A Brief Analysis of Vandermeersch's Theory of the Quasi-Science of the Oracle Divination

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Abstract: *Vandermeersch summarized the basic model of the oracle inscriptions, by adapting marking symbols and formalizing, analyzed the rational development process of the oracle divination, therefore established the axiomatic foundation of the theory of quasi-science of the oracle divination, it's eventually been reducted to a rational system based on quasi-science.*

Keywords: *Vandermeersch; Oracle Divination; Quasi-Science*

Introduction

Léon Gérard Marie Joseph Vandermeersch (1928-2021), a contemporary French sinologist, conducted sinological research for over 70 years. He served as a professor in the Chinese Department at the University of Paris VII, a researcher at the French Institute for Advanced Studies, and the director of the French School of Far Eastern Studies. Vandermeersch's research on Chinese history is centered around Chinese characters, and he was one of the earliest European scholars to study the oracle inscriptions. Vandermeersch's research on Chinese characters is based on his original theoretical foundation, the quasi-science theory of the oracle divination, which he elaborated in his 2013 book Les Deux Raisons de La Pensée Chinoise: Divination et Idéographie.

1. The Emergence of Divination Rationality

In his book, Vandermeersch traces the origin of the oracle divination from observable reality[1]. He cites modern examples of animal bone divination, where bones were placed on fire until cracks appeared, and the cracks were interpreted to gain divine revelation. He believes the origin of Chinese divination is similar to this practice. Such divination remains are scattered across northern China, with a time span from the Neolithic era to around 2000 BCE. Vandermeersch divides it into three stages:

The first stage is primitive divination, where the animal bones were unprocessed, and the fire-heating method was simple, resulting in irregular cracks on the bones.

The second stage is charred incised divination, also a type recorded in Chinese classical literature. The bones were processed, and a thin wooden stick was used to char the back of the bone, causing cracks to appear on the front. Archaeological evidence of this appears in the third period of the Yangshao culture, around 5000 BCE.

The third stage is refined divination, which appeared in cultural sites from the early 2000 BCE. The burning point was first drilled to create a pit, and then the charred incised method was applied to produce more pronounced and clearer cracks on the oracle bones.

In 1988, an important detail was discovered in the oracle bone fragments excavated from the Xia Qiyuan archaeological site in Handan, Hebei. The burning points drilled into the bones had developed into two distinct parts: one was a round hole, drilled out, referred to as drill, and the other was an elliptical hole, carved out, referred to as chisel, which intersected with the round hole. This treatment made the burning points thinner and caused the burn cracks to appear in the shape of " ⊢" or "┤." Through this technical treatment, the cracks were standardized and classified. Vandermeersch tended to adopt the classification method of five to six categories found in the Shangshu · Hongfan text.

The classification of the divination cracks reflects a rational spirit that can reduce the vast world into a few categories by scheme. Vandermeersch believes that it is during this stage that a qualitative change

occurred in the process of calculation, the standardization of divination techniques and procedures, transformed it from a mere act of seeking supernatural revelation into a regular calculation process for rational individuals.

Vandermeersch explained, among the four divine mythical animals in ancient Chinese mythology: dragon, phoenix, qilin, and turtle, only the turtle is the one that actually exists, which is closely related to the extraordinary significance of using turtle shells for divination. He quoted descriptions of the spiritual power of turtle shells from the Compendium of Materia Medica to illustrate the role of turtle shell divination in the transition from primitive mystical worship to rational thought.

2. The Emergence of Divination Rationality and the Divinatory Polynomial

The maturity of divination is marked by the discovery of oracle bones with divination inscriptions at the Xiaotun site in Anyang, Henan, in the early 20th century. Through the analysis of these divinatory inscriptions, Vandermeersch defined them as "formulaic inputs" and inferred that these inscriptions were not ordinary spoken language, but rather scientific symbols serving as a decision-making system for divination.

These divinatory inscriptions contain a scientific expression similar to a "polynomial," structured in the formula: "XY×N∶M→P", which is referred to as a quasi-polynomial. In this formula, "X," "Y," "N," "M," and "P" represent the parameters of the divination, serving as terms expressing data and also as the result of judgment.

Specifically:

"X" and "Y" represent the sexagenary cycle date system, i.e., the "天干"(Heavenly Stems) and "地支"(Earthly Branches);

"N" is the name of the diviner responsible for the divination;

"M" is the proposition decree;

"P" is the prediction decree;

"×" is the operator indicating the execution of the entire divinatory calculation, symbolized by "卜" (to divinate);

"∶" indicates the data record of the proposition decree;

"→" represents the analysis of the cosmic processing result of the prediction decree.

This basic model is a summary derived from the induction of tens of thousands of oracle bone divination inscriptions, and its form is highly rigorous. Vandermeersch refers to it as the Divinatory Formula and defines it as a quasi-scientific program.

