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Specific Features of Chinese Logic: Analogies and the Problem of Structural Relations in Confucian and Mohist Discourses[1]

Abstract

The article follows the presumption according to which analogical inferences in Chinese tradition followed a structure that connected all elements within a particular kind. This structure functioned as the basic element of analogies. Another crucial characteristic of classical Chinese analogies is the method of combining meanings. The composition of classical Chinese sentences tends towards the intrinsic connection among the individual parts of the sentence, and rarely applies morphological signs. This particular feature of the Chinese language also influenced the prevailing methods of thought that manifested themselves in the processes of inferences, based upon proximity, similarity and identity. Focusing upon early Confucian and Mohist philosophy, the author shows how and why these methods could lead to the creation of a specifically Chinese type of analogism.

Keywords

Chinese analogy, semantic meanings, kinds, inferences, structure

Introduction

Analogism is the dominant type of traditional Chinese logic. As we shall see later, it is derived from the specific social circumstances that have defined China during the pre-Qin era (776–221 BC). Already the earliest Chinese philosophers were investigating, developing and applying it to a broad and diversified range of ideologies. Such analogisms have the property of general analogical inferences. Their emergence can be viewed as a result of the specific social circumstances that existed in China during this period.

Classical Chinese analogies are based upon the structural similarity of the objects in question, i.e. upon the identity of two types (or kinds) of things that have certain attributes in common. Upon confirming this identity, we can deduce that these two types (kinds) of things must also be identical with respect to the rest of their attributes. Thus, if we have two objects – A and B – with several common properties (e.g. P1, P2…Pn) and if object A has the property q, then we can analogically infer that object B also has the property q.

Traditional Chinese analogical model which represents a central pattern of specifically Chinese logical thought (Cheng Chung-Ying 1987: 287) is based

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upon complementary relations. This model represents a special form of thought which is rooted in the structural ordering of relations. Such relational reasoning requires mental representation and the cognitive ordering of the relationships among concepts. It includes the distinctively human ability to see analogies between disparate situations (Knowlton & Holyoak 2002: 1007).

I. Language and logic in ancient China

There is an objective link between logic and culture that has to be considered. This link manifests itself as culturally bounded limitations on logic, rather than as the influence of logical thought upon culture (Mou Zongsan 1941: 23). Thus, any logical tradition can only be understood within the framework of the history and culture in which it has been developed. The Chinese logical tradition is no exception to this phenomenon: therefore, our understanding of the Chinese analogical methods is necessarily linked to the specific social and cultural conditions of the pre-Qin period, in which the foundations of classical Chinese logical thought were established.

Actually, the discourses of Chinese philosophy and also of Chinese logic can be traced back to the earliest works as for instance to the *Book of Changes* (易經), an important source dating back to the 7th century BC, while the so-called "Golden era of Chinese philosophy" emerged during the Zhan guo 戰國 (Warring States) period (475–221 BC). During this time arose the so-called Hundred Schools of Thought (百家), including the most influential philosophical discourses as Confucianism, Mohism, Daoism and Legalism. This was a period of immense intellectual and cultural development which has been conditioned by the political chaos and continuous battles between various small states. A wide scope of ideas and philosophic systems which arose from this situation was developed and relatively freely discussed by itinerant scholars, who were employed by different state rulers as political, social and moral advisers. This "Golden era" ended with the first unification of China and with the rise of the proto totalitarian Qin 秦 Dynasty (221–206 BC). Traditional or classical Chinese logic mainly refers to the logic that has been developed during this era. It is a logical discourse that has been developed independently, without any influences from other cultures:

"Outside the Indo-European area there is only one people for whom it has been claimed that they developed an indigenous and independent tradition of logical reflection, namely the Chinese". (Harbsmeier 1998: 7)

In this regard, however, it is important to point out the fact that the Chinese thinkers who were developing logical issues were part of a small subculture, whereas in India and in Europe the logicians belonged to the mainstream of intellectual development (ibid).

In ancient China, logical themes appeared in various philosophical works such as the abovementioned oldest text *the Book of Changes*, and in several works created by the Confucians. In this period, defined by a crisis of certainty, none of the Hundred Schools could ignore the issues raised by the early logicians: problems like the relation between "concepts or names" (*ming* 名) and "realities or objects" (*shi* 實), criteria of identity (*tong* 同) and difference (*yi* 異), or standards of right/true (*shi* 是) and wrong/ false (*fei* 非) were discussed across all ideological separations (Kurtz 2011: 3). Similar to ancient Greece and India, Chinese interest in logical problems evolved from the methodology of debates. The earliest proofs of this interest can be found among the "dialecticians" or "debaters" (*bianzhe* 辯者) who were later classified as a distinc-

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tive "School of Names" (*mingjia* 名家). The most important scholars in this heterogeneous current were Hui Shi 惠施 (ca. 370–310 BC), who formulated ten paradoxes on the infinity of time and space and the well-known Gongsun Long 公孫籠 (ca. 320–250 BC), who became – among others – famous with the logical defence of his *White horse paradox*, claiming that "white horses were no horses" (白馬非馬). The most important contributions to logic can be found in these discourses, and also in the works, written by the Mohist (墨家). Among others, these works contained a series of brief definitions and explanations outlining procedures to check the validity of conflicting assertions, a theory of description, and an inventory of "acceptable" (*ke*) links between consecutive statements (ibid). However, many Confucian philosophers also greatly contributed to the logical thought in ancient China. The Confucian scholar Xunzi 荀子 (ca. 313–238 BC), for example, appropriated the Mohist logical findings of the later in order to defend Confucian ideals of state and society, while his Legalist disciple Han Feizi 韓非子 (ca. 280–233 BC) investigated the theories on "names and disputation" (名辯) in his formulation of the totalitarian ideology which, as already mentioned, helped to end the golden age of Chinese philosophical and logical reasoning soon after the unification of the empire by the state of Qin 秦 in 221 BC (ibid). However, traditional Chinese logic is essentially analogical. The classical Chinese view of reasoning and argumentation is rooted in a semantic theory and epistemology centred on drawing distinctions.

"Reasoning and argumentation are not explained by appeal to the model of a syllogism or a premises-conclusion argument. Instead, reasoning is the process of considering how some acts of term predication, or distinction drawing, normatively commit one to making further, analogous predications or drawing further, analogous distinctions. Inference is typically understood as the act of predicating a term of something as a consequence of having distinguished that thing as similar to a model for the kind of thing denoted by that term. Inference is thus in effect an act or sequence of acts of pattern recognition" (Fraser 2013, 1).

