Shadowlands of Objectivism and Comprehensiveness: An Introduction to Key Concepts in Zhang Shenfu's Philosophical Thought (1919–1948)¹

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Abstract

The article aims at presenting an overview of the main concepts in the philosophical thought of Zhang Shenfu, one of the leading intellectuals from Republican China (1912–1949). The study sets out from a brief summary of Zhang's intellectual achievements, and proceeds by offering a more concise picture of the main influences, developmental stages and finally also central ideas of Zhang's thought. By offering a general view on the concrete confluences and dissonances between the keystones of Zhang's philosophy on one side, and its alleged sources in Western and Chinese philosophy on the other, this study further aims at presenting a new insight into the unique characteristics of Zhang's philosophy. At the same time, by setting the discussion on Zhang's philosophy in a broader context of contemporary intellectual discourse, the article also endeavours to establish a tentative basis for the future critical analyses and potential revaluations of Zhang Shenfu's role in intellectual history of modern China.

Keywords: Zhang Shenfu, objectivism, comprehensiveness, Modern Chinese philosophy, dialectical materialism, Western science, mathematical logic

Mejna območja objektivizma in vseobsežnosti: uvod h ključnim pojmom filozofske misli Zhang Shenfuja (1919–1948)

Izvleček

Clanek podaja pregled osrednjih pojmov v filozofski misli Zhang Shenfuja, enega pomembnejših kitajskih intelektualcev iz republikanskega obdobja (1912–1949). Študija poda kratek povzetek Zhangovih intelektualnih dosežkov, celovitejšo sliko glavnih vplivov in razvojnih stopenj ter osrednje ideje Zhangove filozofske misli. S splošnim pogledom na

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konkretna sovpadanja in razhajanja med temeljnimi pojmi Zhangove filozofije na eni strani ter njenimi domnevnimi viri v zahodni in kitajski filozofiji na drugi poskuša ta študija predstaviti nove vpoglede v edinstvene značilnosti Zhangove filozofije. Z umestitvijo razprave o Zhangovi filozofiji v širši kontekst sodobnega intelektualnega diskurza želi članek hkrati vzpostaviti začasno osnovo za prihodnje kritične analize in morebitna ponovna ovrednotenja Zhang Shenfujeve vloge v intelektualni zgodovini moderne Kitajske.

Ključne besede: Zhang Shenfu, objektivizem, obširnost, moderna kitajska filozofija, dialektični materializem, zahodna znanost, matematična logika

Introduction

Zhang Shenfu 張申府 (1893-1986), originally called Songnian 崧年, was an important Chinese intellectual, who contributed greatly to the propagation of Western science, analytical philosophy and dialectical materialism in 1920s and 1930s China. As an important member of the May Fourth intellectual elite, he took part in shaping of the left-oriented intellectual movement at Peking University. As a close colleague of Li Dazhao, Zhang was a senior member of the communist movement in Beijing and a cofounder of the CPC (Communist Party of China). Having been a notoriously outspoken and prolific writer, and later also as an important member of the first modern Department of Philosophy at Qinghua University (between 1929 and 1936), Zhang played an important role in the processes of the dissemination and establishment of Western modern philosophy in Republican China.

In the intellectual history of modern China, Zhang has generally been credited for pioneering contributions to the introduction and propagation of the philosophy of Bertrand Russell and Ludwig Wittgenstein in the 1920s and early 1930s.² To a minor degree, Zhang has also been credited for his general introduction of Freud's psychoanalysis in the early 1920s,³ and the earliest introduction of the philosophy

² Thus, for example: Wen and Cui (2001, 359–66).

³ As an example of first introduction Jiang and Ivanhoe (2013, 26-28) mention Zhang's article "Social Questions (Shehui wenti 社會問題)" from 1922, which written and published during his stay in Paris. Allegedly in 1922, Zhang attended Freud's lectures at the University of Paris (Zhang 1993, 99). However, Zhang was already interested in modern psychology back in the late 1910s, mainly due to his impression that Russell also had a deep interest in psychology. Thus, in 1920 he published an abridged translation of Russell's essay "The Modern Science of Psychology (Jindai xinlixue 近代心理學)" in the New Youth, which also mentioned Freud's psychoanalysis.

of the Vienna School (early 1930s), in particular the thought of Rudolf Carnap.⁴ Above all, he is given credit for his support for the philosophy of Russell and Wittgenstein—he also created the first translation of the latter's *Tractatus Logico-Philosophicus* into Chinese.⁵ However, maybe the most important of all Zhang's contributions to the development of the discourse of modern science and philosophy in China was his early dissemination of the notion of mathematical logic, followed by his many-year long lecturing about Russell's mathematical logic at most prestigious Chinese universities, such as Peking and Qinghua. Zhang was also the first Chinese philosopher to have organized a specialized course on mathematical logic, Russell or Wittgenstein at any Chinese university.⁶

Beside biographical accounts, all that still bears testimony about Zhang's active role in the intellectual developments of the 1920s and 1930s has been preserved in a relatively rich corpus of his philosophical writings. His collected works reveal both what may have been the main reason why Zhang was erased from the historical archives of mathematical logic in China, as well as the manner in which Zhang actually propagated philosophical and scientific ideas from the West. Apart from numerous translations of works by Bertrand Russell, Ludwig Wittgenstein, Rudolf Carnap, and the like, the main corpus of Zhang's writings that touched upon either modern philosophy or mathematical logic was written in form of philosophical meditations, through which Zhang expounded either on matters of a practical, political nature or his own philosophical worldview. Throughout Zhang's opus from the 1920s and 1930s, a general notion of mathematical logic usually occurred alongside the main collection of other key ideas, which Zhang adopted from Russell, dialectical materialism, Vienna School or traditional Chinese cosmology and ethical thought. In this sense, Zhang's comprehensive, syncretistic philosophical outlook was also the main means of his propagation and dissemination of the above-mentioned ideas.

⁴ Together with his younger brother Zhang Dainian 張岱年 (1909–2004). See, for example Jiang Yi (2009).

⁵ The translation titled *Mingli lun* 名理論 (*Luoji-zhexue lun* 邏輯哲學論) was published in two parts in the *Xiandai pinglun* 現代評論, in 1927 and 1928.

The nature of his role in the history of mathematical logic in China is still a matter of discussion. The majority of historical surveys on this subject either do not recognise Zhang's role at all or only briefly mention him as the first proponent of Russell's philosophy in China. As examples thereof, see Zhou and Zhou 1989, 1–25; Zhou 2004, 398–406; Lin and Zhang 1983; Shi and Zeng 1998; and Song 2000. This trend has been reversed only recently by the study of Su and Dai (2019), who in their article "Zhang Shenfu's Contribution to Early Dissemination of Mathematical Logic in China (Zhang Shenfu dui shuli luoji zai Zhongguo zaoqi chuanbo de gongxian 張申府對數 理邏輯在中國早期傳播的貢獻)" delivered a non-critical overview of Zhang's publications and translations from the 1920s and 1930s, set into the framework of Zhang's own autobiographical accounts of that period.

When it came to his contribution to the development of mathematical logic as a scientific discipline, he was first and foremost one of the leading propagators of the notion of mathematical logic, which he communicated through his version of an all-encompassing and profoundly pragmatic scientific worldview. Even when, in the final years of the 1920s, he started lecturing at the prestigious Qinghua University, teaching the first ever courses devoted explicitly to mathematical logic and Russell in China, he applied the same approach in these lectures as in his philosophical meditations. ⁷ Zhang tended to explain concepts from mathematical logic from an everyday perspective, intertwined with problems from contemporary politics and ethics, as well as the general scientific outlook. Furthermore, in the early 1930s the content of his lectures on logic also gained a strong political undertone, due to his ardent advocacy of dialectical materialism and then philosophical conviction that mathematical logic and dialectical materialism could be combined into one, on the other.

Zhang's philosophical attempt to create a synthesis between two contesting currents in contemporary Chinese philosophy, namely dialectical materialism and analytic philosophy (or more specifically dialectical method and mathematical logic), also constituted the main reason behind Zhang's rise as one of the most important leftist intellectuals in the early 1930s. Thus, the unofficial Marxist historiographer from the period, Guo Zhanbo 郭湛波 (original name Guo Haiqing 郭海清, 1905-1989), recognized Zhang's attempt to bridge dialectical materialism and mathematical logic as an important phase in (the Marxist vision of) the development of logical method in China⁸ (Guo 1965, 225-32).⁹ While this philosophical outlook, which constituted the main source of his intellectual renown in the 1930s, represented the second phase of Zhang's intellectual development, similar efforts to interlink social and political reform with the main results of Western science, and to synthesize a socialist vision of society with analytical natural science, had already been at the forefront of his endeavours in the 1920s. Looking from the perspective of later political developments, one might conjecture that Zhang's main contribution to intellectual development in Republican China was his tireless advocacy of the profound theoretical compatibility

⁷ His tendency to translate logical concepts into simple, everyday terms, and his strong impetus towards illuminating the interrelatedness of theory and practice, made his lectures on logic the most popular and well-attended class at the department (Sun 1988, 30).

⁸ Apparently, this was an important agenda of leftist intellectuals at the time, especially given the fact that logical treaties were among the rare English texts that were read even by Mao Zedong himself (Tian 2019, 18).

I am referring to Guo's work Chinese Intellectual History in the Last Fifty Years (Jin wushi nian Zhongguo sixiangshi 近五十年中國思想史), which was first published in 1935. Guo was also a former student of Zhang.

between Marxist philosophy on one side, and analytic philosophy and traditional Chinese thought on the other. Through his philosophy, for more than two decades Zhang made great efforts at convincing the young Chinese Marxists of the immense importance of things like "mathematical logic", comprehensiveness and greater objectivism for all future constructions of Chinese society. ¹⁰ It is not only due to his key role and influence within the course of intellectual developments of the 1920s and 30s, but also due to the extreme relevancy of Zhang's philosophical thought in a broader temporal perspective, that his ideas ought to be considered as important for our understanding of the modern China.

Besides Zhang's intellectual extravagance, one of the main reasons why his philosophy went widely unnoticed for so many decades is related to his gradual academic and political demise which followed his arrest and—politically motivated—expulsion from Qinghua University in 1936. Following the events of 1936, the academic persona of Zhang Shenfu started slowly fading into obscurity, while his political demise was completed in 1948, when he was finally banished from the circles of the Communist Party of China (CPC) and declared the enemy of the people by the Guomindang (GMD, KMT). The affair of 1948 was also the main reason why, for many decades following the establishment of the People's Republic (PRC), both his philosophy and contribution to the establishment of mathematical logic in China were almost completely forgotten. Zhang's life and thought were rediscovered only in 1979, and only as a result of his interviews with Vera Schwarcz (see Schwarcz 1992).

