

A Study on the Vernacular landscape Pattern of Nagan Walled Traditional Village(樂安邑城) in Suncheon

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Walled town was located on the axis connecting symbolic places, which was a feng-shui lucky place of a mountain sits to the rear and a body of water sits to the front. It represents environmental development of cultural space by blend of folk belief, religion, social system, administration facilities and living culture buildings. Therefore it is sustainable cultural view connected of formed or formless religious view and artificial view(wall, government buildings, living houses, and cultivated land so on) in a nature landscape. Environmental design technique, enlarging its meaning and value of living to mental level was founded from space composition and settlement, which was constructed organized space of government and residence area of walled town within the wall for looking for lucky place(from best, better, and good places) in order to construct ecological network(天+地+人, 山+水+方位+人, 地理+生利+山水+人心) by outlook of space and settlement.

Key words : Sustainable cultural view, Ecological network, Environmental design

1. Introduction

Korean town wall(the wall which enclosed government office and common housings in a local main town become a strategic point of traffic and military as the administrative center of local county and district in the Choson Period. There is a few urban facilities like public establishment and market place, And it is generally have a large scale and typical planned form compare with village formed spontaneously.

In connection with administration, religion and life, town wall became the traditional cultural space that had cultural variety and multiplicity of meaning. This study is going to take a notice of environmental stage(mountain + water + human being) such as location ,territory, cultural ecological aspect which related with components of scenery. As a methods of study in cultural landscape of the Nagan walled town(樂安邑城) ascertain the recognition of environment in our history by literature search, and analysis the

identity of cultural landscape in aspect of space structure in related to construction of space followed by geographical condition of village. and it will come to a conclusion through investigation of combine principal of environmental design and cultural environmental aspect.

2. Development of town wall and cultural view

2.1. Background of developing town wall

Town wall was a fortress, protecting local resident and taking a charge of military and administrative functions. Historically, town walls at were established in plains. Those of the period of three kingdoms were constructed on hills. In unified Shilla era, those were square shapes constructed on basins. In Goryo dynasty, they were made of mud in local town, and they were reconstructed to stone walls and enlarged in Chosun dynasty.

Korean capital city plan was based on 'Construction manual in CHOU book'(周禮考工記), therefore town wall plans were also carried on this basic rules. Location,

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direction, managing of surrounding landscape elements, and shape or naming of facilities was performed based on feng-shui and yin-yang prevailed since late Shilla dynasty. Location and natural landscapes were performed feng-shui and interior facilities were composed based on 周禮. Therefore both traditional principle of environmental plans were combined and applied¹⁾

2.2. Space structure and cultural view of town wall

As above-mentioned, exterior and interior systems of town wall were affected by feng-shui

and 'Construction manual in CHOU book', town wall is located as its front directed to south with northern main mountain on its back. With 'T' or cross shaped road system, arranged at north, markets were located in or outside of gate of town wall. Educational facilities such as school annexed to the confucian shrine or memorial hall for great scholar were arranged outside of wall, and also alters were located outside of wall. In south part of wall, there are annexes to government office and governmental or private houses.²⁾

Table 1. Space structure and cultural view of town wall

Division	Space structure and cultural view
Settlement Environmental design	Lucky place reflecting landscape beauty combined with nature, economy, community, and environment consisting settlement at main mountain regarding feng-shui as administrative, transport, military strategic place, a mountain sits to the rear and a body of water sits to the front, wind was broken by the surrounding mountains and had access to water, administration buildings, housings, culture land, and rear site
Territory and buildings	Buildings reflecting hierarchy, territory, and place such as religious ceremonial facility(totem pole, shrine and shrine tree, monuments for devoted son or wife, well governed monument, alter or local school annexed to confucian shrine, tombs etc.) educational facilities(local school or memorial hall for great scholar), recreational facilities(pavilion, village woods, hill behind of village, and pond etc.), administration or governmental facilities(official inn, administrative buildings, wall), living facilities(living house, well, laundry place, village yard, road, rice paddy just in front of village)
Village road	The road verges on the village (ridge way), an entry road to the village(entrance of town wall: arbor tree, totem pole, the altar for a tutelary deity, A tombstone to the memory of dutiful son, and faithful wife, monument for good government
Ecology	Environmentally friendly eco-space(warm in winter and cool in summer) such as location, direction, consideration of micro-climate(pond, reservoir, stream, waterways), use of natural materials(dust, stone, wood), water permeable pavement
View	View opened from inside to outside and closed view from outside to inside, gate tower or pavilion, environmental psychologically stable view point, beautiful view such as 8 beauties, play and folk belief, and so on

3. Case study of Nagan walled traditional village

3.1. Construction

Nagan walled traditional village is well-known as lucky place according to feng-shui. As strategic place of military and geography, it was typical walled traditional village constructed by government for protecting from Japanese invaders. It is located south of Gumjeon mountain. as its main mountain and forward to south-west. It is

located at basin surrounded by Jaesuck mountain on its east and Baki mountain on its west. Circumference of the wall is 1,406m, height is about 3.5~4.5m, width is 2~3m, and there are 3 gates. It is some elevated on north-western part of it and rectangular shape, longer in east-west axis. Wide plains are open in its south.

