Zhang Dongsun's Views on the Cultural Conditionality of Logic and Epistemology

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1 *Zhang Dongsun: His Life and Work*

While Zhang Dongsun 張東蓀 (1886–1973) can be considered one of the leading Chinese philosophers of the 20th century, his criticism of sinicized Marxist ideologies marked him as a political dissident and he was consequently consigned to oblivion for several decades; only recently has his work been rediscovered by a number of younger Chinese theorists who have shown a growing interest in his ideas. During the first three decades of the 20th century, Zhang was one of the most influential thinkers of the Republic of China, a reputation which rested, in part, on his extraordinary ability to introduce Western thought in a way which was compatible with the spirit of Chinese tradition.

In 1934, together with Zhang Junmai 張君勱 (1886–1969), he established the National Socialist Party (Guojiashehuidang 國家社會黨), which soon became the Social Democratic Party (Minzhushehuidang 民主社會黨). During the early years of the PRC, he served in the new government as a member of the Central Governmental Committee, as counselor at the Ministry of Culture and in various other high-level positions, while also maintaining his position as Professor of Philosophy at Peking University (Beijing daxue 北京大學). However, in 1958, soon after the start of the Anti-Rightist movement, which was aimed at the political control of intellectuals, he lost his professorship and was forced to work as a scavenger at the same university. At the beginning of the Cultural Revolution, he was imprisoned in one of the most infamous 're-education' camps where, after prolonged physical and mental hardship, he would die shortly before the end of this radical integralist political movement.

His work indicates not only a profound understanding of Western theories, but also a comprehension of the linguistic structures that condition them. At the same time, Zhang also remained rooted in his own Chinese tradition of thought. As a youth, he benefited from a wide-ranging, exhaustive classical Chinese education, and he was one of the first philosophers who, as an alternative to the Western Hegelian dialectic, developed and elaborated the traditional system of correlative thought, which was based upon Daoist philosophy as well as upon certain theoretical paradigms of the Book of Changes (*Yijing* 易經).

The whole of his ontological and epistemological thought was also strongly influenced by the philosophy of *chan* 禪 (or Zen) Buddhism, and his system represents one of the first coherent and complete syntheses of ancient Chinese and modern Western ideas. However, for most contemporary scholars his greatest contribution was in his role as the first modern Chinese philosopher who created his own theoretical system, especially in the field of epistemology.[1]

In contrast to most of his contemporaries, whose work was characterized by a revisionism of traditional philosophy, Zhang's theory was a synthesis based on the assimilation of Western thought into the framework of traditional methodological and conceptual discourses.

As Chang Wing-tsit has pointed out, Zhang indisputably assimilated the most Western thought, established the most comprehensive and well-coordinated system, and exerted the greatest influence among Western-oriented Chinese philosophers. Epistemology is the core of Zhang's philosophy, which began with a pluralistic epistemology and culminated in a cultural one.[2]

Zhang's pluralism was based upon a revision of Kant's philosophy, in which he followed his own system of so-called panstructuralist cosmology, which was to a certain extent also influenced by the chan-Buddhist philosophy upon which his own worldview was based.

2   The Critique of Dialectical Materialism

At the end of 1931, Zhang published a number of articles in which he criticized dialectical materialism. His chief opponent in this polemic was the famous Marxist philosopher Ai Siqi 艾思奇 (1910–1966), and the ensuing controversy

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1   Jiang Xinyan, »Zhang Dongsun: Pluralist Epistemology and Chinese Philosophy«, in *Contemporary Chinese Philosophy,* ed. by Chung-ying Cheng and Nicholas Bunning (Oxford: Blackwell Publishers, 2002), 57–81.

2   Ibid., 66.

earned him the dubious reputation of being a 'reactionary' thinker. For this reason, Zhang would be either criticized, or not even mentioned, in the majority of Chinese textbooks and surveys of contemporary Chinese thought until the very end of the last century.

Censorship notwithstanding, this polemic was of great significance in modern Chinese intellectual history, for it generated great interest in the Chinese academic circles of the 1930s and contributed to the dissemination of Marxist philosophy at that time.