Consequently, from the early 1980s on, numerous studies devoted to Zhang Shenfu's philosophy started to emerge in Chinese academic circles. The first substantial act of rediscovery happened with the publication of *The Collected Scholarly Writings of Zhang Shenfu (Zhang Shenfu xueshu lunwenji* 张申府學術論文集) in

²⁷ Zhang allegedly recruited both Zhou Enlai and Zhu De into the Chinese Communist cells he established in Paris and Berlin. When Mao Zedong was working as an apprentice at the Peking University Library, Zhang was his supervisor. Later, in the late 1930s, Mao wrote letters of reverence to Zhang, and in the early 1940s met with him on several occasions during his visits in Chongqing (Meng 2014, 23).

¹¹ Zhang was arrested on charges of having participated in the 1936 student protests in Beijing, which broke out in the aftermath of the December 9th Movement (1935).

¹² Following the outbreak of the Second Sino-Japanese War in 1937 Zhang served as a member of the People's Political Council, until in 1940 he renounced the position after a conflict with the Council's President Jiang Jieshi 蔣介石. After that he assumed the post of the editor-in-chief of the government' periodical *Wartime Culture* (*Zhanshi wenhua* 戰時文化) (Zhang 1993, 114–15). Ultimately Zhang ended up working again in the library of the Peking University.

¹³ The reason for this was the publication of his article "An Appeal for Peace (Huyu heping 呼籲和 平)", which became the target of fierce criticism by the Party.

1985. However, the most important studies on Zhang Shenfu's philosophy started to appear only in the late 1990s. 14 The following decade saw a further increase in the number of Chinese studies on Zhang's philosophy. 15 However, as indicated by Guo Qiyong (2018, 324) in his book Studies on Contemporary Chinese Philosophy (1949–2009): in numerous publications on Zhang Shenfu that were published in the last four decades "the inner logic of his dialectical materialism, his incorporation of traditional Chinese thought ... into his philosophy, and his integration of Western logic and analytic philosophy into dialectical materialism remain relatively unexplored".

This article thus intends to provide a new attempt at grasping Zhang's incorporation and integration of Western and Chinese thought, by presenting an overview of a few main concepts or keywords that constantly reoccur in his writings in the period between 1919 and 1948. Secondly, this study will try to tentatively link these concepts either to their original sources or major events in the contemporary Chinese intellectual world. Apart from "comprehensiveness", which is the thread connecting his entire philosophy, the article will closely examine the notions of "pure" or "greater objectivism", "dialectical materialism", "logical" and "dialectical analysis" and "concrete relativism" in Zhang's philosophy. Zhang's notion of mathematical logic, which is essential for our understanding of not only his philosophy but also of the early development of this scientific discipline in China, will be discussed in a separate study. This article is therefore intended as a preliminary study to subsequent critical discussions on the content and value of Zhang Shenfu's philosophy.

We shall first take a closer look at three main influences in Zhang's intellectual development.

For example: in 1997, the essay entitled "Zhang Shenfu's Philosophical Thought (Zhang Shenfu de zhexue sixiang 张申府的哲學思想)" was written by his younger brother Zhang Dainian and published as a chapter of his book *Culture Clash and Cultural Fusion (Wenhua de chongtu yu ronghe* 文化 的衝突與融合). Li Weiwu 李維武 devoted an entire chapter of his doctoral dissertation entitled "Ontological Questions in Twentieth-Century Chinese Philosophy (Ershi shiji Zhongguo zhexue bentilun wenti 二十世紀中國哲學本體論問題)" to an in-depth analysis of the main pillars of Zhang Shenfu's philosophy.

¹⁵ Among most notable publications was the book Exploring the New Culture of Modern China: A Study of Zhang Shenfu's Thought (Xiandai Zhongguo xin wenhua de tansuo: Zhang Shenfu sixiang yanjiu 現代中國新文化的探索: 張申府思想的研究) by Guo Yiqu 郭一曲 (2002). Zhang's philosophy was also analysed in Guo's article "Analytical Dialectical Materialism: Zhang Shenfu's Philosophical Thought (Jiexi de bianzheng weiwu zhuyi: Zhang Shenfu de zhexue sixiang 解析的 辨證唯物論: 張申府的哲學思想)"(2001).

The Three Influences: Chinese Tradition, Russell and Dialectical Materialism

Even though between 1919 and 1949 Zhang produced a considerable number of texts, covering a wide array of different questions and topics, it is extremely difficult to distil a comprehensive image of his philosophy from these. One of the main reasons for this is that in the vast majority of cases Zhang's views were conveyed through concepts adopted from philosophers like Russell. Works that would offer a profound and broad insight into the whole picture of his world of ideas are thus extremely rare. Even his central philosophical work, Reflections (Suosi 所思) (1931), consists only of fragments, a concatenation of more or less abstract flashes of thought. Moreover, in his entire career Zhang did not produce a single original text on mathematical logic, mathematics or any other fields he had been concerned with academically, but rather devoted all his energy to the dissemination of individual concepts or "keywords" related to his scientific worldview, usually in concrete political or social contexts. It was quite probable that Zhang himself was also fully aware of this shortcoming of his philosophical repertoire, which was the reason why, in 1945, almost a decade after he was discharged from his post as a professor of logic and Western philosophy at Qinghua University, he composed an article entitled "My Own Philosophy (Wo ziji de zhexue 我自己的哲學)"(1945a).

However, a closer look at Zhang's writings from the period between early 1920s up to the late 1940s reveals three main sources behind his ideas: Russell's scientific worldview, traditional Chinese thought (Confucianism and ancient cosmology), and dialectical materialism. According to his focus at the time, Zhang's thought can be divided into three major periods: In the first, which stretched from late 1910s, when he arrived at Peking University, down to around 1928, Zhang's thought revolved around a specific version of Western scientific worldview as advocated by Bertrand Russell. In the second period, which started in late 1920s and lasted until the end of his academic career in 1936, Zhang turned his attention towards dialectical materialism, combining it with notions from Russell's philosophy, ideas related to the Vienna School, Wittgenstein, and philosophical concepts from Chinese tradition. Zhang's ideas from the first half of this period were summarized in his Reflections (1931). Finally, following his expulsion from academia, the orientation of Zhang's philosophical thought underwent another drastic transformation. Thus, from around 1936 until his political demise in 1948, Zhang's focus shifted to the idea of "new enlightenment" (xin gimeng 新啓蒙),16 democracy and the advancement of science in China.

¹⁶ After he was released from prison in 1936, Zhang and his friend Chen Boda 陳伯達 (1904–1989) started what became known as the New Enlightenment Movement (see: Schwarcz 1986, 222–30).

In addition to ideas from the above-mentioned three main sources, throughout his entire academic and political career Zhang's thought was defined by his persistent tendency towards comprehensiveness. Zhang's incessant effort to create harmonic syntheses between seemingly antagonistic principles, concepts or theories, was not just a standpoint or an attitude Zhang had consciously decided to adopt, but rather a perspective inherent in traditional Chinese cosmological (in Confucianism a "onto-moral") outlook, a harmonistic holism founded on the idea of complementary dialectics—the concept of "equilibrium" (zhongvong 中 庸, formerly compared to the idea of "the [unprejudiced golden] mean"),¹⁷ "humaneness" (ren 🗀, also translated as "benevolence; humanity"), and so on. On the other hand, however, in the intellectual developments following the May Fourth period such syncretistic visions were not exactly typical of the so-called "modern" attitudes towards the future Chinese identity. The idea of synthesizing, for example, Western scientific (material) civilization and Chinese spiritual civilization, had been more prevalent in the earlier period, when such harmonization was considered necessary within a profoundly evolutionary perspective. Even though, as we have said, this might have well been an inherently traditional way of cosmological thinking, a more direct source for Zhang's preference for, as it were, "dialectical harmonization", might have been Zhang's senior colleague and former teacher of logic Zhang Shizhao 章士釗 (1881–1973).18 In fact, Zhang Shenfu's autobiographical accounts suggest that even his interest in logic as well as his attitude towards terminology and significantly antiquated style of "logical writing" might have as well been the result of Zhang Shizhao's influence (Zhang 1993, 72-77).19

¹⁷ Zhang also spoke about "proportionality" or "proper measure" (fencun 分寸), which he also equated to emotional temperance, "authentic good" (zhen shan 真善) and "beauty" or "excellence" (mei 美) (Zhang 2005 III, 184-85).

In his political writings, published in the Tiger magazine(s) from 1914 on, Zhang developed a 18 harmonistic (xiehe 協和) theory of evolution, which stipulated the harmonic unity between the mutually opposed Western and Eastern culture as the main condition for the "evolutionary preservation" of both. Zhang further adopted the traditional concept of the mean (zhong 中) to explain the necessity for a synergetic relationship between the antagonistic factors in the universe (see Guo 2000). In parallel to his philosophical views, Zhang Shizhao espoused a universalistic notion of logic, which also entailed the universal application of knowledge across cultures. See: Zhang Shizhao's Essentials of Logic (Luoji zhiyao 邏輯指要)—the manuscript for the book, which was first published in 1939, was originally completed in 1917. Zhang Shizhao's harmonistic views on logic and science were also summed up in his speech for 20th anniversary of the university (Guoli Beijing daxue 1918, 15).

On the early nature and impact of Zhang Shizhao's "logical writing style" (luoji wen 邏輯文), see Kurtz 2020.

The above-mentioned inclination to philosophical comprehensiveness was already present in Zhang's early thought. 20 If in the early 1920s this innate proclivity of Zhang's was still working in service of his fervent devotion to Russell and "all things scientific", his priorities changed in the years following the polemic on science and the view on life (kexue yu renshengguan 科學與人生觀)²¹ which developed in 1923. Generally speaking, this debate caused yet another schism in the Chinese intellectual climate, which had always been quite prone to dichotomic self-representation. The new dilemma had been set out by Zhang Junmai 張君勱 (1887-1969), who proceeded from a notion of the bipartite division of world-philosophy, to a dichotomic division between science and views on life (Nelson 2020, 183), or in other words, between objective and subjective systems of knowledge. In this Zhang Junmai on the one hand reconfirmed the old paradigm of the innate subjectivity of Chinese thought, yet on the other established a relation between Chinese thought and intuition, comprehensiveness, free will and, most importantly, the cultivation of the inner self with a strong emphasis on the uniqueness of an individual's mind (xin 心), or psyche (Zhang Junmai et al. 1997, 33-40), Thus, in the second half of the 1920s, Zhang's profound desire to harmonize pairs of irreconcilable poles became stronger than ever. His battle to overcome the division between the subjective and objective, which was catalysed by his explorations of Freudian psychoanalysis and growing passion for materialist dialectics, led him to scrutinize his former image of Russell, and to conclude that his "logical analysis" represented only one side of the "cosmological coin". 22 Consequently, in the second half of the 1920s he developed his own solution to the

²⁰ For instance: during Russell's visit in China, in 1921, in an essay "My Reservations about Russell" Zhang's long-standing friend Liang Shuming warned against "quests for an all-encompassing, comprehensive philosophy" such as the one pursued by Zhang. Liang went on to add: Truths attained through such comprehensive philosophies might sound good. Indeed, they appear to be perfect in their claim to certainty. But the real truth is always more complex. It is neither as pleasant nor as fine sounding as Russell likes to claim. A scholar is an expert only in his own field. Outside of it, he is just a commoner. Zhang Shenfu is right in saying that "Today's philosophy belongs either to the Russell's school of to that of Bergson". One is a leader in rationalism, the other is a leader in non-rational thought. (Schwarcz 1991/2, 138)

²¹ The chief representative of the pro-science side in the debate, Ding Wenjiang 丁文江 (1887–1936) alternatively called the debate "Science and Metaphysics" (*Kexue yu xuanxue* 科學與玄學).

