

哲学新视界系列丛书

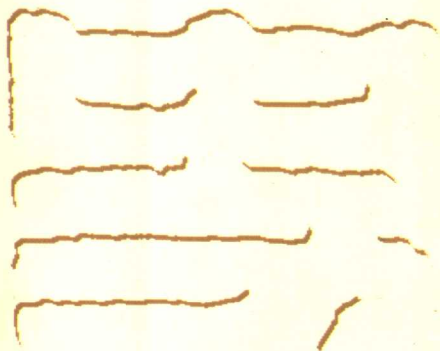
詹石窗 □ 主编

理解与科学解释

—— 解释学视野中的科学解释研究

Understanding and Scientific Explanation

曹志平 / 著



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——A study of scientific explanation from
the perspective of Hermeneutics

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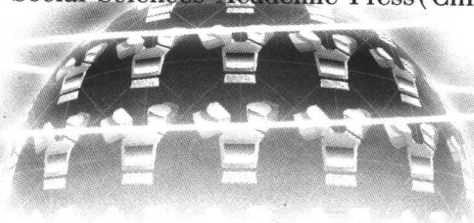
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著 者 / 曹志平

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总 序

进入 21 世纪以来，经济全球化的浪潮迅猛异常，文化学术交流也更加频繁。在这种社会转型的历史进程中，哲学既面临着巨大挑战，也获得了新的发展空间。为了发掘传统的哲学遗产，推动理论创新，培育优秀人才，为中华民族的伟大复兴贡献一份力量，我们组织出版这套丛书。

本丛书是从大的范围来使用“哲学”这个概念的。按照中国的传统，“哲”乃意味着“明智”。《书·皋陶谟》有所谓“知人则哲”；《诗·大雅·下武》称：“下武维周，世有哲王。”凡此二例，均从“明智”的意义上使用“哲”这个词语。由此衍生，而有“哲人”、“哲匠”、“哲思”等相关词汇的流行。此等词汇或指有智慧的文化人，或指具有理论建树的巨匠，或指精深的思虑。至于“学”则有学问、学说等意义。如《庄子·天下》篇谓：“百家之学，时或称而道之。”其中的“学”便是指学说。此外，《韩非子·显学》篇以儒墨为显学，也是从学说的意义上讲的。如此看来，“哲”与“学”连称，即意味着明智的学问或学说。什么是“智”呢？在古人看来，这主要是指知识。《荀子·正名》篇谓：“所以知之在人者，谓之知。知有所合谓之智。”根据前人的解释，荀子所讲的“合”指的是“知”合于“物”，用今天的术语来说，就是主观的认识符合客观事物的存在状况，这实际上是一个知识论问题。当然，古人并非仅仅关注人之“知”如何与“物”合的问题，而是由“物”之“知”

进而探索万物背后的“本根”，这在道家学派那里尤其受到重视。在老子确立了以“道”为核心的本根论之后，《庄子·知北游》则通过寓言故事来暗示“知道”（KnowingDao）与“体道”（EmbodyingDao）的重要性。直到今天，人们探讨问题时还常常发问：“知道不知道？”这说明，在中国文化传统中，人们并非仅仅埋头于具体事项的认识，其实也相当重视深层次问题的探究。值得注意的是，中国古代哲人是从人与天地万物的整体联系上来把握“道”的，无论是先秦的老庄学派，还是魏晋的玄学家、宋明理学家都是如此。这样，有关人生修养的生命哲学、道德哲学以及社会政治哲学都在“天人合一”的贯通下而具有整体的“明智”精神。

从西方文化的源流看，哲学概念本出于希腊，意即“爱智”。在英文中，Philosophy 的含义已经扩展了，除了对知识的热爱可以用 Philosophy 来形容之外，学者还用这个词来指陈哲理、人生观等，探讨的范围涵盖诸多领域。尽管西方学者对于哲学各有自己的界定，但从总体上看，凡属探讨宇宙人生之究竟原理以及认识此种原理的方法都谓之哲学。近代以来，西方学者甚至将研究某一门具体学科的基本原理也归入哲学范围之内，于是有了“历史哲学”（ThePhilosophyofHistory）、道德哲学（ThePhilosophyofEthics）、宗教哲学（ThePhilosophy-ofReligion）等等。