> Firstly, the polemic on dialectical materialism was a means for propagating and spreading Marxist philosophy. The greater the polemic grew, the more people became acquainted with its scientific principles; so it contributed greatly to promoting the circulation and development of Marxist philosophy in China.[3]

However, even Zhang's severest critics recognized the validity of his theoretical argumentation, and acknowledged his role in creating a more serious and profound approach to Marxist ideas in China:

> His critique of Marxist philosophy also referred to the fields of epistemology and historical materialism. Since we cannot accuse his critique and his attacks of lacking theoretical depth, this controversy developed into a theoretically well-grounded dispute.[4]

Zhang's views were criticized primarily on the basis of the presumed infallibility of the prevailing interpretations of Marxist thought, which being considered as a priori true, did not require any further or more detailed substantiation on the part of their proponents.

> Zhang Dongsun did not acknowledge dialectical development as a correct cognitive reflection of worldly movements. He denied the principle of the unity of subjectivity and objectivity, which is a part of it [...]. In his opinion, Hegel's dialectic is a cognitive law which Marx used to replace the laws of being; he believed that Marx understood this law solely as a law of being, and as a reflection of objective existence. Zhang called it »a complete confusion«.[5]

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3   首先，唯物辯證法論戰是馬克思主義哲學的宣傳和普及運動，隨著論戰的不斷深入，馬克思主義哲學的科學原理為愈來愈多的人所認識，從而極大的促進了馬克思主義哲學在中國的傳播和發展。Liu Wenying 劉文英, *Zhongguo zhexue shi* 中國哲學史 [A History of Chinese Philosophy], 2 vols. (Tianjin: Nankai daxue chubanshe, 2002), 2: 875.

4   除此之外，他對馬克思主義哲學所進行的批評，還涉及認識論和唯物史觀領域。由于他的批評和攻擊具有一定的理論深度，因此得以引導這次論戰向更深的層次發展。*Ibid.,* 2: 871.

5   張東蓀不承認世界的辯證運動在人們頭腦中的正確反映，割裂其中包涵的主客觀統一的原理...在他看來，黑格爾辯證法是以思想的法則代替存在的法則，而馬克思確認此法則純為存在的法則，將則看作是客觀存在的反映，則是＂糊塗萬分＂。Ibid.

For Zhang, dialectical materialism was problematic primarily because of its categorical and undifferentiated transfer of the dialectic as a method of logical reasoning to the comprehension of the development of concrete existing actuality.

> [Here], the dialectic method [has been viewed] on the one hand, as a developmental process of factual reality, and on the other, as a method of reasoning. The question as to how these two [processes] are to be linked together, raises a lot of problems.[6]

According to Zhang, these levels differed from each other. In this respect, he also cautioned against an undifferentiated understanding of the concepts of opposition (*xiangfan* 相反) and contradiction (*maodun* 矛盾):

> The advocates of the dialectical method believe that every opposition is a contradiction. Here, it is obvious that they do not understand the meaning of logical contradiction… In essence, contradiction in the sense of absolute negation is a logical concept, and not an actual or empirical state of being […]. A contradiction is a special kind of opposition, which cannot be found in nature, since it only exists in the sphere of language.[7]

Thus, in Zhang's view, the political aspect of the opposition between the exploiting and exploited classes was likewise unfounded and problematic, for it was based upon the assumption that the latter class functioned as a Hegelian antithesis, annulling the thesis simply by representing its negation. »Annulment *[Aufhebung]* is a particular kind of change in logic, not in space, time and actual reality.«[8]

The differences or relations between the laws of the external world and the structures of our perception of this world were explained in detail by Zhang in his epistemology, in which he emphasized their structural inter-connectedness. He named it the 'pluralistic theory of knowledge' (*duoyuan renshilun* 多元認識論).

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6   辯證法即是事實界上的歷程，又是思想上的方法，則于二者如何溝通上又發生許多困難。 Zhang Dongsun, »Dong de luoji shi keneng de ma?« 動的邏輯是可能的嗎？[Is a Moving Logic Possible?], *Xin Zhonghua* 新中華 1,18 (Shanghai, 1933), 1.

7   辯證法的人們，總是主張凡是相反都是矛盾，這顯然誤會了邏輯上的'矛盾'的意義…就性質來 講，矛盾與負面是名學上的，而不是事實上惑經驗是的〔…〕。矛盾是一種特別的相反，這種 相反在自然中是找不著的；這種特別的相反只存在于説話界。 Zhang Dongsun, »Sixiang zhanxian shang ji ge shimao de wenti« 思想戰線上幾個時髦的問題 [Some Fashionable Questions from the Battlelines of Thought], *Xin Zhonghua* 2,10 (Shanghai, 1934), 41.

