

Reconsidering the Logic of Sun Tzu's "The Art of War"

A Debate on "Analyzing the Logic of Sun Tzu in 'The Art of War', Using Mind Maps"

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ABSTRACT: This article reviews "Analyzing the Logic of Sun Tzu in 'The Art of War', Using Mind Maps" by Peter van Emde Boas, Ghica van Emde Boas, Xie Kaibo, and Zhao Bonan. The book focuses on the use of mind maps to analyze the logical structure within "The Art of War". In contrast to many overseas studies that primarily focus on the military theories within "The Art of War", this work innovatively explores its logical thinking. From a perspective of logic, this book analyzes the argumentative structure of "The Art of War" and makes it more accessible to the Western world. Of course, if this work could further explore the rules of argumentation within "The Art of War", it would be even more gratifying.

KEY-WORDS: Pre-Qin philosophy; Sun Tzu; "The Art of War", Logic; Mind maps.

RESUMO: Este artigo faz uma revisão do trabalho intitulado "Analisando a Lógica de Sun Tzu em 'A Arte da Guerra' com o Uso de Mapas Mentais", de autoria de Peter van Emde Boas, Ghica van Emde Boas, Xie Kaibo e Zhao Bonan. O foco do livro é a utilização de mapas mentais para desvendar a estrutura lógica presente em "A Arte da Guerra". Diferentemente de muitos estudos internacionais que se concentram nas teorias militares da obra, este livro traz uma abordagem inovadora ao investigar o raciocínio lógico de Sun Tzu. Através de uma análise lógica, a estrutura argumentativa de "A Arte da Guerra" é nele explorada, tornando-a mais compreensível para o público ocidental. Evidentemente, seria ainda mais enriquecedor se o estudo se aprofundasse nas regras de argumentação presentes na obra.

PALAVRAS-CHAVE: Filosofia Pré-Qin; Sun Tzu; "Arte da Guerra"; Lógica; Mapas Mentais.

Introduction

The English book *Analyzing the Logic of Sun Tzu in "The Art of War"*, *Using Mind Maps* (referred to as *The Logic of Sun Tzu* hereafter) is a collaborative work by Peter van Emde Boas, Ghica van Emde Boas, Xie Kaibo, and Zhao Bonan. This book focuses on using mind maps as a method to analyze the logical thinking within *"The Art of War"* 孫子兵法. It is published in the "Logic in Asia" series by Springer. The main purpose of this book is to interpret the ideas of the ancient military classic, *"The Art of War"*, through logical analysis and explore its applications in modern warfare and decision-making. The book investigates and discusses the ideas of *"The Art of War"* from modern perspectives such as logic, linguistics, and game theory. In particular, the introduction of mind maps provides a new approach to analyze the structure of *"The Art of War"*. The book is divided into four parts. The first part introduces the basic concepts of mind maps and the historical background of *"The Art of War"*. It then analyzes the conditional reasoning in *"The Art of War"* from a logical and linguistic perspective, and explores the strategic thinking within the text from the perspective of game theory. In the second part, the authors construct mind maps in both Chinese and English for each chapter of *"The Art of War"*, demonstrating how the logical analysis from the first part is reflected in the mind maps. The third and fourth parts summarize the argumentative patterns within *"The Art of War"* based on mind maps and discuss related topics such as translation issues. This book is significant for understanding the logical thinking and applications within *"The Art of War"*, while also providing a new method and perspective for the study of traditional literature. It can be said that this work reexamines ancient Chinese classics from a modern logical perspective and provides new insights for the development of Chinese logic. Of course, there is still room for further exploration of the logic

within *"The Art of War"* in this work.

A New Perspective on the Dissemination of "The Art of War"

In his article *Constructing the Introduction to New Sun Tzu Studies*, Li Guisheng 李桂生 points out that "New Sun Tzu Studies" 新孫子學 should incorporate a wider range of academic resources and new methods to provide new interpretations of "The Art of War." (Li, 2023, pp.17–27).

