*(大司徒).⁶

Wangchengtu(王城圖), which worked as an analytical framework, is not a floor plan. It is an explanatory diagram, so it is hard to figure out the real meaning without understanding the backgrounds of the discourse. Furthermore, the meaning contained in figures is not limited to ‘匠人營國’. In fact, the discussion about capital construction is led by “惟王建國”. The key part of construction capital in line with the concept is suggested by “辨方正位”, a top level instruction. Therefore, details were discussed through the phrase ‘匠人建國’.

In other words, structural understanding should be preceded for entire understanding of *Zhouli*, and it is especially necessary to focus on the ‘view’ and ‘writing intention’ of annotators. Accordingly, this research figures out the logical structure that was formed for 2,000 years from the Han to the Qing Dynasties and tries to reveal the substance of the theory contained in the scripture. The literature, *Zhouli* as the most fundamental topics of East Asia urban history research, will serve as a standard to compare and analyze premodern urban areas.

2. METHOD OF LITERATURE REVIEW

(1) The Framework of Analysis, and the Start of the Research

Zhouli is estimated to have become a scripture around A.D. 8 when Wang Mang(王莽, BC.45 ~ AD.23) established Shin(新). And the basis for research on *Zhouli*(周禮) was formed when it was installed as a subject at academies. The interpretation of *Zhouli* became active with *Zhoulijiegu*(周禮解詁) by Jia Kui(賈逵, 30 ~ 101). The most representative among those is annotations made by Zheng Xuan(鄭玄, 127 ~ 200).⁷

The comments made during Han Dynasty are particularly called ‘Zhu(注)’.⁸ Zhu(注) only interprets scripture(經); however, Shu(疏) also provides interpretation about Zhu.⁹

Zhu by Zheng Xuan was understood through Shu by Jia Gongyan(賈公彥) of the Tang Dynasty. It is estimated that research into *Zhouli* made great strides in the Qing Dynasty. A collection of the research is *Zhoulizhengyi*(周禮正義) by Sun Yirang(孫詒讓, Qing, 1848 ~ 1908).¹⁰ This research used annotation by Sun Yirang(孫詒讓) as a starting point in that it acts as a bridge between the pre-modern era and modern and contemporary eras.

A standard for reviewing and comparing interpretations is vital in figuring the consistent flow of interpretation. Annotation of Jia Gongyan and Sun Yirang is required reading for research into *Zhouli*. Both scholars annotated *Zhouli* based on Zhu by Zheng Xuan. This does not mean that the interpretation of Zheng Xuan was accepted as it is. The topic cannot be identified without relying on Zhu. This research also follows the methodology of the past. The significant position of Zhu by Zheng Xuan holds in the scholastic heritage can be understood within the following context.

First, *Zhouli* is passed down only in the Old Text(古文: the writing used before Qin). The Confucian scriptures were almost lost due to the burning of books by Emperor Qin(秦). When Confucianism had its renaissance in the Han Dynasty, various Confucian scriptures previously carried on oral tradition were recorded in the contemporary New Text. At the time of Wudi(武帝), the scripts written in the Old Text were found in the old house of Confucius. Following this, the debate between the two schools became the core of the Confucian Classics during Han Dynasty.¹¹

Second, Zheng Xuan is evaluated as the Compiler of the Confucian classics during Han Dynasty.¹² Zheng Xuan integrated the two theoretic positions into one through an eclectic combination. This means that Zhu by Zheng Xuan was the product completed through a comprehensive understanding of multiple Confucian scriptures. The scholastic lineage for two thousand years had actually followed the tradition.

Third, Zheng Xuan, a follower of Old Text Confucianism, pursued *Zhouli* in annotating ‘Sanli(三禮)’.¹³ While *Zhouli* takes the form of a codex, it may be an evaluation as the whole of knowledge covering each social field. This means that *Zhouli* has become the standard for integrating the Confucian scriptures as a model for the pre-modern academic system. Such a scholarly style was received without holding a different view from the Tang Dynasty to the Qing Dynasty.

⁴ [Sun Yirang, 3425-3426, “國中九經九緯，經涂九軌。” : 3475, “經涂九軌，環涂七軌，野涂五軌。”]

⁵ [Sun Yirang, 3428, “左祖右社，面朝後市。”]

⁶ [Sun Yirang, 721-722, “日至之景尺有五寸，謂之地中，天地之所合也，四時之所交也，風雨之所會也，陰陽之所和也，然則百物阜安，乃建王國焉，制其畿方千里而封樹之。”]

⁷ Yugyodaesajeonpyeonchanwiwonhoe (2007) *Yugyodaesajeon*, Sungkyunkwan, 2039

⁸ KIM Yongog (2009) *Noneohangeulyeokju I*, Tongnamu, 194

⁹ SIM Kyeongho (2007) *Hanhangipmun*, Hwangsojari, 239

¹⁰ Yugyodaesajeonpyeonchanwiwonhoe (2007) *Yugyodaesajeon*, Sungkyunkwan, 2041

¹¹ Yugyodaesajeonpyeonchanwiwonhoe (2007) *Yugyodaesajeon*, Sungkyunkwan, 132-133-286-287

¹² Yugyodaesajeonpyeonchanwiwonhoe (2007) *Yugyodaesajeon*, Sungkyunkwan, 109-1970