在中国当代学位教育的学科划分中，哲学包括了八个二级学科，即马克思主义哲学、中国哲学、外国哲学、逻辑学、伦理学、美学、宗教学、科学技术哲学；而在国家社会科学基金项目的学科分类中，宗教学则独立于哲学之外，列为一级学科。两个系统的划分，各有各的道理，其间的差别当然是有原因的。不过，从研究的角度看，哲学与宗教并非存在着不可逾越的鸿

沟。所以，本丛书拟从广义的立场来审视学科关系，将宗教学的相关课题也纳入哲学的视界之中，为吸纳高质量书稿拓展空间。

本丛书所谓“新视界”的核心精神就在一个“新”字，即倡导新思维，鼓励新开拓，形成新见解。在组稿过程中，编委会的基本思路是：

一、侧重边缘学科的开拓或交叉性研究。这是因为学科的划分本来就不是僵化固定的。众所周知，自然科学的传统学科有所谓数学、物理学、化学、天文学、地理学、生物学等等。后来，学科发生渗透或者相互交错，于是有了物理化学、生物化学、海洋化学等等。在信息化高度发展的现代社会，学科渗透显示了更为强劲的趋势。有资料表明，最新的高科技成果和基本理论的创新成果几乎都不是在单一学科的范围取得的，而是带有跨学科研究的特质。自然科学与技术领域如此，社会科学与人文科学也不例外。例如，经济哲学、神话哲学、音乐哲学等等，即表现了社会科学之间的相互交叉。当然，社会科学、人文科学与自然科学之间同样存在着相互交错的发展趋势，例如生物考古学、智能语言学等新兴学科的出现都证明了跨领域交叉研究已从可能性转化为现实性。所以，哲学研究就不能仅仅局限于传统的八个二级学科的范围，而应该有新的开拓。基于这样的考虑，本丛书在选题上有意识地采纳跨领域研究的成果，如《探赜索隐：道教科学思想研究》、《道教生态学研究》乃是从科学思想史、生态学的角度对道教文化进行新的考察。再如《经济学的理解与解释》则力图从分析哲学的角度对经济学进行理论透析。本丛书将此类著作收入其中，正是由于它们在这方面做了探索，值得肯定。

二、鼓励采用新方法对研究对象进行深层次的解读。事实

证明，人文社会科学研究要取得有分量的高水平成果，除了发掘新资料、从新的角度来审视、考察之外，方法的选择也是相当重要的。固然，从历史上看，哲学研究已经形成了富有自身学科特色的方法论，但这并非意味着理论建构方法的惟一性和永恒性。事实上，学科研究方法从来就不是单一的，更不是一成不变的。就体系建构而论，甚至可以说有多少哲学流派就有多少研究方法。在中国古代有所谓“十日并出”的神话，这种神话在最初可能是先民们对自然现象疑惑的表现，但后来却成为道家进行理论建构的一种象征。在道家看来，思想表达与理论建构应该具有“十日并出”的局面，而不是以“天无二日”的框框来束缚人们的创新。此等思路在今天看来，依然具有深刻的启迪意义。在学科渗透与交错趋势日益明显的当今社会，我们再也不能固守僵化的教条，而应该有所借鉴，有所创新。所谓借鉴，即意味着借鉴西方同行的某些有效可行的研究方法，例如语言哲学研究方法、符号学研究方法等等，也意味着吸纳哲学以外其他相关学科的研究方法。因为学科发展正日益走向相互渗透与交叉，所以引入相关交叉学科的研究方法也势在必行。当然，引进的目的是为了更好地创新。从根本上看，任何具有创新的理论体系往往也需要方法的创新。所以，本丛书在选稿方面也注意到研究方法的特色。例如《理解与科学解释》冲破了以往科学哲学研究的逻辑主义与科学主义阈限，批判性地引入了哲学解释学的方法，从而使理论架构焕发出新的气息。再如《历史及其理解和解释》运用思辨历史哲学的方法对西方历史哲学的基本理论脉络进行梳理，陈述了历史解释的逻辑，并且对历史认识的客观性、历史与叙述、历史评价等问题做深层次的哲理探索。本丛书编委会希望在这方面有更多的佳作加盟。