The book *The Logic of Sun Tzu* applies new methods to interpret "The Art of War" and brings a fresh perspective to its international dissemination. It explores how logical analysis can enhance the clarity and understanding of the ideas in "The Art of War". The influence of "The Art of War" overseas is significant. On platforms such as JSTOR, there are over 26,000 articles related to "Confucius," and a combined total of over 10,000 articles on "Tao Te Ching" and "Laozi". Similarly, there are also around 10,000 articles specifically related to "Sun Tzu," indicating a broad audience for Sun Tzu's ideas in the English-speaking world. Although his influence may not reach the level of Confucius, it is certainly comparable to that of Laozi.

"The Art of War" was first translated into French by a monk named Amiot and was published in Paris in 1772. Amiot had lived in Beijing for many years and was deeply interested in traditional Chinese culture. Jesuit priests and Enlightenment thinkers held great admiration for Confucius, and they played a crucial role in popularizing Chinese culture in France. Consequently, there was significant enthusiasm for Amiot's translation in dedicated journals of the time. One anonymous critic even claimed to have found all the elements of greatness present in the works of Xenophon, Polybius, and Saxe within "The Art of War". However, when it was republished ten years later, "The Art of War" had faded into obscurity as new war strategists such as Napoleon in France, Clausewitz in Prussia, and Jomini in Switzerland became the primary

interpreters of strategy. Additionally, throughout the 19th century, China experienced continuous decline under the imperialist aggressions of Europe, the United States, Japan, and Russia. As a result, Chinese military theorists were no longer considered exemplary (Corneli, 1987).

During the invasion of China by the Eight-Nation Alliance and the Russo-Japanese War in the early 20th century, Eastern military techniques once again sparked people's interest. The first Japanese version of "The Art of War" was translated by Captain Karl Friedrich August Gutzlaff and published in 1905. It was later translated into English by the British orientalist Lionel Giles in 1910. Giles' translation was included in the book *The Origins of Strategy*, published in the United States in 1940. In 1950 and 1958, "The Art of War" was translated into Russian. Russians had a close understanding of French culture, especially over the past century, so it is possible that they had come across the translation by Amiot. Additionally, before and after the fall of the Russian Empire in 1911, Chinese revolutionaries were familiar with the international communist movement in France, Germany, and Switzerland. It is highly likely that they shared their traditional knowledge with Lenin and other Russians. For example, Zhu De 朱德 had some exposure to foreign influences during his studies abroad and may have played a role in introducing "The Art of War" to Russian audiences. In 1987 article *Sun Tzu and the Indirect Strategy*, Alessandro Corneli pointed out the significant relevance of Sun Tzu's concept of "winning without fighting" to the geopolitical landscape during the period of the end of World War II and the beginning of the Cold War. Western scholars experienced two waves of intense discussions on "The Art of War" in the 1960s and 1980s respectively.

The first phase began in 1963 when General Samuel Griffith translated "The Art of War" into English. At that time, the most important aspect was the interpretation of tactics used in guerrilla warfare. Third world countries utilized these tactics to defeat Western colonial powers, and communists played a significant role in these

movements. Looking back further, it was crucial to explain Mao Zedong's 毛澤東 (who is the big fan of "The Art of War", even buy the book in budget-tight time) successes against Japan and later against Chiang Kai-shek 蔣介石 in China. In 1958, French Colonel Bonnet also recognized the importance of Sun Tzu's ideas, particularly in relation to leading uprisings and revolutionary warfare. Bonnet defined revolutionary warfare as a combination of guerrilla warfare and psychological warfare, and he insisted that ancient Chinese people were the first to have a clear understanding of this concept. In this context, he mentioned "The Art of War" in a simple footnote to articulate his viewpoint (Corneli, 1987).