8   奥伏赫變是邏輯的變，而不是空間上的變，時間上的變，與事實的變。 Zhang Dongsun, »Dong de luoji…«, 18.

This theory is the core of Zhang's philosophy, which began with a pluralistic epistemology and culminated in a cultural one.[9]

His cultural epistemology was also based upon this structural worldview and proceeded from the premise that knowledge was culturally determined and therefore essentially of a cultural nature, an aspect of his philosophy which still remains quite current, especially in the field of intercultural research. His cultural-philosophical studies were based upon detailed comparative analyses of Chinese and European thought, with special attention to the influence of linguistic structures upon various philosophical systems, and the connection between culturally determined differences and systems of logical reasoning in different traditions of thought.

Although Zhang's comparative studies of Chinese and Western philosophy were written a half-century ago, they remain of great value even today. They will continue to throw light on current debates on cultural issues and to inspire comparative philosophy in our own time.[10]

Let us therefore take a closer look at his philosophical theory of culture.

3 Language and Logic: Problems of Comprehension and Transmission

Linguistic analysis is an important part of Zhang's philosophy, and his logic is also closely connected to the logic of language. In his treatise Knowledge and Culture (*Zhishi yu wenhua* 知識與文化), he argues that language can help us form our reasoning.[11]

> On the one hand, language creates thought or opens new ways to it. But on the other, it also raises new problems by creating new expressions. In other words: through its expressions, language defines pathways of human thought from which it is not easy to escape.[12]

9   Jiang Xinyan, »Zhang Dongsun«, 6.

10 Ibid., 58

11 Li Xiankun 李先焜, »Jindai luoji kexue de fazhan (xia)—xifang xiandai luoji zhuanru yu Zhong, Yin luoji tansuo« 近代邏輯科學的發展（下）——西方現代邏輯轉入于中，印邏輯探索 [The Development of Modern Logical Science (Part 2)—the Advent of Modern Western Logic and Research in Chinese and Indian Logic], in *Zhongguo luoji shi jiaocheng* [A Textbook on the History of Chinese Logic], ed. by Wen Gongyi 溫公頤 and Cui Qingtian 崔清田 (Tianjin: Nankai daxue chubanshe, 2001), 350–387.

12 言語在一方面創造思想，或開闢思想，而在他方面卻又因新名詞而發生新問題。換言之，即又在人們困在這些名詞中使其思想有了固定的軌道,而一時無法解放。Zhang Dongsun, *Lixing*

In this respect, many interpreters of Zhang's thought believed him to be seconding the Sapir-Whorf hypothesis that language defined the mode of thought,[13] a concept which remains extremely problematic in academic circles today. However, Zhang distanced himself from such an interpretation, and to a Japanese critic who had accused him of advocating such a linguistic determination in his article Differences between Chinese and Western Philosophy from the Perspective of Linguistic Structures,[14] Zhang replied:

> It seems that this interpreter thinks that I advocated the view that language determines thought. This is completely wrong, and this critic seems to be trapped in some old frames of thought. The fact that language cannot be seen as cause, or a consequence of thought, already follows from the aspect of functional relations. The contrary view, which claims that thought is the cause and language the consequence, is equally wrong. All I said in my article was that language, logic and philosophical thought are interdependent and interconnected.[15]

This interdependence and reciprocal influence of language and thought was the basis of all Zhang's logical and philosophical approaches, and can also be seen in his emphasis on the close connection between language and the laws of logic.

> Logic was created because of linguistic problems. Therefore, logic does nothing other than try to regulate language. Why does language need regulation? Because of disputation. The beginnings of logic in ancient Greece can be found in rhetoric. Rhetoric was originally developed because of disputation; at that time, rhetoric was not yet a doctrine for beautiful speech and writing. The oldest Indian logic also arose from disputation in the sense of argumentation and counter-argumentation. In

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yu liangzhi 理性與良知——張東蓀文選 [Reason and Innate Knowledge—A Selection of Zhang Dongsun's Works], ed. by Zhang Rulun 張汝倫 (Shanghai: Shanghai Yuandong chubanshe, 1995), 253.—In modern Chinese, the expressions *yuyan* 語言 ('language') and *yanyu* 言語 ('speech') are different, but in the period in which Zhang was still an active writer, this difference did not yet exist. Zhang therefore could not know or apply the first term, and he often uses the latter for both meanings, i.e. in the sense of expressing the notion of language.