²² In a conversation with V. Schwarcz, Zhang admitted that:
Russell, you see, ended up so one-sided in his philosophical outlook. His philosophy is useful in seeing only discrete parts of a problem. I wanted to think about the whole. In many ways Russell was biased. He opposed materialism. But materialism and idealism are just two sides of the same coin. Materialism does not see the mind (xin \(\psi\)) while idealism fails to appreciate outward realities. My own philosophy seeks for a more comprehensive view of experience, for a more thorough realism, for an expansive objectivity. (Schwarcz 1991/2, 143)

objectivist dichotomies bothering the minds of his fellow countrymen, a method or epistemological theory which he chose to call "pure objectivism".

Apart from "comprehensiveness", the core of Zhang's philosophy consisted of various concepts, principles or perspectives extracted from the three main sources set out above. At the same time, at a macroscopic level, Zhang's philosophy was also a synthesis between three kinds of worldviews. Thus, when it came to his affinity with Russell's philosophy, Zhang did not simply adopt particular ideas, but rather the form of scientific worldview or objectivity which was conveyed through the Russell's thought. In Zhang's understanding, all aspects of Russell's thought were founded on pure scientific facts, derived with the help of most advanced scientific methods and theories of the time, above all else mathematical logic and relativistic physics.²³ He believed that the essence of Russell's thought resided in mathematical logic, which in itself was a harmonic fusion between mathematics and logic.²⁴ Furthermore, in Zhang's understanding, Russell's main philosophical method, which he chose to call the "logico-analytical method" or "logical analysis", was derived directly from mathematical logic. Back in 1920, when Zhang was preparing the stage for his mentor's arrival in China, he described Russell and his work in the following manner:

Russell is currently the world's leading mathematical philosopher, who greatly contributed to the founding of a most splendid new learning (i.e. mathematical logic (shuli luoji 數理邏輯), also called symbolic logic (jihao luoji 記號邏輯) or logistic (luojisitike 邏輯斯諦科)), which inaugurated a new period in the development of modern scientific thought. Founded on his critical survey of mathematics, he also established a new kind philosophical method (in terms of spirit it is the scientific method in philosophy, in regard to manner it is the "logical and analytical method" (luojide

Zhang started closely following modern physics after his conversations with Russell, held in Beijing in 1921. Nevertheless, because in his Chinese lectures Russell also devoted much attention to Einstein and the epistemological consequences of modern physics (Schwarcz 1991/2, 133), his Chinese audience seems to have got the same impression, namely that Russell's philosophy was inherently intertwined with relativistic physics and hence an integral component of the same worldview. In his critical expositions on Russell's "logicist New Realism" from 1922-1923, the philosopher Zhang Dongsun—who accompanied Russell for the most time of his stay in China—regarded Einstein's relativity as one of the main epistemological tenets of the former's logicist variety of realism (see Zhang Dongsun 1923).

²⁴ In "A Revolution in Science" (1920b) Zhang claimed that, alongside non-Euclidean geometry in mathematics and theory of relativity in physics, Russell's mathematical logic constituted on of the three main revolutions in science. In his view, its revolutionary character came from the fact that in itself it harmonically intertwined both mathematics and logic (Zhang 1920b). On Zhang's early ideas on dialectical nature of mathematics see Zhang's article "Philosophical Principles of Numbers" from 1919.

he jiexide fangfa 邏輯的和解析的方法), which might also be translated as "mingli-jiexifa" 名理 解析法 [logico-analytical method]). His philosophy (called "logical atomism" or "absolute pluralism", which presupposes the existence of various kinds of individual [entities] and relations and does not rest on the cosmological foundations that presuppose an existence of one all-encompassing entity. In plain words: it is a new research that sets out from the "relations" and rests on the "theory of external relations") counts as the most influential in the contemporary philosophical and intellectual circles. Recently, he has also taken this "logico-analytical method", which already had such a great effect on mathematics and philosophy, and conducted new research in psychology, having obtained results that correspond in great part to the newest psychological teaching of behaviourism (xingdong zhuyi 行動主義), that emerged in America, and "neutral monism" (i.e. the American School of New Realism). (Zhang 1920a, 4)

At least three of key terms given above from Russell's philosophy were also retained in Zhang's later thought: logical analysis, mathematical logic and the notion of neutrality. When his philosophy approached a certain degree of maturity in the mid-1930s, Russell's influence on Zhang condensed into the notion of "logical analysis", which was now extended to include the Vienna School and Kurt Gödel, while mathematical logic was still defined as its underlaying methodological basis. Concurrently, Zhang also retained a strong interest in relativistic physics, from which he extracted his own epistemological idea of "relativity".

In parallel with the version of "structural objectivity" (see Daston and Galison 2007) described above and extrapolated from Russell's scientific worldview, quite early on Zhang also discovered a strong affinity for materialist dialectics. The reason why Western dialectics might have had such a great appeal for Zhang and Chinese intellectuals in general resided in its profound consonance with

²⁵ Between years 1919 and 1920, Zhang disseminated Russell's idea of the universe as a "continuum" (xiangxuxing 相續體, "continuous substance"). He compared this idea of continuity to one from Buddhist epistemology—although he later withheld this information, apart from history of logic and philosophy of brothers Cheng, Zhang's focus in his undergraduate studies of philosophy had also been Buddhist philosophy (see Guoli Beijing daxue 1918, 365). The notion of continuity in mathematics was also mentioned in the public debate on Russell's mathematical philosophy in 1925. Most importantly, even the devout Buddhist and scholar of Confucian philosophy Liang Shuming found Russell's idea of "continuity" very convincing. In his critical essay on Russell's philosophy from 1921, Liang stated: "Following Mr. Zhang's urgings, I have also tried to read Russell's works and to like them. And, in fact, found that some aspects of his theories accord well with my own thought—such as his social psychology ... I also found Russell's theories of cognition and of the essential continuity of all matter very suggestive ..." (Schwarcz 1991/2, 137)

traditional Chinese reasoning and its cosmological perspectives.²⁶ Thus, Zhang maintained a similar idea of dialectical materialism and traditional complementarian dialectics. In Zhang's eyes, the discerning feature of dialectical materialism, however, was that it claimed to be founded on scientific facts and laws of nature deduced from concrete science. Whereas on the one hand Zhang related its alleged universality to his notion of comprehensiveness (tong 通, also "compatibility" or "free circulation"), on the other he also recognized in it the traditional idea of the "equilibrium" (zhong 中, also "the mean") and "humaneness". Nonetheless, similarly as in the case of Russell, Zhang did not want to invest his entire faith in dialectical materialism. Moreover, he elevated the traditional ideas to a position above both dialectical materialism as well as logical analysis, which he deemed to be profoundly one-sided outlooks. The traditional ethical-coloured ideas of harmonic "mean" and enlightening "humaneness"—which to Zhang somehow resembled the scientific/objectivist spirit, were both implicit in Zhang's crowning theory of "pure objectiveness" (cf. Schwarcz 1991/2, 143). In a typically traditional sense, these ideas or onto-moral attitudes were all bridging together the private and common, subjective and objective, inner sensations and outer facts, and the ethical and material aspects of human existence.

Finally, regarding the content of Zhang's notion of "dialectics", it must be noted that he understood the materialist notion of dialectics from what would be called a traditional Chinese perspective. Generally speaking, Zhang interpreted dialectics through the prism of two key components of the traditional Chinese worldview: complementary or harmonistic dialectics (xiangcheng xiangfan 相成 相反) and the perpetually changing (bianhua 變化) totality of the universe. Consequently, Zhang's initial point of criticism against materialist dialectics had been its seemingly static notion of sublation (Aufhebung) or, in terms of dialectical materialism, qualitative leap forward, which in Zhang's eyes seemed to represent

²⁶ In fact, Zhang spoke about the complementarity of dyadic principles long before he discovered dialectical materialism. In his short essay "Philosophical Principles of Numbers" (Shu zhi zheli 數 之哲理) from 1919, for instance, Zhang expounded on the phenomenological relatedness between pair of functionally opposite mathematical operators and natural principles an ever-changing world. He said:

In the ever-evolving world, there always exist two aspects which mutually oppose and create each other. Being mutually correlative, together they form function and variable (han-bian 函變) ... If one progresses, at the same time the other recedes. If one is diverse and complex, the other is singular and simple. A dynamic factor has got a corresponding static one. If there is a progressive aspect, at the same time there also exists a complementary conservative factor ... Therefore, the method of governing the world does not go beyond harmonizing and adjusting these two aspects. Following their natural posture, one certainly will attain their equilibrium. (Zhang 2005 II, 18)

Zhang continued: "Many social theoreticians are familiar with this principle, and thus say that 'the society's progress is nothing but differentiation and integration'." (ibid.)

a "static" idea of change.²⁷ In his later writings Zhang reaffirmed the connection between the idea that everything changes (Tianxia meiyou bubian de 天下 沒有不變的) in ancient Chinese cosmology (The Book of Change, Yijing 易經) and (materialist) dialectics (Zhang 1939b, 7). Zhang's signature work, Reflections (Suosi 所思), reveals that he understood materialist dialectics as consisting of a static or perpetual complementarity between contradictory principles on one side and, as it were, a principle of dynamic change as embodied in the idea of sublation (Aufhebung) on the other. In Zhang's understanding, these two were reflective of corresponding concepts of complementary dialectics and change from "Chinese culture" (Zhang 2005 III, 168). Observed from another perspective, interpreting what Zhang believed to be Hegel's idea of dialectics and logic, 28 he also maintained that the pattern of dialectical complementarity, which he so keenly espoused, repeats itself indefinitely throughout both the doctrine of dialectical materialism as well as the underlying fabric of the universe. In this sense, every aspect of reality, be it something which embodies either thesis or antithesis, is in itself both "static" and "dynamic".29 In contrast, in the dialectic principle Zhang saw a necessary dynamic process of change, which encompasses every aspect of existence. Consequently, in his conscious or unconscious attempt to create a balanced synthesis between traditional Chinese and Hegelian dialectics, Zhang

²⁷ In the article "On Translation (Lun fanyi 論翻譯)" from 1927, Zhang defined (materialist) dialectics as a theory expounding the principle of the "synthesis (entanglement) of positive and negative, mutual opposition and mutual creation", proposing the terms duikanfa 對戡法 and cuozongfa 錯綜 法 as alternative Chinese terms for it. Zhang further boiled the meaning of the principle of (materialist) dialectics down to two definitions: the first one involved a notion of ever-changing universe and the other the principle of change (involving thesis, antithesis and synthesis). Zhang's main point of contention with Marxist dialectics resided in its idea of evolution, which Zhang described in terms of transformative "swings", and which in Marxist dialectics "appears to [take place only] for a limited period of time (qiongqi 窮期的); speaking in terms of swings, after [the change] had swung to and fro, [everything] will return back to a static (jingzhi 靜止) [state]. I am afraid that this is but an empty desire" (Zhang 2005 II, 99). Because at the time he was still a strong adherent of Russell and because in the same year he also got immersed into Wittgenstein's Tractatus, Zhang concluded that the "principle" of change in the world of tomorrow is still uncertain and unknown to us—he quoted well-known Russell's statement that it is not certain that the sun will rise tomorrow—and concluded with last sentence of the *Tractatus*, that we must be quiet about what cannot be spoken about (ibid.).