According to numerous researchers,[2] all these peculiarities were influenced by the specific structure of classical Chinese language. Shen Youding 沈有鼎, for instance, pointed out that although vocal languages that represent direct realities of thinking have no class dependent distinctions, they have also been formed by cultural distinctions. Ancient Chinese characters were represented in the ancient Chinese thought structure (see Buljan 2008: 988). Therefore, they inevitably also affected the development of Chinese logic, which was therefore deeply influenced by specific Chinese forms and representations (Shen Youding 1980, 90). Most of these researchers agree that due to its specific structure, the classical Chinese has greatly contributed to the development and amplification of informal logic. This language expressed meaning rather by differences in the word order and in different structures of sentences, then by morphologic changes. This characteristic was very important in respect to the generation and the development of informal reasoning. Wang Kexi's 王克喜 (2000: 30ff) analyses showed that the specific Chinese comprehension is a result of distinguishing meanings independently from the grammatical form. In order to grasp the meaning and the semantic construction of a Chinese sentence, it is necessary to analyse it in its context. This rather flexible understanding of Chinese has formed the mode of informal thought in China. According to Wang, Chinese is a kind of comprehensive

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See for instance Shen Youding (1980), Chad Hansen (1985, 1989), Christoph Harbsmeier (1998), Zhang Dongsun (1995) and Wang Kexi (2000)

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language; it has no changes of location, case and form. Thus, semantic differences have not been constrained by morphologic forms, but rather depend on the semantic structures. Sometimes Chinese sentences cannot be analysed by the grammatical rules of the Indo-European languages. They are based upon a different epistemological system, which has been tightly connected to specific Chinese philosophy and arts (ibid: 32). Another important feature of classical Chinese might be found in the fact that it had no use for a copulative, since it developed other types of sentences to express judgments. A careful exploration of texts from the Warring States period (ibid: 30ff) shows that there were only a few sentences with the structure of linking verbs and predicates. Judgments were usually expressed through the relations of comparisons, causes, enumerations and explanations. Due to the absence of judgments structured by linking verbs and predicates in a strict sense, the scholars of that period could not entirely understand the concepts of generality and particularity. In contrast to Aristotelian logic in which a concept is the predicate of its positive over-concept, and the latter is the subject of the former, the ancient Chinese logicians were more focused upon the exploration of 'resemblance' (analogies) and the researching of the characteristics of the concept of 'kind' (*lei* 類). Thus, they were not interested in the exploration of the relation between generality and particularity. (However, the ancient Chinese concept of 'kind' was not limited to the division of the extension of concepts but also included in the resemblance between two events or actions.) This also explains why in ancient China, the analytical logic in the Aristotelian sense was underdeveloped and also, why analogism became the dominant type of the classical Chinese logic.

II. Thinking through relations:
Chinese analogy and the structural model of thought

In traditional Chinese philosophy, relations were generally viewed as primary and qualities as secondary (see Rošker 2008: 312ff). Thus, a sentence could generally be considered as expressing a grouping or a nexus of concrete experiences linked to an action or relation.

Analogical inference is not only a method that has been drawn from particular or specific to particular or specific; it also represents a type of inference in which the premises are not necessarily connected to the final conclusion. The link between the premise and the conclusion belongs to the sphere of probability, which is why this kind of inference belongs to the category of "probability inferences". In spite of these considerations, the ancient Chinese method of analogical thought met the basic requirements of scientific demonstration: it included the clarification of the origin of certain knowledge, the logical inevitability of the sources and the support of the demonstration (Cui & Wen 2001: 110). One of the most important characteristics of traditional Chinese analogism is that it was not exclusively limited upon the forms without considering their contents, something which could prove useful for advocating one's own ideas, while refuting the viewpoints of others. It also provided a foundation for an awareness of ethical, political and social problems. Such analogism is an inference which is rooted in similarities between the known and unknown. It could therefore not only function as a model that could be applied to existing experience; in addition, it also included certain epistemological effects. Hence, this method could relatively easy also function as a model of truth.

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As we all know, the ability to evaluate the perceptual similarity between stimuli is the *sine qua non* of biological cognition, underpinning nearly every cognitive process, from stimulus generalization and Pavlovian conditioning to object recognition, conceptualization, categorization, and inductive reasoning. Regardless of our individual and cultural backgrounds, humans are not only capable of evaluating the similarity between objects based on perceptual regularities, (e.g. in recognizing when two physical stimuli are perceptually similar), but can also understand when two ideas, mental states, grammatical constructions or causal-logical relations are similar as well. Even children understand that the relation between a dog and its doghouse is similar to the relation between a bird and its nest, although there is little or no "surface" or "object" similarity between the constituents of these two relations (Penn, Holyoak & Povinelli 2008: 112).

Analogical inferences[3] are based upon the presumption according to which reality is an organic entirety, composed of mutually interconnected parts that have similar or even identical attributes, functions and are additionally linked by mutually compatible structures. They basically belong to fundamental kinds of inferences and represent an important cognitive tool that can be used to present scientific hypotheses. For analogical inferences, structure is of crucial importance, since similar cognitive methods follow a cognitive process by which a known aspect or segment of reality forms a model that can be applied in order to recognize another unknown aspect or segment of that same reality, by linking them through the same properties or structure[4]. In this case, analogy is dependent on the mapping or alignment of the elements of target and source. Such overlapping takes place not only between objects, but also between relations of objects and even between relations of relations. The full mapping produces the designation of a predicate or a relation to the target. Modern computational models of analogy also emphasize the role of structural parallels between relations in the source and target. The importance of formal structure provided the foundation for Gentner's (1983) theory of structural mapping (Lee & Holyoak 2008: 1122), which has been implemented in the structure mapping engine. Since structural thought paradigms belong to the typical Chinese patterns of reasoning[5] (Rošker 2010, 2012), it is certainly of no coincidence that analogies represent a crucial method of Chinese logic.

Combining meanings thus appears as one of the main characteristics of classical Chinese. The composition of classical Chinese sentences tends towards the intrinsic connection among the parts of the sentence, and rarely applies any

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Lat.: *ratiocinatio per analogiam*.

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An eloquent historical example for the structural compatibility that defines such inferences can be found in the making of first atom models in Europe in the early 20th century. These models were based on the assumption that electrons with a negative charge were moving in circular or elliptical orbits around the atomic core, which had a positive charge. Thus, every atom can be described as a kind of micro-cosmic solar system. This supposition was based on analogical inference. Coulomb's Law which states that the magnitude of the electrostatic force between two points of electrical charges is directly proportional to the product of the magnitudes of each of the charges and inversely proportional to the square of the distance between the two charges, is structurally related to Newton's law of gravitation, which is again linked to Kepler's law of planetary motion.