¹³ Yugyodaesajeonpyeonchanwiwonhoe (2007) *Yugyodaesajeon*, Sungkyunkwan, 2037-

(2) The Issue within the Study of Confucian Classics, and the Way of Reading Zhouli

Zhouli(周禮) is consists of six sections; Tianguanzhongzai(天官家宰), Diguansitu(地官司徒), Chunguanzongbo(春官宗伯), Xiaguansima(夏官司馬), Qiuguansikou(秋官司寇), Dongguankaogongji(冬官考工記). It is also called Zhouguan(周官), or Zhouguanjing(周官經) because it describes each government post and their duty. Among them, Kaogongji(考工記) was added later during Han Dynasty, in replacement for the lost Dongguansikong(冬官司空). Zhouli(周禮) had been a subject of debate for authenticity(真偽) in its name, author, details of its emergence, and the structure. However, it is only argued by the New Text Confucianism(今文學派).¹⁴ There could be a room for controversy, but the question of authenticity is hardly the issue of the study of Confucian classics.

The important issue to note in the study of Confucian classics lies in the guideline described in every section of Zhouli. The full text, “惟王建國，辨方正位，體國經野，設官分職，以為民極。” states the purpose of the formation of six departments(六官), as shown in <Figure 1(A)>. But Kaogongji(考工記) discusses six positions of the state instead. It states that every master's duty is related with other five, and was one of that system. That is to say, the five phrases are the super ordinate concept that embraces six departments(官).

According to the pre-modern discussion, there is the logical relation as shown in <Figure 1(B)>. The discussion originated from Zheng Xuan's interpretation of “惟王建國”. The crucial point lies in “設官分職” and “以為民極” at the end of the phrase. Particularly, “以為民極” concluding the sentence was the beginning of “建國”. The king founding the state and ruling it is to realize “以為民極”, and “以為民極” can be embodied through “設官分職”. Finally, “設官分職” was originated in “體國經野” and thus Zhouguan(周官) was formed.

But the building of the capital had to precede before “體國經野，設官分職”. This means that the true meaning of “建國”, “惟王” as its key driver, lies in the building of the capital. The essence of building the capital was discussed by “辨方正位”, as the task for achieving “建國”. In the study of Confucian classics, “辨方正位，體國經野” was viewed as the major subject of argument of the lost Sikong(司空). The interpretive basis for “辨方” and “體國” is the full text of ‘匠人建國’ and ‘匠人營國’ each. “經野” is related to ‘匠人為溝洫’ in interpreting.

The order of priority of the guideline follows the order described in “惟王建國，辨方正位，體國經野，設官分職，以為民極.” Therefore, the subject of Sikong follows the order of ‘匠人建國’·‘匠人營國’·‘匠人為溝洫’. Here, one may assume why the crucial part of capital construction was discussed in ‘匠人建國’. The main point of the issue is to clarify the

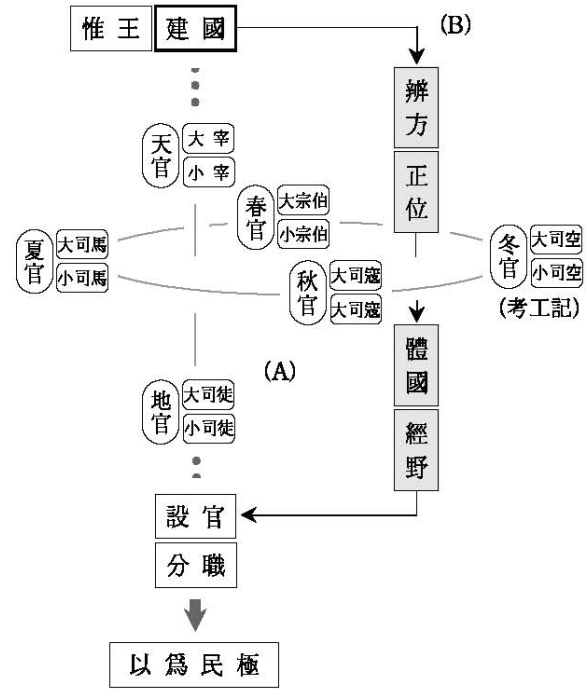


Figure 1. Five achievement goals of Zhouli (KANG Seoyeon, p.15)

specific object of discussion and the true meaning according to the logical relation.

(3) Introductory Remarks

A line should be drawn between the original text and its interpretation. This is because usage of the same characters varies by time and the original intention can be changed with layers of annotation with time. Accordingly, this paper sets up principles as follows:

First, double quotation marks(“”) are used for phrases from the original text, preventing confusion.

Second, if necessary, single quotation marks(“”) are used for phrases from the original text quoted in annotation, interpreted contents, lexical meaning, etc.

Third, but the full text of “匠人建國” is simply denoted as ‘匠人建國’ and that of “匠人營國” is denoted as ‘匠人營國’, avoiding complexity.

Fourth, the source of phrases from the original text is cited with this form: [annotator, page, “phrases from the original text”]. In terms of repeated use of the same material, this paper does not duplicate the title because it is included in the reference with great detail.