众所周知，理论创新需要实事求是的态度与敢于探索的勇气。如果说实事求是的态度是进行理论创新的思想前提，那么勇于探索的勇气则是理论创新的基调。从某种意义上说，勇于探索首先应该敢于怀疑，所谓“怀疑”就是要对现成的理论体系进行一番审视，从而有所继承有所超越。我们相信，坚持“实事求是”态度与“勇于探索”勇气的结合必将迎来更多的创新性收获！

詹石窗

谨识于厦门大学童蒙斋

2004年6月6日

Preface to *New Perspectives of Philosophy*

Zhan Shichuang

In the 21st century, economic globalization is accelerating its pace, and there are many more academic exchanges than ever before. Under such circumstances, the study of philosophy has got a new chance for development, and it also faces great challenges. Therefore, We publish the series of books, aiming at making better use of the heritage of philosophy findings left behind by our ancient scholars, promoting the renovation of theories, training a new generation of researchers and contributing to the revitalization of the traditional cultures of our motherland.

The authors of the series of books use the concept of “philosophy” (哲学 in Chinese, and “zhexue” in pinyin) in a broader sense. Traditionally, the Chinese character “哲” (zhe) means “wise”, According to “Gaotaomo”, a chapter of *Shu*, a Chinese classic, a person who knows other people inside and out is a wise man. Another Chinese ancient classic *Shijing*, namely, *The Book of Songs*, says, “Wu and Zhou are two wise dynasts.” In

① This Preface Translation had been examined and revised by Professor Xue Chuqing of Shanghai foreign language College, I express my thanks to him especially.

both cases, they refer to people of wisdom by using the word “zhe”, Consequently, we have derivatives like zheren (wise people), zhejiang (scholars of philosophy), and zhesi (thoughts of philosophy), and so on. The other character “学” (xue) means knowledge or theory. For instance, a chapter called “the World” in *Zhuang Zi* says, “We often discuss theories of many schools of learning,” Besides, “Outstanding Learning” in *Hanfei Zi* regards Mo Zi’ s theory as important and excellent, which indicates the author means the same in terms of theories as well (Mo Zi is also an eminent scholar preaching Confucian theories). Therefore, if we put “zhe” and “xue” together, we mean knowledge of wisdom and profundity. What does it mean by “wisdom” then? From ancient people’ s perspectives, it mainly refers to knowledge. “Zhengming” in *Xun Zi* comments, “To know means to master knowledge, and if the knowledge fits the truth, we call this wisdom,” Xun Zi lays emphasis on the correspondence between one’ s knowledge to reality, while today we may interpret this in this way, that is, if one’ s subjective understanding corresponds to the actual existence of objects of the physical world, we call this wisdom. In fact, it’s a matter of epistemology. Surely, ancient scholars not only paid attention to this question, but also attached importance to knowing the truth of the sources of everything in the world. This is particularly true with Taoist scholars. After Lao Zi established Taoism as the core of his theory, “Zhibeiyou” in *Zhuang Zi* tells fables to underline the importance of knowing and embodying the truth of Taoism in one’s daily life. Even today, when people are making inquiries, they often say, “don’t you know of not”. This means Chinese people are much influenced by the cultural tradition to go further to search for truth instead of

knowing things only at a skin-deep level. It should be noted that ancient Chinese scholars, be he Lao Zi, Zhuang Zi in early Qin Dynasty, metaphysicist of Wei and Jin Dynasties, or Mingli Scholars in Song Dynasty, all tried to search for truth from the perspective of the overall relations between man and nature. Therefore, with the influence of idea that “man and nature enjoy perfect harmony”, the life philosophy related to personal cultivation, moral philosophy and philosophy of social politics all take on a strong flavour of wisdom worship.

According to the history of Western civilization, the concept of philosophy first came from Greece, referring to “the love of wisdom”, In English, the word of philosophy has extended meanings, referring not only to the love of knowledge, but also to the truth of philosophy, and the outlook on life. Therefore, this word covers a wide range of subjects. Though different scholars may lay emphasis on different aspects, on the whole, all researches related to the universe and all research methodologies can be included in the sphere of philosophy. In recent centuries, western scholars even regard the fundamental methodology with which people do research work for a specific subject as a branch of philosophy, hence the emergence of philosophy of history, philosophy of ethics and philosophy of religion, and so on.