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For a detailed analysis and explanation of the traditional Chinese structural cognitive patterns manifesting themselves in the important philosophic concept *li* 理 see my article on the structural features of Chinese epistemology (2010) and my book *Traditional Chinese Philosophy and the Paradigm of Structure* (2012).

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formal signs. The grammar of an ancient Chinese sentence is determined by the word order and semantic meanings. According to Cui Qingtian 崔清田 (Cui & Wen 2001: 72), there are many synonyms and ambiguities in numerous sentences and their structures because of the unlimited possibilities caused by the lack of formal symbols. As a result, we can only understand these sentences through their contextual meaning. Of all the elements of language, meaning is the most important one in ancient Chinese. In his opinion, this essential structure has influenced the entire Chinese tradition and culture.

This particular feature of the Chinese language also influenced the prevailing methods of thought that manifested themselves in the processes of inferences, based upon proximity, similarity and identity. Although this did not lead to the development of a "classical" deduction, it did create the specifically Chinese type of analogism.

As is well known, analogy in a general sense is a cognitive model that employs a neuro-cognitive working-memory system to activate and bind relational representations, integrate multiple relations, and suppress distracting information (Morrison, Cho 2008: 31).

"Using several priming tasks, Spellman et al. (2001) investigated whether analogy might just be a consequence of the organization of concepts in semantic memory. They found that unlike traditional semantic priming, 'analogical' priming was not automatic and instead required the participant to direct attention to relations between word pairs. This suggested that controlled retrieval of a bound relation into working memory (WM) may be a necessary process for analogical reasoning. Subsequent experiments demonstrated that WM was indeed important for analogical mapping, as well as relational binding" (ibid).

Perhaps this helps explain why relational propositions formed the basis of the specific logic that was developed in ancient China, while propositions with a subject–predicate structure were instead typical of ancient Greek logic. The correlation between dual but mutually complementary oppositions (above/below, before/behind, etc.) thus constitutes the very source of ancient Chinese logic. Traditional cognitive methods, however, did not remain limited to bipolar models, which only provided the foundations for basic, simple methods of comprehension. In such methods, binary (i.e. dual predispositions) functioned as basic elements or relational models that could be developed into higher or more complex structures or models of multi-layered, plural models of comprehension and thought.

Hence, traditional Chinese forms of cognition were defined by relations among individual objects of comprehension. These relations formed a dynamic structure that determined each singular entity through connections and influences between itself and other entities. Wu Chun 吾淳 describes the systemic, relational type of reasoning which arose from the specifically Chinese holistic worldview:

"Integral reasoning developed another new form, namely relational thought, in which things cannot exist independently, because they are always related to other things. In other words, each single thing can only exist within a relational network or within an integral structure. In fact, nothing can exist outside of this network or structure"[6] (Wu Chun 1998: 312).

This basic assumption also had a very profound influence on traditional Chinese epistemological approaches. In fact, in these approaches the primary object of recognition is not a specific entity (regardless of whether it belongs to the "external" or "internal" world), but its relations. The universe was thus conceived of as a complex network of innumerable, interdependent relations that were connected to and separated from one another in countless ways and on countless levels.

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Hence, traditional Chinese philosophers did not focus solely upon the human ability to grasp analogies, but also upon the capacity to combine relations into structures of a higher order. They also stressed that in order to make our relational capacity operational, an elaborate symbolic system, such as human language, was necessary.

The Han 漢 Dynasty (202 BC–220) scholar Dong Zhongshu 董仲舒 pointed out that the symbolic level of language was based upon common meanings:

"Names and symbols are pronounced in different ways, but they all arise from the same foundation"[7] (Dong Zhongshu 2010. Shen cha minghao: 1).

This foundation was understood as a structural connection between everything that exists:

"When people were creating language, they acted like a blind man: i.e. they followed the symbolic signs of names (concepts) in order to understand their structure"[8] (ibid: 4).

The fundamental axiom of structural language and reasoning was thus rooted in the assumption that the entities and behaviour of any complex system cannot be properly understood without first constructing a model of the basic structure of all that exists. Hence, the epistemology of relational thought was not limited to dual or bipolar models, but tended towards a systemic reasoning rooted in an integral structure of reality.

"Human thought had to follow relations and was no longer limited to the treatment of independent, isolated entities. If we think of a specific thing, we must simultaneously think of other things that are connected to it. This means we have to consider the impact it has upon other things, as well the impact other things have upon it. It thus becomes clear why such reasoning did not remain limited to a dual structure, but tended towards the development of plural structures"[9] (Wu Chun 1998: 312).

A cognitive model of this kind is based upon viewing the world as a complex structure composed of relations, intersections and interacting feedback loops. Once the structure is perceived, simulated and understood, the basic functioning of the system becomes manifest, making the system's response to problems, in terms of their solution, predictable.

In this context, it is important to point out that in ancient Chinese view, the changeable semantic connotations were not arbitrary, but followed a certain structure. This can already be seen in what is perhaps the most influential classic of ancient Chinese philosophy, namely in the Confucian commentaries on the *Book of Changes*. This famous work also includes quite a few examples of analogical inferences:

"The *(Book of) Changes* was composed based on principles of accordance with heaven and earth, and therefore clearly shows us their course." (Zhou Yi 2012: Xi ci shang, 4)[10]

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在整體性思維中，又產生了一種新的形式，這就是聯繫．在聯繫的思維中，一個事物或物體通常不會是孤理存在的，而是與另一個事物或物體有著聯繫．換言之，一個事物通常是一個聯系網絡上或整體結構中的事物．離開這種網絡或結構的事物，實際上是不存在的．

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名號異聲而同本

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民之爲言，固猶瞑也，隨其名號以入其理

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給與此，人們的思維活動就必須以聯繫的方式運行，而不是以孤立的方式存在．當考慮某一個事物時，就必須考慮其相關的事物，這即包括該事物對其他事物的影響，也包括其他事物對該事物的影響．可以看出，整體思維在這裡已走出二元結構，向多樣結構發展

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易與天地準，故能彌綸天地之道

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The *Book of Changes* was thus probably already based upon an idea of the world as being composed of a unitarian, universal structure. This supposition finds confirmation in a comment dating from the Western Han Dynasty (206 BC – 9)

"The *(Book of) Changes* is simple and yet it provides the mastery of the universal structure." (Han shi wai chuan 2012: 3,1)[11]

This enabled the ancient Chinese scholars to create analogies that were based on structural connections. The *Book of Changes* argued that universality included the logic of the world. It applied the Eight Trigrams as symbols, expressing structural connections to the laws of nature. These symbols were also applied as criteria for the classification and summarization of all worldly situations. The reason for this "summarization" of all the universal laws by the scheme of the eight trigrams, lies in the method of "comprehending by analogy," that was applied by interpreting these symbols. (Cui & Wen 2001: 32). This method was a method of gradual deduction, based upon step-by-step analogies.

