Where Is North? Directionality in Precolonial and Colonial Land Surveys in Korea, 1897–1918

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Abstract: We take the cardinal directions for granted, but they are social constructs. Directionality is relative to how we locate central points, and these choices reflect a sense of direction in a society. This article illustrates how the notion of "center" changed in Korean society by comparing land registers of the Korean Empire (1897–1910) and the Japanese colonial period (1910–45). The colonial government prioritized mapping with scale, contours, and cardinal directions. As a result, the entire country was mapped to conform to a procrustean order. By contrast, there had been no cadastral map for centuries prior. Instead, the location of each parcel was described in textual information with four cardinal points. The author argues that fundamental difference between the two notions of "center" lay in the consciousness of the relationship between the human and the natural. The difference was expressed through the contrast in their respective conformity and flexibility, standardization and diversity.

Keywords: sense of direction, land registers, land survey, mapping, indigenous knowledge

Maps have taken many forms. More recently, paper maps have given way to the convenience of maps on digital devices. Despite these changes, the use of cardinal directions remains central to all maps. They are especially useful for finding routes to unfamiliar places. By determining the cardinal directions, one can ascertain the exact path to a destination. This awareness then takes for granted the cardinal directions as a fact of nature, directly observed through scientific measurement. We should realize, however, that this bearing system is also a social construct.

There are, of course, commonsense definitions for each direction. One might think of "east" as the direction of the sunrise, but this notion tells us *what* "east" is, not where. The earth is spherical, and there are no starting or ending points. What is east can also be treated as west. If we can communicate effectively with cardinal directions, it is because a commonsense point of reference is already implied. Take, for instance, how we understand the positions of north and south. Current cartographic conventions set north on top, which looks natural to us, but even only a century ago, numerous maps, especially in Asia, used "south-up" conventions.[1] In other words, current conventions of directionality have been formed by conscious effort and motivated by specific intentions.

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The eighteenth and nineteenth centuries saw significant developments in measurement practices, many of which were promoted by Western imperialism. There were several attempts to develop a common standard for a new age in the world. The French Academy of Sciences desired to create universal standards of measure and, for instance, established the meter as one ten-millionth of the distance from the North Pole to the equator "for all people, for all time" (Alder 2002: 1). Many such new standards were eventually adopted universally. The Japanese acceptance of the Western clock in the nineteenth century is a good example. Since Western timekeeping was entirely different from existing Japanese practices, Japanese users had to study its mechanisms and practice it repeatedly before it could be fully implemented (Frumer 2014, 2018). In Siam, new cartographic methods were adopted over twenty years in the late nineteenth century. Although Siam had its own methods of mapping, they were not legible to European powers such as France and England. In the end, however, Siam reluctantly adopted Western cartography to negotiate its territorial claims with Western powers (Winichakul 1994). The time difference between the initial introduction and full implementation is a kind of buffering.

The Japanese and Siamese cases show how difficult the adoption of unfamiliar standards could be, even when the process was considered necessary. Both endeavored to grasp new principles and practiced them repeatedly, but it took a long time for their acceptance to be seen as natural. During this process, previous customs were cast as relics of ignorance, and they ultimately disappeared from everyday usage. Unlike Japan and Siam, which adopted new conventions with their political autonomy intact, the radical transformation of Korea occurred within a few years under Japanese colonialism, armed with the tools of the modern West. The colonial government (1910–45) converted indigenous practices and established new Japanese institutions. The decades-long buffering period during which Meiji Japan could gradually adopt Western knowledge and practices was not allowed in Korea. Instead, the colonial government-general rearranged Korea into a unified order under a Western-influenced but ultimately Japanese standard. The colonial government implemented the Western model immediately, without a buffer period.

Like Siam, Korea too had its own indigenous cartographic methods and senses of direction, which were distinct from Western ones. The colonial government, however, used new cartographic methods for creating a map that would be the basis for land taxation. This map used latitude and longitude lines and followed a national standard for scale, size, and the position of directions, all of which were unusual to Koreans.[2] This rapid transformation led to the effacement of indigenous customs, including the sense of direction.

To recover indigenous senses of direction, scholars have proceeded along three lines of inquiry. The first is through a history of technology, notably the use of the compass in Korea. This approach introduces several types of compasses or examines their principles of operation and their technical accuracy (Kim C. 2003; Cho 2011). Another approach is to focus on geomancy (C. *fengshui*; K. *p'ungsu* 風

水). The judgment of cardinal points is the basis of geomancy. As it measures relative placement of geographical and architectural features, setting the center for measurement can alter the result. Where the compass should be put thus was the most important issue in geomancy (Yi and Kim 1988; Cho 2006). The final approach is to understand directionality through Confucianism. In Confucian ritual principles, each cardinal point represented status levels within a hierarchical structure. Usually, north was the highest position. Deciding how and where "north" was situated was essential to Confucian ritual practices (Yu 2004; Han C. 2006; Chi 2013).