In 1397 at Taejo era of Chosun dynasty, Kim, Bingil, initially constructed mud wall. In 1626 at Injo era, Im, Kyungup, as county governor, reconstructed as stone wall. Governmental buildings and three villages were combined as

walled village. There are total 108 households

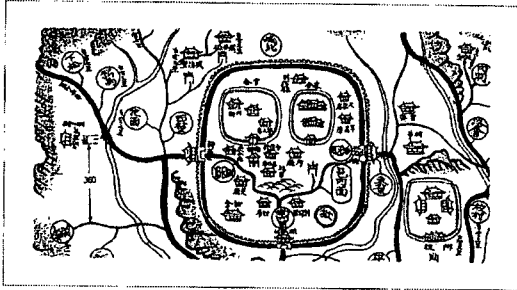


Fig. 1. Nagan walled town old map

consisted of 78 households of 41,018 pyong inside and 30 households of 26,472 pyong outside of wall. Ceremonial facilities, Sajikdan (社稷壇), local school, Sungwhangdan (城隍壇), Ryodan (alter for the dead) were arranged outside of wall. Sajikdan is at west, Ryodan is at north, and local school is at east. Sungwhangdan is located at Jaesuck mountain, its main mountain. Which is just follows the principle of 'Construction manual in CHOU book'.

This village is designated as historical landmark 302 in 1983 the first in Korea. There are 6 government buildings, 4 towers, and 231 private houses. Nine living houses among them are important folk materials, official inn which is the province designated tangible cultural properties, pavilion for the general Im, Kyungup's monument is cultural material, and also 15 old trees are existed as local monument. In October 2002, the committee of Chonnam province cultural property requested it as tentative list for world cultural heritage.

3.2. Space composition and cultural view

3.2.1. Space composition

Space composition of Nagan walled village is as followed. A ginkgo nut tree is center of village and main road, connecting east gate and west gate. There are government buildings such as official inn or administration building on north of and private houses are on the south of main road. This village named as Nagan because it gives a comfortable and warm feelings as in mother's arms. Village roads are T shaped. Market is located on its center, which functioned as centripetal point for meeting. Main road is living road which connecting in and out of village. The

road to south had formal function Streets connected to main road as bow shape, narrow streets of Y shapes are functioned as approaching road to living houses regarding easy approach and privacy.

Village divided to rear land, residential area, cultivated area. It reflects the current of facing sky as follows the axis and rank, which presents symbols transfer from secular to holy. Rear land is mountain behind the village, act as symbol, windbreak, scenic forest, tomb for ancestors, folk belief, and practical area providing living materials, fire woods, and water reservoir. Residential area is located at plain land feel open, Accordingly cool south-eastern breeze blow in summer and also it controls cold northern wind in winter. It regards privacy and is decided by geomantic aspects. Therefore it should be a safe and well-lighted space. Cultivated area open wide in front of south wall is divided to fields in front of gate or in the distance along stream. Subsidiary food crops were planted on front field and rice planted largely on distant field.

3.2.2. Symbolic view

Aspect of Nagan in feng-shui look like 'a lady put on makeup for waiting a general' or 'sailing ship'. A lady, Oknyebong, put on makeup with letting down her hair for waiting a general, Jangkunbong. It is told that it could be very lucky if it has ship equipment such as rudder, sail, anchor, and oar. For maintain this condition, natural landforms were used or many trees were planted. Ginkgo in center of village have been symbolized as sail of ship, Ginkgos planted both sides of center Ginkgo have been symbolized as anchors which make the ship balanced. Also big old trees around the wall were symbolized as oars. For this reason, digging wells have been restricted and naturally spring out wells should be bail out.

Dongcheon, flowing around outside of east-side wall, functioned as moat. There are stone dog statues in front of stone bridge at east gate. They were created against the rugged spirit of Obong mountain. Particularly, There are 8 beautiful views in great Nagan area.