Each of the binary symbols that composed their base was rooted in a structure that was integral, all-embracing and could therefore be expanded to include a limitless number of things that belonged to the same kind as this concrete individual symbol.

III. Specific features of the Chinese model

Since the Chinese epistemological tradition is defined by structural perception and reasoning (Rošker 2010: 79), the fact that the method of analogical inference had emerged as the central and most important model of logical inference in ancient China appears as no coincidence.

In the global history of logic, we can find three major traditions of logical thought, namely the Greek, the Indian and the Chinese (Cui & Wen 2001: 15). These different traditions have similarities as well as particularities. They all proceed from the same basic contents and all of them developed specific forms of inferences. Their differences result from differing social conditions and cultural backgrounds, which both underlay and limited them. Thus, each developed their own peculiar features. The majority of these features are connected to their respective dominant form of inferences. However, the Chinese model of analogical inferences differs in many essential respects from the Greek or Indian model.

In ancient Greece, the core of the prevailing Aristotelian logic was to be found in three-part argumentation, whereas the dominant types of ancient Indian logic were the five-branch method, and the three-branch method that evolved from the former. In pre-Qin China, the dominant inference mode was analogism. Although some theoreticians insist that analogism in Chinese (especially Mohist) logic was identical to Aristotelian three-part argumentation (or the three-branch method), this view lacks convincing evidence and has been continuously rejected by the academic world. As early as in the start of the 20th century, Hu Shi 胡適 has questioned (1983: 98) Zhang Binglin's 章炳麟 assertion (2010: 33) that the Mohist school had developed a theory of a three-part argumentation. Hu claimed that the Mohist theories were based upon causality rather than on deduction (ibid).[12] In the fifties of the previous century, Tan Jiepu 譚戒甫 claimed (1958: 22) that Mohist argumentation was very similar to ancient Indian logic, given that they shared about 70% of their

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key terms (ibid). In the beginning of the present century, Cui Qingtian 崔清田 and Wen Gongyi 溫公頤 forcefully challenged this opinion (2001: 73), arguing that such comparisons could not grasp the essence of the Mohist logic of argumentation. They saw logic as an instrument of reasoning which is closely linked to linguistic structures. Since in their view, different languages were defined by different historical and cultural characteristics, the structures and classifications of different types of logic could not be the same either (ibid).

The specific features of analogisms are derived from the general characteristics of Chinese logic, which were described by Hu Shi 胡適 (1891–1962) as follows:

"The formal aspect of Chinese logic is obviously far less important than in ancient Indian or traditional European logic… Its essence is rather of a theoretical than a formal nature" (Hu Shi 1983: 155).

The fact that ancient Chinese logicians focused on contents rather than form, is doubtless the crucial particularity that defines the specificity of such Chinese discourses. Germs of such reasoning can also be found in ancient Greek logic, particularly in the works of Aristotle; however, within the European logical tradition these germs were not developed or elaborated further until the early 20th century, i.e., till the emergence of new theories in the philosophy of language.

The modern Chinese philosopher Zhang Dongsun 張東蓀 (1886–1973) pointed out that the classical logic of disputation (in the sense of arguments and counter-arguments, i.e. of thesis and antithesis) was also developed in ancient Greek philosophy. He argued that in Europe, such logical method was not elaborated later on because (for different reasons) the European tradition became focused upon the development of formal logic. In this context, Zhang laid stress upon the fact that originally, the Aristotelian logic still implied two different central methods: that of evidences and of disputation. But while later developments remain focused upon syllogisms that were rooted in the former method, the latter was gradually forgotten (Cui & Wen 2001: 350). As we all know, a renewed research into the logic of argumentation by various logicians would not take place till the latter half of the 20th century:

"The enduring achievement of Aristotle lay in his ability to permeate practical thought by studying, preserving and applying its general forms and bringing them to consciousness. To do this, Aristotle's method introduced changing and unchanging terms into the analysis of properties. When we use the appropriate changing terms instead of unchanging terms in a proposition, i.e. multiple and complex practical contents, we obtain a generalized formula from the practical proposition. Formal logic, the foundations of which were laid by Aristotle, related to this kind of form" (Cui & Wen 2001: 351).

Formal logic distinguishes general forms of cognitive processes on the one hand, and the object of investigation on the other. Chinese logic differs in this respect, for its creators were mainly interested in creating semantic (not formal) structures, which they tried to define through descriptive explanations and practical examples, rather than in defining general abstract formulas of propositions and analogies.

This focus on contents instead of form led to the classification of analogisms into four main types. The adherents of the ancient Chinese Mohist school of logic have named this types *pi* 辟, *mo* 侔, *yuan* 援, and *tui* 推 (Mo Di 2012: 11, Xiao qu 2). While the *pi* type was based on explanation by example, the

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mo type referred to deduction from a parallel series of words, phrases or sentences (*ci*). The *yuan* type was instead based upon potentially similar views and the *tui* type on agreements with certain views through the negation of contrary views. All these types were apparently based upon descriptive methods (ibid).

This specificity led to fundamental particularities in inferences, as they were developed in ancient China. The structural systematization which defines the general (i.e. traditional European) model of analogical inferences dictates a preposition by which certain relations necessarily imply some other relations, regardless of the concrete domain or context (Holyoak 2008: 145). For example: let's suppose that R is a transitive relation; if there is a relation R (a, b) and at the same time there is a relation R (a, c) then it must be valid for all relations R that R (a, b) and R (b, c) both necessarily include R (a, c). However, the classical Chinese analogical method also distinguishes within this general model between different types of inferences with respect to the semantic-axiological value of the relations they include. In other words, in the Chinese model the validity or non-validity of analogical inferences also depends upon the axiological value of both preceding presuppositions. To illustrate this difference, let us take two inferences with exactly the same formal structure, but in which (according to their authors) the first one is valid, while the second one is not.