According to Alessandro Corneli's research, the 1958 edition of the *Encyclopedia Britannica* did not have an entry for "The Art of War." In the 1961 edition, there was still no specific entry for Sun Tzu, but a mention of "The Art of War" existed under the topic of "Strategy." It was not until 1974 that a dedicated entry for "The Art of War" appeared, consisting of a lengthy paragraph about it. Allen Dulles, who served as the head of the Central Intelligence Agency (CIA) from 1953 to 1961, referenced "The Art of War" in his 1963 book "The Craft of Intelligence," specifically in the second chapter. Dulles used Sun Tzu's concepts to support his theory that prior knowledge of events was crucial for wise rulers and skilled commanders to outmaneuver their enemies. In the 1960s, the *International Encyclopedia of the Social Sciences* (1968) mentioned "The Art of War" under the title of "Strategy," claiming that contemporary military studies were merely quantifying Sun Tzu's work. The *Great Dictionary* (1964 edition) included a section titled "The Art of War" in its tenth volume, but it simply stated that his ideas originated from Chinese and Japanese military thinkers. Montgomery of Alamein also mentioned "The Art of War" several times, but his discussions mostly focused on evaluation rather than a detailed analysis of its theories.

In the 1980s, the Western academic community's interest in "The

"Art of War" was sparked by the increasing significance of international terrorist events and the manipulation of public opinion in the late 1970s and early 1980s. In this regard, the focus on Sun Tzu's work revolved around the importance of intelligence. When Yuri Andropov succeeded Leonid Brezhnev as the leader of the Soviet Union at the end of 1982, this aspect was emphasized further. Andropov had previously served as the head of the Soviet Union's most prominent intelligence agency, the KGB, for fifteen years. Due to "The Art of War's" advocacy of espionage and the use of deceptive intelligence, his book began to be seen as a primary source for the Soviet Union's subversive strategy aimed at weakening Western resistance and gaining influence without risking nuclear warfare. Former U.S. President Richard Nixon, in order to emphasize the Soviet Union's comprehensive strategy in the nuclear era, made connections between it and the ideas of "The Art of War." His book "The Real War," published in 1980, made repeated references to "The Art of War." (Corneli, 1987).

As of today, "The Art of War" continues to have a significant influence in the Western world. Peter Lorge published *Sun Tzu in the West: The Anglo-American Art of War* in 2022, further highlighting its impact and translation in English. Jonathan Welch also provided commentary, suggesting that we can reexamine the politics and strategies of both the United States and China through the lens of "The Art of War." Many scholars have analyzed the value of "The Art of War" from the perspective of business competition, in addition to military theory. For example, Blaine McCormick's article titled *Make Money, Not War: A Brief Critique of Sun Tzu's "The Art of War"* believes that the principles of warfare and deception in "The Art of War" may not align with the values and practices of contemporary business. However, with appropriate adjustments, selecting certain concepts from this book can still offer valuable guidance for modern commerce (McCormick, 2001).

It is evident that as a military theoretical work, "The Art of War"

not only allows the Western world to better understand ancient Chinese wisdom but also provides them with a clearer understanding of China's political, commercial, and military strategic landscape. As a result, "The Art of War" has gained widespread popularity in the Western world.

However, as an ancient classic, if we analyze the ideas in "The Art of War" solely from the perspective of its content, we can only draw limited conclusions. After all, "The Art of War" has been around for thousands of years, and many military strategies, such as fire attacks and terrain considerations, have gradually become outdated in the process of modernization. The political and military wisdom conveyed in the book has also lost its truly unique value due to the widespread dissemination of culture. While "The Art of War" is undoubtedly a cultural hub, we need to explore its value from other sources as well.

The book *The Logic of Sun Tzu* brings us new perspectives. In the introduction of this book, the author points out, "Through this book, we aim to analyze the logic of Sun Tzu and understand how people three thousand years ago, without modern measurement tools, geography, maps, firearms, or historical records, engaged in rational thinking, especially in the context of war, which is an intriguing and complex situation. It is surprising that this book is still regarded as a bible in business and military academies. What magic lies in Sun Tzu's reasoning and contemplative approach that led to the creation of such a great work? Our goal is to understand the thinking methods employed by Sun Tzu within the limitations of his time." (Boas, et al., 2022, p. 4). Focusing on Sun Tzu's creative thinking, using mind maps and argumentation patterns as a starting point, truly brings a "fresh perspective" to readers. The author points out, "The logic in Sun Tzu's era was very informal, and he described his logic in a rather abstract manner. By revealing the logical patterns in his texts, with enumeration and opposition being the most prominent, we are able to highlight his reasoning methods more effectively." (Boas, et al., 2022, p. 5). Moreover, the author believes that through the exploration of the logic in "The Art