These studies have contributed to the understanding of precolonial concepts of directionality but are limited to technical and theoretical explanations. Theories of geomancy or Confucianism can provide insights into the understanding of space, but indigenous practices and customs also greatly influenced people's sense of directionality in everyday life. In addition, each kind of inquiry concentrated on only one sense of direction. The first kind emphasizes absolute directions; the second and the third lines focus on relative directionality. In reality, of course, both types of directionality, absolute and relative, coincided. Both ways of thinking about direction were used in conjunction during the precolonial period. Instead of these theoretical explanations, scholarly analysis should focus on how directionality operated in familiar, vernacular, and everyday contexts.

This article thus seeks to recover a common sense of direction in daily life. It does so by tracing the routes of land surveying during the Korean Empire (Taehan Cheguk 大韓帝國) period (1897–1910) and analyzing how directionality was determined. It helps reveal how common people thought about the directions in the period. Although land surveying was an official project, elderly local Koreans were mobilized to offer advice regarding the measurement of their villages. In this process, the spatial awareness of these commoner residents could be reflected in the official registers. Moreover, it could also implicitly reflect the sense of direction in late nineteenth-century Korea. Despite the last king of the Chosŏn dynasty (1392–1896) proclaiming himself emperor in 1897, with the adoption of a new national name and accompanying administrative reforms, considerable continuity was expected. This is because the local population and their existing senses would not have dramatically changed with this political shift.

Comparing Directionality in Two Land Registers

The Korean Empire conducted a national land survey from 1898 to 1904. This ambitious survey was conducted all across the country and was the first national survey in 180 years, the last having been taken in 1720. In Chosŏn society, where land and population were the major tax sources, identifying these two revenue sources was an essential step in national fiscal operations. Surveying every piece of land across the country, however, was a huge and expensive project. Even though the government could expect to see an increase in land tax revenue, an inability to cover the high costs of such an ambitious project had stymied land surveys for nearly two centuries. But after proclaiming the Korean Empire, Emperor Kojong

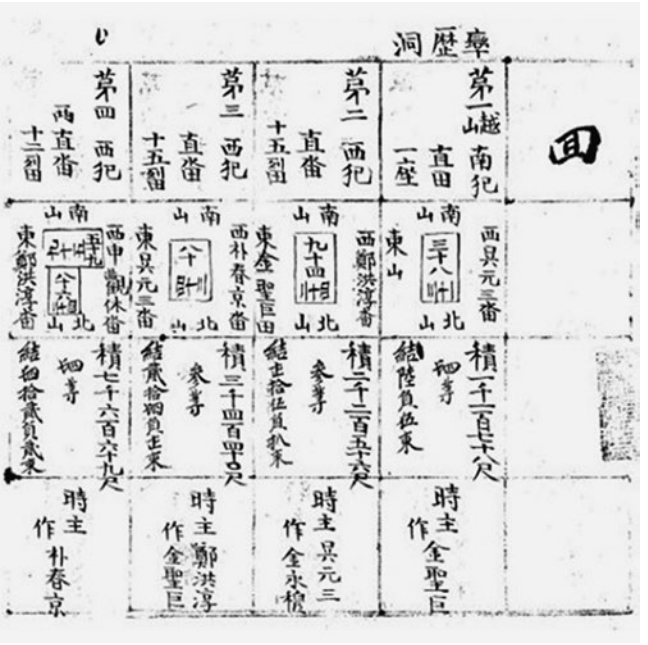

Figure 1. Kwangmu Land Register. In the first row, surveying routes are recorded as one of four directions, as such "toward the south" (*nambŏm* 南犯). The second row contains information on the neighboring parcels and uses four cardinal points (clockwise from the top: south, west, north, and east).

高宗 (r. 1863–1907) ordered the countrywide Kwangmu Land Survey (*kwangmu yangjŏn* 光武量田) in 1898.

The results of the survey are compiled in the Kwangmu Land Register (*kwangmu yangan* 光武量案), named after the reign era of Emperor Kojong (fig. 1). For each piece of land, the register indicates the land category, shape, area, owner, tax quota, and location. All of this information was recorded exclusively as textual descriptions. Even the location of each plot of land was described solely in terms of four cardinal points: north, south, east, and west. The absence of cadastral maps or stable address systems in Korea during the preceding centuries meant that there were no visual tools for determining the location of a specific plot of land.