"Black horses are horses. If we ride a black horse, we ride a horse. Female slaves are human beings. If we love a female slave, we love a human being" (Mo Di 2001: 11, Xiao qu 4).[12]

If we replace the word "female slave" in the third sentence with the word "thief", we obtain a formally and structurally equivalent inference, claiming that thieves were human beings and that to love a thief meant to love a human being. Although both examples are structurally equivalent on the formal level, and their premises are doubtless true, for the later Mohists the first inference was valid, whereas the second was not, given that the first was in accord with common sense, while the latter was not.[13] Thus, they pointed out:

"Thieves are human beings, but to love a thief does not mean to love a human being" (ibid: 5).[14]

They explained it in the following way:

"If we do not like thieves, this does not mean we do not like human beings… And if we desire that there be no thieves this does not mean we desire there be no human beings."[15] (ibid)

If this is true, then it must equally be true that to love thieves does not mean to love human beings… In this case, the Mohist interpretation certainly does not hold up to closer verification, for thieves (as female slaves) are a subspecies of human beings. An equivalence is thus valid in affirmative arguments, but not necessarily in negations, for if all thieves are people, clearly not every person is a thief. The same holds true for female slaves. The element of semantic connotation is more evident in the following Mohist argumentation:[16]

"A dog is the same as a cur, but to kill a dog is not the same as to kill a cur" (Mo Di 2012: 10. Jing xia 155).[17]

In this framework of different semantic valuations of particular elements in the premises of both of the above inferences, it becomes clear that to love female slaves means to love human beings, while to love thieves does not necessarily mean to love human beings.

In Chinese intellectual tradition, forms of inferences were thus always further defined by semantic connotations. The dependence of the understanding of

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words on the syntax and semantic shows how relations dominate the Chinese linguistic consciousness (Cheng Chung-Ying 1987:290). Models of inference that were grounded upon semantically determined analogies were thus extremely important in traditional Chinese logic. This is clearly evident in many influential works of the pre-Qin period.

Germs of analogical theory can already be found in the Confucian commentary on the *Book of Changes*, as well as in the *Analects* (論語) of Confucius. Many important elaborations of these elements are contained in the *Mohist canon* (墨子) which was compiled by Mo Di 墨翟and in the main works of the followers of Confucius, *Mencius* (孟子) and *Xunzi* (荀子). The theory of analogies underwent further extensive development by Lü Buwei 呂不韋 in his *Commentary on Spring and Autumn* (呂氏春秋). All these works that can be traced back at least to the 6th century BC contain clear indications that the application and investigation of analogies was quite common already among ancient Chinese scholars.

IV. The development of semantic connotations in Confucian inferences

Confucius 孔子 (551–479 BC) can doubtless be regarded as the pioneer of the earliest Confucian teachings. Yet he never systematically epitomized or explained the above mentioned analogical model. However, it appears obvious from many of his quotations that he considered its application an important part of ethical and political learning. The following quotation from the *Analects*, in which he is described by his disciple Xue Er 學而, clearly shows that Confucius was well acquainted with the type of reasoning which is rooted in acquiring knowledge through analogies and that he often applied it in his methods of inference from known to unknown elements.

"I gave him a hint and he and he knew its proper sequence" (Kongzi 2012: Xue er 15)[18].

This was an example of inferring from the known to the unknown. A similar transfer of information was rooted in the assumption according to which elements with similar properties could be treated with the same criteria. The *Analects* also indicates that Confucius often trained his disciples in this kind of reasoning.

"I do not open up the truth to those who are not eager to obtain knowledge; I will not help out any one who is not anxious to find an explanation by himself. When I have presented one corner (of a subject) to any one, and he cannot from it learn the other three, I do not repeat my lesson" (Kongzi 2012: Shu er 8).[19]

12
驪馬，馬也；乘驪馬，乘馬也。獲，人也；愛獲，愛人也。

13
This validation was clearly related to the ideological stance of the later Mohists who – in contrast to their fiercest opponents, the Confucians – advocated universal love but were not opposed to capital punishment. They thus had to find a solution to this contradiction.

14
盜人人也，愛盜非愛人也

15
無盜非無人也…欲無盜，非欲無人也

16
Interestingly, in his investigations on universalities, Russell also concerned himself with the problem of dogs and the different words that denote them. See Russell (1997: 256).

17
狗，犬也，而殺狗非殺犬也

18
告諸往而知來者

19
不憤不啓，不悱不發，舉一隅不以三隅反，則不復也

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Making inferences regarding the other three corners based on the one which is given, is a kind of analogism. The four corners of the subject are namely supported by similarities; seeking the other three corners when one is provided, is thus a process of analogy (Cui & Wen 2001: 51). Even the central Confucian virtue of humanity (*ren* 仁) was, according to Confucius, established as an analogical model of a person who infers the nature of his fellow human beings based upon his own nature:

"The man of perfect virtue, wishing to be established himself, seeks also to establish others; wishing to be successful himself, he also seeks others to succeed. To be able to take one's own feelings as a guide may be called the art of humanity." (Kongzi 2012: Yong ye, 30)[20]

In this quotation, which can be understood as a Confucian version of the Christian "Golden rule," we find the term *pi* 譬, which in later texts is used to signify "analogy," in the sense of a cognitive process or information transfer from one individual to another.

In ancient texts, this character means "figuration". Contemporary scholars often translate it as "to match" (Cui & Wen 2001: 56). Hence, *pi* can be interpreted as explaining a truth by using suitable matching or corresponding examples.

Inference, as used in these examples, implies two oppositional concepts that are seen as similar, because they belong to the same kind.[21] In this instance, the concepts are those of "self" and "other," and the inference consists in the possibility of establishing a cognitive process that links the first concept with the second. The premise of putting oneself into other people's shoes means we have to know who people are before we can judge their preferences; thus, we cannot judge them through our own preferences or inclinations.

This presupposition was later taken up and further developed by Mencius (Mengzi 孟子 371–289 BC). This philosopher, however, based his conclusions on a logical foundation which clearly differed from that of Confucius. This foundation was based on notions of kind (*lei* 類) and thus on human beings being of the same "kind". By this concept, Mencius introduced a new methodological dimension into the process of analogy as a specific method of Chinese logic.

"Saints and ordinary people are of the same kind" (Mengzi 2012: Gonsun Zhou shang, 2).[22]

In this view, all members of "human-kind" must have something in common. According to Mencius, the similarity of minds is the basic similarity which defines all humans. Since their minds are structured in the same way, they can directly communicate. His treatises contain analogical thought that is based upon the theory, according to which human beings are of the same kind. Obviously, these analogies were developed upon the basis of Confucian teaching, which required people to "*take their own feelings as a guide*" when dealing with one another. Accordingly, if objects belonged to the same kind, they could be treated with the same criteria, since they were connected through some form of identical (or at least similar) constitution. These objects had thus to be connected through the same structure.