of War," we can also glimpse the basic characteristics of ancient Chinese logic. "When Sun Tzu discusses his war strategies, it is more like a series of suggestions and reflections from a diligent thinker. He did not establish a systematic theory of war and support his arguments with evidence, nor did he start from a set of principles and derive complex formulas. The primary way to describe his arguments is through enumeration of various situations, providing appropriate advice for specific circumstances, and some basic calculations. However, basic does not mean lack of logic. We cherish this fundamental logical thinking as it showcases the emergence of ancient Chinese logical argumentation and, in turn, the emergence of human logical thinking itself." Different thinking styles can reflect the cultural background of different ethnic groups. In this era of openness and communication, mutual understanding of Chinese and Western thinking can allow the world to have a deeper understanding of the ancient and longstanding Chinese nation from the perspective of "sympathy through understanding."

*Logical Rule: A Possible Advancement
of the Logic in "The Art of War"*

Logic, as a discipline, has a long history of development. It originated in ancient Greece with Aristotle's "Organon," which presented the basic principles of formal logic and established fundamental concepts such as reasoning. Through continuous development in the Middle Ages, logic evolved until the 17th century when two monks from the Cartesian school, Antoine Arnauld and Pierre Nicole, collaborated on a work entitled *Logic or the Art of Thinking*. In this work, they proposed that logic is the science of thinking, dividing it into three parts: concepts, judgments, and reasoning. This formalized the establishment of the term "logic" and conceptualized logic as the science of thought. From this perspective, Hegel believed that logic, the study of the laws of thought, emerged.

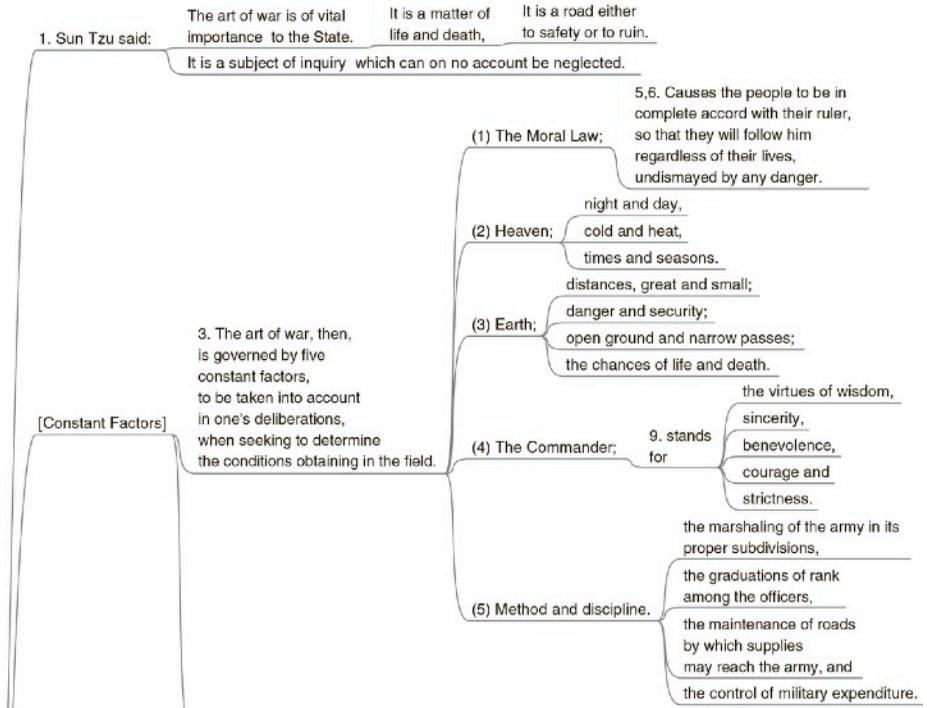
In the 20th century, logicians like Bertrand Russell and Alfred North Whitehead integrated logic with mathematics in their book "Principia Mathematica," introducing the principles of mathematical logic. This led to the mathematical turn in logic, where logicians focused on exploring deductive inferences and sought for the "validity" of arguments, using symbols, axioms, and rules to describe the structure of natural language.

