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氣功與人體：哲學探索
Qigong & Human Body: Philosophical Explorations

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氣功科學如何才是可能的？

倪培民

摘要

近二十年來有關氣功的論爭有一個明顯的特點，即科學佔據了整個論爭的中心地位。懷疑論者用科學作為準則來對氣功的命題提出質疑，指出外氣為迷信和騙術。氣功的支持者們則試圖通過科學實驗來證明外氣的存在和功效，卻又常常被指斥為偽科學。科學在當今的統治地位似乎已將問題定義為這麼一個兩難困境：要麼氣功為科學所證明，這就意味者它被歸結為常規科學所熟悉的解釋框架之中；要麼它不被科學所證明，於是它被指斥為迷信或偽科學。

本文論證，對整個問題首先應當採取一個 "康德式" 的提問，即不是問氣功是否 "科學"，而是問，"氣功科學如何才是可能的"？本文的具體方法，是首先列舉氣功懷疑論者的主要論據，試析其如何將氣功變得不可科學地證明，然後列舉幾條氣功支持者們的主要理由，試析其如何使氣功變得幾乎不可證為。本文初步的結論是，氣功要成為科學，我們需要在七個方面保持適當的張力。

目錄

當代科學與迷信之哲學反思

劉大椿

摘要

可檢驗性是區分科學與偽科學的一個關鍵。它至少包含三層意思；第一，它意味著科學實驗是最基本的科學實踐活動，實驗方法是科學的標誌。第二，它為科學假說提供了一個基本的方法論原理，不論是提出假說還是鑒別假說。第三，它是科學發現獲得社會承認的基本條件。如果一個假說在原則上是不可檢驗的，那它就不能稱為科學。偽科學乃是打著科學旗號、冒充科學的虛假東西，我們需要仔細分析，予以揭露，同時，我們也需要認識到，在現代社會的複雜系統中，雖然科學起著主導作用，但科學不是全體，更不是一切。有許多非科學的東西，如宗教、藝術、習俗等，對於社會發展是十分重要的，不能一概否定。但它們也不必硬說成是科學。

目錄

摘要

修煉氣功大有益於人的健康。但對於氣功那些令人震撼的效應，還沒有提出一套比較完整的氣功科學理論來加以解釋。然而，無法用當代已接受的科學理論來說明的現象不應一概斥之為迷信。當我們說“氣功科學”時，我們並不是說氣功已經是一門科學，而是說要以科學的態度、方法、手段和精神來對待氣功，研究氣功，努力開創一個科學探索的新領域。在這一探索中，還要注意從氣功的理論、世界觀和方法論出發來設計氣功科學實驗，而不是以常規科學的方式為萬能的或唯一正確的研究方式。

Abstract

The effectiveness of qigong (cultivation and application of qi-vital energy) is typically divided into two categories, the maintenance and improvement of the practitioner's own health and overall well being ("internal qi"), and the exertion of qi to affect external objects ("external qi"). Internal qi is less controversial partly because its effects are easier to be explained within the parameters of modern science, whereas external qi is much more controversial as its claims defray some deeply cherished common sense beliefs and well-received scientific laws. Skeptics take science as a measure to question qigong claims, accusing qigong, especially external qi, to be occult and superstition. Some advocates of qigong tried to conduct scientific experiments to prove the existence and effects of qi. In the public domain science has virtually become legislator for the legitimacy of qigong. But the encounters between qigong masters and scientists have been an unhappy marriage. Qigong claims were often denied by scientists as impossible right off the hand. Most scientists were unwilling to step into this field for the fear of being ridiculed by their colleagues. The dominant position of science in today's world seems to have defined the problem in such a way that, either qigong effects are scientifically proven, in that case it often means that they are reduced into normal frameworks of the accepted scientific practices and explanations, or that it is rejected on the bases of being scientifically unjustified, and therefore be treated no more than superstitions. In either case, qigong is rejected as a special science.

Given the nature of the issue, it is necessary to take a Kantian approach by asking "How is qigong science possible?" The paper analyzes four major skeptical arguments against qigong, and three claims from qigong advocates, and draws a conclusion that only by keeping some essential tensions can qigong become science.

The first skeptic argument is that, because some apparent qigong results could be duplicated by playing tricks, the qigong "masters" were therefore simply deceiving the public. This argument entails a logical confusion. Just like the fact that some may steal money does not prove all money come from stealing, duplication by playing tricks does not prove all paranormal phenomena should be rejected as such. Precautions should be taken to prevent frauds, but certain trust and respect must be observed for qigong to be science. If the argument were accepted as a valid disproof of qigong claims, it could reject all the claims, whether paranormal or

normal. In this area, the principle of "assuming innocence until proven guilty" must also be applied.

The second skeptic argument is that qigong claims violate well-established scientific laws and common sense beliefs, and are therefore simply impossible. The argument is based on the popular, though naive, belief that common sense beliefs and well-established scientific laws are plain truth, and, instead of subjecting to further evaluations, they become standards themselves for measuring possibilities and impossibilities.

The third argument is that qigong results could be explained by or reduced to normal physical or psychological phenomena, and they are therefore actually not unusual. While this approach can separate some merely apparent paranormal phenomena from genuine ones, it should be taken within certain limit. When reductionism is used as a regulative principle, it becomes "a constraint upon the acceptability of theories in the special science with the curious consequence that the more the special sciences succeed, the more they ought to disappear" (Fodor).