13   Li Xiankun, »Jindai luoji kexue de fazhan«, 352.

14   似乎譯者以為我主張言語決定思想，乃是本末倒置。我感說評者依然囿于舊觀點中。殊不知從涵數關係的觀點看，如說言語是因而思想是果，固然不對。而說思想是因，言語是果，亦同樣不對。我只是主張言語，邏輯與哲學思想，三者互相依靠（interdependent），互相關聯（interconnected）而已。 Zhang Dongsun, »Cong yanyu gouzao shang kan Zhong Xi zhexue de chayi« 從言語構造上看中西哲學的差異, in *Lixing yu liangzhi—Zhang Dongsun wenxuan* 理性與良知——張東蓀文選 [Reason and Innate Knowledge—A Selection of Zhang Dongsun's Works], ed. by Zhang Rulun 張汝倫 (Shanghai: Shanghai Yuandong chubanshe, 1995), 383.

15   *Ibid.,* 383.

China, formal logic was never developed, but the art of disputation dates from the earliest times. Those who dealt with the art of disputation were called dialecticians. The demand for a regulation of language therefore arose from disputation.[16]

Zhang Dongsun argued that the logic of disputation (in the sense of arguments and counter-arguments, i.e. of thesis and antithesis) was also developed in ancient Greece, and that this form of logical method was not elaborated later on because the European tradition focused on the development of formal logic instead. In the history of traditional European logic, even Aristotelian logic still implied two main methods: the method of evidence and the method of disputation; later developments, however, concentrated upon syllogisms, based upon the former method, while the latter was gradually forgotten.[17] A renewed research into the logic of argumentation by certain logicians[18] did not occur before the latter half of the 20th century:

> Zhang Dongsun had already stressed this aspect during the 1940s, arguing for a re-examination of the entire framework of Aristotelian logic. This was a very rare and valuable effort on his part.[19]

According to Zhang, the inextricably interwoven relationship between language and logic was already evident in the system of grammatical structures; in his view, the laws of logical methods also arose from the laws of linguistic structures.

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16 邏輯是由于言語上有了問題而始發生的。所以邏輯不外乎是想調整言語。為什麼言語會有調整的必要呢？乃是因為辯論。在希臘，其邏輯的始祖就是修辭學（rhetoric），而這種修辭學卻為了辨論而設的，不象後世那樣為了美文。在印度最古的邏輯亦只是辯駁之述。即在中國卻從無所謂形式邏輯（formal logic），但最早即有辨學，這種學者名之曰辨士。可見乃是因為有辯論遂有調整言語的必要。 *Ibid.,* 240.

17 Li Xiankun, »Jindai luoji kexue de fazhan«, 353

18 One of the first pioneers in this field was the Belgian logician Chaim Perelman (1912–1984), whose work *Traité de l'argumentation: La nouvelle rhétorique* (1958) was seminal in this respect.

19 而張東蓀在40年代強調這一側面，以恢復亞里士多德邏輯的全貌，這是難能可貴的。 Li Xiankun, »Jindai luoji kexue de fazhan«, 353.

Therefore, the main function of such logic is to regulate language. Due to customary modes of expression, language does not always correspond to rational principles. Thus, it became a kind of necessity and this method developed out of this necessity. It tried to re-establish a correspondence between language and rational principles, i.e. logic. This necessity is essentially a social one and does not arise from solely rational domains, as was thought by some later scholars.[20]

Here, we can see the influence of traditional Chinese epistemology which, on the basis of the relation between language and reality, tried to 'rationally' (i.e. in accordance with the most appropriate structural regulation [*dao* 道] of language as an expression of all that exists) standardize (*chang* 常) linguistic structures in order to improve and harmonize political and social relations within society. However, his approach here can also be compared to some recent researches in linguistic logic, which focus upon linguistic pragmatism:[21] »In my opinion, traditional logic is a discipline which deals primarily with the intrinsic structures of human discourses.«[22]

