

## On “⊥” Based Map Symbol in the China Ancient Map

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### Abstract

This paper discussed several types of map symbols representing surface features and geomorphy in the China ancient map, and especially pointed out that the kind of map symbol based on “⊥” structure unit was of typical importance in the China ancient map symbols system.

Ma Wang Dui Map drawn on silk in the second century B. C. represented surfaces feature and geomorphy by means of relative standard map symbols. In “Garrison Map”, the outline of Jian Dao which was the maximum castle was expressed by the triangle, the symbol of watch-tower over the wall of city was depicted outward openly and flattly, and it is a type of symbol which writes or paints realistically, its combination symbol seems like the inscription on bones or tortoise sheels “Guo (the outer wall of a city)” (Fig. 1), it is demonstrated that the China ancient map symbols communicate with Chinese Characters each other. In “Garrison Map”, the curve was used for the representation of the run of mountain range. There were two type of additional symbols in the winding protion: (a) three irregulated overlapping circles in which filled in parallel lines were depicted on the protruding side of mountain range; b. the tapering and short lines which pointed to the mountain valley were depicted on the concave portion of another side (Fig. 2). Some scholars hold that the above stated symbols are purely decorative patterns, such us “Floating clouds variety” pattern (Fig. 3)<sup>①</sup>. But we hold

that the overlapping symbols are similar to the slope line on modern map, because such overlapping symbols were depicted on the winding portion of mountain range and perpendicular to the mountain range line. In "Shen Ping Defense Area Topographical Map", the mountain range was expressed by means of closing curve in which fills in parallel lines similar to contour lines. The crescent symbols were depicted on the outside of the protruding portion of mountain range (Fig. 4). The scholars think that it was used for the representation of outstanding terrains such as hilltop, spur,<sup>②</sup> furthermore, this additional symbol might have the slope line implications. There found the geomorphic symbols similar to the above-mentioned symbols in "Garrison map" in the unearthed map from No. 1 Tomb of the Qin Dynasty in Fangmatan, Tian shui city, Gan shu Province, dating from the 3rd century B. C. (Fig. 5)<sup>③</sup>.

In modern map, slope indication line mainly points out slope land direction, vertical to the contour line. In modern military map, the saw-tooth pattern is used to express the situation of two armies pitted against each other, its figure structure is similar to slope line, short lines standing side by side point to the enemy. All of the above symbols express things' space alignment and gradation. In fact, this type of symbol was early found in China ancient map, the most representative is the Great Wall symbol. The Great Wall was a defense installations by which the Agriculture nation in Central plains resisted North nomadic people. In ancient map, the Great Wall symbol was formed with the city wall curve and battlements pattern. Up to now, there still exist many famous ancient maps: "Six kinds of classics map", "Hua Yi Map" and "Geographical map" of the 12th century, "Guang Yu Map" "Yiang Zi Qi Ba Yu Map" of the 16th century, "Huang Yu Full View Map", "Qiang Long Nei Fu Yu Map" of the 18th century etc. All of the Great Wall symbols in these maps have the same characteristics: the battlements were arranged on the north side of city wall and pointed to the North—

—Where the China ancient nomadic people lived; therefore, this symbol had definite pointing implication (Fig. 6) ④ If they are simplified, they will be similar to the steep slope line on modern map (Fig. 7), the latter is continuous slope indication line. There were several kinds of implications on the pointing of the Great Wall battlements; North—South, ourselves—the enemy, inside—outside and in on. The battlements standing side by side pointed to the enemy, in a sense, its implication is identical with the pointing implication of not only gatetower of Jian Dao in above narrate “Garrison Map”, but also the battlefield state symbol on modern military map. The imagery combination of “Occupying a commanding position on military deployment” and “height” symbol of slope line expresses thing’s space gradation and alignment. Such symbol based on “⊥” structure unit is of typical importance in the China ancient map symbols system.