Even when physical measures are detected in qi emitting environment, the measurements themselves tell us little about the real content of qi, just like the vibration of air tells us little about the meaning of a spoken sentence.

The fourth argument from the skeptics is that qigong claims are not conclusive because they lack rigorous scientific justification. While this is a very legitimate concern, scientific standards and procedures themselves need to be examined. Laboratory experimentation maybe the worst way for testing qigong claims, since the prime variable in qigong is mental states, and they occur most likely in natural conditions. Mental states are also more difficult to re-create than physical states, especially if the function of these states depends on what Jung calls collective consciousness.

Qigong advocates have three major claims that apparently make qigong unfalsifiable. The first is that experimenters' mental states may exert influence on the outcome. While this argument may be misused to explain away any failure, it does not make scientific study of qigong impossible. It requires the scientist to abandon their "objective" bystander position, and adopt a positive attitude toward the experiment, or even become qigong practitioners themselves, but it does not demand self-deception. We can still empirically confirm or disconfirm a claim by asking whether the outcome is more likely to happen with the participation of sincere believers and diligent practitioners.

Qigong advocates also claim that, when some qigong treatments were not effective, it is because the recipient did not believe that it had actually worked. Direct verification of this claim involves proof of counterfactual conditional statements. As no one can undo his mental activity, the claim remains a hypothesis. A more disturbing claim for the scientists is that even if the physiological test results turn out to be bad, the patient should still remain positive that she has been cured. To a scientist this sounds like a typical self-deception. Yet claims like these may well be actually profound. The metaphysical principle behind the claim is that words and thoughts do not merely describe or reflect facts; they are actions that affect facts. One's own words can be an action of affirmation. Even ordinary counterfactual claims cannot be proven by undoing what has been done. If statistical data shows that in a critical amount of similar cases, the likelihood of the positive effect significantly increases with a positive attitude, and otherwise decreases, it would equally be plausible to make such claims.

A third disturbing claim from qigong advocates is that qi is autonomous — it makes its own choice about what problems to fix first. The difficulty for scientists to accept this claim is that it opens the door for any failure, in any kind of tests. This claim again involves counterfactual condition, and appears to be empirically unfalsifiable. Yet it is still acceptable if we find the practice or treatment is in significant amount of other cases effective. Scientists have long taken for granted that scientific facts must be publicly observable by ordinary perception. It seldom occurs to them that they may need to cultivate themselves to open the "third eye" and become a "competent judge." The claim can be justified in proportion to the amount of testimony from those judges. This hypothesis requires a radical shift in epistemology, but not abandonment of empirical justification.

The discussion leads to the following tentative conclusions: Qigong science is possible only if we keep essential tensions between seven pairs of extremes: (1) a tension between blindly trusting any alleged qigong masters and dismissing qigong claims as fraud before investigating the cases; (2) a tension between dogmatically sticking to currently accepted common sense and scientific beliefs and naive credulity; (3) a tension between reducing something unfamiliar to familiar frameworks forcefully, rejecting whatever that cannot be reduced, and casually adding new categories of variables and new hypothesis into scientific theories; (4) a tension between conceiving experimenters as totally outside observers and demanding uncritical blind believers; (5) a tension between taking language as descriptions and as actions; (6)

a tension between requesting public observability for everything and taking whatever an alleged qigong master says without checking with other masters; and (7) a tension between truth and value, and understand that the legitimacy of qigong is not derived from science alone.

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Abstract

There is an important way to distinguish science from pseudoscience: empirical testability. It has three basic implications. First, scientific experiments are the fundamental scientific activities, and the method of experiment marks empirical science. Second, empirical testability constitutes the first methodological principle for proposing or affirming a scientific hypothesis. Finally, it is also a basic condition for a scientific discovery to be accepted by society. If a hypothesis cannot be tested even in principle, it cannot be termed as a scientific hypothesis.

In contemporary Chinese society, there are varieties of pseudo-sciences. They use the name of science to identify themselves, but cannot pass the serious requirement of empirical testability. We should carefully examine such pseudo-sciences and disclose the nature of their hypotheses and activities as non- or anti-science. At the same time, we should also recognize that, although science is dominant in contemporary society, it is not everything valuable. There are a great deal of other items, such as religion, art, and customs, which are non-scientific but are extremely important to the development of society. We should not deny the value of non-scientific theories or activities. Neither should we mark them as science.

Notes by a Worker for Qigong Science: Reflections on the Problems of Qigong Science

Ni Peihua

Abstract

Many people have noticed that practicing qigong is beneficial to human health. However, how does it work is not quite clear. Especially, there is no way to use the contemporarily accepted scientific theories to explain some strikingly impressive effects and phenomena that qigong practitioners have brought out. But we should not take all of them as superstitious simply because they cannot be brought to light by currently accepted scientific theories. Instead, we should seriously explore qigong science.

When we speak "qigong science", we do not mean qigong is already a science. Rather, we mean that we ought to study qigong through scientific methods and in scientific attitude and spirit in order to open a new area for scientific inquiry. The basic spirit of science is honesty: truth is truth, and false is false. Science is not static. It is always developing. In scientific investigations of qigong, we must take notice to the special characteristics of qigong: its own theories, worldviews as well as methodologies. In designing scientific experiments on qigong, we should not take currently common scientific designing procedures and rules as absolute and universal standards. Rather, we should adapt them in ways of suiting the peculiar features of qigong practice so that useful information and results can be brought about.

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