"The structures of everything that exists interact mutually through their kinds" (Li ji 2012: Li qi 30).[23]

Based on this premise, communication between humans is only possible because the human brain is structured in the same way. The assumption that objects belonging to the same kind were mutually connected because they shared the same structure was especially elaborated by Confucius' second

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follower, Xunzi 荀子 (313–238 BC). His analogies were already founded on a strict classification of objects into different kinds. Like his predecessors, Xunzi also postulated that objects belonging to the same kind could be treated with the same logical criteria. However, it is very significant that structure was seen as the main criterion for placing particular objects into the same kind:

"That which is of the same kind is not in mutual contradiction and always has the same structure" (Xunzi 2012: Fei xiang 7).[24]

Since Xunzi thus presupposed that each thing belonged to a certain kind and that objects of the same kind had the same structure, he established a theory of inferences which was based upon the analogy of similarities. But since Xunzi was simultaneously a precursor of the legalist school, he also used the concept of kind to establish a theory of legal precedents:

"We should implement laws according to the written statutes. If there are no written statutes, we should implement them according to previous cases of the same kind." (Xunzi 2012: Wang zhi, 3)[25]

V. The Mohist contributions

The method of analogical inferences was also investigated and elaborated by the later Mohists 後期墨家. As we saw at the beginning of this article, their canonical work *Mozi* 墨子 includes several chapters that, both directly and indirectly, seek to resolve questions connected to this method. In this sense, the Mohist were especially concerned with the concrete application and logical classification of analogical inference. The achievements of the later Mohists are of utmost value for the further development of the methods of analogical inference (Graham 1978: 12). Taking their departure from the results of earlier investigations, they systematically elaborated and developed them into a coherent, integral theory of analogies.

Their arguments are primarily dealing with the "difficulties connected to the theoretical definition of analogies" (Mo Di 2012: 10, Jing xia 102).[26] The Mohist treatments of the methodological suppositions of analogical inference were based upon their attempts to establish a detailed definition of the notion of kind. Hence, they were the first philosophers to engage in an extensive debate on the notion of kind (lei 類) in connection with naming (ming 名), both of kind, and of the objects belonging to it:

"Name: unrestricted; classifying; private." (Ibid: Jing shang, 79)[27]

20
仁者，己欲立而立人，己欲達而達人．能近取譬，可謂仁之方也已

21
This is a latent supposition which was considered, but never explicitly defined by Confucius. The definition was provided later by his follower Mengzi 孟子. The concept of kind, however, is also mentioned in earlier Confucian classics, for example, in the *Book of Ritual* (*Li ji*) 《禮記》

22
聖人之於民，亦類也

23
而萬物之理，各以其類相動也

24
類不悖，雖久同理

25
其有法者以法行，無法者以類舉 (The character 譽 was pronounced "yue" and denoted similarity.)

26
推類之難說 (This chapter also includes the first occurrence of a phrase that is still used in modern Chinese to denote the traditional method of analogical inference /*tuilei* 推類/.)

27
名，達，類，私

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The comment which is added to this phrase, explains that naming something "a thing" is unrestricted, since any actuality necessarily requires this name. Naming something "horse," however, is classification, because for actualities of this type we necessarily use this name. Naming someone by his or her surname is private, because this name remains confined to a particular reality (ibid: Jing shuo shang, 79).

The Mohists also defined the notion of kind (type) in connection to the concepts of identity (*tong* 同) and difference (*yi* 異) (ibid: Jing shang 87, 88; Jing shuo shang 87, 88). According to the later Mohists, the reason analogical inferences were problematic was due to the different sizes (consistency) of kinds as such:

"Analogical inferences (lit. transferring the kinds) are difficult because of their sizes." (ibid: Jing xia, 102)[28]

"If we are speaking about animals with four legs, then oxen and horses are included. But in the long run, (all) things are different in something; therefore, this is a question of the sizes (of kinds)." (ibid: Jing shuo xia, 102)[29]

At issue is the differentiation between, respectively, large and small sameness and difference, an aspect which was formulated in greater detail by the nominalist Hui Shi 惠施 (ca 370–310 BC).

However, this segment also elaborates on the differentiation between kinds with respect to their extension,[30] and consequently on the (im)possibility of analogical inferences based upon transferring information from these kinds. In the example above, the kind of animal with four legs is an umbrella kind, which "covers" many narrower kinds of animals with different names. The Mohists thus cautioned that when inferring we must be aware of the size of a particular kind, for the larger a kind, the less the objects belonging to it will possess common attributes and criteria. Analogical inferences should therefore follow criteria that are appropriate for the dimensions of a particular kind. However, objects should not be shifted from larger into smaller kinds arbitrarily, as this could lead to false conclusions:

"We cannot claim that oxen and horses are different because the former have teeth while the latter have tails. They both have teeth and tails. But neither can we claim that an ox is different from a horse because it has horns, while a horse does not. If we take the fact that oxen have horns while horses do not as an example in order to clarify the differences between them, it is a kind of nonsense, just like the example that an ox has teeth and a horse has a tail."[31] (Ibid: Jing shuo xia,167)[32]

Distinguishing oxen and horses because the first ones have horns, while the latter do not, is wrong, because horns are not a differentia specific of oxen, but also a characteristic of sheep and goats. Only a unique feature can serve as a criterion for distinguishing objects within a certain kind (Cui & Wen 2001: 54).

If things have some unique similarities, they are of the same type; if not, they belong to different types. So, if we want to judge whether certain things belong to a same type or not, we can only take unique differences or similarities (which manifest themselves in their general attributes) as a standard. Otherwise, the average differences or similarities (in their general attributes) cannot help us in judging whether these things belong to a same type or not (ibid). Hence, similarities in the evidences of analogism are relationships between things with the same unique attributes.

Things of the same kind can appear in analogies as the carrier or object of the information transfer. Analogical inferences follow a structure that connects

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all elements within a particular kind. It is no accident, therefore, that in such discourses, structure functioned as one of the basic elements that make analogies possible. The Mohists established three conditions that determined the formulation of the so-called phrase, which served as the basic instrument for analogical inferential cognitive processes (ibid). These phrases (*ci* 辭) were defined as elements that express meaning:

“Names denote realities, and phrases express meaning” (Mo Di 2012: Xiao qu 1).[33]

For the Mohists, phrases were fundamental elements of a well-regulated communication, based upon principles of semantic logic. Phrases could thus provide the bases for analogies. Phrases were also seen as sentences or propositions (Cui & Wen 2001: 64). The Mohists stressed that the existence, composition and application of phrases could not be arbitrary, otherwise people could not communicate clearly, and understand one another. The three aforesaid necessary conditions that determine phrases, as well as analogies, were *reasons, structures* and *kinds.*

“Before starting an argument, three elements are necessary: phrases originate from reasons, they follow structures and are transferred through kinds. Forming phrases without a clear knowledge of their reasons leads to chaos” (Mo Di 2012: Da qu, 25).[34]

By “they follow structures” is probably meant the application of phrases within a well regulated semantic structure of language and meaning (reasoning). The “transfer of phrases through kinds,” i.e. the cognitive processes that are based upon analogies, follow the structure that determines this inherent constitution of language and thought. In this context, structure (*li* 理) thus signifies well ordered (i.e. proper and reasonable) relations between reasons (*gu* 故) and kinds (*lei* 類).

