

Some Reflections on Science and Religion in Traditional China

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傳統中國의 科學과 宗教에 관한 몇가지 고찰

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요 약

서양의 전통사회에서 과학과 종교는 모두 사회적으로 중요한 요소였기 때문에 이 두 가지가 여러 형태로 서로 작용했을 것은 당연하다. 더구나 서양에서는 과학의 대상인 자연세계와 종교의 대상인 神 사이의 본질적인 연결(자연세계를 神이 창조했다고 믿기 때문에)이 있었다. 따라서 서양의 역사에서는 과학과 종교가 서로 깊게 영향을 미친 예를 많이 찾아 볼 수 있다. 그러나 中國에서는 과학이나 종교가 사회에서 그렇게 중요한 적은 없었으며 서양에서 본 것과 같은 둘 사이의 본질적인 연결도 없었다. 이에 따라 中國에서의 과학과 종교의 관계에 관한 연구는 사회 내에서 별로 중요하지 않았던 이들 두 요소들 간의 假想的인 또는 극히 미미했던 연결이나 상호영향을 강조하는 일이 많았다. 예를 들어 中國의 과학발전에 있어서 道敎의 역할이 지나치게 평가되었던 것이다. 또한 어떤 종교적 요소의 「不在」가 과학에 어떤 영향을 미쳤는가 하는 점도 많이 탐구되었다. 물론 이같은 연구는 中國과학의 발전형태에 대한 — 또는 中國과학이 발전하지 못한 형태에 대한 — 많은 흥미있는 설명을 제기하기도 했지만 많은 문제들도 낳았다. 이 논문은 바로 이러한 문제들 — 전통 中國사회에서의 과학과 종교의 관계를 살피 볼 때 제기되는 문제들 — 을 다룬다.

I

In the history of the Western society and culture, both science and religion were important and powerful elements. The Christianity was strong ever since it took root in the ancient Roman times: it was the single most dominant factor in the Western culture for the most part of the past two millenia. Science was never very trivial in the Western history, either: having assumed some degree of importance during the late Renaissance period, its importance in society has been ever growing. It is then to be expected that the

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two strong elements in a society should have much influence upon each other. Moreover, the objects of science and religion—the Nature and the God—were directly linked in the Western conception in that the God created the natural world. Thus throughout the Western history there has always been an obvious possibility for strong connection and interaction between science and religion. The thirteenth-century Christian scholasticism, the Galileo affair, science in the Puritan and the Restoration England, the eighteenth-century natural religion, and the Darwinian controversies are only the more conspicuous examples; there are numerous others that can be found in almost all the other times.¹⁾ In fact, when we look at the relationship between science and religion in the West, we are really looking at the relationship between “the two pillars” of the Western civilization—Athens and Jerusalem.

In traditional China, however, the situation was drastically different. Neither science nor religion was important in China as in the West, nor was there an obvious link between the objects of the two. Of course there were exceptional periods in which religious elements, sometimes even scientific interests, were important. For example, several centuries following the fall of the Han (漢) dynasty around A.D. 200 saw strong and widespread Taoist and Buddhist beliefs and practices. The early parts of these centuries were also a period of much interest in various “proto-scientific” activities—alchemy, astrology, hygiene and other forms of physical and physiological therapies.²⁾ Yet there never was a period in which a single religion was dominant in China in the manner the Christianity was in the West or the Islam in the Arabic societies. Even at the height of Buddhism it represented just one among many religious currents of the time. Nor were those scientific—and proto-scientific—activities ever integrated fully into the scholarly pursuits of the dominant intellectual class. They were the activities mainly of the marginal—both socially and intellectually—groups of the society, and even when in some periods the interest in them was strong among the ruling class, it was always secondary to their primarily speculative intellectual concerns. Furthermore, as the traditional pattern of the Chinese society and culture evolved in the Sung dynasty (宋, 960-1270), the strength of both religion and science became even weaker.