When the colonial government conducted its own national land survey (*t'oji chosa saŏp* 土地調查事業) from 1910 to 1918, it prioritized the mapping of each village with contours and latitude and longitude lines, following a national standard for scale and size. When the Japanese occupied the Korean peninsula, the colonial government faced a serious problem: Japanese officials could not determine where each parcel in the prior Korean land registers was located in reality. Thus, they hurried to make national sketch maps (*kwaseji kyŏnch'wido* 課稅地見取圖) showing the distribution of all pieces of land as a preliminary step toward the colonial land survey. Unlike in the precolonial era, the colonial government used cadastral maps to define exact locations. Through this process emerged a new address sys-

tem whereby each plot of land within a village was numbered, a system that has persisted to this day.[3] Though only about a decade separated the two land surveys, their survey methods were quite different.

These differences raise the following question: how could Koreans of the Korean Empire period ascertain the location of parcels with only the four cardinal directions? Such a task seems impossible for us, who have come to depend on latitude and longitude lines (or GPS systems). However, several contemporary societies do use cardinal points mainly as location information. For instance, the cities of San José in Costa Rica and Managua in Nicaragua indicate household addresses in terms of cardinal points (Gugerty and Brooks 2001: 252). It is therefore possible for a group of people to communicate position with cardinal directions, which was the case in precolonial Korea. This implies that they possessed a sense of direction distinct from that of modern Korean society.

To understand a precolonial, indigenous sense of direction, this article compares Kwangmu registers with colonial cadastral maps to recover the surveying routes of Kwangmu measurement. Surveyors measured each plot of land by conducting field surveys. The surveyors then proceeded to the next plot of land, recording how each plot was connected to the other using the four cardinal directions. By reading this textual information according to the order of the entries in the register, we are able to reconstruct the routes taken by the surveyors. As mentioned earlier, the Kwangmu survey did not use or make maps to show its course. Thus, this article overlaps information from two primary sources—Kwangmu registers and colonial maps—to locate each parcel in precolonial registers on colonial cadastral maps and to determine the routes taken by surveyors for the Kwangmu survey. For linking both sources, I used the software Jigsawmap, which was developed for this task.[4]

For this article I chose four villages in Hansan County (now Sŏch'ŏn) of Ch'ungch'ŏng Province. The Kwangmu registers for this county were compiled in July 1901,[5] and the colonial land registers and cadastral maps were completed from 1913 to 1914,[6] so there is roughly a twelve-year gap between the two land registers. These four villages neighbor each other, as shown in figure 2, so surveying routes can be drawn continuously even though the relative topographic characteristics of each village are different. A range of hills divides village C (Mamyŏng-ni) from village A (Kayang-ni) and village B (Yogok-ni). A stream flows from village A to B, to C, and to D (Sinjang-ni). Village B has several valleys and is relatively higher in terms of altitude. Village D, in contrast, is on a plain and was a marketplace during the Chosŏn dynasty. The Kwangmu survey proceeded in alphabetical order as marked on figure 2.

After finding the location of each plot using the software, I drew a line on the map along the course of the Kwangmu land surveys and examined the accuracy of the surveying route information written in the register. For instance, if the fifth plot is recorded as "toward the south," it means that the plot is located on the southern side of the fourth one. Thus, I checked whether the information is correct or not on the cadastral map made just twelve years later by the colonial government. The results were frustrating. Only about 80 percent of the direc-

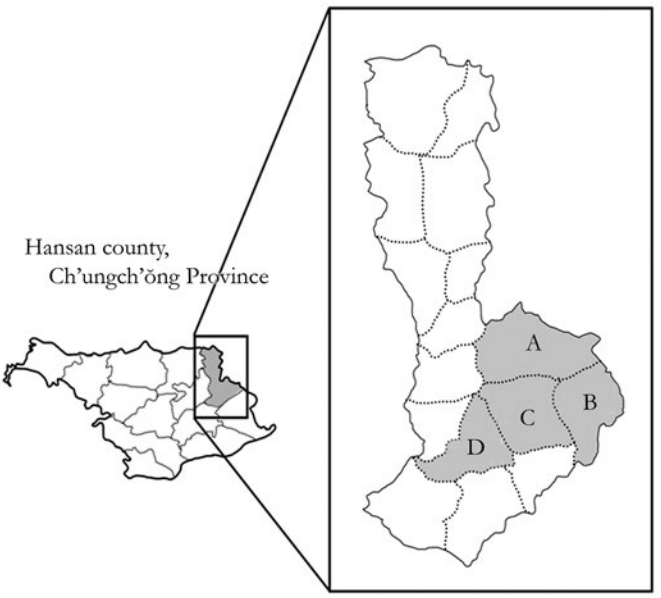

Figure 2. A map of the subject area.

tional descriptions were helpful for finding the location of the parcels. The other 20 percent are too vague to be of assistance in determining the exact location. For example, there are several cases that record the location as "toward the south," but the actual location was on the northern side of the previous parcel of land. In this case, the exact location of the next plots could not be verified based on the records alone since there was no cadastral map in the Kwangmu era.