3. DISCUSSION OF CAPITAL CONSTRUCTION

(1) The Beginning of Discussion, “惟王建國”

Wangcheng(王城) by Nie Chongyi(聶崇義, Song), well known as an example of Wangchengtu(王城圖), is one of the figures related to ‘Gongshi(宮室: palace and temple)’

¹⁴ Yugyodaesajeonpyeonchanwiwonhoe (2007) Yugyodaesajeon, Sungkyunkwan, 2037

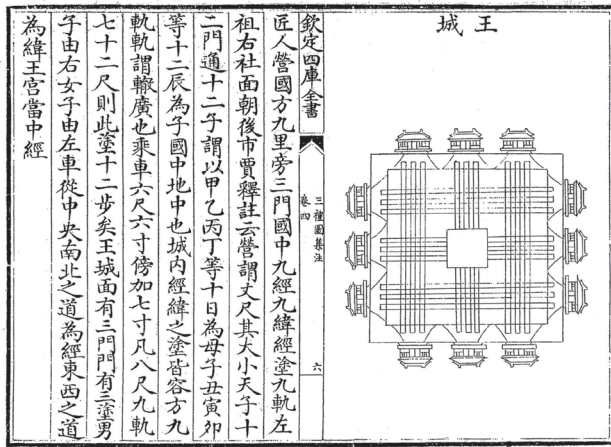


Figure 2. Wangcheng of Sanlitujizhu

from Volume 4 of *Sanlitujizhu* (三禮圖集注). As shown in <Figure 2>, the phrase of ‘國中地中也’ stands out in the middle of the explanation on *Wangcheng*, which is neither a phrase of *Jiangren* (匠人) nor a related annotation.¹⁵ Nie Chongyi added in ‘宮室第四’ of Volume 20 that the phrase was associated with “惟王建國” written at the beginning of *Tianguan* (天官). The part is as follows:¹⁶ ‘……天官序云惟王建國注云周公居攝而作六典之職謂之周禮營邑於土中……’ ‘注’ in here refers to the annotation of Zheng Xuan (鄭玄). This is a clue for understanding how Nie Chongyi (聶崇義) wrote the phrase of ‘國中地中也’. The full text of the annotation that Zheng Xuan put to “惟王建國” is as follows:

建，立也。^(a)周公居攝而作六典之職，謂之周禮。^(b)營邑於土中。^(c)七年，致政成王，^(d)以此禮授之，使居雒邑，治天下。^(b)司徒職曰：「日至之景，尺有五寸，謂之地中，天地之所合也，四時之所交也，風雨之所會也，陰陽之所和也，然則百物阜安，乃建王國焉。」

In the interpretation above, ‘司徒’, the source of ‘地中’, refers to the official title ‘*Daisitu* (大司徒)’. The sentence in *Daisitu* starting with ‘日至之景’ discusses the definition of ‘地中’, specifying the characteristics of ‘地中’ with the phrase ‘然則百物阜安’ meaning ‘therefore, all things are flourishing and at peace’. After all, the sentence that ends with ‘乃建王國焉’ suggests that “惟王建國” by Zheng Xuan was committed to the words of ‘*Situ* (司徒)’. Earlier on, Zheng Xuan mentioned ‘營邑於土中’ (b). A saying in *Shuowen* (說文) mentions ‘邑 (yi) is 國 (guo)’ therefore, the meaning of ‘營邑’ would be eventually the same as “建國”. Thus, following texts after ‘司徒職曰’ are additional explanation of ‘營邑於土中’ in terms of the writing’s logical composition. ‘國中地中也’ by Nie Chongyi states the key information. Then what does ‘周公居攝而作六典之職謂之周禮’ quoted with ‘營邑於土中’ have to do with ‘王城’?

Zheng Xuan defined “建國” as ‘周禮(a: 周公~周禮)’ and ‘營邑(b: 營邑於土中)’ through the lexical meaning of “建” with dichotomous logic. Presumably, ‘Zhouli mentioned by Zheng Xuan’ is limited to ‘Zhi (職) of Six Dian (典)’.¹⁷ However, scholars in the later years expanded the meaning of ‘Zhouli of Zheng Xuan’ into ‘Zhili (制禮: system and rites) and regency of Zhougong’. In the same context, ‘以此禮授之, 使居雒邑, 治天下.’ by Zheng Xuan suggests the sequence of events around “建國”. In the seventh year of his regency, Zhougong returned the governing power of Chengwang (成王). ‘So’, Zhougong, ‘in upholding Li (禮: model),’ had Chengwang first ‘dwell in Luoyi’ and ‘rule the whole world’ (c: 七年~天下). ‘居雒邑’ in here is just part of ‘治天下’. It does not mean ‘in upholding Li (禮); dwell in Luoyi’. This sentence is an additional explanation of the two previous sentences (a·b), but in this context, it is hard to think that ‘Li (禮)’ covers ‘Luoyi’. However, scholars in the later years considered ‘Zhou gong’s rites interpreted by Zheng Xuan’ to include “建國 (meaning Luoyi)”.¹⁸ They viewed ‘營邑於土中’ as a part of ‘周禮’.

Especially, *Wangcheng* as a ‘Zhouli’ refers to a specific name of the place. It is a Luoyi constructed in the north of the Luoshui (洛水), according to a divination by Shaogong (召公). There is a documentation that Luoyi is Chengzhou (成周), but there already was a Chengzhou in the east of Chanshui (澗水). Wuwang (武王) transferred the capital from Feng (豐) to Hao (鎬), which became Zongzhou (宗周). Chengzhou is a Luoyi, made Xiadou (下都: second capital) after destruction of Shang (商) by Wuwang. Why did Luo (洛) draw so much attention? It is because the location of Feng (豐) and Hao (鎬), which was lopsided Westward, required politico-economic balancing. However, ‘營邑於土中’ by Zheng Xuan means only *Wangcheng*.¹⁹ So, what is the meaning behind the construction of the new Luoyi?