In terms of the rules of logic, Zhang Dongsun appropriated Karnap's theory of linguistic games:

Logic as such is a game. Its effectiveness is due to its ability to establish self-sufficient rules. The principles of symbolic logic, such as the so-called principles of permutation, addition, substitution, summation or association, etc., resemble the rules of chess, where the knight can jump over the castle. The deductive system that was developed based upon these rules is essentially tautological and therefore, of course, self-sufficient and consistent. But we should realize that all such systems are essentially arbitrary.[23]

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20   所以這種邏輯，其主要用處在於整理言語。因為言語有因習慣而致有不合立法的。乃是出一種需要。由這個需要就逼迫出來一個辦法。.把不合乎立法的言語變為合乎立法的，就是把言語使其合乎邏輯了〔…〕。這種需要乃是社會的，並不是如後來 學者所想的那樣屬於理性的。 Zhang Dongsun, *Lixing yu liangzhi,* 389.

21   Li Xiankun, »Jindai luoji kexue de fazhan«, 153–354.

22   我對於傳統邏輯的看法是以為這種邏輯是研究 ‘人類說話’（human discourse）中所宿有的 ‘本然結構’（intrinstic structure）。 Zhang Dongsun, *Lixing yu liangzhi,* 389.

23   邏輯本身就是一個玩藝或把戲（game）。其所以能玩得有效就因為它自身所定的規則是自足的。如符號邏輯上的所謂 principle of permutation, addition, substitution, summation, association 等等那一條不是等於象棋上馬跳車走的規則。根據這些規則所演成的 ‘演繹系統’（deductive system）在本身沒有不是重言疊說的，當然是自足的與 ‘自圓的’（consistent）。但須知這些系統都是所謂隨意的系統。 *Ibid.,* 253.

For Zhang, the basic function of language is expressing and transmitting thought. For this reason, he established a new concept of the so-called domain or discourse of logic (*mingli jie* 名理界) which posited a sphere of structural principles that exist beyond the external (*waijie* 外界) and the internal (*neijie* 內界) worlds. This sphere was to be understood neither as some sort of formalized copy of external reality, nor as a psychological representation of the structure of consciousness. In Zhang's view, the domain of logic was an independent and inherently consistent, autonomous, 'intrinsic' structure of rules (*benyou de guize* 本有的規則), which also figured as the main subject of logical research.

4   *The Universality and Cultural Conditionality of Epistemology*

However, logic is not only a discourse of language, but also a metaphysical tool for ideologies which bind and knit societies and cultures together internally.

> From the viewpoint of culture, logic, metaphysics, morals, society and politics are a unity which came into being out of the same necessities. If we break down the wall which surrounds it, we can see that what we considered to be logic is, in fact, a kind of social theory. What we considered to be metaphysics is in fact only a question of certain morals. And what we considered to be a moral theory is in fact nothing but a kind of political movement. In other words: each political movement needs to be based upon a certain morality. Each moral system needs to be protected by a certain metaphysics, and metaphysics, in turn, requires logic as a tool.[24]

Culture was thus an entity composed of a number of specific discourses and relations. The interweaving and interdependence of these discourses form the specific cultural background, which is also expressed in the structures of language and logic:

> Logic arose from social needs and developed in parallel with philosophy. Therefore, logic is not universal and basic. In addition, there is no single 'logic as such', since

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24   從文化的觀點來看，邏輯、形而上學、道德、社會、政治都是在一個需要上打成一片。在打穿後壁來説，即表面是邏輯，而暗中只是一種社會思想；表面上是形而上學，而暗中只是一個道德問題；表面上是一個道德理論，而暗中只是一種政治運動。再換言之，即某種政治運動必需要某種道德為基礎；某種道德必需要某種形而上學為其保障；某種形而上學必需要某種邏輯為工具的。 *Ibid.,* 419.

there are many different kinds of existing logics. Who knows? Perhaps this viewpoint represents a challenge to Chinese logicians.[25]

Hence, Zhang argued that logic was culturally determined; like language, it had developed on the basis of cognitive patterns which, at the same time, were formed by logic. Zhang very schematically distinguished four elementary forms of existing logic: the first was Aristotelian, the second mathematical, the third was the Indian logic of double negation and the fourth he named social-political logic, which included Hegelian dialectics and Marxist dialectical materialism.[26]