There are several folk performances transmitted. Shamanist service in shrine(堂山祭) wished safe and abundance of village. Tug of war using great rope wished abundance. Folk-play was played at

mid July by the lunar calendar traditional farmer's band performance. Three villages have their own Shrine and Shamanist service. Shamanist service progressed in order of middle shrine top shrine lower shrine well shrine tree totem pole signifying prayer for a good harvest along with band performance.

3.2.3. Cultural view

Walls are little elevated on north-western side, rectangular shape of longer in east-west axis. Its circumference is 1,406m, which is 460m, 340m, about 310m each on its south, north and east or west sides, respectively. Its height is ranged from 3.5m to 4.5m and width is from 2m to 3m. Total inner space of wall is 41,018 pyong. There are 3 gate towers and moat was constructed around from east to south. Width of wall is 7 to 8 meters in bottom and 2 to 3 meters in upper most. Wall is piled up with big talc in bottom and small stones to upper side.

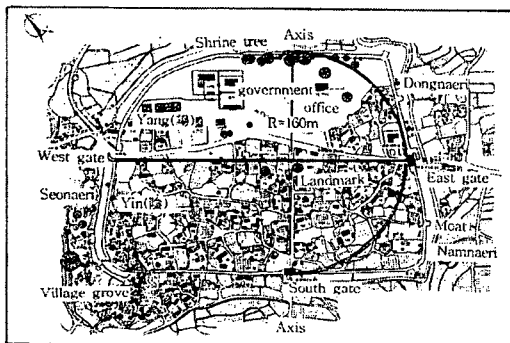


Fig. 2. Nagan walled town cultural landscape

The highest ranked government buildings(6 government buildings and 4 towers) are located on north with Gumjeon mountain on their back. Official inn is located on its center and main office and shaped official residence are located on its west. Local government buildings such as Nakmin pavilion and so on are views of administration area.

There are three villages and 231 private houses with 108 households as 78 households inside and 30 households outside of wall. Nine living houses 3 houses from each village are designated as important folk material. Living houses(mostly mid-size or small-sized farm residence types with front yard and family garden) are straw thatched houses which resembled natural landform. Low

stone fence divides inside road with naturally curves and present scenic beauty of local view combined with ivy, pumpkin vines, and trees.

There are scattered 32 big old trees such as *Ginkgo biloba* on its central axis and so on. Fifteen trees are designated as local monument; three *Ginkgo biloba*, six *Celtis sinensis*, a *Zelkova serrata*, three *Aphananthe aspera*, and two *Carpinus laxiflora*. *Ginkgo biloba* on the central point of village symbolizes the sail of ship and *Celtis sinensis* behind of official inn, *Aphananthe aspera*, *Carpinus laxiflora* around the wall symbolize the rudder and oar. Bamboo forest and village woods on the north-west side of village were created for windbreak of west-north wind during winter season, which promote comfortable of living.

There are 5 dolmens outside of east gate, it means the villages were existed since prehistoric age, Dogs were regards as guard house and protect from sundry evil spirits. Two stone dog statues are existed in front of plate stone bridge outside of east gate, which were created against the rugged spirit of Obong mountain according to feng-shui.

Cross bridge performance as many as his or her age was performed on plate stone bridge out of east gate across the moat on the full moons day of lunar January. People believe this performance could make their leg healthy during that year. Moat is compromised stream created with using natural stream. Water flows from streams of northern Gumjeon mountain and eastern Shae mountain valley, runs through east side of wall and run out from south gate. It flows along plains and joined with Seocheon river then run through the front of Oksan mountain and enter into ocean. This Moat's length is 596 meters with 3 meters of width, from 1.5 to 2 meters in depth. It has functions of invader preventing and appease the rugged spirit of Myalak mountain by S shaped stream which symbolize soften the rugged spirit.

There are wells of 1 meter deep on center of each village. They maintain their water level even at drought. Well at Namnaeri(south village) called as big well because county governor use it. From long ago, a legend, water of this well make people gentle mind and good appearance, was handed down. Well ceremonies were hold on lunar January fourth at Namnaeri and great full moons day of lunar January at Dongnaeri(east village).