Combination of Egocentric and Environmental Directionalities

An ambiguity rate of 20 percent is a considerable obstacle to communicating using the four-cardinal-direction system. Was this simply the result of human error? According to the research of Leo Gugerty and Johnell Brooks (2001: 264), "People on average make a navigational error on one of every three cardinal direction judgments." The study, however, also indicates that people who are trained and have practiced finding cardinal directions, such as pilots, make fewer mistakes. In other words, repeated practice can improve the ability to judge direction. In the Chosŏn dynasty, Koreans, especially the male population, started learning the cardinal directions and numbers at the age of six. This means that it is difficult to imagine their sense of direction from a modern perspective. While we are used to numerical designations, they were used to navigating with cardinal points.

Thus, I retraced the process of my analysis and realized that an important fact had been overlooked. Maps were not used for land surveys before the colonial period. Since there was no cadastral map in the Korean Empire period, it was

impossible to determine directions based on a map. Instead, the direction was guided by descriptions using what Gugerty and Brooks (2001: 252–53) have called the *egocentric* and *environmental* frames of reference:

> The two most important reference frames used in navigation are the egocentric, or body-referenced frame and the environmental, or world-referenced frame. The egocentric frame represents navigational knowledge with respect to the navigator's body using concepts such as up-down, front-back, and left-right. The environmental frame represents navigational knowledge independent of the navigator's perspective in the world using concepts such as north-east-south-west, latitude-longitude, and compass coordinates.

This distinction between the body-referenced frame and the world-referenced frame takes for granted the concept of cardinal directions. In indigenous Korean senses of direction, however, directionality was understood in terms of body-referenced notions in daily life. The Confucian ritual code that dominated life in the Chosŏn dynasty emphasized social hierarchy and used the cardinal directions as symbolic devices to express this order. The highest object or person was treated as "north," even if it did not match the geophysical direction of north. For instance, when the officials faced north in order to bow deeply toward the Chosŏn king (*pukhyang chaebae* 北向再拜), they did not prostrate themselves toward the geophysical northern side. Instead, they bowed toward Seoul, where the North Star—the king—was located. Nevertheless, they regarded themselves as facing north. In the same way, the king was always facing south, since he embodied the north.

Other directions were also set in turn by relative position: front is south, left is east, right is west (Yu 2004: 6–11). This logic of relative directionality applied to architectural layout as well. No matter the orientation of a building, the same rules of front as south, left as east, and right as west applied. In this scheme, north pointed to the direction behind the edifice (Chi 2013: 123). This rule applied to many contexts. In Korea, for instance, the name of *Namsan* 南山, which means literally "southern mountain," is used for mountains in front of the entrance of every village. Although this linkage between cardinal direction (world-referenced) and egocentric (body-referenced) terms was at first theoretical and symbolic,[7] it soon melded into daily life and became what may be termed a *common sense of direction*.

In other words, the indigenous sense of direction was shaped by a combination of the egocentric and the environmental frames. Whereas modern Koreans determine left or right in reference to their bodies, precolonial Koreans also verified environmental directions, such as east or west, through an egocentric method. The center of direction judgment was the individual, the ego.

I returned to the Kwangmu registers with an awareness of this principle of directionality. Instead of determining direction by referencing the cadastral map, I reconstructed the path the surveyors took as they conducted their measurements in the field. Tracing the routes they walked and recording the direction of north at each plot of land, the data in the Kwangmu registers began to take on a different form.

Figure 3. Directional information in the Kwangmu land registers and actual locations (*a=starting point).

During the initial examination, I fixed a north-south axis as a vertical line, following the convention of cadastral maps in the colonial period. I checked the accuracy of direction information in the Kwangmu land registers and discovered, as mentioned earlier, that for about 20 percent of the cases the information was unhelpful in determining the location of parcels. A section depicted in figure 3 is an example of this situation. Directions recorded in the registers do not accord with the vertical north-south axis. Downward trajectories in the map were represented as "toward the east" rather than "toward the south." Such instances where direction records do not correspond to the directional axes comprise the ambiguous 20 percent of cases.

Upon reexamination, we can adopt the vantage point of a person walking on a three-dimensional terrain. Rather than visualizing moving down across plots on a map, this walking motion can be envisioned as traveling ahead on flat roads. Instead of traveling in a zigzag motion, as it would appear from the bird's-eye vantage of the map, the walker is turning at the corners of each plot. To judge direction, such walkers must have a reference by which to set their directional axis as they turn. In other words, a constant awareness of trajectory was needed. As presented in figure 3, the walker identified a north-south axis that was offset from true north by nearly 90 degrees. It is clear that the walker disregarded a sense of true north, as indicated by the compass on the map.