Zhang directly discussed Hegel only on a few occasions. Beside his late "Household Words" (*Jiachang hua* 家常話), he mentioned Hegel in *Reflections—Continued* (Zhang 2005 III, 182–83), where he also delivered an expanded definition of his idea of materialist dialectics, which, however, also reveals great discrepancies with both Hegel's and the materialist notion of dialectics.

In line with Engels, Plekhanov and Lenin, Zhang believed that the dynamic aspect had a precedence over the static. However, Zhang also believed that any aspect of human thought in essence is already of a "dynamic" disposition, which he understood under qualities of "liveliness" (*buo* 活), "thoroughness" (*zhouquan* 周全), attention to the interrelatedness of things, evolutionary perspective, complementarity of opposites, unity of theory and practice etc. (Zhang 2005 II, 330).

actually failed to get an adequate grasp of the latter, which he contorted in analogical accord with his version of traditional cosmology.

The Pillars of Zhang Shenfu's Philosophy—Reflections (1931)

As already mentioned in the introductory remarks, the first major formative turn in Zhang's philosophy occurred when he started distancing himself from Russell and devoting more attention to traditional and materialist dialectics. The seminal impetus, however, that eventually led to the shift in direction of his thinking came from his recognition of the vital necessity of "comprehensiveness", and the priority of "greater objectivism" over the blunt analytical dissection of facts. In Zhang's opus this shift had been most concretely manifested in a series of general philosophical meditations composed between 1928 and 1930. These were eventually epitomized in his monograph Reflections (Suosi 所思), issued in 1931. Reflections consists of a collection of homonymously titled short meditations written in the years between 1924 and 1930, which were supplemented by a few of Zhang's quintessential writings from the late 1920s. As Zhang's signature-work from the period, Reflections offers the most exhaustive insight into his world of ideas, providing a set of clear-cut statements about the main ideal pillars of his philosophy.

In the introduction to *Reflections*, Zhang wrote that all ideas raised in the text had been derived from two main principles:

- Mutual opposition (xiangfan 相反) and mutual creation (xiangcheng 相 成)—a harmony of contradictions.
- Scientific method as the method of pure objectivity (chun keguanfa 純客觀 法). (Zhang 2005 III, 53)

In the subsequent part of the introduction, Zhang offered the following explanation of the above two principles:

On the first point, the (bi)polarity of phenomena, ³⁰ I have already expounded on in a publication from the beginning of 1919. At that time, I was still unaware of the nowadays widespread notion of dialectical method. But, in truth, to get to these conclusions one would only need to look at the facts realistically. Besides, to speak about yi 易 (change) in terms of one yang and one yin is basically an extremely ancient idea espoused by the Chinese. The same idea is also equal to Confucius' "humaneness" (ren 仁). "Humaneness" and "the scientific method"; I believe these are the

³⁰ Zhang is referring to the article "Philosophical Principles of Numbers" (1919).

two most precious things. Among the things which in recent years have most often reappeared in my mind or resounded from my throat, were in particular the following four ideas: analysis (fenxi 分析; formerly, I especially preferred to use the word *jiexi* 解析), pluralism (duoyuan 多元), objectivism (keguan 客觀) and realism (qieshi 切實). If we combine the last two, we can obtain the fashionable notion called "materialism" (weiwu 唯 物). Also, as was explained by Russell, the person who most understood these things, the key characteristic of what is generally referred to as "the theory of realism", ..., was the belief that the method [ought to] reside in analysis and cosmology in pluralism. Because of that, I am most opposed to the ideas of "everything or nothing" and the anthropomorphism (renhua sixiang 人化思想) which is disseminated by the literati. Instead, I strongly believe that, in its entirety, the world is unanimous and complex. Originally, I spoke about the "entanglement between the positive and negative" or used to say that everything is mutually entangled. It is also possible to put it like this: Events in the world are always random (against expectations) in this or another way, they mutually cause (give rise) or suppress each other, swinging in or out of existence. (ibid.)

In the same section of *Reflections* Zhang also gave his idea of "comprehensiveness" in philosophy:

I believe that "comprehensiveness" (tong \mathbb{H}) is the ultimate goal of philosophy. Analysis, pluralism, objectivity, and realism all are ways of "comprehensiveness". They are all applications of "comprehensiveness". Conversely, "comprehensiveness" is also a complement to analysis, etc. The mutual entanglement of everything can only be comprehended through "comprehensiveness". Only through comprehensiveness will one not succumb to rigidness (obstinacy). Only thus, one will be able to grasp two [opposite things] and employ the mean (zhong \oplus). In that way, one will be able to accumulate numerous views and recognize the reason why the obscure is hidden from one's sight, and restore each one to its appropriate position. (ibid., 54)

The above two excerpts from *Reflections* reveal Zhang's strong propensity towards comprehensive worldviews. In a more explicit way, Zhang draws a parallel between the idea of dialectical complementarity of opposites from traditional Chinese philosophy and dialectical materialism. In Zhang's opinion, science and philosophy both share a common objective in a universal system of knowledge, which would be endowed with a just as universally applicable

dialectical-analytical method. Secondly, what Zhang further proposed was a syncretic marriage between the above-described dialectical principle on one side and scientific objectivity on the other.³¹



Figure 1: The title page of the 1931 publication of the book *Suosi* 所思 (Reflections)

³¹ This marriage between "dialectics" and "pure objectivism" was adamantly rejected by Zhang Dongsun, who published his critique of Zhang's philosophical notions in the Xueyuan complement to the Beiping chenbao. (See Guo 1965, 263)

On the other hand, Zhang's exposition on the central pillars of his "modern scientific" outlook can also shed some light on the intellectual background of his understanding of modern science and philosophy. As noted above, it also explains why Zhang recognized in dialectical materialism a plausible and objective doctrine. That this quest for reconciliation between any antagonisms of this universe did also involve the problematic relationship between East (China) and the West transpires in the following statement: "In my opinion, 'humaneness' (ren 仁) and 'scientific method' are humankind's greatest treasures. Humaneness comes from the East and scientific method comes from the West" (Zhang 2005 III, 64). In other words, like Zhang Shizhao before him, Zhang's comprehensive philosophical outlook also aimed at creating a synthesis between the spiritual civilization of the East and the material and analytic West. Interestingly, the potential adhesive for the two poles was provided in the form of a few key concepts from traditional Chinese philosophy. Thus, in addition to being a nature-related or ethical principle, Zhang also recognized in ren (humaneness) a form of scientific/objectivist attitude, which can lead to objectivist enlightenment and benefit people by means of conferring on them an insight into the realm of truth.³² Already back 1927, Zhang presented his first idea of a possible methodological solution, one that would adequately embody both the principle of humaneness as well as scientific method, and at the same time satisfy the vital precondition of "comprehensiveness". He chose to call this theory "the method of pure objectivism" (chun keguanfa 純客觀法).

Finally, the overall configuration of the main pillars of Zhang's philosophy, as outlined in his *Reflections*, can be illustrated by the following scheme:

One of Zhang's later articles, "Humaneness and the Visionary (Ren yu xianjuezhe 仁與先覺者)" (1939a), reveals that his notion of ren 仁 derived heavily from his reading of Zhu Xi 朱熹. Zhang reconceptualized Zhu Xi's notion of humaneness, emphasizing its equality with the ethical value of scientific attitude as well as its inherent connection to Western philosophical doctrines, which in one way or another created a synthesis between two antagonistic categories. On Zhu Xi's definition of ren see, for instance Huang 2017, 180–209. Intriguingly, in his Reflections Zhang also emphasized that love (ai 愛) embodies both the principle of complementarity (xiangcheng xiangfan) as well as the method of pure objectivism (Zhang 2005 III, 144).

Tong 通 (Comprehensiveness)

Harmony of contradictions		\leftrightarrow	Scientific method	Scientific method	
Confucius' "humaneness" (ren (=) Book of Change (complementarity of yin and yang)		\leftrightarrow	Method of pure objectivism chun keguanfa 純客觀法		
(Dialectical) Materialism		\leftrightarrow	Russell's New realism Logical Analysis		
7	Κ.		7	Γ,	
Realism	Objectivism		Analysis	Pluralism	

Apart from the six main pillars set out above—from dialectics to the scientific method—Zhang's epistemological views in Reflections were also derived from modern physics. In the late 1920s, Following Russell's example, Zhang endeavoured to integrate various aspects of modern physics, such as Einstein's Theory of Relativity, theory of atoms and quantum mechanics, into his own philosophical discussions. 33 The immediate result of his longstanding interest in modern physics was also his epistemological standpoint of "concrete relativism" (juti xiangduilun 具體相對論) which he developed at the beginning of 1940s. Nevertheless, in the time when Zhang was still writing his Reflections, his focus was still fixed on "neutral monism", a concept with which Russell used to describe his own version of New Realism. In the earliest parts of Reflections (around 1925), Zhang advocated a version of "monistic dualistic plurality", where "monism refers to neutral monism and plurality refers to absolute pluralism" and "dualism refers to dialectics and polarity"³⁴ (Zhang 2005 III, 61).

As Zhang himself indicated in the preface to this book, the notion of dialectical materialism started to appear only in the latter parts of his, as it were, intellectual diary (Reflections—Continued), composed after 1928. Concurrently, in these later sections, Zhang's idea of "pure objectivism" had already evolved into a theory of "greater objectivism" (da keguanfa 大客觀法).

In the subsequent section of our discussion, we will take a closer look at the above-listed central concepts in Zhang's philosophy in the period between 1919 and 1948 (apart from "mathematical logic").

³³ Here, I am referring to articles like "A New Discovery in Science" (1928), and "Russell on New Theory of Atoms" (1928).

Beside Russell and Confucius, Zhang's Reflections also contain numerous references to Wittgenstein, Freud, Frege and Zhuangzi. In one of his meditations, Zhang also mentioned Frank P. Ramsey's work The Foundation of Mathematics.