Vandermeersch believes that the divinatory inscriptions represent an articulation[2] within the polynomial, which is fundamentally different from the isolated pottery motifs of the Stone Age. The key to the proliferation of ideographic symbols in this system is the polynomial operators such as "卜" (to divinate), "贞" (to verificate), and "占" (to predict).

A ideographic language of science begins to take form in the embryo of a Divinatory Formula. "卜" acts as the key operator, guiding the articulating in the divinatory formula. Its "referent[3]" is the formalized content of the divination, and it represents a set of symbols such as "⊦" or "⊣ ." Thus, "卜" is the first meaningful Chinese character, undergoing a transformation from the symbol of divination to referring to divination itself. There are three characteristics for this transformation:

1, The value orientation regarding the result of divination, i.e., good/bad, disappears.

2, "卜" is abstracted into the divination activity, and the variability of its image disappears.

3, Be endowed with a pronunciation, "卜" thus transforms into a language symbol.

Vandermeersch asserts that considering the special position of "卜" in the polynomia and its phonetic quality, it was not designed for a spoken language but was articulated as part of the parameters and results of the divination[4].

Vandermeersch refers to "贞"and "占" as subordinate operators, which are in a subordinate state under

the control of the main operator "卜" in the overall polynomial structure. Both "贞" and "占" are based on "卜". "贞" is the content of "卜" ("贝"means a container), and "占" is the expression of "卜," ("口" means a mouth). These two subordinate operators are another key factor in the proliferation of symbols in the divinatory formula.

Vandermeersch suggests that the diviners ("史") of the Shang Dynasty likely used spoken language when designing divination formulas. However, this did not lead to the creation of a written language for spoken words. The diviners designed symbols not to record their narratives but to document their thinking, which, in its structure, is similar to the creation of mathematical expressions like "2 + 5 = 7." In practice, the rules of the divinatory operations were involved articulation of the very terms following the rules of divination, it's distinctly different from a declarative speech.

It can be observed here that mathematical language was designed after the advent of written spoken language, and thus, mathematical formula symbols borrowed directly from existing spoken language symbols. However, the ideographic symbols of Chinese divination formula were originally created as ideographic symbols for the divinatory formula and only later borrowed to express thinking processes in declarative writing.

Vandermeersch concludes that, a word formation like the ancient Chinese divinatory polynomials, through the process of "贞" and "占," could not have emerged in any spoken languages as in other cultures. He calls this mechanism as autogenese, it's a quasi-scientific mechanism that continually generates new ideographic symbols. This mechanism distinguishes the Chinese ideographic symbol system from other alphabetic writing systems which simply record spoken language, the two are fundamentally different in nature.

3. Expression of Data

Vandermeersch references the phrase "爰始爰谋，爰契我龟" from The Book of Songs (Shijing, Daya, Mian, means Here begins our planning, here charring with my turtle.) to elaborate on the meaning of "契" (to char), which compare the divination to writing and recording, it's the very task for the diviner ("史", historian), only them were responsible for creating ideographic symbols and monopolized this ability[5]. According to Zhou Li (Book of Rites), Da Bu / Zu Zhu, the diviner performs the cracking, the historian uses ink, the noble uses color, and the ruler uses form ("卜人占坼，史占墨，大夫占色，君占体"), the divination consists of four roles, made up a rational decision-making framework. The diviner/historian is not only the guardian of the articulating mechanism in divination operations but also the intellectual provider of an autogenese that continuously generates new ideographic symbols.

The diviner/historian records the dialectical process of divination as the "命辞" (proposition decree) and "占辞" (prediction decree) in the divinatory formula. This is an ongoing process of creating ideographic symbols, which forms a symbol library. The diviner/historian, with the autogenese and the ideographic symbol library created, constitutes the rational mechanism of ancient Chinese divination, as called the quasi-science. Vandermeersch conducts a detailed analysis of the polynomial "XY×N∶M→P" and its data expression.

3.1 Preface decree

The preface decree consists of the combinations of "天干"(Heavenly Stems) and "地支"(Earthly Branches) with the historian's name. There are 10 symbols for the Heavenly Stems, 12 for the Earthly Branches, and about a dozen historian's name symbols. In total, there are fewer than 50 symbols.

Abstract Geometric Symbols: The symbols for the Heavenly Stems and Earthly Branches represent the states of the universe's time and can be compared to the motifs found on Neolithic pottery. For example, "甲" (jia) takes the form of a "十" shape, while "乙" (yi) resembles a "口" shape. These were created by imagination and were limited in number.

Spoken Language Derived Geometric Symbols: These symbols use the shapes of items and tools that phonetically match the Heavenly Stems and Earthly Branches symbols. For example, "戊" (wu) and "戌" (xu) are two different shapes of the "戈" (spear) symbol, which have become borrowed symbols, detached from their original meaning.

Historian Name Symbols: About a dozen symbols representing names, similar to abstract geometric

symbols on pottery.

In sum, the preface decree uses a small number of symbols to complete data expression, without generating significant symbol proliferation.