With this in mind, we return to other examples in neighboring villages and observe that each village can be divided into several blocks, according to the

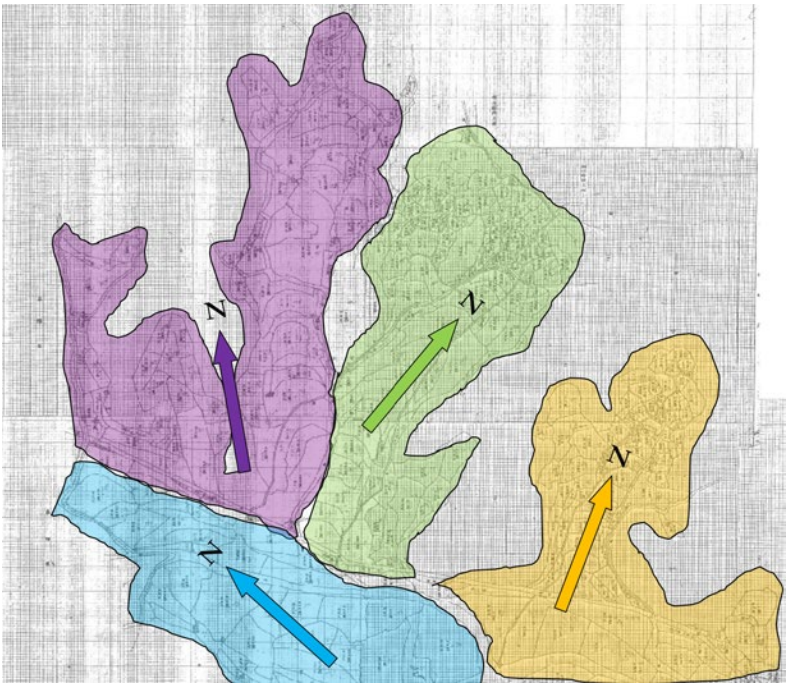

Figure 4. Several blocks in village B. Each block shares the same direction of north-south axis.

distinct north-south axes identified by the surveyors who walked through them. Figure 4 is an example of this phenomenon in village B. The map is the northwestern corner of village B. I drew four additional color-coded sections to mark land registers with a shared definition of *north* as identified by the arrows of the same color. Although there is no explicit borderline between each of the colored sections, natural terrain features, such as streams, bogs, and hills, act as natural boundaries between each section. Judging directions from an egocentric frame of reference allows the north-south axis to be rearranged.

This reconstruction was possible since there were few main paths to walk along in these small villages. Anyone who wanted to survey each block using the shortest path would walk the same route. To reduce the time for land surveying, investigators designed the entire course efficiently; they never traveled the same route twice, doubled back, or crossed a previously traveled route. Local elders were mobilized to guide them, and the names of these representatives for each village are recorded in the Kwangmu registers. The local elders were senior residents of the village who knew the rural socioeconomic setting like the backs of their hands. Most of the elders were in their forties to sixties. Some of them had a good level of literacy in Literary Sinitic. But not all of them were elites. According to a recent study, more than half of these local elders in a township (*myŏn* 面) identified themselves as common farmers, not *yangban* elites (Kim K.

2018: 49–51). Official investigators, therefore, were guided by native senses of direction that were shared within local society, senses that were documented in these registers.

This situation tells us that local precolonial society did not fix a north-south axis along a meridian line; instead, it allowed the rearranging of the axis according to the lay of the land. This rearrangement, however, did not follow an arbitrary, personal view. It reflected common senses of direction shared by residents within each local community. In turn, these senses constituted the directionality of precolonial Korea. The senses were formed in the field, not on the map, which allowed flexible arrangements according to environmental factors.

This directionality was ultimately displaced by a more rigid standard by the Japanese colonial government under the name of modernization, which was in fact a guise for Westernization. The colonial government established a standard for mapping with a scale and a uniform axis, but these two-dimensional maps woven into the grid left no space for a three-dimensional, on-the-ground sense of the land.

Cardinal Directions in Precolonial Society

The compass, a representative instrument for measuring bearing, was used primarily in geomantic works, for land surveys, and on voyages in precolonial Korea. Until the Koryŏ dynasty (918–1392), compasses were mainly used by feng shui experts. However, their accessibility improved, and by the fifteenth century they were widely used by ordinary travelers. During the Chosŏn dynasty, a new kind of compass called the *yundo* 輪圖 was introduced. There was also a portable type of compass, the *p'aech'ŏl* 佩鐵, for which the male *yangban* class developed a special preference, using it as an accessory. Chosŏn simplified the 360-degree system to a twenty-four-point system. This twenty-four-point directional system was a more differentiated one than the sixteen-point directional system that was typically used in the West. And unlike Western compasses, Korean traditional compasses took "south-up" shapes.