Key Concepts in Zhang's Philosophical Thought

Greater Objectivism

The theory of "greater objectivism" represented Zhang's first concrete attempt to create a universal epistemological method, which would be able to integrate all aspects of human perception and cognition. By setting out to reconcile the realms of subjective and objective, Zhang also wanted to attain harmonic complementarity between human understanding of the antithetical aspects of existence in general.³⁵ As we have already indicated above, it could be argued that Zhang's attempt at merging together the objective and subjective into a more comprehensive view of knowledge was implicitly echoing the main intellectual dilemma of the time, which, in great part, had been promulgated through the science and the view on life debate. Zhang's probable solution to the problem of the inner epistemic schism of the modern human being, as established in the debate, was first described in a short essay entitled "The Method of Pure Objectivism (*Chun keguanfa* 純客觀法)" from 1927.³⁶

The term "pure objectivism" was an early version of Zhang's later notion of "greater objectivism" (da keguan 大客觀). The term appeared for the first time in his article "A Comparative Discussion on Modern Philosophy (Xiandai zhexue jiaolun 現代哲學校論)" issued in 1926,³⁷ where Zhang discussed two antagonistic currents in Western philosophy: realism and idealism.³⁸ He maintained that the antagonistic relationship between the two currents of thought was rooted in the qualitative dichotomy within human nature. Combining the traditional dichotomy between yin and yang and the Marxist dialectics of nature, he asserted that, in general, there exist two kinds of human disposition:

³⁵ Here, I assume that Zhang maintained a holistic notion of reality, where the epistemic duality was seen as a direct reflection of a dialectical nature of the universe.

³⁶ The essay, which was first published in the *Chenbao fukan* 晨報副刊 in 1927, was later reprinted in *Reflections*.

³⁷ Zhang's recapitulation of current trends in Western philosophy from 1926 was based on his reading of Joad's *Introduction to Modern Philosophy*—in the same year Zhang completed his translation of this work. The above-mentioned article was published under the title "Xiandai zhexue jiaolun 現代哲學校論 (A Comparative Discussion on Modern Philosophy)".

A bipartite division of philosophy was also applied in Zhang Dongsun's early critical excursions into logicism and New Realism (Zhang 1922, 15–16). Zhang distinguished between two philosophical systems, where the first one represented a "philosophy of thought" that advocated logicism, transcendentalism and rational knowledge; while the contesting "philosophy of life" advocated a form of psychologism, empiricism, stressed particular content and stood against rational knowledge. According to Zhang Dainian, this classification was borrowed from the thought of Zhang Junmai.

One is progressive, the other conservative; one appreciates new, the other adores old; one is revolutionary, the other reactionary; one is fast, the other slow; one is sensitive, the other apathetic; one is dynamic, the other static ... ³⁹ We could simply collectively call them left and right. (Zhang 1926a, 81)

In Zhang's opinion, the above-described dialectical schism within the forces of the universe also gave rise to the distinction between the realist and idealist schools of philosophy. 40 As one would expect, Zhang spoke in favour of the realist school, for which he gave the following explanation:

Realism presupposes the existence of the real ... it observes reality through reality. It is objective and aims at overturning the fallacies of mind. It emphasizes knowledge and the universal patterns (li 理). Usually, it seeks support and guidance in the natural laws of transformation (tianxing 天行, "movement of Heaven"). By application of analysis as its method, it focuses on what is presently at hand, it resolves trivialities and does not ignore what is universal and primary (universal elements). It is harmonious with science; it is young and revitalizing. In its search for knowledge within the real it advances bravely ... (ibid.)

In the above excerpt, the term "analysis" refers to Russell's "logical analysis", which Zhang regarded as a method consistent with the principles and results of mathematical logic. In this very sense, he looked upon mathematical logic as a key component of an objective outlook on reality.

In the conclusion of the above-mentioned essay from 1926, Zhang already raised the idea that philosophy has one single aim: to establish a "broader view" of reality. Moreover, that in philosophy the greatest priority must be assigned to logical analysis and synthesis. However, as Zhang later discovered, such all-encompassing objectivity also entailed a due inclusion of all aspects of human nature, namely the sphere of subjectivity. Thus, in the final sentence of the article he enthusiastically asserted that a future kind of world-philosophy would only be created by virtue of the method of "pure objectivism", which would itself combine the two aspects.

³⁹ The terms static and dynamic had been adopted from Marxist discourse on the dialectics of nature and dialectical materialism in general. In his Dialectics of Nature, for instance, Engels spoke about two contradictory forces in the universe: attraction (gravity) and repulsion (energy of the stars).

The representatives of the former, progressive current in philosophy, were Russell and Whitehead, 40 while at the other side of the divide were philosophers like Bergson, Driesch, and so on.

One year later, in 1927, Zhang had already delivered the first version of such an all-encompassing objectivism. The article "The Method of Pure Objectivism (Chun keguanfa 純客觀法)" elucidates its core idea in the following way: "[pure objectivism] goes beyond (跳出) the dichotomy between subjective and objective, [and at the same time remains] objective by attaching the utmost importance to the objectiveness" (Zhang 1927a, 57). The relationship between "subjective" and "objective" was further interpreted in terms of $si \, \%$ "private" and $gong \, \diamondsuit$ "common", where the subjective was seen explicitly as the inner perspective and the objective as a view from without. Consequently, the ultimate aim of a purely objective view would be to overcome the one-sidedness of either subjectivity or objectivity and in turn endow both with a higher level of objectiveness. In order to demonstrate the feasibility of such an extraordinary idea, Zhang provided the following diagram:

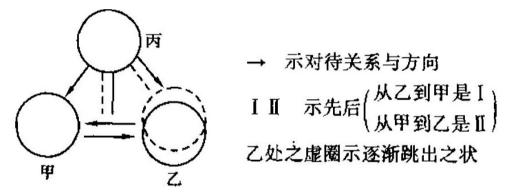


Figure 2: Zhang's Diagram of Pure Objectivism (Source: Zhang 2005 II, 95)

Zhang provided the following explanation for this diagram:

In their basis, the subjective and the objective are antithetical; they are contrary to each other, yet they still depend on each other. We could also say that they mutually oppose and create each other (xiangfan xiangcheng 相反想成). In the picture, the symbol A (甲) represents the objective, and the symbol B (乙) represents the subjective. Between A and B there is a reciprocal relationship, expressed by two the arrows pointing in opposite directions. What I call "going beyond subjective and objective" means to leave behind the antithetical opposition between A and B. But to do that, we must first surpass the subjective domain. The area signified by the symbol C (丙) represents the place we want to attain by leaving the relationship between A and B. The single arrows represent

the relationship and direction of our surpassing. When we jump to the point C, and we take another look at A and B, are they not viewed from without? In that way, have they not already both become objective? This is what we mean by saying that "subjective is also objective". But when we look from C, the event of antithesis we have previously seen, the objects A and B become even more so a product of fabricated distinctions (in logic this is called "a logical construction" which maybe we could also call "logical fabrication"). ... "when the pure objectivism is established these become mere events". This is already to speak about things and events from methodological point of view, therefore the cosmological [maxim] we should obtain from pure objectivity ought to be: everything makes up its own event. (Zhang 1927a, 57)

In short: pure objectivism surpasses both the conventional objectivism and subjectivity by means of presenting a view on both from without. At the same time, the pursuit for such a dialectical synthesis would essentially also satisfy an ethical goal, for, in Zhang's eyes, one of the main objectives of humaneness was also related to the attainment of the principles of "equilibrium" (zhong) and "humaneness" (ren).

Another important source for Zhang's theory of pure objectivism was Einstein's concept of relativity, in which, in a philosophical sense, the objective and subjective views become redefined through the so-called "observer's effect". Indeed, Zhang explicitly claimed that his newly invented method was devised in accordance with the recent tendencies in modern science, such as relativist physics and behaviourist psychology (Zhang 2005 II, 97).

In the parts of his Reflections written a year later (1927/1928), Zhang indicated that his objectivism equalled Russell's ethical neutrality. This correlation was supposed to reside in the fact that the method of pure objectivism enabled a harmonic unison between self and the nature, making both indistinguishable from each other (Zhang 2005 III, 83-84). In Reflections—Continued (Xu Suosi 續所思) (around 1930), where his idea of dialectical materialism had already occupied the central place in Zhang's philosophical outlook, he emphatically ascribed to greater objectivism the ability to solve all the problems of humankind (ibid., 165).

In the early 1930s, the notion of dialectical materialism lay at the very heart of Zhang's philosophical meditations. Basically, Zhang treated dialectical materialism as a methodological utility akin to the aforementioned concept of logical analysis. Already in the sequel to his Reflections, Zhang pointed out that the

dialectical method⁴¹ was a "science of sciences, technique of techniques and method of methods" (ibid., 178). Formerly, Zhang had ascribed the same attributes to logical analysis, which seems to have retained a similar place in his later philosophy. Moreover, regardless of the level of their objectivist potency, in the framework of greater objectivism they both ought to be supplemented by the subjective intuition and imagination. With the gradual ascent of dialectical materialism, in Zhang's eyes its very essence became ever more synonymous with philosophy as such. Whereas in the earliest parts of *Reflections* Zhang maintained that philosophy "straightens the virtues (de 德) and enlightens [the correct] human relations (lun 倫)"⁴² (ibid., 90), in the parts written after 1930 he ascribed the same attributes to the dialectical method, reducing its main principles to liveliness (huo 活), universality (also quan 全 "whole") and practice (ibid., 178). Furthermore, in Zhang's opinion the proximity between dialectical materialism and the Confucian value of "humaneness" was based on the fact that in Marxism one of the main objectives of the revolution (geming 革命) was to resolve social contradictions—i.e. to "harmonize" human relations.

Objectivism Versus Materialism

Greater objectivism and dialectical materialism remained at the forefront of Zhang's philosophy up to the late 1940s. In 1945 Zhang reformulated his theory of greater objectivism in his article "My Own Philosophy (Wo ziji de zhexue" 我自己的哲學)". At this stage, Zhang's approach relied heavily on his new understanding of dialectical materialism and his notion of concrete relativism. Thus, in the 1945 exposition of his philosophical views, he distinguished between a (as it were) "legitimate" scientific objectivism and a mechanist objectivism. The latter, which Zhang compared to the "observer's view", was defined in the following way:

It does neither recognize the function of the subjective, nor does it exhibit human power, but simply maintains the current objective circumstances. This is a "dead" objectivism. It is a mechanical type of objectivism. This is the form of objectivity, which 50 years ago Lenin portrayed as standing in contrast with materialism. It is a least acceptable form of ideology. (Zhang 2005 II, 335)

⁴¹ In the debates on dialectical materialism from the first half of the 1930s, the term "dialectical method" (bianzhengfa 辯證法, also "dialectics") was synonymous with "dialectical logic" (bianzheng luoji 辯證邏輯). In the earliest Chinese expositions of dialectical logic, which relied in great part on Plekhanov's critique of formal logic, dialectical logic was also referred to as "dynamic logic" (dongde luoji 動的邏輯).

⁴² He further defined virtue as "what perfects all things and beings" and human relations as "what makes all things and beings equal".