‘土中’ is the result of Sangtaek (相宅). It defines whether the land is suitable to be a capital, in relations to the Jiuzhou (九州: the territory of the country)-Daoli (道里: the road)-Xingshi (形勢: the shape of the land and topography). After all, ‘土中’ and ‘地中’ mean one and the same, but there is a subtle difference in the meaning. The *Zhouli* says that, ‘日至之景, 尺有五寸’ refers to ‘地中’. ‘日至之景’ refers to the Sun shadow measured in Luoyi during the summer solstice. ‘尺有五寸’ means that when an 8-foot-long pole was erected in ‘土中’ to observe the shadow, its length was 1.5 feet. The length of the sun shadow must vary according to the time and region in which it is measured. Based on the figure of 1.5 feet, the commentators estimated the location of *Wangcheng*. With this, ‘the quoted *Situ* (司徒)’ demonstrated the validity of the sentence: ‘*Jianguo* (建國) is namely the construction of Luoyi’. Furthermore, the figure

¹⁷ [Sun Yirang, 9, “惟王建國”]

¹⁸ [Sun Yirang, 9, “惟王建國”]

¹⁹ [Sun Yirang, 11, “惟王建國”]

¹⁵ [Nie Chongyi, Vol.129(I)-58, “王城”]

¹⁶ [Nie Chongyi, Vol.129(I)-278, “宮室第四”]

of 1.5 feet was the mark that indicated ‘地中’ as a model for capital construction.²⁰

(2) “辨方正位” as the Crux of Capital Construction

Zongshi (總釋) of *Yingzaofashi* (營造法式) records historical researches related to architectural terminology. One can find the following phrase from *Zhouli*:²¹

定平

周官考工記匠人建國水地以垂

取正

周禮天官惟王建國辨方正位

考工記置槩以垂視以景為規識日出之景與日入之景夜考之極星以正朝夕

‘定平’ and ‘取正’, considered to be architectural terms, are classified as ‘壕寨制度(Haozhazhidu: system of trench and city wall)’ in the body of the writing. ‘考工記’ of ‘定平’ and ‘取正’ in phrases above are phrases from ‘匠人建國’, meaning that ‘匠人建國’ was interpreted with two viewpoints. Of the two, it is obvious that ‘置槩~朝夕’ is the core part because it is in line with ‘惟王建國辨方正位’ in terms of meaning. It can be expected that the phrase has the crucial clue to interpret “辨方正位” and a logic in line with “惟王建國”. In order to understand general writing backgrounds, this research starts a discussion through “辨方正位”, a super ordinate concept. Zheng Xuan suggested a framework for interpretation of “辨方正位” as follows:

^(p)辨, 別也。鄭司農云: 「^(q)別四方, ^(r)正君臣之位, 君南面、臣北面之屬。」^(s)玄謂: 考工「匠人建國, 水地以縣, 置槩以縣, 視²²以景。為規識日出之景與日入之景。晝參諸日中之景, 夜考之極星, 以正朝夕」, 是別四方。^(t)召誥曰: 「越三日戊申, 太保朝至於雒, 卜宅, 厥既得卜, 則經營。越三日庚戌, 太保乃以庶殷攻位於雒汭。越五日甲寅, 位成。」正位謂此定宮廟

In the interpretation above, Zheng Xuan states that “辨” is ‘別’(p: 辨別也), which follows theory by Zheng Zhong(鄭衆) that defines “辨方” as ‘distinguishing the four directions(q: 別四方)’. Zheng Xuan added the full text, ‘匠人建國’, strengthening the meaning of Zheng Zhong’s statement(s: 玄謂~四方). Subsequently, Zheng Xuan tried to fine the original meaning of “正位” in *Zhaogao*(召誥) of *Shujing*(書經) (t: 召誥~宮廟). This is a different view on existing theory (r: 正君~之屬). The reason that quoting the phrase above to discuss “正位” is that the meaning lies in ‘攻位’ and ‘位成’. Zheng Xuan defined “正位” as ‘setting the palace and ancestral temple like this’, and Sun Yirang interpreted

the words of Zheng Xuan as ‘rectifying the places of palace and ancestral temple’. This coincides with “左祖右社, 面朝後市” from *Kaogongji*.²³

The discussion so far has one thing unclear. It is the logical relation between “辨方” and “正位”. Sun Yirang(孫詒讓) understood the essence of the discussion about “辨方正位” through Yan Ying(晏嬰: ? ~ BC. 500)’s *Chunqiu*(春秋). It is as follows:

The *Zaxia*(雜下) of the *YanziChunqiu*(晏子春秋) says: When Jinggong(景公) completed the new building of Baiqin(柏寢), Kai(開), a Yueshi(樂師: musician), said, “The building faces west.” Duke asked Daijiang(大匠: master craftsman), “Why did you build this building to face the west?” Daijiang answered, “The building was built with the Ju(矩) of Gong(宮).” So he called Sikong(司空) and asked, “why did you build Gong to face the west?”, Sikong answered “Gong was built with the Ju(矩) of Cheng(城).”