In his view, the cultural determination of logic was, to some degree, connected with the cultural conditionality of comprehension. Based on this assumption, together with elements of his pluralistic epistemology, Zhang developed his (inter)cultural theory of knowledge:

> Pluralistic epistemology reveals that knowledge is not an objective reflection of external things; and pan-structuralism argues that there is no substance for us to know. Knowing does not mean representing what there is outside of us, but signifies the construction or recreation of the contents of knowledge in relation to the structures of the universe. For this reason, the need for objective elements in knowledge is obvious. How, then, are the subjective contents of knowledge decided? Zhang believed that in addition to the common structure of human knowledge as described in his pluralistic epistemology, culture plays a significant role in forming our knowledge, and that knowledge is culturally and socially determined. Therefore, in order to discuss knowledge, we must also discuss culture. In this sense, the knowing mind is a collective mind. According to Zhang, epistemology in the past only talked about the solitary mind, but there is no solitary mind.[27]

Based on the premise of the close connection between various languages and the cultural determination of coincidental specific modes of logical reasoning, Zhang proceeded to develop his thesis on the linguistic foundations of European and Chinese philosophy. In his view, a key factor determining the specificity of 'Chinese' thought was the fact that the Chinese language (especially ancient Chinese), made no clear distinction between subject and predicate, while in morphological terms it did not add suffixes to express categories of time, gender or number.[28]

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25   邏輯是由文化的需要而逼迫出來的，跟著哲學思想走. 這就是説，邏輯不是普遍的與根本的。
      並且沒有‘唯一的邏輯’（logic as such），而只有各種不同的邏輯。這種主張或許對於中國
      的邏輯學者是一個挑戰亦未可知。 *Ibid.,* 388.

26   *Ibid.,* 387–401.

27   Jiang Xinyan, »Zhang Dongsun«, 68.

28   Zhang Dongsun, *Lixing yu liangzhi,* 360.

Zhang argued that this grammatical feature had greatly influenced Chinese thought. Since the subject is not distinguished in the Chinese language, the Chinese do not have the concept of a subject; because the subject is not distinguished, the predicate is not distinguished either.[29]

In addition, the Chinese language generally does not use sentential subjects, as opposed to Indo-European languages which omit sentential subjects only in exceptional cases.

> The Chinese language does not apply subjects and omits them quite often. Therefore, we generally conclude that the subject is not particularly necessary.[30]

Another difference is that Chinese lacks the equivalent of the expression »it«.

> Neither the colloquial *zhe,* nor the classical *ci* in the Chinese language is equivalent to the [English] word »it«. The Chinese word *ci* merely means the same as the English word »this«. This word has its contrary: the word *ci* ('this') is opposed to the word *bi* ('that'), and therefore cannot be applied as the indefinite pronoun.[31]

»It« is an indefinite pronoun, but »this« is not. Chinese lacks the form »it is«. »It is« expresses only the existence of something and not its attributes, and this separation of existence from attributes is a basic condition for forming the concept of substance.[32]

But the most important difference Zhang noted was that between the Indo-European expression 'to be' and the Chinese word *shi* 是.

> The Chinese language does not have an equivalent to the Western word »to be«. The colloquial *shi* does not express existence, while the ancient Chinese *wei* means the same as *cheng,* as in the English phrase »to become«. However, in the English language the words »becoming« and »being« are contradictory.[33]

»To be« implies 'to exist' and 'being in existence'. *Shi* 是 ('is') in spoken Chinese does not imply 'to exist'. Ancient Chinese had the expressions *you* 有 ('to have') and *cheng* 成 ('to become'), but not the equivalent of »to be«. Since Chinese lacks

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29   See *ibid.,* 363.

30   中國言語不必需要主語。換言之，即主語常在省略之例。因為主語常被省略，我們便可推知主語並不是不可缺少的。 *Ibid.,* 363.

31   中國言語上無論口語的 '這' 與文言的 '此' 或 '其' 都不能與 'it' 相當。'此' 只是英文的 'this'。這個詞是有對待的。'此' 是與 '彼' 相對的。不能成為一個 '不定者'（the non-definite）。 *Ibid.,* 363.