Classification	Techniques of environmental plan and vernacular landscape pattern
Object of plan	Settlement which reflect the system of universe and beauty of combined heaven earth and human being and idea of land admire, Organic settlement which respect principal of ecological balance(yin yang, mountain + water + declination + human being) Practical + ideal = management of healthy and sustaining living place. Pantheistic view of nature + land, Physical + mental wealth = reflection of life immortality idea)
Concept of plan	Construction of democratic environment by government and civil union. and plan of space which reflect land capacity, Real view(nature) + symbolical view(space for religious ceremony) + artificial view(town wall village) = cultural range of wide range, Existence(residential place, cultivated land)
Location	Calm valley on axial line of main mountain and morning mountain, Good place with gentle gradient. Settlement of combine(nature + economy + community + environment), ideological good place + practically suitable place. A mountain sits to the rear and body of water sits to the front.. Bright living place with secure.
Utilization of land and the line of flow	Residential land + cultivation land + rear land. Dong, Seo, Namnaeri, United space management of village road + stream Continuous system of adequate development and conclusion in dynamic space by blending motion and emotion . Government building, attached building, private house....etc according to the order of rank in master and servant discriminative utilization of land. use of land by check and balance, line of flow system which reflect capacity and branch shaped village road
Residential form	Energy saving house and village considering geographical features and water stream, landscape. Tile-roofed house and straw thatched roof house constitute higher class, middle class, lower class housing in order, exposure of house, view, adjusting environmental condition, structure of house combine interior and exterior
Ecology	Construct wide range of environmental network of ecology connecting natural green belt to living place. ecological landscape + village, which are well harmonized with, ecological capacity, natural habitat, track, environmental forest, water, rock, tree
Territory	Territory indicator inside and outside of village(natural environment, place for religious ceremony, village forest, well, village wall, pavilion. etc.) Specialized zone like private home, facilities for religious ceremony, school, cultural convenient facilities for living and culture
Culture of education	Management of school(local school annexed to the confucian shrine, village school house) and elegant and convenient living culture facilities, Standard of confucian idea of scenery
View	Complete view of combine inside yard + outside yard, inside garden + outside garden, and nature landscape + symbolical landscape artificial landscape., Manage of viewpoint in landscape balanced view (eye patch) of environmental psychological and pavilion. Establish a symbolic landscape, manage the wide range of view, native folk view, like Nagan 8 beautiful views
Community	Identified village territory as a boundary factors like village wall, totem pole, pole signifying prayer, village grove and embodiment of public community Cooperative community program like accompaniment fraternity, market place, cooperative farming team, festival, ceremonies of coming of age, marriage , funeral and ancestral worship Construction of self-sufficient public community united of peoples in diverse classes

According to feng-shui, walled town village is look like ship. Local agreement prohibits digging deep wells, because digging well was like drilling a hole on bottom of ship. Therefore water should be bail out from these wells, because these water

symbolize the water on the bottom of ship and which was believed to make Nagan safe.

Human and pole shaped totems were erected both side of entrances on east, south and west gate. Totem ceremony has been hold every lunar

direction, managing of surrounding landscape elements, and shape or naming of facilities was performed based on feng-shui and yin-yang prevailed since late Shilla dynasty. Location and natural landscapes were performed feng-shui and interior facilities were composed based on 周禮. Therefore both traditional principle of environmental plans were combined and applied¹⁾

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January. In old days, human shaped totems were erected in line, so it called as totem street. Pole shaped totem(duck or wild goose on top of each pole) was derived from belief of wild goose, messenger of sun god, introduces dead soul to heaven. Duck, lays many eggs, symbolizes abundant harvest without drought and prevent from fire.^{3),4),5),7),13)}

4. Conclusion

Forming a village, Korean walled town furnished with military and administrative space based on the principles of 'Construction manual in CHOU book'. Nagan walled town also used this bases and feng-shui or yin-yang were applied for location, direction, landscape, shapes, naming, and meaning of facilities. That is to say location and landscape were based on feng-shui, and create of interior was based on principles of 'Construction manual in CHOU book'. The effect of sense of value temperance to nature and consideration of environmental order introduce design principle of place prosperity than people prosperity.

Forming asymmetric space of harmony between government facilities and private house, Nagan walled traditional village established their own cultural view by combining folk belief and social system. Territory, divided by 3 town, with landmark of inside road in village, become self sufficient space in secure. And it become a dynamic space with blending motion and emotion contained many cross-linking of environmental planning factors like in selection of government building and private home in order of rank, introduction of landmark which emphasize territory and identification, reflection of rhythmical beauty that provide psychological tension-relaxation-buffer-relief followed by movement of line of flow and vision, and introduction of view indicator emphasizing territory and identification, setting a view point of landscape so enjoy a natural and cultural view as a foreground landscape, middle ground landscape, long distance landscape

Living houses and walled town have practical inner or outer yards changed to nature and inner or outer yards nature itself. They also have waterscape presenting methods for pond, moat, management of village woods or towered pavilion, management of great views like 8 beauties of

Nagan. Environmental design principles of landscape aesthetics reflecting religious or natural sense and symbolism were affect to practical standard such as Shrine tree or pavilion tree.

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