The above record draws attention in that it clearly states an important principle. The essence of the quotation is the sentence: “Gong(宮: palace) was built with the Ju(矩) of Cheng(城: castle).” Calling this “辨方正位”, Sun Yirang defined the concept as ‘setting the Ju of Cheng and the Ju of Gong.’²⁴ In other words, he grasped the link between “辨方” and “正位” as ‘Ju’ and fleshed out what was the previously unclear identity of “辨方” as ‘castle’. At the same time, he limited the object of discussion of “正位” to ‘palace’. Here, one can find the essence of capital construction.

Sun Yirang interpreted Yanzi’s words as ‘Ligong(立宮: building the palace) must correspond with the directions of Jianguo(建國: capital construction)’.²⁵ This refers to the principle that the directions of Jianguo must be decided before the place is constructed. This is adopted as the standard for palace construction. This means the actual purpose of “辨方” is ‘setting the Ju of the palace’. Sun Yirang, quoted *Shenshi*(慎勢) of *Lushichunqiu*(呂氏春秋) before discussing Yanzi. ‘Kings of the past built Guo(國: capital city) with selecting the center of Tianxia(天下: the border of four directions within the ruling district), and built Gong(宮: palace) with selecting the center of Guo, and built Miao(廟: ancestral temple) with selecting the center of Gong.’²⁶ This discussion only includes direction built on assumption of ‘Gong selects the center of Guo’. This means ‘Ju’, the logic of “辨方” implied. Then, what specifically is ‘Ju(矩)’?

The dictionary definition of ‘Ju’ is ‘a ruler in a right angle’ or ‘a right angle’. Ju as discovered by Sun Yirang refers to the horizontal and vertical relationship between land and architecture. This interpretation derived from

²⁰ [Sun Yirang, 725, “日至之景尺有五寸, 謂之地中, 天地之所合也, 四時之所交也, 風雨之所會也, 陰陽之所和也, 然則百物阜安, 乃建王國焉, 制其畿方千里而封樹之。”]

²¹ [Li Jie, Vol.673(I)-402-403, “定平”、“取正”]

²² ‘匠人建國’ describes it as “眡”. “眡” is the old character of ‘視’.

²³ [Sun Yirang, 12-13, “辨方正位”]

²⁴ [Sun Yirang, 12-13, “辨方正位”]

²⁵ [Sun Yirang, 3428, “左祖右社, 面朝後市, ”]

²⁶ [Sun Yirang, 3428, “左祖右社, 面朝後市, ”]



Figure 3. Zhu by Zheng Xuan on “左祖右社, 面朝後市” and its logical structure (KANG Seoyeon, p.21)

interpretation of “水地以縣” by Zheng Xuan, ‘於四角立植, 而縣以水, 望其高下。……’ Jia Gongyan(賈公彥) wrote ‘植(zhi) is a 柱(zhu: pillar); and ‘於四角立植, 而縣’ by Zheng Xuan is ‘於造城之處, 四角立四柱而縣’, First of all, it talks of “erecting four wooden posts(立四柱) at the four corners(四角)” where the castle was to be built (於造城之處). This indicates the structural requirement for successful architecture. Next, ‘and hang (而縣)’ means ‘hang it to measure the height and lowness’. This means that they got the wooden post right by marking the erected wooden posts with an ink line and thereby ensuring the level of water.²⁷ In other words, one gets the level of land from the level of water and goes from there to get the uprightness of the building.

Scholars viewed “水地以縣” and “置槷以縣” as the relationship as per Ju. The separate descriptions of ‘匠人建國水地以垂’ and ‘置槷~朝夕’ in *Yingzaofashi*(營造法式) refers to such a relationship. The two make an architectural process, and ‘周禮天官惟王建國辨方正位’ of ‘取正’ may be said to refer to ‘置槷~朝夕’ that implies ‘匠人建國水地以垂’. Meanwhile, one can find in the annotation by Zheng Xuan a clue for approaching “辨方正位” from the perspective of an architectural plan. Zheng Xuan interpreted “左祖右社, 面朝後市” as ‘王宮所居也。祖, 宗廟。面猶鄉也。王宮當中經之涂也。’²⁸ The purpose of the description can be grasped as shown in <Figure 3>. In other words, ‘祖, 宗廟。’ and ‘面猶鄉也。’ enlarge on ‘王宮所居也。’, and ‘王宮當中經之涂也。’ derives from the definition of ‘面猶鄉也。’. It means that since a palace is a space that continues from the hall of audience(朝), the palace should face the road that passes through the center of the castle. Here, ‘面’ refers to the manifested direction of Jianguo. Sun Yirang quoted *YanziChunqiu* for ‘王宮當中經之涂也’ by Zheng Xuan. He thought that “辨方正位” and ‘王宮當中經之涂也。’ by Zheng Xuan shared the same context.

(3) The depiction of ‘匠人建國’ and Mingtang

When we survey the organization of Volume 4 of *Sanlitujizhu*(三禮圖集注), its edition is interesting in that it reflects how space is understood and the system for perceiving space. The first thing noticed was that the

index begins with *Mingtang*(明堂) and ends again with *Mingtang*(明堂) as shown in <Table 1>. But, the last *Mingtang*(明堂) is tagged with the description: ‘此秦法故重出 This is an system of Qin Dynasty, so it appears repeatedly.’²⁹ Thus, *Mingtang* was viewed as the origin of space creation. By the way, of those images in Volume 4, those portrayed in the form of space are only ‘明堂’, ‘宮寢制’, ‘王城’, ‘九服’, ‘四等附庸’, ‘井田’, ‘溝洫’, ‘明堂’. The remaining ones are conceptual elements related to ‘宮室’. The latter comprehensive meaning may be assumed to some extent through the description of ‘明堂’, even if one does not bother to take a close look at each of them.