In modern China's, degree education system, philosophy includes 8 subordinate subjects, namely, Marxist philosophy, Chinese philosophy, foreign philosophy, logic, ethics, aesthetics, study of religion, and philosophy of science and technology. However, in terms of the classification by the National Foundation for Social Sciences, religion is no longer a subordinate subject of philosophy. Instead, it acquires equal status as philosophy does. Eash

system has good reasons to do so. Even so, there is no insurmountable differences between philosophy and religion. Consequently, we do not draw a clear demarcation between the studies of the two. Instead, we welcome academic books of good quality on religious studies to join the series.

The key tone of our series is to advocate new ideas, promote new ways of thinking, and foster new theories. Therefore, the guidelines for us editing committee are as follows.

First, emphasis is laid on the pioneering efforts to research borderline subjects and their interaction because there is no fixed way to define the classification of subjects. It is known to all that for natural sciences, there are mathematics, physics, chemistry, astronomy, geography, biology, etc. Later, with the advancement of researches, there appear other subjects like physical chemistry, biochemistry, oceanographic chemistry, and so on. In modern society where information technology is highly developed, the interaction and interconnection of different subjects are more and more evident. Data show that the latest hi-tech achievements and the innovation of theories are hardly confined to a single subject. Instead, they often go beyond the domain of a particular subject. It is a rule as far as natural sciences are concerned, but social sciences and humanities are no exception. For instance, now we have subjects like philosophy of economics, philosophy of mythology, philosophy of music, and so on. These all point to the merging of different social sciences. Of course, there is also a trend of merging among social, natural sciences and humanities. For example, the appearance of bio-archaeology and intelligence linguistics shows that the research concerning two fields is now a reality rather than a possibility. As a result, philosophy studies should not confine itself to the traditional

eight branches, and we call for new breakthroughs. Accordingly, our series intentionally include findings other fields. For example, *A Study of Taoist Ecology* and *Probing into Taoist Ideology Related to Science and Technology* present the authors' comprehension of Taoism in light of ecology and the history of science and technology. In the meantime, *Understanding and Interpretation of Economics* attempts to do a theoretical analysis of economics from the perspective of philosophy. To welcome such works to join our series is a positive affirmation for their efforts.

Second, we encourage researches at in-depth levels by adopting new approaches. Ample facts show that besides looking for new objectives and new materials for studies, achievements meeting high standards cannot be acquired without proper methods. Judging from history, philosophy research has derived certain methodology with distinct characteristics, but it does not mean that we should stick to it for ever. Actually, there is never just one research method, let alone that it should be unchanging with the passage of time. In terms of system construction, we may even say that every school of philosophy as research method of its own. As an ancient Chinese legend has it, there once appear in the sky ten suns that shine side by side. This legend at first was an indication of the confusion of our forebears when they were puzzled by some natural phenomena. As time went by, it became a synonym for the Taoist who used various methods to build their theoretical frameworks. From their perspectives, the expression of ideas and theoretical construction should voice freely, just like those "ten suns". Meanwhile, another Chinese idiom reads, "there should never be two suns shining in the sky at the same time", which displays an arbitrary attitude towards the expression of one's thinking. Obviously, we should say yes to

the former and no to the latter. In today's world, we should not be confined to certain doctrines. We should learn from others and make our own progress. By "learning from others", we mean to borrow some practicable research methodologies from our western counterparts, such as the approach for doing studies in the field of linguistic philosophy and semeiology. Besides, we may even learn from the research methodologies resated to other subjects than philosophy. It is all because of the interaction of different subjects, and hence the necessity of introduction of research methods of related subjects. Certainly, to introduce more is to create better. Fundamentally, creative theoretical systems call for creative methodologies, so we compilers of the series pay attention to new features highlihgtng the research methods. For example, *Understanding and Scientific Interpretation* smashes the boundaries of the logicism and scientificism of traditional philosophy of science and introduces hermeneutics of philosophy in a critical way so as to inject vitality into the construction of new theories. *Hirstory and Its Understanding and Interpretation* gives order to basic theories of western history and philosophy by means of dialectical philosophy of history, states the logic of historic hermeneutics, and delves into many issues such as the objectivity of historic understanding, history and its statement, and history assessment. We hope that more excellent works in this regard may join our series.