Since the 1950s, thinkers such as Toulmin and Perelman have reflected on formal deductive logic, and in the 1970s, an informal logic movement emerged in North America. Logic educators began reconsidering the utility of basic formal or mathematical logic as tools for analyzing and assessing everyday reasoning. Consequently, "informal logic," which analyzes everyday language, gained prominence, defining logic as the structure and rules of argumentation, with arguments generally structured from premises to conclusions.

Wu Hongzhi and others have pointed out that "from a traditional perspective, an argument consists of at most three elements: premises (reasons or grounds), conclusion (assertion, position, or claim), and supporting relationship." (Wu, 2009, p. 387). In order to provide a comprehensive representation of argument structures, the technique of argument diagramming has gradually formed and developed. For example, Fisher used a tree diagram method in *The Logic of Real Arguments* to illustrate the argument forms of Malthus, Mill, and Marx in economics. Wu Hongzhi and others believe that regardless of the diagramming method used, standardization of arguments is necessary to clearly identify premises and conclusions, clarify the reasoning process, and ensure a clear and complete representation of the argument.

The Logic of Sun Tzu is precisely based on the graphical representation of argument structures to elucidate the logic of "The Art of War." It states that "mind maps are used to reveal the structure of the text in 'The Art of War.'" This may cause confusion as mind maps are commonly understood as semantic diagrams, but in this book, they are

primarily used as structured text trees. However, this approach can help reveal the semantics of the text." (Boas, et al., 2022, p. 5). For example, in this book, the first chapter of "*The Art of War*," titled "*Estimates*," is analyzed using a tree diagram:



Mind Map 3: Aow Ch. I, START PLANNING - English Mind Map (Boas, et al., 2022, p. 108).

The book then extracts the patterns of argumentation used by Sun Tzu in the chapter, including metaphors, conditional sentences, and definitions, focusing on three aspects: deliberations, deception, and calculations. In addition to these three argumentation patterns, the book also identifies enumerations, pairs of opposites, and preference order as strategies employed. This depiction is enlightening as it presents a systematic display of the argumentative strategies in "*The Art of War*."

However, from the reader's perspective, it would be beneficial if the book could delve deeper into the discussion of "argumentation rules" and provide more content by refining these rules.

"The rules of argumentation" refer to the coherent relationship between premises and conclusions in an argument. In other words, it addresses how premises lead to a conclusion. In informal logic, "argumentative patterns" and the RSA evaluation strategy are commonly employed to fulfill this task. Jū Shí'er's theory Generalized Argumentation also considers the rules of argumentation as the central aspect in dealing with a series of arguments. *The Theory and Methods of Generalized Argumentation* states, "The third stage involves analyzing the data and proposing candidate argumentation rules. Based on the socio-cultural background provided in the first stage, this stage involves analyzing the data obtained from field surveys on typical argumentation cases to propose candidate argumentation rules and conduct a strategic analysis of the arguments." (Ju, 2022, p. 1–27).

In the article *An Inquiry into Ancient Chinese Logic from the Viewpoint of the General Argumentation Theory* co-authored by Jū Shí'er and He Yang (Ju, 2022, p. 102–111), rules were extracted based on the structure of Fu poetry argumentation. These rules include: "The argumentative behaviors of both parties in Fu poetry argumentation must be in accordance with propriety; the participants in Fu poetry argumentation must appropriately integrate the social context of that time and use the method of selective quotation to compose and interpret poetry; the meanings derived from the chosen poems by the participants in Fu poetry argumentation must provide sufficient reasons from the perspective of propriety for their respective claims." The extracted principle of argumentation "以禮為理" (can be translated into English as "Using propriety as the basis for reasoning" or "Reasoning based on propriety.") This work is highly valuable in analyzing the process of argumentation. The authors aim to gain a better understanding of the argumentation by examining the coherent