Table 1. *Gongshidisi* of *Sanlitujizhu*

1	明堂 <i>Mingtang</i>	8	禘禘樂 <i>Dixiale</i>
2	宮寢制 <i>Gongqinzi</i>	9	大宗子 <i>Dazongzi</i>
3	王城 <i>Wangcheng</i>	10	小宗子 <i>Xiaozongzi</i>
4	九服 <i>Jiufu</i>	11	四等附庸 <i>Sidengfuyong</i>
5	律呂 <i>Lulu</i>	12	井田 <i>Jingtian</i>
6	圓丘樂 <i>Yuanqiule</i>	13	溝洫 <i>Gouxu</i>
7	方丘樂 <i>Fanguile</i>	14	明堂 <i>Mingtang</i>

In Volume 20 ‘*Gongshidisi*(宮室第四)’, Nie Chongyi(聶崇義) defined *Mingtang*(明堂) as Tang (堂: hall) that enlightens Zheng(政: politics)斗 Jiao(教: edification), and quoted ‘明堂宗廟圓明以法天方堂以法地’ from Dongpingwang(東平王) of the Han Dynasty. Two issues are raised here. One is that *Mingtang* refers to Zongmiao(宗廟: ancestral temple), and the other is that *Mingtang* is related to ‘天圓地方’.³⁰ To examine the content of *Mingtang* in Volume 4, ‘天圓地方’, when understood in the context, indicates the logic of Yinyang(陰陽). Wushi(五室: five room) of *Mingtang* in *Mingtang*(明堂) of Volume 4 symbolizes Wuxing(五行). What moves Wuxing are Yin(陰) and Yang(陽).³¹ In other words, ‘天圓地方’ means ‘易’. This is the principle that is applied not only to ‘明堂’, but also to ‘路寢’ and ‘宗廟’.³² Such a logic was discussed with the phrase “置槷~朝夕” in ‘匠人建國’. Specifically, it corresponds to ‘取正’ in *Yingzaofashi*(營造法式). ‘匠人建國’, that is to say “匠人建國, 水地以縣, 置槷以縣, 眡以景。為規, 識日出之景與日入之景。晝參諸日中之景, 夜考之極星, 以正朝夕。” can be generally depicted as follows:

In ‘匠人建國’, attention is especially drawn to the phrase “置槷以縣, 視以景” related to “辨方”. It is to observe the shadow of a pole planted in the land in order to set the

²⁷ [Sun Yirang, 3416, “水地以縣”]

²⁸ [Sun Yirang, 3428, “左祖右社, 面朝後市,”]

²⁹ [Nie Chongyi, Vol.129(I)-55, “三禮圖集注第四”]

³⁰ [Nie Chongyi, Vol.129(I)-278, “宮室第四”]

³¹ [Nie Chongyi, Vol.129(I)-56, “明堂”]

³² [Nie Chongyi, Vol.129(I)-56, “明堂”]

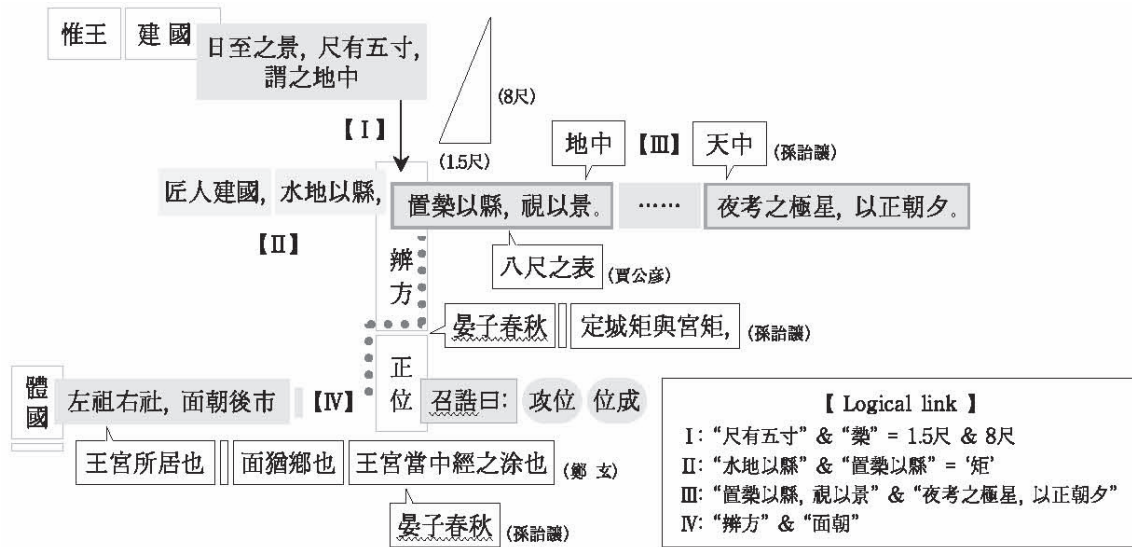


Figure 4. Interpretation of Jiangren according to “辨方正位” (by KANG Seoyeon)

right cardinal directions. To observe the shadow, the ground should be made even and a pole should be stood by spacing an ink-line. At sunrise and sunset, the length of the shadow is measured with a Gui(規: compass for drawing); when the directions of East-West are found, the directions of South-North can be found because the S-N directions cross at right angles with E-W. Furthermore, based on the length of the shadow in the middle of the day and the location of Polaris in the middle of the night, if you look at the directions of South and North, you will confirm if the directions of East-West are accurate.³³ (Refer to annotation by Jia Gongyan about “辨方”)