32   Jiang Xinyan, »Zhang Dongsun«, 73.

33   中國言語中沒有和西方動詞 to be 相當的詞。如口語的 '是' 便不能有 '存在' 的意思。至於文言的 '為' 反有 '成' 的意思，有幾分似英文的 'to become'。而在英文 becoming 卻與 being 正相反對。 Zhang Dongsun, *Lixing yu liangzhi,* 363.

an expression for »to be«, it has difficulty in forming the subject-predicate propositions of standard logic.[34]

Due to the absence of the linguistic (and thus also cognitive) category of 'subject' (*zhuti* 主體), and the absence of the expression »to be« in ancient as well as modern Chinese, traditional Chinese philosophy never established or developed the concept or discipline of 'ontology' (*benti lun* 本體論). Therefore, classical Chinese philosophy also never developed formal logic based upon theorems (*mingti* 命題), and even the basic law of traditional European logic, i.e. the law of identity (*tongyi lü* 同一律)[35] was alien to specific Chinese thought.

> The Chinese system of logic was not based upon the law of identity (logic without identity). Because the Western logical system of classifications is based upon the law of identity; it necessarily developed dichotomies.[36]

However, this does not signify that traditional Chinese thought did not develop its own logic, which Zhang defined as 'non-Aristotelian' (*fei Yalishiduo de* 非亞里士多德的) logic:

> Chinese cannot be forced into the framework of Western logic; in fact, we must recognize that logic as it developed in China represents a completely different system.[37]

The specificity of Chinese logic can therefore not be found in the framework of Western cognitive patterns:

> If we search for contributions of Chinese logic in the framework of Aristotelian logic, we will necessarily conclude that there was no logic in ancient China.[38]

Zhang Dongsun concluded that Aristotelian logic, based upon the law of identity, developed the structure of dichotomies based upon contradictions of the type »A and not-A«. Such relations were mutually exclusive:

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34   Jiang Xinyan, »Zhang Dongsun«, 73.

35   Zhang considered the two remaining elementary laws, i.e. the law of contradiction (*maodun lü* 矛盾律) and the law of the excluded third (*pai zhong lü* 排中律), merely as variations of the law of identity.

36   中國人的名學系統不建築在同一律上的（logic without identity）〔…〕西方名學上的分類因為基於同一律,所以必須為'二分'（dichotomous division）。Zhang Dongsun, *Lixing yu liangzhi*, 363.

37   中國人的思想是根本不能套入於西方名學的格式內,而中國人所使用的名學只好說是另外一個系統。 *Ibid., 365*

38   因為一定要按亞里士多德邏輯的'圖'去素中國邏輯之'驥',必然會得出中國古代無邏輯的結論。 Zhang Dongsun, quoted from Li Xiankun, »Jindai luoji kexue de fazhan«, 358.

But Chinese thought was not focused upon these features. Dual oppositions, such as big and small, above and below, good and evil, or presence and absence, were seen as mutually defining and interdependent.[39]

The classification of the type »A and B«, however, makes it possible for something not to be A or B; such non-exclusionary distinctions were quite common in Chinese logic. Logical definitions in the Aristotelian sense are equivalents in which the symbol of identity connects the *definiendum* and the *definiens*.[40] Ancient Chinese logic lacked such definitions:

> According to this logic, the meaning of a word can be understood or clarified by looking at its opposite. For this reason, definitions found in Western logic do not exist in Chinese logic. The meaning of a word is not made clear by a definition, but by contrasting it with its opposite. For example, a »wife« is a »woman who has a husband«, and a »husband« is a »man, who has a wife«. This is not a strict definition but an explanation in terms of a relation.[41]

Zhang Dongsun is the first philosopher we know of who defined the conceptual basis of specific traditional Chinese logic. Its foundations were relational propositions, just as Western logic was based upon the proposition of the subject‐object structure. The correlation between dual yet complementary oppositions (such as above-below, before-behind, etc.) thus represented a specific approach of ancient Chinese logic.

Zhang named this specific logic, as it was formed and developed in ancient China, 'correlative logic' (*xiangguan lü mingxue* 相關律名學) and 'the logic of correlative duality' (*liangyuan xiangguan lü mingxue* 兩元相關律名學)«[42]. In contrast to the Hegelian method, which was based upon mutually exclusive contradictions, the methods of ancient Chinese 'dialectical logic' (*bianzheng mingxue* 辯證名學) represented a dynamic interrelational process of inter-dependent and complementary poles, as could already be found in the theoretical approaches of the Book of Changes *(Yijing)*.