relationship between premises and conclusions, as well as the principles of argumentation. As Jū Shí'er points out, "In the generation process of argumentative discourse actions, based on the received information and interactive goals, arguers conceive the argumentation process, modify their cognitive context, understand the discourses produced by other arguers, and attempt to implement discourse actions that serve certain functions, aiming to achieve the persuasive function of the overall argumentation. This forms a sequence of argumentative discourse, displaying the arguer's argumentation planning and strategies." (Ju, 2022, p. 1–27).

In the book *Logic of Sun Tzu* within the preferred sequential argumentation pattern of the "Attack by Stratagem chapter" 謀攻篇, it is stated that "the segment of a mental map can be found in Figure 40. Detailed information about the worst strategy for leaders can be found in Figure 41. The segment of a mental map in Figure 42 illustrates the characteristics of a skilled leader, which is also part of the theme of leadership (Boas, et al., 2022, p. 302):

- The following are four strategies arranged in this order:
- Disrupt the enemy's plans.
- Prevent the alliance of enemy forces.
- Attack the enemy on the battlefield.
- Siege a city.

The world is not perfect, so when the best solution cannot be achieved, Sun Tzu suggests the next best option, followed by the next one. Therefore, one does not have to immediately resort to the worst choice.

Through this priority sequence, Sun Tzu provides a more nuanced perspective on strategies. It is not about choosing between A and non-A; rather, we can evaluate strategies from the most preferable to the least preferable based on their priority sequence. We choose to implement the second-best scenario when a better plan cannot be

realized."

This analysis provides a description of the statement "Thus, the highest form of warfare is to attack the enemy's strategy; the next is to attack their alliances; after that, attack their military forces; and finally, besiege their cities. "故上兵伐謀，其次伐交，其次伐兵，其下攻城" according to the language sequence in "*The Art of War*," which indeed allows readers to have a clearer understanding of the argumentative structure in the book.

However, it is important for readers to understand why a "skilled leader" would adopt an attacking strategy in such a preferred sequence. This can lead to reflections on Sun Tzu's strategies and the underlying "logic" in his work, providing us with a clearer understanding of the logical aspects in his book "*The Art of War*."

The translation of "Act in accordance with advantage, cease when there is no advantage" 合於利而動，不合於利而止. This is the core essence of "The Art of War" and embodies the fundamental principles of all military theories. Regarding this core viewpoint, in "Logic of 'The Art of War'", it is described using "conditional sentences" as follows:

Par. 17: When it was to their advantage...
 2 (Cond. => Adv.), if-then-else construction
 - Par. 18: If asked how...
 Cond. => Adv.

The Logic analysis the "Act in accordance with advantage, cease when there is no advantage" captures its meaning well. However, it does not provide further explanation regarding what Sun Tzu means by "advantage" or how it influences the logic of "The Art of War".

For conditional sentences, it is generally expected to follow the positive antecedent (true premise leads to a true conclusion) and the negative consequent (false conclusion implies a false premise). If the author can further discuss why "accordance with advantage" 合於利(true premise) inevitably leads to "move" 動 (false conclusion), it would provide readers with additional insights beyond just following the

general flow of the mind map.

"The Art of War" is primarily an educational work that focuses on instructing King Helu of Wu 吳王闔廬 on how to raise armies, conduct warfare, and seek benefits. It is neither a typical work of logic nor a philosophical treatise; it is simply a "military book". Even though "The Art of War" mentions abstract concepts like the "WAY" or "道," its understanding of the "WAY" hardly carries any metaphysical connotations. "WAY" in "The Art of War" refers to aligning the people's interests with those of the ruler, allowing them to willingly sacrifice their lives or contribute to the ruler's cause without fear of danger. This understanding is on a different level compared to the abstract nature of Laozi's 老子 concept of the way, as expressed in "The Tao that can be spoken is not the eternal Tao" 道可道，非常道.