With referring to this, the annotations made by Sun Yirang(孫詒讓) can be reviewed to understand the original meaning hidden in ‘匠人建國’. Keywords and their meanings derived from Sun Yirang’s essays are as follows:

First, the sentence related to ‘天圓地方’ in Zhouli is “置槷以縣, 視以景。” in Jiangren(匠人). Here, scholars pay attention to the character of “槷”. Earlier, 3.1 of this paper says, ‘when an 8-foot-long pole was erected in Tuzhoong(土中) to observe the shadow’. “槷” refers to the ‘8-foot pole’. And this “槷” refers to ‘表(biao)’, the post of the sundial. Sundial is a basic tool that gave birth to Yi(易), especially “置槷以縣, 視以景。” represents Buyi(不易: unchanging).³⁴

Second, ‘天圓地方’ refers to the North East Asian method for observing the sky before the compass(羅針盤) was invented. In here, ‘the land’ is an unmoving ‘space’, whereas ‘the sky’ is continuously circling ‘time’. Therefore, it is said that there are four seasons in the sky, and four directions in the land. Modern-day scholars explain such observation method by comparing it to ‘transparent umbrella’ or calls

it ‘theory of Canopy-Heaven’. The tip of a transparent umbrella is the Polaris. An astronomical chart is a picture of stars going around in circles with the Polaris at the center of a tip of an umbrella.³⁵

Third, seeking ‘地中’ refers to seeking the center of the four cardinal directions of north, east, west, and south. In ancient China, they used the sundial to determine the center and the four cardinal directions of north, east, west, and south.³⁶ ‘地中’ is ‘天中’. To describe it in terms of 氣, ‘中’ can be explained with Yinyangwuxing(陰陽五行) and ‘沖和會合 concentration of Yuanqi(元氣) in once place.’³⁷ Furthermore, ‘地中’ is the center of heaven and earth. Zhouli described ‘地中’ as ‘天地之所合也, 四時之所交也, 風雨之所會也, 陰陽之所和也’. In this regard, Mei Gucheng(梅穀成) said, “Merging of heaven and earth means the combination of the Zhongqi(中氣) of earth and the Zhongqi(中氣) of heaven. Therefore, He(合) is not worried about the seasonal change and an intense heat or a severe cold. It gathers wind and rain or is not worried about the wind. Thanks to the Yin(陰)-Yang(陽) harmony, it has no worry about Yin(陰).”³⁸

Fourth, the most important phrase in ‘匠人建國’ is “夜考之極星, 以正朝夕。” ending the sentence. “正朝夕” in the last means ‘to look at Beichen(北辰), which is Jixing(極星).’³⁹

³³ [Jia Gongyan, 4-5, “辨方正位”]

³⁴ [Sun Yirang, 3416-3417, “置槷以縣, 視以景。”]

³⁵ Eo Yunhyoung-Jeon Changseon (2010) *The Way to Eumyangohaeng*(陰陽五行); Zhou Chuncai (2006) *The Illustrated Book of Changes*, 10

³⁶ [Sun Yirang, 715, “以土圭之灋測土深, 正日景, 以求地中。日南則景短多暑, 日北則景長多寒, 日東則景夕多風, 日西則景朝多陰。”]

³⁷ [Sun Yirang, 721-722, “日至之景尺有五寸, 謂之地中, 天地之所合也, 四時之所交也, 風雨之所會也, 陰陽之所和也, 然則百物阜安, 乃建王國焉, 制其畿方千里而封樹之。”]

³⁸ [Sun Yirang, 722, “日至之景尺有五寸, 謂之地中, 天地之所合也, 四時之所交也, 風雨之所會也, 陰陽之所和也, 然則百物阜安, 乃建王國焉, 制其畿方千里而封樹之。”]

³⁹ [Sun Yirang, 3419, “畫參諸日中之景, 夜考之極星, 以正朝夕。”]

East and west is the direction of which the sun rises and sets, but it is different with each season. Therefore, the east and west is determined by the stars in the night sky. There is the unchanging Polaris in the center of the stars, and the sky circles counter-clockwise. The north of the Polaris is the point of winter solstice(冬至), and the south is the point of summer solstice(夏至). The meaning of the phrase 'there are four seasons in the sky' is this. The polaris is '天中'. The land is a reflection of the sky circling with the Polaris as its center(象).⁴⁰ This is the starting point for Fengshui(風水).