3.2 Proposition Decree and Prediction Decree

The proposition decree is used for propose about various affairs such as rituals, farming, warfare, hunting, reproduction, illness, and others, a large number of symbols, discovered at least 4,000, are used for it.

Pictographs: These include symbols for common items, animals, and plant names, many of which are inspired by prehistoric pottery motifs.

Compound Symbols: This is the main characteristic of the divinatory inscription symbols, with more than 60% of symbols are of this form. This category broadly covers the spoken language in daily life, forming the Six Scripts structure which is continuously evolving, such as the symbol of "贞" and "占", they both using "卜" as the basic element.

The proposition decree is an important area for symbol-creation, yet it adheres to strict formulaic rules. The prediction decree is as similar as the proposition decree, usually containing expressions indicating good/bad results or repetitive elements of the proposition decree as the presupposition.

3.3 Verification Decree

It's occasionally appears at the end of the divinatory formula, explaining the confirmation or supplement to the prediction decree. It may be the precursor to the later Chinese historical records.

Vandermeersch asserts that the ideographic symbols of the oracle inscriptions, as the products of a quasi-scientific mechanism, is the origin of the systematic Chinese writing. The discovery of bronze vessels before the reign of King Wu Ding in the Shang Dynasty, which lacked inscriptions, proves that systematic Chinese writing did not exist prior to the oracle inscriptions. These bronze vessels predate the oracle inscriptions, but the inscriptions on themselves appeared later. As for many symbols existed in Neolithic China, they were merely isolated motifs and cannot be considered as systematic writing. However, Vandermeersch does not deny the existence of other symbols in China before oracle inscriptions.

4. The Theory of the Quasi-Science of the Oracle Divination

Vandermeersch's quasi-science theory of the oracle divination is significantly important.

Firstly, by adapting symbolic marks to analyze oracle inscriptions, the way for discovering the "quasi-scientific" origins of the oracle divination were paved. As prominent philosopher of science, educator, and logical empiricist Hans Reichenbach (1891-1953) explained, "The symbols themselves are not a discovery mechanism, but using them in a particular field may indirectly pave the way for our research[6]."

Secondly, by establishing a general model for the oracle inscriptions, formalizing it as a "divination formula," the axiomatic foundation for the theory of the Quasi-Science of the Oracle Divination were laid, leading to an integration for all the propositions about the oracle divination into a deductive system which based on axioms. As logical empiricist philosopher Rudolf Carnap described: "The axiomatization of a theory lies in arranging all of its propositions in a deductive system based on axioms, and all of its concepts in a system based on fundamental concepts[7]."

Thirdly, through defining the quasi-scientific nature of the oracle divination, the entire symbol-producing process of which leading to the generation of conceptual thinking and rational forms were revealed. As Friedrich Ludwig Gottlob Frege (1848-1925) summarized the significance of producing symbols: "Without symbols, it would be hard to elevate to conceptual thinking... we can only obtain concepts by expressing them," and "this conceptual language is a tool conceived for specific scientific purposes[8]."

With these three basic work, Vandermeersch successfully reduced the oracle divination into an ancient Chinese rational system built upon quasi-science.

Moreover, some of Vandermeersch's discussions on divination somehow appeared objective idealism. Modern science indicates that turtle shells are suitable for divination not because they reflect Chinese cultural concepts such as the "round sky and square earth" or the worship of longevity, but because the biological structure of turtle shells differs from ordinary animal bones. Turtle shells have a spongy structure and surface pores, making the direction of the divination cracks less controllable by human influence, thus giving turtle shell divination a more objective advantage compared to other kind animal bone divination.

Additionally, Vandermeersch's theory has been criticized for overemphasizing the autogenese of the polynomial. The so-called polynomial reflect the collective intelligence of the ruling elite class, with each role in divination serving its function. In the role division of the "Zhou Li" (Rites of Zhou), the Buren performs independent technical operations to ensure the objectivity of the good/bad shapes of the cracks. The king and officials set the tone for the divination from a macro and intermediate perspective, controlling the atmosphere and direction of the divination, while the historian implements the intellectual conclusions on a micro level to form the divination inscriptions. This consultation and debate process is a decision-making process among the ruling elite group, comprising the highest rulers, officials, and intellectuals, similar to modern democratic debates. This format of discourse among the top intellectual elites of the state provided more reasonable decision-making outcomes.

Conclusion

Vandermeersch's theory is primarily based on archaeological discoveries, reliable conclusions, and reasonable inferences. He values the relativity of judgments, describes with multiple angles to avoid superficial understanding, and emphasizes the importance of analysis and inquiry. He analyzed the rational development, adopt symbolic marks, categorized the basic model and formalized the oracle divination, thereby creating an axiomatic foundation for the quasi-science theory of the oracle divination. The quasi-science definition reveals the entire rational development process of the oracle divination, and reduced it into an ancient Chinese rational system based on the quasi-science.

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