Sun Tzu's task is to abstract the various situations on the battlefield based on battlefield experience into the "basic conditions of the battlefield," and then analyze "how to respond to the basic conditions of the battlefield." "The Art of War" is a refinement from reality to theory, with its various assertions and viewpoints supported by reality rather than emphasizing the various connections between sentences themselves. In other words, "The Art of War" does not aim to delve into complex metaphysical concepts. It simply uses concise language to describe methods of dealing with war. Building on this, Li Zehou 李澤厚 pointed out: "Chinese military books are so mature and developed at an early stage, and they still have value for reference thousands of years later precisely because they are based on long-term, complex, and intense practical experiences of warfare. There have been many discussions about 'The Art of War,' and this article only focuses on highlighting the rational attitude manifested in military thought." (Li, 1994). The "rationality" that Li Zehou mentioned refers to the prevalent "practical rationality" among Chinese pre-Qin thinkers. It primarily refers to a rational spirit or attitude. In summary, unlike general philosophical works that follow a path from text to thought,

"The Art of War" is a work that moves from reality to thought. This means that it does not need to handle the argumentative relationships between statements in an extremely abstract manner. It is sufficient for the statements to describe reality as much as possible.

As an "educational" military treatise, the theoretical aspects and arguments of "The Art of War" are not overly complex. While there may be some ambiguity in the meanings of certain concepts such as "wholeness," 全 "deception," 詭 and "profit," 利 this seems to reflect the linguistic barriers between different eras. The interpretations of these concepts by later figures such as Cao Cao 曹操, Zhang Yu 張預, Du Mu 杜牧, and Mei Yaochen 梅堯臣, though slightly varied, are generally similar. For example, when explaining the concept of "deception," Cao Cao defines it as "the military lacks constant forms and relies on deception as its path," 兵無常形，以詭詐為道 Mei Yaochen explains it as "without stratagems, one cannot exercise authority; without authority, one cannot control the enemy," 非譎不可以行權，非權不可以制敵 and Zhang Yu explains it as "although the underlying principle lies in benevolence and righteousness, victory must be achieved through deception." 用本雖本于仁義，然其取勝必在詭詐 All of them are talking about the winning strategy of using surprise in warfare. "The Art of War" provides a comprehensive explanation of the concept of "deception.": "Deploying soldiers is a game of deception. Therefore, fake incapability when in effect capable; fake inactivity when ready to attack; appear to be faraway when actually nearby, and vice versa. When the enemy is greedy for gains, present a bait to lure him; when he is in chaos, attack and overcome him; when he shows off substantial strength, be doubly prepared against him; and when he is irresistible, evade him. If he is given to anger, provoke him. If he is prudent and careful, encourage his arrogance. If his forces are rested, wear them down. If the enemies are united as one, divide them. Attack where he is least prepared. Take actions against him when he least expects. This is the strategist's subtle tactic, which can not be arranged mechanically in

advance." 兵者，詭道也。故能而示之不能，用而示之不用，近而示之遠，遠而示之近；利而誘之，亂而取之，實而備之，強而避之，怒而撓之，卑而驕之，佚而勞之，親而離之。攻其無備，出其不意。此兵家之勝，不可先傳也。

The Logic of Sun Tzu describes it as follows:

All warfare is based on deception. So,

- » when able to attack,
 - we must seem unable;
- » when using our forces,
 - we must seem inactive;
- » when we are near,
 - we must make the enemy believe we are far away;
- » when far away,
 - we must make him believe we are near.
- » when seducible
 - trap the enemy;
- » when disorganized
 - capture him
- » when he is secure at all points,
 - be prepared for him.
- » when he has superior strength,
 - evade him
- » when your opponent is furious,
 - seek to irritate him.
- » when he may grow arrogant,
 - pretend to be weak.
- » when he is taking his ease,
 - give him no rest.
- » when his forces are united,
 - separate them.
- » where he is unprepared,
 - attack him

- » where you are not expected.
- appear.