Zhang's version of objectivism, on the other hand,

both recognizes the objective and is aware of the existence of the subjective. In one sense, the so-called "greater" objectivism broadens the scope of objectivity, and at the same time also integrates into his own system the subjective. It relies mainly on the objective and integrates the subjective and the objective into one. On one hand, it recognizes objective facts and makes them its foundation, and on the other hand also accepts the function of the subjective. The objective is not only the objective, but it also encompasses subjective elements. A nonsensical approach in Western philosophy is creating a sharp antagonism between the subjective side of the human being and the so-called independently existing outer world, which does not include the human. My objectivism intends to avoid this [problem]. A realistic recognition that humans are also a kind of thing (wu 物) can definitely reduce many inconveniences that are troubling the humankind. (ibid.)

In addition to this, Zhang also alleged that this "greater objectivism" could also "pacify the mind through attainment of the principle" (li de xin an 理得心安). While, as before, the main aim of greater objectivism was comprehensiveness, "another meaning of my greater objectivism is related to knowledge. Knowledge starts with perception. I believe that knowledge which comes from perception is neither subjective nor objective, but a form of relationship between the subjective and the objective" (ibid., 336).

In the 1930s one of Zhang's priorities was the spreading of dialectical materialism, and this also gave rise to a fundamental need to integrate the theoretical tenets of dialectical materialism into his own comprehensive philosophy.⁴³ In consequence, Zhang composed an article titled "Objectivity and Materialism (Keguan yu weiwu 客觀與唯物)" (1933), in which he set out to demonstrate how his notion of greater objectivity and dialectical materialism were merely two sides of the very same thing. In order to prove his point, Zhang redefined the main aim of greater objectivism as the synthesis between theory and practice, because it also included

In 1932, for instance, in an essay titled "Egg and Chicken-Heroes and Circumstances: On an Application of Dialectical Materialism (Jidan yu ji - Yingxiong yu shishi: weiwu bianzhengfa yingyong zhiyi 鷄蛋與鷄 – 英雄與時勢: 唯物辯證法應用之一)", where Zhang claimed that dialectical materialism can resolve paradoxical questions like "What was first, a chicken or an egg?" because it embodied the principle of evolution (Zhang 2005 II, 166-69). The resolution of the problem of "chicken and egg" by dialectical method was not Zhang's original idea, but was adopted from contemporary Chinese translations of keyworks of Soviet Marxist philosophy-e.g. Tao Bo's 陶伯 translation of Bukharin's *Historical Materialism* (in 3 volumes) from 1930 (see Bukharin 1930 III, 8 (Appendix I)).

value judgments. Rendered in this way, Zhang's objectivism would be aimed at perfecting the human capacity to realise value-ideas, which cannot be divorced from the domain of the subjective. Zhang also pointed out: "What is the meaning of 'value' (jiazhi 價值)? It means 'zhi 值': 'to be just right', 'with right measure'" (Zhang 2005 II, 179). Ideas, however, have to be understood, perceived or defined by the people, who are in turn also transforming them into values. Consequently, the subjective within greater objectivism must necessarily represent elements pertaining to a social class and cannot be considered as something individua, and in this very point Zhang recognized its main practical application. ⁴⁴ Greater objectivism does not neglect human effort or human influence. It attaches importance to the real and stresses human practice. Hereby, it not only focuses on current, factual circumstances, but also on what is potential or caused by these circumstances. It encourages people to realise their future potentials (ibid.).

Shortly before this, Zhang also published an article entitled "Dialectical Complementarity and Pure Objectivism (Xiangfan xiangcheng yu chun keguanfa 相反相 成與純客觀法)" which proposed the same relationship between pure objectivism and the traditional concept of dialectical complementarity (xiangfan xiangcheng 相反相成, "mutual opposition and mutual creation"). ⁴⁵ According to Guo Zhanbo, in this article Zhang defends his position that the dialectical method is purely objective and that consequently a philosophy established upon such principle (i.e. dialectical materialism) has got scientific bases. Later, Zhang's claims were countered by Zhang Dongsun, who adamantly denied that dialectic materialism had been established on objective science. ⁴⁶

Regardless how effective dialectical materialism was alleged to be in solving various kinds of scientific and social problems, as Zhang himself conceded, in its essence it still differed significantly from the equally significant methods of logical analysis and mathematical logic. Consequently, Zhang concluded that, as just

⁴⁴ Zhang claimed that greater objectivity does not neglect human effort or human influence. It attaches importance to the real and [at the same time also] emphasizes human practice. Hereby, it does not only focus on current, factual circumstances, but also on the potential or what is caused by these circumstances. It [also] encourages people to realise their future potentials. (ibid.)

⁴⁵ The article is mentioned in Guo Zhanbo's 郭湛波 Chinese Intellectual History in the Last Fifty Years from 1935 (Guo 1965, 227). It originally appeared in Xueyuan 學園, a supplement to the Beiping chenbao 北平晨報.

⁴⁶ Guo Zhanbo (1965, 263) summarized the main thesis of Zhang Dongsun's article as follows: Mutual opposition and mutual creation (Xiangfan xiangcheng 相反相成) are Hegel's dialectics (duikan fa 對勘法), and pure objectivism is a method which goes beyond every coordinate system. The two of them can in no way match each other. Therefore, one can absolutely not produce or develop pure objectivism out of [the principle] of mutual opposition and mutual creation. The alleged article of Zhang Dongsun—titled "Xiangcheng xiangfan yu chun keguanfa 相成相反 與純客觀法"—was also mentioned in Cai 1936, 35.

another method, the dialectical method could not replace logic, nor could it replace science as such (Zhang 2005 II, 169).

Between Logical Analysis and Dialectical Materialism— "Dialectical Analysis"

Zhang's understanding of the term "logical analysis" was intricately related to his notion of mathematical logic as one of the most advanced products of contemporary Western science (see Zhang 1920a, 4). In Zhang's eyes, "logical analysis" represented a method of philosophical inquiry, a theoretical extension of the otherwise purely scientific mathematical logic, where the main results and mechanisms of the latter were extrapolated to solving problems of a practical and theoretical nature. In other words: logical analysis was a practical extension of mathematical logic.47

Under this meaning, logical analysis represented a recurring concept in Zhang's philosophical and political writings. In the second half of the 1920s, when Zhang first discovered Wittgenstein's Tractatus Logico-Philosophicus, he also regarded it as a component of "logical analysis". Similarly, in the early 1930s, when Zhang and his younger brother Zhang Dainian were introducing the Viennese School to Chinese philosophical circles, he also regarded this movement as a direct outcome of "logical analysis." This reveals that in later years, for Zhang, "logical analysis" simply denoted an analytical variety of philosophy, which was methodologically based on mathematical logic. In the 1930s, when he was still a professor of logic at Qinghua University, his fascination with mathematical logic also led Zhang to devote his attention to the thought of Rudolf Carnap and Kurt Gödel—although none of his writings explicitly demonstrated that he really understood their work.

In his second overview of contemporary Western philosophy, the essay "Main Currents in Contemporary Philosophy (Xiandai zhexue de zhuchao 現代哲學 的主潮)", which was published in the Qinghua Weekly (Qinghua zhoukan 清華 周刊) magazine in 1934, Zhang presents a new image of world philosophy, dominated by two contesting philosophical schools: the first was "logical analysis" and the other dialectical materialism. While in Zhang's opinion the main objective of the school of "logical analysis" was to "clarify thoughts and words"

⁴⁷ In contrast to the majority of stark exponents of Marxist philosophy from the 1930s and 40s, Zhang believed that formal logic is in its essence entirely "dynamic"—namely, that it essentially incorporates all major aspects of dialectical method, and that its character depends only on the angle from which you study it. Therefore, he also advocated the motion that formal logic could be fused together with dialectics to form one harmonic entity (see Zhang 2005 II, 330).

so as to render them capable of expressing objective facts, the chief concern of materialism was the existence of objective facts per se. In this very definition of analysis and materialism, Zhang recognized the same relationship as previously believed to have existed between science and the view on human life (renshengguan 人生觀), where the latter had also been linked to traditional Chinese thought (see Zhang Junmai 1997). Thus, by analogy, in his writing from 1934 Zhang recognized in dialectical materialism a form of philosophy which, apart from the scientific method (inductive aspect) also incorporated practical aspects such as "revolutionary practice" and a "life-oriented attitude". As such dialectical materialism could be seen as an important locus of Zhang's search for comprehensive worldviews—dialectical materialism as a holistic view on matter, changes and the interrelatedness among phenomena. At the same time, with regard to mathematical logic, Zhang's focus now turned away from Russell to the Vienna School and Prague as the current centres of mathematical logic and probabilistic logic in Europe (Zhang 1934, 10–11).

In the spirit of his greater objectivism, Zhang believed that although dialectical materialism and logical analysis might appear to stand in absolute opposition to each other, in fact they are entirely complementary and compatible. They both, for example, originated in science and denounced metaphysics, and are compatible in the sense that due to their diametrically opposite characteristics (e.g. one is specific while the other tends towards generalization), they represent the most effective supplements to each other (ibid., 10). The supposition that dialectical materialism can supplement "logical analysis" or, more specifically, mathematical logic led Zhang to assert that the former could also be used for resolving problems in fundaments of mathematics, especially where logicism (shuli luoji hua 數理邏輯 化 "logicization of mathematical principles"), formalism (xingshilun 型式論) and intuitionism (zhijuelun 直覺論) had been unable to present any feasible solutions. According to Zhang, many philosophical problems could also be solved through the combined application of both logical analysis and dialectical materialism.

At the beginning of the 1940s, when Zhang's philosophical thought entered yet another developmental phase, Zhang conceived his final theory of "concrete relativism" (juti xiangduilun 具體相對論). In its initial form, this idea had already been mentioned in his essay on contemporary philosophy from 1934. In the context of his "concrete relativism", the dialectical method and logical analysis were further merged into one single methodological body, which he believed to be an important step towards the comprehensiveness and application (yong 用) of scientific knowledge. In his attempt to devise such a comprehensive method, Zhang coined the terms "dialectical analysis" (bianzheng jiexi 辯證解析) and "analytical dialectical materialism" (jiexi de bianzheng weiwulun 解析的辯證唯物論) that

stood for a fusion between dialectical materialism and logical analysis, and the central methodological machinery of "concrete relativism" (Zhang 1934, 12). In this unlikely marriage, the focus of the "dialectical part" would be to study relationships, changes and developments, to examine internal contradictions (struggle between the opposites), relationships of mutual opposition and mutual production (xiangfan xiangcheng), and the dialectical development of quality and quantity. While, on the other hand, the duties of logical analysis would be semantics, logic, and theoretical systematization.⁴⁸ Zhang further claimed that another common feature of logical analysis and the dialectical method lay in their strong propensity towards the unification of all sciences.

As we have already noted above, the above-mentioned synthesis between logical analysis and dialectical materialism was presented as an integral part of his epistemological theory called "concrete relativism".