It is known to all that theory renovation calls for the attitude that we seek truth from facts and the courage to venture into unknown worlds. The former is the prerequisite for innovations, and the latter sets the keynote for creation of new theories. In a sense, it is necessary to be skeptical first in order to be adventurous to take up new researches, and to be skeptical means to go over carefully

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the existing theories in order to learn from the tradition. and go beyond the tradition We are convinced that armed with the two approaches, we are surely well on the way to more innovative achievements!

June 6th, 2004

内 容 摘 要

在科学解释的哲学研究中，我们以量子力学解释的新特征为基础，批判性地引入哲学解释学的思想与方法，力图构建一个可以广泛适用于自然科学、人文科学和社会科学的科学解释理论。

I. 在西方科学解释的哲学研究中，逻辑实证主义的科学解释观具有历史的先在性。逻辑实证主义坚持“科学解释即论证”的研究纲领，将科学解释的哲学研究看做是对形式化的科学解释模式的构造，确认科学解释就是由普遍律所做的论证或推理。这种科学解释观在哲学上拒斥形而上学，将科学解释看做是一个无主体、无旨趣、无意向的过程，在科学解释与人文、社会科学解释的关系上坚持了科学主义立场。逻辑实证主义科学解释观的种种理论偏失，源于其抽象理性主义的哲学前提。抽象理性主义与非理性主义、逻辑主义与历史主义的对立是西方科学哲学在科学解释问题上表现出的基本理论特征。它既是困扰西方科学解释理论发展的难题，也是重建理性主义科学解释观——批判的历史的理性主义科学解释观的突破口。

II. 我们提出在理解与解释的关系中理解科学解释。理解与解释的关系是人类科学活动的基本关系，它包括本体论、认识论和方法论三个层次。理解与解释的方法论关系，是理解与解释作为两种不同而又联系的认知方法形成的互补关系，它表现了人类从事自然科学、人文科学和社会科学活动的不同特征；

理解与解释的认识论关系，是“理解”与“解释”作为主体认知的手段和状态，在主体与客体的辩证运动中展开的关系，它表征着人类科学活动的内在矛盾；而作为人的基本存在方式的理解与解释的本体论关系，则构成了自然科学与人文、社会科学活动的共同根基。“理解与解释”的本体论、认识论和方法论的一致和辩证统一，是自然科学与人文、社会科学方法论的重要思想或原则。

Ⅲ. 理解与解释的关系首先是本体论关系。在哲学方法论上，我们不是首先着眼于科学解释的方法论问题，而是首先对之进行生存论分析；考察科学解释在人的历史存在中成为可能的前提条件，以回答科学解释何以可能这个先于方法论的问题。我们认为，前理解结构是科学解释的可能性条件。科学解释的前结构不仅包括可表述的各类信念、规则和目标，如自然的数学化观念，关于自然界物质实体及其过程的形而上学信念、科学的合理性信念等，而且还包括对于解释者作为背景存在的各种物质的、社会的和技能的实践因素。前结构使科学解释成为可能，它预先假定了一种内在的意义统一性来引导人的科学解释，制约着解释者的选择。

Ⅳ. 文本概念使科学解释的哲学研究从本体论向方法论过渡，研究的重心从理解向解释转移。科学文本作为科学解释的直接对象，由形式系统和经验事实两种基本文本构成。科学文本的含义与指称都是科学文本的意义。科学文本虽然是科学解释的直接对象，但其重要性却不在科学文本本身；与主体相关联的自然对象及其关系是科学文本的“文本”，是科学文本意义的客观基础。

Ⅴ. 科学解释的逻辑结构是科学解释方法论的重要部分。它包括定律解释、形式体系的语义解释，以及它们通过理论模型而形成的解释性关联。首先是作为基本科学解释的定律解释。定律解释是用经验定律对经验现象或事实的描述的说明。亨普