In this situation, it is not surprising that the relationship between science and religion in traditional China was quite different from that in the West, or that such difference has been widely noted in the previous study of that relation. But too much attention to the difference has sometimes given rise to problems for the proper understanding of the distinct nature of the science - religion relation in traditional China. In the present paper I shall

1) For general discussions of the relationship between science and religion in the Western history, see, e.g., C. A. Russell, ed., *Science and Religious Belief: A Selection of Recent Historical Studies* (London: Oxford University Press, 1973); I. A. Barbour, *Issues in Science and Religion* (Englewood - Cliffs, NJ: Prentice - Hall, 1966).

2) For brief overviews of the relevant aspects of this period, see Max Kaltenmark, *Lao tseu et le taoisme* (Paris: Editions du Seuil, 1965), chapter 3; Holmes Welch, *Taoism: The Parting of the Way*, revised edition (Boston: Beacon, 1965), part 3. For more detailed studies, see Henri Maspero, *Le Taoisme et les religions chinoises* (Paris: Gallimard, 1971), especially books V-VII, IV; Holmes Welch and Anna Seidel, eds., *Facets of Taoism: Essays in Chinese Religion* (New Haven: Yale University Press, 1979).

discuss these problems and suggest some of the ways to look at the relation more fruitfully.

II

Looking for the relation between science and religion in the traditional Chinese society amounts to looking for the relationship between two things in a society neither of which had much importance in that society. This could easily lead, if one is not very scrupulous, to the dangers of assuming that religion must have played an important role in the development of science in China, as it did in the more religiously-oriented Western societies. Indeed, most of the previous work on the science-religion relation in China reflects the influence of such assumption, and consists of the following two kinds: 1) emphasis and exaggeration of some tenuous links between science and religion; and 2) search for—and often speculation about—the possible effects of the lack of some religious elements upon the scientific development.

The prominent example of the first kind is the frequently observed link between science and Taoism. Needham, Maspero, and Welch—and others who follow their pioneering work—have seen the importance of the scientific and proto-scientific activities practiced by various groups associated with Taoism.³⁾ Needham in particular has gone a step farther and stressed the connection, or the congruence, between the Taoist philosophy and the study of Nature.⁴⁾ Perhaps there is no need to present yet another critique of Needham on science and Taoism in this latter aspect.⁵⁾ But there clearly are problems in the many, very detailed studies that are supposed to show the link between the scientific and proto-scientific activities and Taoism. Although these interesting and informative studies have taught us immensely about the alchemical, astrological and medical texts and practices, they raise more questions when they are viewed in connection with the issue of the science-religion relationship. For, apart from the fact that they were practiced by those groups for some religious purposes, what was their significance—or relevance—for the relationship between science and religion in China? What exactly do these activities have to do with their religious beliefs and practices? Are we sure that their proto-scientific activities are influenced by, or at least linked with, their religion? Are we not looking at mere coexistence of, and not any essential or causal connection between, the proto-scientific activities and the Taoist religious currents

3) In addition to the references cited in note 2, see Joseph Needham, *Science and Civilisation in China*, 7 volumes projected (London: Cambridge University Press, 1954–), volume V, part 2, pp. 62–127; part 3, pp. 1–117; the special issue (“Current Perspectives in the Study of Chinese Religions”) of *History of Religions* 17 (February and May 1978); Sakai Tadao (酒井忠夫), ed., *Dōkyō no sōgōteki kenkyū* (道教の総合的研究) (Tokyo, 1977).

4) E.g., Needham, *Science and Civilisation*, volume II, pp. 33–164.

5) For works containing such critiques, see, e.g., Wing-tsit Chan, “Neo-Confucianism and Chinese Scientific Thought”, *Philosophy East and West*, 6(1957), 309–332; Shigeru Nakayama, “Joseph Needham, Organic Philosopher”, in S. Nakayama and N. Sivin, eds., *Chinese Science: Explorations of an Ancient Tradition* (Cambridge, MA: MIT Press, 1973), pp. 23–43; Willard J. Peterson, “Chinese Scientific Philosophy and Some Chinese Attitudes towards Knowledge about the Realm of Heaven-and-Earth”, *Past and Present*, no. 87 (1980), 20–30.

in a same group?⁶⁾ And on this we may need be reminded of our experience with the long controversy over a certain group of the seventeenth-century Englishmen among whom the propensities for science and the religious enthusiasm coexisted.⁷⁾ Also, if the links were to be established, would we then be to see the "origins" of science in China in those activities, which did not develop further into full-fledged scientific activities? How can we call them "origins" if not much development has originated from them? Would we then have to go on to look for the causes for such lack of development?