Bearing these elements in mind, let us now reconsider the famous Mohist citation concerning the difference between killing a dog or a pup.[35] Even though both words are synonyms and refer to the same being with different denotations, we can now detect a specificity of Chinese logic in the understanding of the structure of relations that form models of analogical inferences. This framework is based upon an important assumption, by which a sentential structure is not merely a formal, static structure with immutable functions, but also implies dynamic variations of different meanings that can influence the validity or invalidity of a certain inference.

28
推類之難，說在之大小

29
謂四足獸，與牛馬與，物盡異，大小也

30
Or, at the semantic level, to their intension and extension respectively

31
It is interesting and somewhat curious that a similar problem of oxen and horses (or, more specifically, of beef and horse meat) was also analysed by the modern British philosopher Russell. He concluded that the question of “universals” was not merely a problem of words, but a difficulty that arose when seeking to determine facts. See Bertrand Russell, *My Philosophical Development*, 266–267.

32
牛狂與馬惟異，以牛有齒，馬有尾，說牛之非馬也，不可．是俱有，不偏有，偏無有．曰之與馬不類，用牛角，馬無角,是類不同也．若舉牛有角，馬無角，以是爲類之不同也，是狂舉也，猶牛有齒，馬有尾

33
以名舉實，以辭抒意 (Later, an even more detailed definition of this term was given by Xunzi.)

34
三物必具，然後足以生．夫辭以故生，以理長，以類行也者．立辭而不明於其所生，妄也

35
狗，犬也，而殺狗非殺犬也 (A dog is a pup, but killing a dog is not the same as killing a pup; Mo Di 2012: Jing xia, 155.)

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VI. Conclusion

Despite the Confucian and Mohist contributions described in the present essay, the specific Chinese analogy model has been elaborated and developed my most of the pre-Qin philosophical schools, including the ones who have mostly not been dealing with questions of semantic logic. This kind of reasoning is grounded in the structural view of reality which is characteristic for all classical Chinese discourses and manifests itself – among others – in the parallelisms that can be found in literary, historical and even in artistic texts. The starting point of such cognitive patterns can namely be found in the pre-logical foundations of thought, i.e. in concepts resulting from spontaneous correlations which might be discredited in case the conclusions drawn from them were contradictory or refuted by observation. In such cases, they could only be replaced by a spontaneous correlative switch (Graham 1992:207). The Chinese analogical thinking was namely based upon knowing explanatory categories (*lei*) that were constructed through the structural (*li*) similarity of objects they implied. These "leis" were not just fixed natural kinds (Harbsmeier 1998: 224), but rather relevant similarity groups, important to the arguments at hand. These – and many other – specific peculiarities of classical Chinese logic clearly show that the comparative study of logic makes significant demands on those, who embark on it (ibid: 420); however, it also points, on the other hand, to the limitless possibilities of intercultural human understanding.

Literature

Buljan, Ivana (2008): Philosophy and Zhexue. Time to Another and Back. In: *Filozofska istraživanja*, 28 (4), pp. 986–990.

Cheng Chung-Ying (1987): Logic and Language in Chinese Philosophy. In: *Journal of Chinese Philosophy*, 14, pp. 285–307.

Cui Qingtian 崔清田and Wen Gongyi 溫公頤 (Eds.) (2001): 中國邏輯史教程 (A Tutorial in the History of Chinese Logic). Tianjin: Nankai daxue chuban she.

Dong Zhongshu 董仲舒 (1975): 春秋繁露. (*Rich Dew of Spring and Autumn*). Beijing: Zhonghua shuju.

Fraser, Chris (2013): Distinctions, Judgment, and Reasoning in Classical Chinese Thought. In. *History and Philosophy of Logic*, 34.1, pp. 1–24.

Gentner, Dedre and Stevens, Albert L. (Eds.) (1983): *Mental Models*. Hillsdale, New Yersey: Lawrence Erlbaum.

Graham, Angus Charles (1978): *Later Moist Logic, Ethics and Science*. Hong Kong – London: Chinese University Press.

Graham, Angus Charles (1992): *Unreason within Reason*. La Salle: Open Court.

Han shi wai chuan 韓詩外傳 (1992) (*External Traditions of the Han Poems*). Hong Kong: Shangwu yinshuguan

Hansen, Chad (1989): Chinese Language, Chinese Philosophy, and "Truth". In: *The Journal of Asian Studies*, 44 (3), pp. 491–519.

Hansen, Chad (1989): Language in the Heart-Mind. In: *Understanding the Chinese Mind: The Philosophical Roots* (ed. by Allinson, Robert E.), pp. 75–124.

Harbsmeier, Christoph (1998): Language and Logic. In: *Science and Civilization in China* (Ed. by Needham, Joseph), Vol. 7. Cambridge: Cambridge University Press.

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Holyoak Keith. J. (2008): Relations in Semantic Memory. In: Gluck, M.A., Andreson J.R. and Kosslyn (Eds.): *Memory and Mind: A Festschrift for Gordon H. Bower.* New York: Erlbaum, pp. 144–159.

Hu Shi, 胡適 (1983): 先秦名學史 (*The History of the pre-Qin Logic*). Shanghai: Xuelin chuban she.

Knowlton Barbara J. and Holyoak Keith J. (2002): Prefrontal Substrate of Human Relational Reasoning. In: Gazzaniga, M.S. (Ed.): *The Cognitive Neurosciences*. Cambridge, London: MIT Press, pp. 1005–1017.

Kongzi 孔子 (1965): 論語 (*The Analects*). Taibei: Zhonghua shuju.

Kurtz, Joachim (2011): *The Discovery of Chinese Logic*. Leiden, Boston: Brill.

Lee, Hee Seung and Holyoak Keith J. (2008): The Role of Causal Models in Analogical Inference. In: *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34 (5), pp. 1111–1122.