Concrete Relativism

In its essence, Zhang's idea of "concrete relativism" was derived from Russell's "neutral monism", and his notion of relativity of knowledge based on his interpretation of relativity in physics. Initially, Zhang also referred to his theory as "absolute relativism" (juedui xiangduilun 絕對相對論) or "relative absolutism" (xiangdui jueduilun 相對絕對論).

In "Concrete Relativism (Juti xiangduilun 具體相對論)" from 1943, his earliest essay devoted exclusively to this theory, Zhang raised two major theses: "truth is concrete" and "the absolute is the concentration of the relative". Herewith, Zhang wanted to indicate the complexity of the question of truth and falseness (of a theory or proposition). Zhang proposed his theory of concrete relativism as an alternative to traditional epistemologies, which fail to take into account the above-mentioned fluidity of true and false. Moreover, in his concrete relativism he also endeavoured to supply a methodology which could provide the pivotal criteria for establishing the right measure (zhong 中 or zhi 值) of truth (Zhang 1943, 320–21).

With respect to the main cause for the above-mentioned epistemological obscurity, Zhang adopted the standpoint of the Western proponents of the linguistic turn, focusing on the positiveness of language (sense and meaning). At the same time,

⁴⁸ Namely: logical reasoning, differentiation between types (i.e. Russell's theory of types); logical form, definition of classes, sets, functions and variables; a study of relations; establishment of theory on facts; systematisation of inference and dissolving fallacies (Zhang 1943, 322).

he also claimed the same idea had been inherent in the traditional Chinese substance-function (*ti-yong* 體-用) dichotomy (e.g. nature versus man, order versus mediation). Zhang also believed that this dichotomy was embodied in the twofold structure of his philosophy: dialectics as its technique (pursuit for *dao* 道) and logical analysis as its method. In order to demonstrate the objectiveness of his epistemological views, Zhang claimed that they were deduced from Russell's theory of types. At the same time, he asserted that Russell's theory in itself not only proved that "dialectical analysis" was attainable, but also demonstrated that rectification of relations between names and actualities (*ming-shi* 名實) was crucial for its attainment of comprehensiveness and practical implementation (Zhang 1943, 322).

Zhang's theory of concrete relativism was recapitulated in an article entitled "The Central Point of My Philosophy—Concrete Relativism (Wo de zhexue de zhongxindian – Juti xiangduilun 我的哲學的中心點 – 具體相對論)" which was published in 1945. In this, Zhang emphatically stated that the central source of his concrete relativism was "the theory of types form Russell's mathematical logic", whereas its other notable sources included Einstein's theory of relativity, dialectical materialism and Chinese philosophy (Zhang 1945b, 10). He also reiterated his conviction that as a comprehensive synthesis of all branches of science concrete relativism could both significantly improve the rational capacity of the human mind and contribute to one's inner (ethical) self-cultivation.⁴⁹

Because at the time Zhang believed physics to be the most important of all sciences, he proposed that in the process of verification in "concrete relativism" one would also have to examine the spatial and temporal dimensions in which a proposition or a theory is located—in addition to its evolutionary aspects and causal circumstances related to its sense. Zhang described such a verification as determination of the type, level, order and relational aspect within a proposition. While such an application would reveal the concreteness of facts, a concurrent "relativism" would imply that truth is not determinable in a straightforward way. Finally, in Zhang's view such a "concrete and relative" method would lead to the

An idea that was in line with Confucian notion of knowing (zhi 知) or wisdom (zhi 智) as an integral part of one's inner self-cultivation (xiushen 修身). In a similarly "traditional" manner Zhang also assumed that "the perfection of dialectical analysis and a consistent practice of concrete relativism would be able to pacify people's minds, bring unity to the world and establish a harmonic relationship between the nature and man (Zhang 1945b, 11–12). In this sense, it becomes clear how the ethical aspect of Zhang's comprehensive philosophy rested heavily on the Confucian concept of humaneness (ren 仁), which in the latter developments within East Asian Confucianisms was ascribed the same attributes and was believed to lead to same practical results—common welfare, inner harmony, etc. (For a detailed study on the concept of humaneness in East Asian Confucianisms see Huang 2017.) It is important to note that in such inclusion of the ethical aspect into his theory Zhang also recognized an essential prerequisite for its universal value and objectiveness.

complete clarification of language: by recognizing that language requires concreteness and the principles (li 理) [it denotes] are relative, one can prevent all mistakes and dispel all delusions (Zhang 1945b, 11-12).

Conclusion

The above outline of recurring key concepts from Zhang Shenfu's philosophy reveals a number of special features, ones that ought to be taken under closer examination, not only in future surveys of the thought of this important Chinese thinker, but also in more general excursions into the intellectual history of modern China. Among the most outstanding and obvious such features is most certainly the intriguingly deep-running traditional undertone to all of Zhang's attempts at grasping the meaning of his favourite Western teachings and ideas, as well as his persistent struggle to merge Western science with traditional Chinese cosmology. As indicated in the introductory remarks to this study, Zhang's intellectual development was crucially defined by the apparently schismatic dilemma of modernity, which incised a deep gorge between the two alleged poles of the modern world. Having been still deeply immersed in the ideas and perspectives of traditional China—like many of his contemporaries—Zhang was barely able, and at the same time probably also unwilling, to overcome the profound differences between traditional and Western scientific worldviews. Hence, his intellectual undertakings signified the stage or fragment in the process of adoption of Western ideas when the traditional base still prevailed over the system of ideas extracted from the Western thought. Here, it further needs to be noted that when it came to intellectual appropriation the logic in intellectual translation of Western natural science was not entirely the same as in the case of Western philosophy—or as the Chinese intellectuals themselves decided to call this category, the "view(s) on life" (renshengguan 人生觀). While, in the 1920s and 30s, the first (science) essentially involved a sense of onto-moral imperative (having been recognized as "objective") and utilitarian necessity, the second touched on the sense of cultural identity or essence as an objectively autonomous spiritual realm (the subjective), as the main umbilical cord still interconnecting the day-to-day reality of modern China with its philosophical past.

Like other intellectuals from the period, Zhang's notions of Western science and philosophy rested predominantly on establishing analogies between the patterns and concepts in traditional thought/perception on one side, and corresponding patterns or, maybe even more importantly, terms in Western scientific worldviews (as holistic systems) on the other. Correspondingly, what appears to us as clear errors in understanding—e.g. his idea of materialist dialectics—is also an expected outcome of such an analogical method of exploring certain ideas within a fundamentally holistic worldview, dominated by traditional concepts and categories as the basic norms of "similarity".

From his early years on, Zhang's enthusiastic examinations of the philosophy of Bertrand Russell, mathematical logic and dialectical materialism were saturated with palpably traditional perspectives, including a strong dialectic and holistic view of reality. Gradually, Zhang himself also became aware of this essentially traditional feature of his thought, and in turn consciously embedded the idea of harmonic complementarity between opposites (xiangcheng xiangfan 相成相反) into his ideas about Western science, logic, analytical philosophy, and so on. The same principle was also extrapolated into his idea of pure or greater objectivism, which he also derived from the traditional Chinese idea of "comprehensiveness" (tong 通), which again indicates a universal interpenetration of all things and principles that compose the universe. On the other hand, deriving from the inherent ethical connotations of the cosmological constellations of principles in Confucian thought, Zhang further established a connection between the "objectivistic spirit" of the Western scientific worldview and the Confucian concept of "humaneness" (ren □), which embodied yet another aspect of the all-encompassing unity of principles. Broadly speaking, in Confucian thought this concept represented the intersection between one's inner moral cultivation (subjective) and the external order of things (objective), as the crucial starting point for attaining substantial consonance with the pattern (li 理, also "principle") or the way (dao 道) of the universe.

Zhang's erratic and, on the surface, rather extravagant and inconsistent way of writing, made him a notoriously controversial thinker, already back in the years when he was still active as a philosopher. From the early days on, his writing was occasionally immensely cryptic and his conclusions extremely hasty and over-generalizing. However, a more scholarly counterpart to Zhang Shenfu soon arrived in the philosophical persona of his younger brother Zhang Dainian, who inculcated Zhang's syncretistic philosophical ideas together with his key concepts into his own elaborate discussions of contemporary and traditional Chinese philosophy. In this sense it needs to be noted that Zhang Dainian's philosophical writings from the 1930s constitute an important part of the whole picture, which might help us better understand Zhang Shenfu's thought.

Finally, even though from the vantage-point of a Western philosopher Zhang Shenfu on many occasions critically failed to understand certain concepts and theories from Western philosophy (most notably the notion of dialectics in Hegelian

and Marxist philosophy), still his colourful scholarly style, his intellectual and political renown, his pioneering contributions (mostly in the propagation of certain notions) to Chinese studies of analytic philosophy and mathematical logic, and his immensely influential role in pivotal moments and movements in Republican China, make him an immensely important figure in modern Chinese intellectual history. Most of all, as a Republican intellectual Zhang also deserves to be studied because of his remarkably unique philosophy, which painted in the eyes of his numerous students and adherents-many of whom would go on to be leading Chinese Communists—an alternative, fundamentally "harmonic" and synthetic version of intellectual modernity, where, in an equally unique manner, a special place was reserved for both traditional thought as well as Western scientific notions such as mathematical logic and relativistic physics. Consequently, in the light of all the reasons set out above, a deeper interest and study of Zhang Shenfu and his philosophy may offer additional and crucial insights into one of the most important chapters of modern Chinese history. Moreover, because Zhang was also one of the leading proponents of dialectical materialism in China, a closer look at his thought may also offer a better insight into the general circumstances that surrounded the very formation of the intellectual foundations of socialist China.

References

- Bukharin, Nikolai I. [Buhalin 佈哈林]. 1930. Weiwu shiguan 唯物史觀 (Historical Materialism), 3 volumes. Shanghai: Taidong tushuju.
- Daston, Lorraine, and Peter Galison. 2007. Objectivity. New York: Zone Books.
- Cai, Shangsi 蔡尚思. 1936. "Sanian lai de Zhongguo sixiang 卅年來的中國思想 界 (Chinese Intellectual Circles in the Last Thirty Years)." Tianlai jikan 25 (2): 1-38.
- Findeisen, Raoul David. 1994. "Professor Luo: Reflections on Bertrand Russell in China." Asian and African Studies 3 (1): 10-33.
- Guo, Hua-qing 郭華清. 2000. "Jiayin shiqi Zhang Shizhao de zhexue sixiang - tiaohelun 甲寅時期章士釗的哲學思想 - 調和論 (Zhang Shizhao's Philosophical Thought in the Period of Jiayin (The Tiger)—The Theory of Harmony)." Supplement to the Journal of Sun Yatsen University (Social Science Edition) 20 (3): 150-62.
- Guo, Qiyong. 2018. Studies on Contemporary Chinese Philosophy (1949–2009). Translated by Paul J. D'Ambrosio, Robert Carleo III, Joanna Guzowska, Chad Meyers et al. Leiden, Boston: Brill.