The second kind of work mentioned above has centered around the concept of god. It has been noted repeatedly that the Chinese lacked the concept of "creator-god", "divine legislator", or "personal", "purposive" and "active" god, who created the world and rules over that world constantly.⁸⁾ It has been shown how the lack of such concept of god influenced the way the Chinese understood the natural world. Most obviously, because of the lack of the concept of creator-god the phenomena and objects of the natural world have become quite irrelevant for religious beliefs in god, who did not create that world. And as a consequence the connection between science and religion could only become sociological. Also, because the concept of divine legislator—the god who ordained the divine law to be obeyed by everything of the world—was lacking, there was among the Chinese much less interest for studying the natural world in order to find, and admire, that law which underlies it.⁹⁾

To be sure, not all agree on these points and there have indeed been discussions about such things as creation mythologies and laws of nature.¹⁰⁾ But these discussions, whichever position one takes, have problems. For they seem to be based upon a hidden assumption that the way science and religion interacted in the West is the norm, the standard, which should have been followed by all the other cultures. When one tries to see the effect of the absence in China of a certain religious element which existed in the West and played a certain significant role in the Western scientific development, one is likely to come to the conclusion that the absence of such element in China caused the lack of such influence in China. Of course such findings are not altogether trivial and can be interesting in their

6) Nathan Sivin even questions whether this group can be properly called "Taoist": "On the Word 'Taoist' as a Source of Perplexity. With Special Reference to the Relations of Science and Religion in Traditional China", *History of Religions* 17(1978), 303-330.

7) The controversy began with the publication of Robert K. Merton's famous work, "Science, Technology and Society in Seventeenth Century England", *Osiris* 4 (1938), 360-632. For a most recent critical review of the controversy surrounding the so-called "Merton Thesis", see Gary A. Abraham, "Misunderstanding the Merton Thesis", *Isis* 74(1983), 368-387.

8) Typical, and influential, examples can be found in various works of Joseph Needham: e.g., *Science and Civilisation*, volume II, pp. 580ff. For more recent comments on the subject, see Shu-hsien Liu, "Theism from a Chinese Perspective", *Philosophy East and West* 28(1978), 413-417; John S. Major, "Myth, Cosmology and the Origins of Chinese Science", *Journal of Chinese Philosophy* 5 (1978), 1-20.

9) E.g., Needham, *Science and Civilisation*, volume II, pp. 518-583.

10) E.g., N. J. Girardot, "The Problem of Creation Mythology in the Study of Chinese Religion", *History of Religions*, 15 (1976), 289-318; Derk Bodde, "Evidence for 'Laws of Nature' in Chinese Thought", *Harvard Journal of Asiatic Studies* 20(1957), 709-727; "Chinese 'Law of Nature': A Reconsideration", *ibid.* 39(1979), 139-155.

own ways. They have led to many interesting explanations of the various particular ways Chinese natural knowledge developed—or failed to develop. Yet, the problems inherent in looking for the effects of the lack of a given historical factor is at least as serious as those involved when what is looked for are the causes of the lack of a certain historical event.¹¹⁾

III

The relationship between science and religion is profoundly culture-dependent. Understanding the science-religion relationship in China cannot be achieved by checking the presence or absence of those religious concepts, practices, groups, and links that were relevant in the Western scientific development (as if the relation that developed in the West could be the only kind of relation that religion can have with science). Study of the relationship in China should examine different kinds of relationship that were meaningful in the context of Chinese science, religion and society. And what we should be looking at are different elements and aspects of science and of religion that are different from those we would look at when we study the science-religion relationship in the West.

The science-religion relationship is culture-dependent not only in the sense that the relation is different in different cultures. It is culture-dependent also in that the meaning, or importance, of the relation is different in different cultures. As we have seen, science and religion were two of the most important elements in the West with the inherent link between them. Thus the relation between the two was strong and is quite important in understanding the scientific and religious developments in the West. One cannot expect, however, to find the relation between science and religion in a different culture to be as strong and important as one finds it in the West. One could even go to the extreme position that the "science-religion" relationship may be meaningless in the case of traditional China, and that one should stop looking for that relationship in traditional China. Of course we do not have to go that far. But we have to be clear that we are dealing with a different kind of science, a different kind of religion, in a different kind of social and cultural context. Thus we are looking at a different kind of relation of science and religion, different kinds of links, interactions and dependences that may be incommensurable with those we look at when we study the science-religion relation in the West.