> He was the first to understand that the Book of Changes represented orthodox Chinese thought and the beginning of the history of Chinese logic. This was a very creative insight, since the Logic [from a language point of view] of the Book of Changes was created much earlier than Moist or Dialectical logic.[43]

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39 但中國人的思想則不注重於此點。總是大小對稱，上下對稱，善惡對稱，有無對稱。並且把他們認為相依靠的。 Zhang Dongsun, *Lixing yu liangzhi,* 364.

40 *Ibid.*

41 Jiang Xinyan, »Zhang Dongsun«, 75.

42 Zhang Dongsun, *Lixing yu liangzhi,* 365.

43 將《周易》的思維方法看作中國的正統思想，看作中國邏輯史的開端，是有創見的，因為

Due to his ostracism during the Cultural Revolution, Zhang Dongsun's theories were consigned to oblivion for many years. Recently, however, a younger generation of theorists has begun to rediscover his work, though often expressing reservations as to its more problematical aspects: »Some of his conclusions are invalid from the viewpoint of contemporary theory.«[44]

However, most contemporary thinkers acknowledge his valuable and often innovative contributions to the development of Chinese philosophical thought, and especially his pioneering role in the discovery and interpretation of correlative dialectic. »He was probably the first scholar to attribute correlative thinking to Chinese philosophy [...].«[45] Zhang Dongsun was also one of the founders of the relatively new field of intercultural philosophy and methodologies for intercultural research.

> His recognition that ancient Indian logic was of a different kind than Aristotelian logic, and that ancient Chinese logic was in many respects quite different from both, is doubtless true. His most valuable contributions are also to be found in his endeavors to elaborate the dialectical aspect of Aristotelian logic, to connect logic, language and methods of disputation, and to discover principles and formal elements of the logic of linguistic pragmatism. Recently, many Chinese and foreign theorists began to address these questions and their research has already produced some important results. However, Zhang was the first to see the far-reaching significance of these problems, and can be considered something of a visionary in this respect.[46]

Despite the fact that certain aspects of his thought are incomplete and insufficiently systematic, [47] Zhang Dongsun is definitely deserving of the attention currently being paid to his work by both Western and Chinese scholars.

Zhang's comparative studies of Chinese and Western philosophy helped to establish his cultural epistemology and showed how cognition is influenced by

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    《周易》的邏輯確實比墨變邏輯產生的更早。 Li Xiankun, »Jindai luoji kexue de fazhan« 358.

44 張東蓀有些具體論證從現在看來是不一定能成立。 Ibid.

45 Jiang Xinyan »Zhang Dongsun«, 74

46 一般承認古印度的邏輯是一種與亞里士多德邏輯有區別的邏輯類型，那麼承認中國古代的邏輯也有不同於上述兩種邏輯的某種特性，這也并非説不過去〔…〕而繼承亞里士多德的論辨邏輯的傳統，將邏輯與語言表達，與論辨結合起來，探索語用邏輯的形式與規律，現在國內外已經有不少人在作這方面的嘗試，並且取得了一定的成果. 張東蓀首先提出來，還是有遠見的。 Li Xiankun, »Jindai luoji kexue de fazhan«, 358.

47 These deficiencies are mostly due to the fact that Zhang Dongsun was prohibited from writing and publishing during the last 25 years of his life, and therefore was unable to refine and perfect his theory in terms of style, terminology, system and essence.

culture. His studies also contributed greatly to comparative philosophy itself and provided many valuable insights into the differences between Chinese and Western philosophy. His investigations of the influence of Chinese language on the development of Chinese philosophy are very influential and pioneering work. His hypothesis that correlative thinking is a characteristic of Chinese philosophy and that analogical argument is a Chinese mode of inference has been widely adopted by scholars in comparative philosophy. Although he is still relatively unknown in the West, Zhang definitely deserves to be recognized for his contributions to Chinese and comparative philosophy.[48]

We can only concur with this view in adding that his greatest contribution was most certainly the creation and development of a modern theory of knowledge based upon ancient Chinese and Chan Buddhist epistemology, and which in many respects represents a felicitous synthesis of modern science and traditional Chinese thought.

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48   Jiang Xinyan, »Zhang Dongsun«, 78.