The ancients in the East Asian tradition believed that the four cardinal directions were sacred and predicted people's fortunes. It can be said that the religion that believed in the worship of the gods of the four directions in the Koguryŏ kingdom (37 BCE–668 CE) belongs to this kind of belief. The sacredness of cardinal points was also reflected in shamanism, which is well illustrated by the Korean shamanic ritual *kut*. The performer sprinkles water in the four directions to create order in the ritual space by following the hierarchical order of the cardinal points. The symbolic meanings that had historically been used in relation to the cardinal directions are arranged in table 1.

This symbolism reflected in the cardinal directions was applied in everyday life and affected decisions about sites for homes or graves. We need to think about whether the relationship between the cardinal directions and the four sides was a reciprocal one. In other words, when people perceived the east as the left, they might in turn have considered the left as east. Of course, the four cardinal directions existed first, and the symbolic system was created later. But if this understanding was deeply embedded within society and used as a matter of

Table 1. The Cardinal Points and the Five Elements System

	North	South	East	West	Center
Directions	back	front	left	right	center
Five Elements	water	fire	wood	metal	earth
Colors	black	red	green	white	yellow
Heavenly Creatures	tortoise	bird	dragon	tiger	*qilin* 麒麟 (mythical hooved chimerical creature)
Planets	Mercury	Mars	Jupiter	Venus	Saturn
Seasons	winter	summer	spring	autumn	long summer
Blood Circulation Organs	kidneys	heart	liver	lungs	spleen
Sensory Organs	ears	tongue	eyes	nose	lips

Source: Chen (2009: 231)

course in everyday life, the symbols and cardinal directions would have naturally evolved into a bilateral relationship. Therefore, I conjecture that, instead of using a compass to determine the cardinal points, people might have determined the directions within their symbolic system. In other words, the common sense of directionality composed of these symbolic meanings accounts for the ambiguity of 20 percent of the data in precolonial land registers.

The Matter of Scope

The Kwangmu Land Survey was one of the grand reform projects undertaken by the government of the Korean Empire. This nationwide survey was carried out in 218 counties. The court set only minimal regulations for this national project, which had the effect of allowing for local and situational diversity.[8] At the same time, the project did not include mapping, because it could not portray three-dimensional diversity on two-dimensional paper. The colonial government, by contrast, saw mapping the entire country as a prerequisite to the national land surveys (Yi 2013: 427–28). Cadastral maps were produced according to uniform standards: north-up orientation, unified scale, and uniform size. Explicit borderlines were drawn between parcels, and every natural feature was captured on the maps. The human was separated from the environment and became an observer above the maps.

During the Chosŏn dynasty, numerous maps of diverse scope, ranging from county-level maps to those covering the world, had been produced.[9] A significant characteristic of those maps is the diversity of directionality. After the sixteenth century most Chosŏn world maps set north as the top, a result of the influence of Westerners, such as Matteo Ricci, on Chinese cartographic conventions. Unlike world maps, maps of individual counties were portrayed in a variety of ways. The dynasty occasionally published official chronicles of all the counties (*ŭpchi* 邑誌),

which included maps of each county. The court collected maps from local offices, and each office had to draw up a map on its own. As a result, these maps did not reflect a uniform style, even though they were compiled in the same book. Directional orientation differed from one county to the next. The map could be top-oriented to not just north but any direction, such as southwest. Interestingly, any one county usually maintained the same directionality regardless of when the maps were drawn. If a county had set east as the top, this position would continue for at least several future maps, suggesting that a single locale shared a common sense of direction. The agency of the locality persisted through the final comprehensive compilation of all the counties (*Chibang chido* 地方地圖, 1872).

A similar phenomenon can be observed in France. In the seventeenth century the French developed cartography for administrative purposes. Unlike military or academic ones, these new administrative maps were drawn simply, with minimal markings. Chandra Mukerji (2007: 233–37) demonstrates that this difference was the result of their distinct political purposes. Depending on their purpose, maps could be drawn as a form of "far-sightedness" or "near-sightedness." As such, the precision or consistency of cartographic conventions differed according to a map's purpose, especially its political aims. At the same time, however, differences of spatial consciousness, and of geographical scope in particular, are a major factor as well. Even when a local map is drawn for the exclusive use of local administration, if the mapmakers' geographical imagination included the entire country or the world, each local map would likely follow conventions that integrate representations of a locale within broader spatial representations. In other words, an awareness of geographical scope can influence the degree of diversity in cartographic conventions.