Perhaps at the heart of this "culture-dependence" is the idea of "religion" itself. For in China we are dealing with the kinds of religion that were different from such Western ones as the Christianity and the Islam. For example, the Chinese religions lacked the

11) For a discussion of the problems involved in the latter type—search for the causes of the lack of an event—, see my "Natural Knowledge in a Traditional Culture: Problems in the Study of the History of Chinese Science", *Minerva* 20(1982), 83-104; (In Korean) "Chōnt'ong munhwa sok'esō'ui kwahak: Chung'guk chōnt'ong kwahak yōn'gu'ui che munje 傳統文化 속에서의 科學; 中國 傳統科學研究의 諸問題", *Han'guk kwahak-sa hakhoe-ji* (한국과학사학회지) 5(1983), 18-36; (In Chinese) "Chung-kuo ch'uan-t'ung wen-hua chung-te tzu-jan chih-shih (中國傳統文化中的 自然知識)", *Shih-hsueh p'ing-lun* (史學評論), no. 9(1985), 59-92. For a more abstract philosophical discussion of the problems, see Robert S. Cohen, "The Problem of 19(k)", *Journal of Chinese Philosophy* 1(1973), 103-117.

established priesthood that was tied with the state power yet possessing an independent religious force. Nor was there in the Chinese religions strong other-worldly zeals. We may even have to interpret the term "religion" differently from the way we do in the Western context so that the notion fits with the Chinese religious practices and beliefs. And certainly, we have to guard ourselves from the tendency of looking at the type of religion that could exert the kind of influence upon science that we see in the West. Perhaps what we are looking at may be the "belief systems", rather than the Western type of exertive, institutionalized religions. In any case, only when we fully realize such differences we will be able to come up with the answers—the relations, influences, and the interactions between science and religion—that are more meaningful, more interesting, more so than mere "presence" or "absence".

IV

One subject that cannot be ignored in this context is the problem of Confucianism, which I offer as a query and not as any kind of solution. Should we not perhaps include the Confucian beliefs and practices when we look at the relation between science and religion in traditional China? And should we do so, would we not come up with more interesting comparisons with the West? Confucianism was the only belief system that dominated the post-T'ang (唐, 618-906) traditional Chinese society and culture to a degree comparable to the Christianity in the medieval West. Most of the Chinese intellectuals in the period were at least potentially bureaucrats dedicated to Confucian values and beliefs, as the intellectuals in the medieval West were potential clerics devoted to Christian values and ideology. Thus regardless of one's view as to whether Confucianism can be referred to as "religion" or not (Have we not already talked about Taoism as "religion" in our discussion of the science-religion relationship in spite of all the problematic aspects of it as religion?),¹² there is no denying that looking at the ways in which the major belief system of a society influenced its natural knowledge will throw light upon science, religion and their relation in that society.

Again, when we look at Confucianism, what we should look at is not the presence or absence of certain religious concepts and practices that were important in the West, but rather those Confucian concepts and practices that were important in the Chinese context. A foremost example will be the concept of heaven (*t'ien* 天). For whatever may be its difference from the Western concept of god, it cannot be denied that for the Confucians the heaven is responsible for the coming into being and workings of everything in the world, including man. The neo-Confucian anthologies like *Hsing-li ta-ch'üan* (性理大全, "Collected Works on Human Nature and Principle", compiled in 1415) and *Chu-tzu Yü-lei* (朱子語類, "Classified Conversations of Master Chu Hsi", compiled in 1270) contain many utterances explicitly saying that the heaven "created", or "generated" (*sheng* 生) man and

12) In a much broader context Max Weber refers to Confucianism and Taoism as "religion": *The Religion of China, Confucianism and Taoism* (New York: Free Press, 1951).