Li ji禮記 (1934) (*The Book of Ritual*). Taibei: Shangwu yinshuguan.

Lü Buwei 呂不韋 (1854): 呂氏春秋 (*Lord Lü's Commentary on 'Spring and Autumn'*). Beijing: Zhonghua shuju.

Mengzi 孟子 (1980) (Master Meng, Mencius). Beijing: Zhonghua shuju.

Mo Di 墨翟 (2001): 墨子 (Master Mo). Guangdong: Guanzhou chuban she.

Morrison, Robert G. and Cho, Soohyun (2008): Neurocognitive Process Constraints on Analogy: What Changes to Allow Children to Reason like Adults? In: *Behavioral and Brain Sciences*, 31, pp. 391–392.

Mou Zongsan 牟宗三 (1941): 邏輯典範 (*The Logical Paradigms*). Hong Kong: Shangwu yinshu guan.

Penn, Derek C. Holyoak, Keith J. and Povinelli D. J. (2008): Darwin's Mistake: Explaining the Discontinuity between Human and Nonhuman Minds. In: *Brain and Behavioral Sciences*, 31, pp. 109–178.

Rošker, Jana S. (2008): *Searching for the Way – Theory of Knowledge in pre-Modern and Modern China*. Hong Kong: Chinese University Press.

Rošker, Jana S. (2010): The Concept of Structure as a Basic Epistemological Paradigm of Traditional Chinese Thought. In: *Asian Philosophy*, 20 (1), pp. 79–96.

Rošker, Jana (2012): *Traditional Chinese Philosophy and the Paradigm of Structure*. Newcastle: Cambridge Scholars Publishing.

Russell, Bertrand (1997): *My Philosophical Development*. London: Routledge.

Shen Youding 沈有鼎 (1980): 墨的逻学 (*The Moist Logic*). Beijing: Zhongguo shehui kexue chuban she.

Tan Jiepu 譚戒甫 (1958): 墨辯發微 (*A Tiny File on Mohist Disputes*). Beijing: Kexue chuban she.

Wang Kexi 王克喜 (2000): 古代漢語與中國古代邏輯 (*Classical Chinese Language and Classical Chinese Logic*). Tianjin: Renmin chuban she.

Wu Chun 吾淳 (1998). 中國思維形 (*Chinese Forms of Cognition*). Shanghai: Shanghai renmin chuban she.

Xunzi 荀子 (1974) (Master Xun). Shanghai: Shanghai renmin chuban she.

Zhang Binglin 章炳麟 (2010): 章炳麟論學手札 (*Zhang Binglin's Academic Essays*). Beijing: Beijing shifan daxue chuban jituan.

Zhang Dongsun 張東蓀 (1995) :知識與文化 (*Knowledge and Culture*), Zhongguo guangbo dianshi chuban she, Beijing 1995 (1st Ed.: Shangwu yinshuguan, Shanghai 1946).

Zhou Yi 周易 (1990) (*The Book of Changes*). Shanghai: Shanghai guji chuban she.

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Jana S. Rošker

Posebna obilježja kineske logike: analogije i problem strukturnih relacija u konfucijanskim i moističkim diskursima

Sažetak

Članak razmatra pretpostavku prema kojoj analogijsko zaključivanje u kineskoj tradiciji prati strukturu koja povezuje sve elemente unutar određene vrste. Ova struktura funkcionira kao temeljni element analogije. Još jedna ključna karakteristika klasičnih kineskih analogija jest metoda kombiniranja značenja. Kompozicija klasičnih kineskih rečenica teži k intrinzičnom povezivanju pojedinih dijelova rečenice te rijetko primjenjuje morfološke znakove. Ovo obilježje kineskog jezika također je utjecalo na prevladavajuće metode misli koje su se manifestirale u procesima zaključivanja, temeljenog na bliskosti, sličnosti i identitetu. Fokusirajući se na ranu konfucijansku i moističku filozofiju, autorica pokazuje kako i zašto ove metode mogu voditi do stvaranja specifično kineskog tipa analogizma.

Ključne riječi

kineska analogija, semantička značenja, vrste, zaključivanje, struktura

Jana S. Rošker

Spezifische Merkmale der chinesischen Logik: Analogien und das Problem der strukturellen Beziehungen in konfuzianischen und mohistischen Diskursen

Zusammenfassung

Der Artikel folgt der Annahme, nach welcher die analogischen Schlussfolgerungen in der chinesischen Tradition eine Struktur befolgten, die sämtliche Elemente innerhalb einer bestimmten Art verband. Diese Struktur fungierte als Grundelement der Analogien. Ein weiteres ausschlaggebendes Charakteristikum der klassischen chinesischen Analogien ist die Methode der Kombination von Bedeutungen. Die Zusammensetzung der klassischen chinesischen Sätze neigt zu einer intrinsischen Verbindung unter den einzelnen Satzteilen hin und wendet selten morphologische Zeichen an. Diese besondere Eigenschaft der chinesischen Sprache beeinflusste ebenso die vorherrschenden Denkmethoden, die sich innerhalb der Folgerungsprozesse bekundet haben, basierend auf der Nähe, Ähnlichkeit und Identität. Indem sie sich auf frühe konfuzianische und mohistische Philosophie fokussiert, erläutert die Autorin, wie und weswegen diese Methoden zur Bildung eines spezifisch chinesischen Typus des Analogismus führen können.

Schlüsselwörter

chinesische Analogie, semantische Bedeutungen, Arten, Schlussfolgerungen, Struktur

Jana S. Rošker

Principales caractéristiques de la logique chinoise : Analogies et problèmes de relations structurelles dans les discours confucianistes et moïstes.

Résumé

Cet article analyse la présupposition selon laquelle les inférences analogiques dans la tradition chinoise suivent une structure reliant tous les éléments à l'intérieur d'une espèce particulière. Cette structure fonctionne comme l'élément fondamental de l'analogie. La méthode combinatoire de significations est une autre caractéristique cruciale des analogies classiques chinoises. La composition classique de phrases chinoises tend vers une combinaison intrinsèque de connexions entre les parties individuelles de phrases et applique rarement des signes morphologiques. Cette caractéristique particulière a également influencé les méthodes prévalantes dans la pensée qui se sont manifestées dans les processus d'inférences basés sur la proximité, la similarité et l'identité. Se concentrant sur les débuts de la philosophie confucianiste et moïste, l'auteure montre comment et pourquoi cette méthode peut mener à la création d'un type spécifique d'analogisme chinois.

Mots-clés

analogie chinoise, sémantique de signification, espèces, inférences, structure