This matter of scope is related to the issue of north and south. In the case of indigenous Korean maps, if only a small locale was the object of mapping, its top orientation was not a major issue. The map needed only reflect the local senses of direction. Broadening the map's scope to encompass the world, however, complicates the story. Although there were several world maps in the Chosŏn dynasty, the north and south poles were shown in maps only after the importation of Ricci's cartography in the sixteenth century. This expansion of geographic imagination, however, exercised only a limited influence on Korean cartographic practice. It was only with the colonial period that Korean geographic imagination truly expanded to global parameters.[10]

A case study by Tad T. Brunyé et al. (2012: 1891) shows that participants from diverse places of origin with varied natural terrain features nevertheless all tended to associate "the north with mountains and south with level terrain." Moreover, people tend to recognize north as up and south as down, even when there is no "explicit connection between north and up, or south and down." This research implies that exposure to maps, atlases, and GPS devices showing "north in a physically upward orientation" might shape spatial awareness. In other words, repeated learning of north-as-up has influenced senses of directionality to accept conventional arrangements of north and south as natural.

One might suppose that restoring alternate senses of directionality is only a matter of turning around a map. The switching of up and down, however, requires a reversal of existing senses, which is no simple matter. The Japanese adoption of the Western clock faced similar challenges. Although Western timekeeping appears natural and practical to us now, it appeared too specialized and technical to Japanese in the nineteenth century. One of the difficulties was the location of the numeral 12. Unlike Western clocks, the "the twelve hours of the Japanese dial were correlated to the twelve cardinal directions, commonly represented with the north (associated with midnight) placed at the bottom" (Frumer 2014: 808). Thus, to turn the clock upside down, the entire knowledge structure of temporality and directionality in a society had to be transformed simultaneously. Likewise, turning the map requires a fundamental switch of existing senses. In the same way, current cartographic conventions result from continuous and conscious efforts to convert diverse models into a uniform Western style.

The Question of Center

To ascertain the cardinal directions, one needs not only the four points but also a fifth point—the center. In East Asia, these five points, north, south, east, west, and center, were considered the five cardinal directions.[11] Thus, any discussion of bearing should also consider the role of the center. Setting the center was the basic issue of geomancy, which observes the relative location of features to read the flow of energy. Usually, geomancy measures immovable features such as mountains, rivers, and buildings. The only movable factor is the compass: the center.

The fundamental question, then, was where the compass should be placed. If the center moved, the four surrounding directions also moved with it. Since geomancy treated the position of the compass as the center of a small cosmos, the relative directionality of one feature could therefore change according to the relative position of the compass (Cho 2006: 8). Unsurprisingly, there were several different theories in China, Japan, and Korea about setting the compass, informed by cultural and social factors (Yi and Kim 1988). With each theory reflecting views of the world in each region and period, diversity in and of itself was valued (Cho 2006: 12–16).

The possibility of multiple centers was not just a matter of importance for geomancy; it was also an important question in the history of Korea. There had been two cosmological "centers" historically: Seoul, the capital of Korea, and Beijing, the capital of China. People simultaneously regarded both of them as the center for centuries. This pluralistic cosmological view, which accommodated multiple centers, was not contradictory in indigenous frames of reference,[12] and it influenced cartographic conventions in precolonial Korea.[13]

Returning to the Kwangmu land surveys, the salient question is which point was the center used for the surveys; it was neither Beijing nor Seoul. Instead of choosing a center from among multiple candidates, surveyors followed the geomantic convention of a movable center. Official investigators and native dwellers traveled together as a group to survey lands. The group stopped at each plot to take

measurements and identify neighboring plots. Each halt functioned as a resetting of the compass, and the surveying crew itself became the central directional reference point, which made realigning the north-south axis possible. Since the land registers were made for future users, not for the group itself, the group took the perspective of future individuals who would walk the same path. In other words, the Kwangmu survey assumed indigenous senses of direction, where the vantage point of each individual was a movable compass and therefore the center of a small, local cosmos.

This mobility of the center was ignored by modern cartography in the colonial period. Instead of using individual, human-centered vantage points as a reference, directionality was settled by the legends on the map. These new conventions emphasize their own objectivity in line with Western models while treating previous senses of direction as subjective. The implementation of a new address system altered the role of cardinal points, as taking the vantage point of someone on the road or imagining the actual environment was no longer necessary; instead, one only had to look at a map.

Conclusion

The human body is ruled by time and space. Humanity, in turn, has tried to measure both more accurately through technology. Though electronic clocks and GPS devices can show precise values, they also deprive our senses of the ability to measure the environment from the vantage point of where we stand. Our sense of direction grows increasingly impotent as we rely on GPS navigators or electronic maps to determine location and track movement.