the ten thousand things, that the heaven "conferred" (*fen-fu* 分付) something that gives life to man and things, that the heaven is what is "in charge of" (*chu-tsai* 主宰) everything, etc.¹³⁾ The more we examine such aspects of the concept of heaven, the more do we come to realize that this concept has some connotations of "creator-god" and "divine legislator". At the least, the argument that the lack of such concept in China inhibited, or failed to encourage, the study of nature loses much persuasive power. Another term that sometimes has a religious connotation and is related to "the heaven" is "the sages" (*sheng-jen* 聖人). In most of the Confucian, especially the neo-Confucian, sources it is generally held that, whereas the heaven first caused man and things into being, it was through the sages(who, of course, were themselves brought into being by the heaven) that the heaven created all the various human artefacts—tools, cultural objects, social institutions, including even the classics, the words of the sages that contain the Way of the sages.¹⁴⁾ Bearing this in mind, and understanding the term better, will help us greatly as we try to make sense of many assertions in and about the classics that are related with the things and events of the natural world and with the knowledge about them. The Confucian practice of offering sacrificial services (*chi-ssu* 祭祀) to the dead ancestors, the central activity of the Confucian ancestor worship, has a clear religious implication, and provides still another example. Study of various explanations of the practice, especially through the concept of *kuei-shen* (鬼神), which itself has different levels of meanings, has much to tell us about the ideas of human life, death and about the way the practice influenced such ideas.¹⁵⁾ Lastly, when we deal with the religious aspects of Confucianism, we can also consider the clearly religious character that modern scholars perceive from the intense mental and intellectual endeavors of the so-called "investigation of things" (*ke-wu* 格物) of the serious neo-Confucian thinkers like Wang Yang-ming (王陽明, 1472-1528) and those of the Tung-lin (東林) group.¹⁶⁾ What effect, one may ask, did this religious character have upon their knowledge about the natural world?

V

When it comes to Buddhism, no one questions whether it can be called "religion", though quite a different one from the Western religions. And as religion it was very powerful

13) Such utterances can be found in various places of the anthologies: e.g., *Chu-tzu yü-lei*, chüan 卷 4, p. 4b; ch. 16, p. 2b; ch. 17, p. 14b; ch. 18, p. 17b.

14) E.g., *ibid.*, ch. 4, p. 20b; ch. 76, p. 4a; ch. 87, p. 23a. For a brief discussion of these passages, see my Ph. D. dissertation, "The World-View of Chu Hsi (1130-1200): Knowledge about the Natural World in *Chu-tzu ch'üan-shu*", (Princeton University, 1980), p. 34.

15) For a detailed discussion of the concept of *kuei-shen*, see my forthcoming article, "Kuei-shen in Terms of *Ch'i*: Chu Hsi's Discussion of *Kuei-shen*", to be published in *Tsing Hua Journal of Chinese Studies*.

16) Such religious characters can be discerned in many modern discussions of these thinkers: e.g., Wei-ming Tu, *Neo-Confucian Thought in Action: Wang Yang-ming's Youth (1471-1509)* (Berkeley, CA: University of California Press, 1976); Julia Ching, *To Acquire Wisdom: The Way of Wang Yang-ming* (New York: Columbia University Press, 1976); Heinrich Busch, "The Tung-Lin Academy and Its Political and Philosophical Significance", *Monumenta Serica* 14 (1949-1955), 1-163.

during the middle centuries of the first millennium in China; its strength never disappeared completely in the later centuries from the mind of the Chinese intellectuals.¹⁷⁾ For example, even as late as the twelfth century Chu Hsi (朱熹, 1130-1200) felt the need to criticize Buddhism vehemently,¹⁸⁾ which testifies to the strength of Buddhism at the time. Yet, Buddhism has rarely been studied in connection with science, almost the only example being Needham's section on the Buddhist thought.¹⁹⁾

Needham's verdict on the effect of the Buddhist thought upon the Chinese scientific development is essentially negative. It is basically that Buddhism inhibited, or did not help, the growth of science in China. This verdict might very well turn out to be correct in balance. But it will be correct not exactly for the reasons that Needham gives. He sees in Chinese Buddhism all kinds of the "inimical factors" for science, pointing for example to such tendencies as the denial of reality, the agnostic and mystic attitudes, and even the hostility towards the rational inquiry into nature. These factors, of course, cannot be quite congruent with the inquiring attitude into the natural world. But they could not, by themselves, have inhibited the development of scientific knowledge in China. In the West of the early middle ages, when the Christian theology allied with the Platonism was dominant, we see all of these attitudes—the Platonic denial of the empirical reality, the early Christian agnosticism and mysticism, and the hostility of the Christian fathers towards science and rationalism.²⁰⁾ Although the effects of these attitudes must have been negative upon the scientific development, they could not inhibit the reemergence in the West of the scientific inquiries in the high Scholasticism of the later middle ages.