Our opinions on which “⊥” symbol had slope line implications are based on the development of the relevant word symbol and its implication in China ancient Chinese characters. The oldest systematic Chinese characters we have known are the inscriptions on bones or tortoise shells about the 14—11th century B. C., from which, we can know the sources of “⊥” symbol and its semantics.

”Upper “,” Below “ (Fig. 8) ⑤, the acrossline expresses the main body, the additional line expresses the opposite position of “Upper” or “Below”. The writing of “Upper” or “Below” was “⊥” or “⊥” in the “Analytical Dictionary of Characters” of the 3rd century B. C. (Fig. 8), the additional short line is vertical to the main line, the semantics of this symbol had upper—below, high—low, they expressed space gradation and alignment, could be extended to be heaven—earth. “Land” (Fig. 9) is the sign of Land occupation, may be extended to be the local god of the land and considered as the symbol which the people offer sacrifices to gods or ancestors; it is called “She” (the god of the land) ⑥ “Bang

(country)”, “Feng (feudal, Fig. 10)<sup>⑦</sup>”, “Its word symbol and its meaning are similar to “lond”, in literal sense, they mean tree — planting or erecting surveyor’s pole on Land to set up its sign to express its own country’s territory. “Zu (ancestor) (Fig. 11), it meant the pictographic picture of man’s penis and represented “the ancestors”, it was the sign that the people offer sacrifices to the ancestors<sup>⑧</sup>. All the narrate word symbols can be simplified as “⊥”, the across line expresses the substance, the vertical line points to the above — imaginary space in which the Gods live. The core of its semantics is abstract upper — below, but its image is from the space upper — below.

There were some word symbols expressing topographic undulation. “Qiu (hillock, Fig. 12)<sup>⑨</sup>” was a elevation drawing on the hills, hillocks. “Fu (mound, Fig. 13) was highland in the literal sense, the vertical line expressed the substantial highland, the sawteech or shortline standing side by side expressed the extend side or the protruding portion of the highland. Some scholars hold that “Fu” is the vertical writting of “Qiu”, or short lines standing side by side are a climbing Ladder<sup>⑩</sup>. But we hold that this pictograph should be a plane figure, the vertical line points to the highland, extending direction, the short lines slanding side by side have slope line implications, “Dui” (pile up, Fig. 14) means hillock, it is “Dui” to be the vertical writting of “Qiu”. In ancient chinese characters, “Dui” was a loanword, it was regarded as a word symbol of “Shi” — in which means the army was armed and stationed, and expressed the two barracks stationed at highland<sup>⑪</sup>. We hold that this word symbol may be also regarded as a plane pictre, it seems like two decentral-ized hilltops, the bind line between two hillocks expresses the saddle and has the slope line implication.

There existed the plane figure representing geomorphy in pic-tographes, the most typical is the stream system words. “Pai (group. Fig. 15)<sup>⑫</sup>”, in literal sense, is the river’s branch, among them, “⊥”.

expresses the converge of the main and tributary streams. "Jian" (ravine, Fig. 16) <sup>(13)</sup> two lines in the central section mean the river bank, both banks are "Dui" which is the plane figure of the hillock, therefore, the above stated view on "Dui" are fully demonstrated. We think, the plan "Dui" is the symbol source using closing curves for the representation of the plan of mountain range in "Garrison Map" of "Mang Wang Dui Map drawn on silk". "Zhou" (continent, Fig. 17). means the protruding highland over the horizontal plane in the river, The curves both sides express the river bank (or not painting), the ellipse among it represents island islet, Shoal, highland, the short lines of both ends of the ellipse expresses the water — course. Obviously, the additional short lines have space pointing implications which distinguish height gradation, especially approach the slope indication line's implications.