In this current situation, reviewing the premodern senses of direction gives us some implications. Moderns like us who are accustomed to visual maps and modern geographic education tend to consider the cardinal directions as natural elements, but they should be understood instead as a kind of social contract. Depending on the setting of a center or the given hierarchy among features, we can arrive at different results when measuring the cardinal directions of the same object. If we take this into account, our understanding of indigenous senses of direction in precolonial Korea can be renewed; these senses can be characterized as relativity, flexibility, and diversity.

First, before the twentieth century there were no cadastral maps in Korea in which the shape of each piece of land was drawn. Instead, before the Korean Empire, people recorded textual information to show the location of individual parcels even in national land surveys. This information was too difficult to be properly understood by third parties, including the colonial government, who were also not locals. This was because the viewpoint on the actual site was recorded in registers that could not be accessed within a compiled book. In other words, textualized three-dimensional viewpoints could not be understood by third parties who did not know the local environments. This indigenous perspective can be explained as a combination of egocentric and environmental frames. For those of us today who are accustomed to choosing one of these frames, it is

difficult to fully understand their records. This was the reason the government-general hastened from the 1910s onward to make cadastral maps.

Second, to grasp the notion of directionality in Chosŏn society, it is necessary to look back on their notion of the center. Diverse centers were set depending on the type of work—world maps, local maps, land registers, and so forth—and the surrounding environments were rearranged in correlation to the position of the center. This is one of the reasons that Chosŏn's maps are not cadastral maps but paintings. The toleration of various centers is a characteristic of Chosŏn society.

Conversely, since the colonial period, Korean society has been devoted to producing standardized maps that could be read and used at any time by anyone. It was therefore unavoidable to establish solid standards and turn them into a new social contract. In this process, the previous indigenous senses of direction and centers were regarded as inaccurate and irregular and lost their meaning.

The key point, however, is not the existence of standards. Although Koreans set each person with his or her own compass, they shared a common sense of direction. Continuous communication among themselves, with others, and with the environment within the principle of cosmic resonance could convert subjectivity into diversity. We should recognize our position within the environment instead of presuming to be a distant observer. As movable compasses, we should ask ourselves, "Where is my north?"

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NOTES

1. Other cardinal points have been placed on "top" as well. South was most preferred as up in East Asia.

2. Of course, these had been discussed and used among a few elites in precolonial Korea. The latitude of Seoul from the North Pole was measured in the fifteenth century, and several maps from the eighteenth century use the latitude-longitude structure. However, they were not employed as cartographic conventions. Most Korean maps are said to look like drawings, which is because they did not follow strict measurement methods (Han Y. 1999: 30–102).

3. Korean society had used this land lot–based address as the official address system since the colonial land survey. The Korean government changed the address system into the road name address system in 2014. Most Koreans, however, are still confused and use both address systems together.

4. Jigsawmap is a software program developed years ago through the collaboration of a few Korean historians and computer engineers at Seoul National University. For more information, see hcil.snu.ac.kr/research/jigsawmap (last accessed April 25, 2020).

5. *Ch'ungch'ŏngnam-do Hansan-gun Yangan* 忠淸南道韓山郡量案 (*The Kwangmu Land Register of Hansan-gun, Ch'ungch'ŏngnam-do*) was made by the Yangji Amun 量地衙門 (Ministry of Land Survey). The registers are currently owned by the Kyujanggak Institute for Korean Studies, with call number 奎 17671-16. For a detailed bibliography, see Kyujanggak Institute for Korean Studies of Seoul National University 2013: 239–43.

6. The colonial registers are owned by the Sŏch'ŏn-gun County Office. Cadastral maps can be browsed through the website of the National Archives of Korea (www.archives.go.kr).

7. This understanding of direction came from Chinese culture. For Chinese symbolic meanings of cardinal directions, see Chen 2009.

8. The government did not fix the form of registers. Its final form was shaped and unified only as the survey proceeded (Wang 1995: 66–70).

9. For a brief history of cartography in Korea until the nineteenth century, see Han Y. 1999. For world maps in the Chosŏn dynasty, see O 2011.

10. For instance, the term *Nambang* 南方, which literally means "southward," became a reference for Southeast Asia after the colonial period (Kang 2014).

11. Each point, including the center, had symbolic associations (Chen 2009). A different color represented each of the cardinal directions. A few maps marked five areas with the five representative colors (Han Y. 1999: 33–91).

12. For a representative treatment of this theme, see No 1999.

13. The most famous national map made in the nineteenth century sets Seoul as the standard of measurements (Wŏn 1989: 53). Beijing acted as the center for world maps after the eighteenth century (Pae 1999: 158).

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