(Boas, et al., 2022, p. 117).

Although the logical symbols "»" and "◦" were used to indicate conditional reasoning, the knowledge obtained from reading the text sequentially is almost the same. For example, if we remove the logical symbols from the first few sentences, we would have: "when able to attack, we must seem unable; when using our forces, we must seem inactive; when we are near, we must make the enemy believe we are far away; when far away, we must make him believe we are near." In ancient Chinese, "之" functions as a pronoun, and "而" indicates continuation or sequence. Although "...之" is not a fixed collocation, the use of "而...之" in those instances creates a parallel structure, making the text more clear in structure and easier for King Wu to understand Sun Tzu's knowledge.

Indeed, Chinese people still have a sense of ancient language, so reading ancient texts like "The Art of War" doesn't pose too much pressure for them. However, for Westerners, there may be greater difficulty. Describing ancient sentences in logical terms can help the Western world better understand the thinking process of "The Art of War". Further research may provide more insightful content from a rules perspective, allowing Eastern thinking to be better understood and appreciated by the Western world. This is our further expectation.

Conclusion: Where is Chinese logic heading?

In the compilation of the history of traditional Chinese logic, "The Art of War" is rarely depicted. Despite the long development, the Chinese logic community no longer interprets Chinese texts using a Western logic-centric approach as scholars like Liang Qichao did in the past. Instead, there is a growing effort to explore ancient Chinese logic and uncover its unique characteristics.

However, scholars' exploration of Chinese logic still revolves around the basic theories of logic, with a particular emphasis on excavating texts from the pre-Qin period that are relevant to "logic." As Chai Jingcheng 翟锦程 states, "Based on the unique ideological ecology of the pre-Qin period and grasping the relationships between names and realities 名实关系, things and categories 类物关系, and images and objects 物象关系, we have provided a new interpretation of the objects and content of Chinese logic. This interpretation is not a mere analogy to the terminology of Western logic's theoretical system, but rather, it analyzes the position and role of Chinese logic in Chinese philosophy by referencing the foundational position and fundamental role of Western logic within Western philosophical systems. It aims to offer a fresh understanding of the ideological content and basic theories of Chinese logic. In the interpretation of the core concepts and key issues of Chinese logic, we adopt a 'Chinese interpretation of Chinese thoughts' approach, which neither uses Western logical terms nor relies on modern Chinese language. Instead, we refer to how the pre-Qin philosophers understood these concepts and problems, and reasonably analyze their original meanings, providing explanations that are consistent with Chinese philosophy and culture." (Zhai, 2022).

Ju Shier points out that every culture has its own logic and types of argumentation. In order to accurately describe the reasoning processes in different cultures, it is necessary to expand the existing concept of "argumentation" and propose and establish the concept of "broad argumentation" and the corresponding concept of "logic". Broad argumentation refers to the use of symbols by a group or groups of individuals belonging to a given socio-cultural context to provide reasons based on social norms or rules, in order to persuade participating individuals to accept or reject a certain viewpoint. We refer to this social interaction or game that involves reasoning through the use of symbols as broad argumentation. Symbols in this context include both linguistic symbols and non-linguistic symbols, such as body language and visual

symbols. Reasoning, on the other hand, is the process of providing reasons to persuade people to accept or reject a certain viewpoint or position. Under the concept of broad argumentation, logic can be understood as a set of rules for social interactions within a cultural group that have reasoning functions (Ju, 2022).

As Li Zehou has pointed out, ancient Chinese thinkers, particularly those of the pre-Qin era, placed a greater emphasis on "practical rationality," with their interest in theory primarily focusing on its impact on practice. Whether it was Confucius, Laozi, Han Feizi, or Mozi, the pursuit of politics was the main theme among the various schools of thought. "The Art of War" by Sun Tzu is a classic work that abstracts from reality to form theories. To extract the logic from "The Art of War," it may be necessary to start with fields such as military science and history, extracting and reflecting on the reasons and rules that Sun Tzu believed could lead to victory, as well as the evidence that could convince the King of Wu.

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