There existed using pictographs, ideographs and its extended meanings for the representation of direction, pointing and location. "Shi" (arrow, Fig. 18) is a arrowhead figure, its extended meaning is the pointing. "Shi (Arrow)" and "Tu (land) form the word symbol " "Zhi (arrive)" (Fig. 19) <sup>(15)</sup>, "Zhi" describes that the arrow head lands on the ground, it is a knowing word of "Location", "goal", "arrive". "Diao" (hang. Fig. 20) <sup>(15)</sup> means "come" or "go", expressing "go forward" by the arrowhead, There was a ideograph "Jiang (boundary, Fig. 21) <sup>(18)</sup> in inscriptions on bronze ware the 11th (entury B. C., it is formed from pictograph "(Bow 弓)" and "Farmland (农田)". "bow" is a instrument for land surveying. In the middle of this symbol, specially exaggerative pointed — line was added to point to between two farmlands, and expressed the demarcation line.

As above stated, in ancient chinese characters, the pictographs for the representation of geomorphical phenomenon have plane figure and elevation drawing; in the semantics, there existed not only distinguishing from space gradation and alignment, but also distinguishing location

and position pointing. The geomorphical symbols in ancient map are identical with corresponding chinese characters in symbol origination, these chinese characters were transplanted "in the same nature" to be map symbols, finally formed map language. Therefore, in the above narrate ancient maps, additional symbols to surface feature substance lines aren't solely decorative pattern, but are the pointing line which distinguish space gradation alignment, they are similar to slope line or flowline on modern map, and are abstract space-time pointing symbols.

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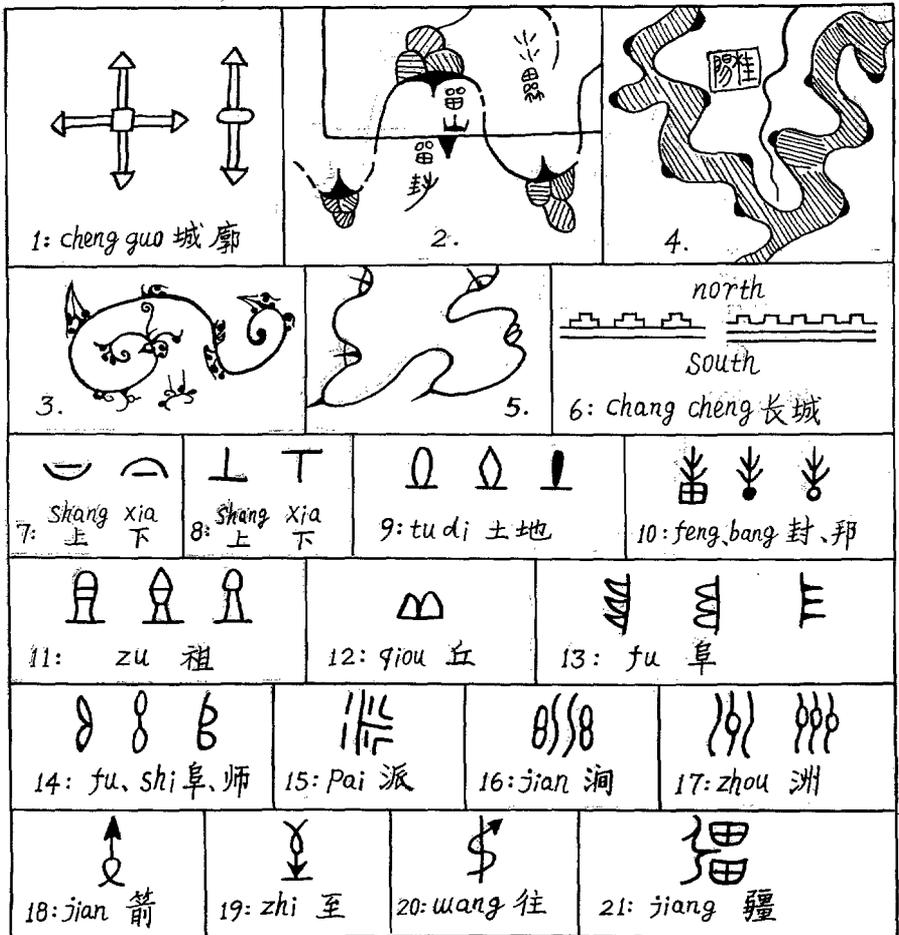
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