Meanwhile, the sequence of '明堂'-'宮寢制'-'王城'-'九服' in *Sanlitujizhu* reminds the gist of *Shenshi*(慎勢) in *Lushichunqiu*(呂氏春秋). Namely, it represents the reverse arrangement of the concept of 'Guo(國: capital city) at the center of Tianxia(天下), Gong(宮: palace) at the center of Guo(國), and Miao(廟: ancestral temple) at the center of Gong(宮)'. Here, the location of Miao is at variance with as "Ancestral temple on the left (左祖)" as written by the Confucian scriptures or with the interpretation by Zheng Xuan that puts the palace as the subject. In North East Asia, the thoughts regarding the center is divided into Yin and Yang. One is the actual center, i.e., the locational center. This is called '火(fire)'. The other constitutes the center in terms of substance, that is, the qualitative center. This is called '土(earth)'. The two refer to Yin and Yang, respectively. The qualitative center does not mean its position at the center, but in terms of content, it is another center that contains everything in it.⁴¹ It seems as these kind of thinking have been reflected in the depiction of *Lushichunqiu* and the editing of *Sanlitujizhu*. The expression 'built Miao at the center of Gong' derives from such logic.

4. CONCLUSION

FangBao(方苞: 1668 ~ 1749) of the Qing Dynasty cited an ancient scholar's words in *Zhouguanbian*(周官辨) to read *Zhouli*(周禮) as a book that conveys the '易' and '春秋'.⁴² The conclusion drawn from this research is also not different from it. So, the fact(Interpretation) about the so far known fact(Original text) is not a fact(Principle).

This paper finds that the key thesis of capital construction is "辨方正位", and organizes the logical link that pivots on "辨方正位" as in <Figure 4>. Namely, it is the framework of the Confucian text which was completed based on the theory compiled by Zheng Xuan(鄭玄) of the late Han Dynasty. And its interpretation was concluded by Sun Yirang(孫詒讓) of the Qing Dynasty. According to the comment by Sun Yirang, the principle of capital construction may be traced as follows:

First of all, the role model for capital construction was defined with the grounds for interpreting "惟王建國". It is

the passage from *Daisitu*(大司徒): '日 至之景, 只有五寸, 謂之地中'. Here, the figure of 1.5 feet refers to the length of the Sun shadow which was measured at Wangcheng(王城) of Zhou(周). In other words, the location of Wangcheng is the result of Sangtaek(相宅). And the figure of 1.5 feet is Zhouli and afterwards became the indicator of Sangtaek(相宅).

Next, the kernel of capital construction is 'to decide the Jwahyang(坐向: a direction of which the building is facing) of the palace'. This was drawn from *YanziChunqiu*(晏子春秋) which was discovered by Sun Yirang. The relevant passage is "Gong(宮: palace) was built with the Ju(矩) of Cheng(城: castle)". Here, '矩' refers to the 'horizontal-vertical relation' of the building, so it means Jwahyang of the building. And this is the gist of "匠人建國, 水地以縣".

Finally, the principle of capital construction lies in the statement of '匠人建國' which penetrates "惟王建國, 辨方正位". That is, the passage of "置槷以縣, 眡以景." and later. The passage carries a logical link to *Daisitu*, the essence of which refers to Yi(易). This is the principle of capital construction as conveyed by *Zhouli* as well as the location of the palace.

Furthermore, the directions of Jianguo(建國) has links to "面朝". While '匠人建國' is interpreted in two points, it is a process of construction connected with '矩'. The same is true of the relation between "辨方" and "正位". "正位" can also mean "左祖右社, 面朝後市", so "辨方" and "左祖右社, 面朝後市" also is a relation of 矩. After all, because the direction of Jianguo(建國) is the same as 'Jwahyang(坐向)', the scenic characteristic of the capital is made visible through "面". It can be evaluated as a three-dimensional argument, rather than being a two-dimensional one.

REFERENCES

- 十三經注疏整理委員會 編, (2000) 十三經注疏: 整理本, 北京大學出版社
- Vol.7 ~ 9: Zheng Xuan(鄭玄)·Jia Gongyan(賈公彥), *Zhoulizhengyi*(周禮正義) 商務印書館 編 (1983) 文淵閣四庫全書, 臺灣商務印書館
- Vol.129(I): Nie Chongyi(聶崇義), *Sanlitujizhu* (三禮圖集注) Vol.673(I): Li Jie(李誠), *Yingzaofashi* (營造法式) 四庫全書存目叢書編纂委員會 編 (1997) 四庫全書存目叢書, 齊魯書社
- 續修四庫全書編纂委員會 編 (1995) 續修四庫全書, 上海古籍出版社
- Vol.79(II): Fang Bao(方苞), *Zhouguanbian* (周官辨) Vol.81(II): Shen Menglan(沈夢蘭), *Zhoulixue* (周禮學) Sun Yirang(孫詒讓) 撰; 王文錦·陳玉霞 點校 (2000) 周禮正義, 中華書局
- 國土開發研究院 編 (1982) 周禮考工記, 國土開發研究院
- KANG Seoyeon, (2016) *Rites of Zhou Core Values of City Building and Critical Review of Flat Conformational Analysis through Its Annotations, Journal of Architectural History* 25(3), 7-22.
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⁴⁰ [Sun Yirang, 3421, "畫參諸日中之景, 夜考之極星, 以正朝夕。"]

⁴¹ Eo Yunhyoung·Jeon Changseon (2010) *The Way to Eumyangohaeng*(陰陽五行)

⁴² [Fang Bao, Vol.79(II)-436-437, "周官辨惑八"]