- Guo, Yiqu 郭一曲. 2001. "Jiexi de bianzheng weiwu zhuyi: Zhang Shenfu de zhexue sixiang 解析的辨證唯物論: 張申府的哲學思想 (Analytical Dialectical Materialism: Zhang Shenfu's Philosophical Thought)." Zhongguo zhexueshi 4: 79–85.
- ——. 2002. Xiandai Zhongguo xin wenhua de tansuo: Zhang Shenfu sixiang yanjiu 現代中國新文化的探索: 張申府思想的研究 (Exploring the New Culture of Modern China: A Study of Zhang Shenfu's Thought). Guangzhou: Guangdong renmin chubanshe.
- Guo, Zhanbo 郭湛波. 1965. Jin wushi nian Zhongguo sixiangshi 近五十年中國思想史 (Chinese Intellectual History in the Last Fifty Years). Hongkong: Longmeng shudian.
- Guoli Beijing Daxue 國立北京大學. 1918. Guoli Beijing daxue nianzhounian jiniance 國立北京大學廿周年紀念冊 (Commemorative Publication for the Twentieth Anniversary of National Peking University). Beijing: Guoli Beijing daxue.
- Huang, Chun-chieh 黃俊傑. 2017. Dongya Rujia renxue shilun 東亞儒家仁學史 論 (A Historical Study the on Discourse on Humaneness in East Asian Confucianisms). Taipei: Guoli Taiwan daxue chuban zhongxin.
- Jiang, Tao, and Philip J. Ivanhoe, eds. 2013. *The Reception and Rendition of Freud in China: China's Freudian Slip*. New York: Routledge.
- Jiang, Yi 江怡. 2009. "Weiyena xuepai zai Zhongguo de mingyun 維也納學派在中國的命運 (The Fate of Viennese School in China)." *Shijie zhexue* 6: 6–23.
- Kurtz, Joachim. 2020. "Reasoning in Style: The Formation of 'Logical Writing' in Late Qing China." In *Powerful Arguments: Standards of Validity in Late Imperial China*, edited by Martin Hofmann et al., 565–606. Leiden, Boston: Brill.
- Li, Weiwu 李維武. 1998. Ershi shiji Zhongguo zhexue bentilun wenti 二十世紀中 國哲學本體論問題 (Ontological Questions in Twentieth Century Chinese Philosophy). Changsha: Hunan Education Press.
- Liang, Shuming 梁漱溟. 1920. Outline of Yogācāra (Weishi shuyi 唯識述義). Beijing: Beijing daxue chubanshe.
- Lin, Xiashui 林夏水, and Zhang Shangshui 張尚水. 1983. "Shuli luoji zai Zhong-guo 數理邏輯在中國 (Mathematical Logic in China)." *Ziran kexueshi yanjiu* 2 (2): 175–82.
- Meng, Guangwu 孟廣武. 2014. "Zhang Shenfu: Bei yiwang de shuxuejia gemingjia zhexuejia 張申府: 被遺忘的數學家革命家哲學家 (Zhang Shenfu: A Forgotten Mathematician, Revolutionary and Philosopher)." *Journal of Liaocheng University (Natural Sciences Edition)* 27 (3): 1–32.
- Nelson, Eric S. 2020. "Zhang Junmai's Early Political Philosophy and the Paradoxes of Chinese Modernity." *Asian Studies* 8 (1): 183–208.
- Schwarcz, Vera. 1986. The New Enlightenment: Intellectuals and the Legacy of the May Fourth Movement of 1919. Berkeley, Los Angeles, London: University of California Press.

- —. 1991/2. "Between Russell and Confucius: China's Russell Expert, Zhang Shenfu (Chang Sung-nian)." Russell: The Journal of the Bertrand Russell Archives 11: 117-46.
- ----. 1992. Time for Telling Truth is Running out: Conversations with Zhang Shenfu. New Heaven, London: Yale University Press.
- Shi, Mingde 时明德, and Zeng Zhaoshi 曾昭式. 1998. "Shuli luoji zai Zhongguo fazhan zhihuan de yuanyin tanxi 數理邏輯在中國發展滯緩的原因探 析 (An Exploration of Reasons of Slow Development of Mathematical Logic in China)." Xinyang shifanxueyuan xuebao 18 (2): 29-33.
- Song, Wenjian 宋文堅. 2000. "Zhongguo shuliluoji bashi nian 中國數理邏輯八 十年 (80 Years of Mathematical Logic in China)." Beijing hangkong hangtian *daxue xuebao* 13 (1): 12–17.
- Su, Rina 蘇日娜, and Dai Qin 代欽. 2019. "Zhang Shenfu dui shuli luoji za Zhongguo zaoqi chuanbo de gongxian 張申府對數理邏輯在中國早期傳播 的貢獻 (Zhang Shenfu's Contribution to Early Dissemination of Mathematical Logic in China)." Shuxue tongbao 58 (10): 9-12, 19.
- Sun, Dunheng 孫敦恆. 1988. "Zhang Shenfu jiaoshou zai Qinghua 張申府教授 在清華 (Professor Zhang Shenfu's Years at Qinghua)." Beijing wenshi ziliao, January: 30–31.
- Tian, Chenshan. 2019. "Mao Zedong, Sinicization of Marxism, and Traditional Chinese Thought Culture." Asian Studies 7 (1): 13-36.
- Wen, G. 溫公頤, and Cui Q. 崔清田. 2001. Zhongguo luojishi jiaocheng 中國邏 輯史教程 (A Course in the History of Logic in China). Tianjin: Nankai daxue chubanshe.
- Wittgenstein, Ludwig (Weitegenshentan 維特根什坦). 1927. "Mingli lun (Luojizhexue lun) 名理論 (邏輯哲學論) (Tractatus Logico-Philosophicus)." Translated by Zhang Shenfu [申甫]. Xiandai pinglun 1 (5): 53-98.
- Wittgenstein, Ludwig (Weitegenshentan 維特根什坦). 1928. "Weitegenshentan Mingli lun (xu)"維特根什坦名理論(續) (Wittgenstein's Tractatus Logico-Philosophicus (Continued))."Translated by Zhang Shenfu [申甫]. Xiandai pinglun 1 (6): 31-80.
- Zhang, Dainian 張岱年. 1997. Wenhua de chongtu yu ronghe 文化的衝突與融合 (Culture Clash and Cultural Fusion). Beijing: Peking University Press.
- Zhang, Dongsun 張東蓀. 1922. "Xin shizailun de lunlizhuyi 新實在論的論理 主義 (On the Logicism of New Realism)." Dongfang zazhi 19 (17): 15-34.
- ——. 1923. "Xiangduilun de zhexue yu xin lunli zhuyi 相對論的哲學與新論理 主義 (The Philosophy of Theory of Relativity and New Logicism)." Dongfang zazhi 20 (9): 58-81.
- Zhang, Junmai 张君劢 et al. 1997. Kexue yu renshengguan 科學與人生觀 (Science and the View on Life). Jinan: Shandong renmin chubanshe.

- Zhang, Shenfu 張申府 (Songnian 崧年). 1919. "Shu zhi zheli 數之哲理 (Philosophical Principles of Numbers)." *Xinchao* 1 (4): 90–92.
- ——. 1920a. "Luosu 羅素 (Russell)." Xin qingnian 8 (2): 4–9.
- ——. 1920b. "Kexue li de yi geming 科學里的一革命 (A Revolution in Science)." *Shaonian shijie* 1 (3): 1–6.
- ——. 1920c. "Jindai xinlixue 近代心理學 (Modern Psychology)." Xin qingnian 7 (3): 95–99.
- —— (Chi 赤). 1922. "Shehui wenti 社會問題 (Social Questions)." Xin qingnian 9 (6): 28–29.
- —— (Songnian 崧年). 1926. "Xiandai zhexue xiao lun 現代哲學校論 (A Comparative Discussion on Modern Philosophy)." *Zhexue yuekan* 1 (5): 1–3.
- ——. 1927b. "Lun fanyi 論翻譯 (On Translation)." *Beixin* 2 (1): 115–22.
- Zhang, Shenfu 張申府. 1928a. "Kexue zhong de xin fajian 科學中的新發見 (A New Discovery in Science)." *Shijie* 5: 2–3.
- ——. 1928b. "Luosu xin yuanzishuo 羅素論新原子說 (Russell on New Theory of Atoms)." *Dongfang zazhi* 25 (6/8): s.d.
- ——. 1928c. "Xiandai wuli kexue de quxiang 現代物理科學的趨向 (Trends in Contemporary Physics)." *Dongfang zazhi* 25 (11): 73–78.
- —. 1931. Suosi 所思 (Reflections). Shanghai: Shenzhou guoguang she.
- ——. 1933. "Keguan yu weiwu 客觀與唯物 (Objectivity and Materialism)." *Dagong bao (l'Impartial*), November 16: 11.
- —. 1934. "Xiandai zhexue de zhuchao 現代哲學的主潮 (Main Currents in Contemporary Philosophy)." *Qingua zhoukan* 42 (8): 10–12.
- ——. 1939a. "Ren yu xianjuezhe 仁與先覺者 (Humaneness and the Visionary)." *Zhanshi wenhua* 2 (1): 51.
- ——. 1939b. "Guomin jingshen zongdongyuan shang de er yaodian 國民精神 總動員上的二要點 (Two Main Points in Mobilisation of the National Essence)." *Zhanshi wenhua* 2 (3): 6–9.
- ——. 1943. "Juti xiangduilun 具體相對論 (Concrete Relativism)." In *Zhang Shenfu wenji* 张申府文集 (*Collected Writings of Zhang Shenfu*), Zhang Shenfu (2005) author, vol. 2, 320–22. Shijiazhuang: Hebei renmin chubanshe.
- ——. 1945a. "Wo ziji de zhexue 我自己的哲學 (My Own Philosophy)." Xinhua ribao 23 (June), s.d.
- ——. 1945b. "Wo zhexue de zhongxindian: juti xiangduilun 我哲學的中心點: 具體相對論 (The Central Point of My Philosophy: Concrete Relativism)." *Zhongxuesheng* 91/92: 10–12.
- ——. 1985. Zhang Shenfu xueshu lunwenji 张申府學術論文集 (The Collected Scholarly Writings of Zhang Shenfu). Jinan: Qilu shushe.

- ——. 1993. Suoyi 所億 (Reminiscences). Beijing: Zhongguo wenshi chubanshe.
- ----. 2005. Zhang Shenfu wenji 张申府文集 (Collected Writings of Zhang Shenfu), 4 Volumes. Shijiazhuang: Hebei renmin chubanshe.
- Zhang, Shizhao 章士釗. 1943. Luoji zhiyao 邏輯指要 (Essentials of Logic). Chongqing: Shidai jingshenshe.
- Zhou, Yunzhi 周云之, and Zhou W. 周文英. 1989. Zhongguo luojishi 中國邏輯 史 (The History of Chinese Logic), vol. 5: Xiandai juan. Lanzhou: Gansu renmin chubanshe.
- Zhou, Yunzhi 周云之. 2004. Zhongguo luojishi 中國邏輯史 (The History of Chinese Logic). Taiyuan: Shanxi jiaoyu chubanshe.