Moreover, as Needham himself admits, Buddhist doctrines were relatively rich in the fundamental abstract concepts that could have generated theoretical discussions about the questions of possible scientific importance. For example, Buddhist emphasis of the emptiness (*k'ung* 空 or *hsü* 虛) and nothingness (*wu* 無) could have led to discussions of the concept of the void. Similarly, the doctrines of the rebirths, the hells and paradises could have raised problems about the uniqueness, eternity and infinity of the universe and the questions of life, soul and body. Although these Buddhist doctrines never produced the kind of intense discussions as similar concepts did in the medieval Western Christianity²¹⁾—which eventu-

17) For historical surveys of Buddhism in China, see, e.g., Arthur F. Wright, *Buddhism in Chinese History* (Stanford: Stanford University Press, 1959); Kenneth K. S. Ch'en, *Buddhism in China* (Princeton, Princeton University Press, 1964); E. Zürcher, *Buddhist Conquest of China* (Leiden, 1959).

18) Chu Hsi's criticism of Buddhism is found in many places of the Chu Hsi corpus. But important passages are gathered in *Chu-tzu yü-lei*, ch. 126, titled "Shih-shih" (釋氏). For some discussions of these materials, see Ch'ien Mu (錢穆), *Chu-tzu hsin-hsueh-an* (朱子新學案), 5 volumes (Taipei, 1971), volume 3, pp. 489-579.

19) Needham, *Science and Civilisation*, volume II, pp. 396-431.

20) For brief discussions of the situation concerning religion, science and learning in this period, see Edward Grant, *Physical Science in the Middle Ages* (New York: Wiley, 1971), chapter I; Brian Stock; "Science, Technology, and Economic Progress in the Early Middle Ages", in D. C. Lindberg, ed., *Science in the Middle Ages* (Chicago: University of Chicago Press, 1978), pp. 1-51.

21) E.G., John E. Murdoch, "From Social into Intellectual Factors: An Aspect of the Unitary Character of Late Medieval Learning", in J. E. Murdoch and E. D. Sylla, eds., *The Cultural Context of Medieval Learning* (Boston: Reidel, 1975), pp. 271-339.

ally led to very fruitful results during the Scientific Revolution—, this does not allow us to conclude that the Buddhist beliefs and doctrines by themselves were inhibitory to the scientific development.

Certain Buddhist doctrines did generate debates of some scientific interest, sometimes even among the Confucians. A foremost example is the doctrine of “the wheel of transmigration of the Soul” (*lün-hui* 輪迴, *samsara*), the doctrine that at death the soul passes into another body either human or animal. Not only did this doctrine generate interest among the Buddhists about the origins of life and the soul,²²⁾ but it also became a target of criticisms by the neo-Confucians. In order to reject the theory of transmigration, the Confucians used the general belief that man’s *ch’i* (氣) is dispersed after death.²³⁾ But since that belief raised a problem for the practice of offering sacrificial services to dead ancestors whose *ch’i* is already dispersed, they had to provide quite elaborate set of explanations for the practice.²⁴⁾ Of course such explanations did not reach the level of those extremely technical and theoretical discussions on the principle of life, structure of matter, change, etc. that the Christian Eucharist doctrine, for example, created in the medieval West.²⁵⁾ But it was not because the Confucian, or the Buddhist, beliefs and doctrines precluded, or inhibited, interest in such problems.

Thus, it is not the differences in the religious ideas and doctrines alone that we should look at when we study and compare the science-religion relationship in the West and that in China. As we have seen, there were religious ideas and doctrines—both in Buddhism and in Confucianism—in China that could have led to scientifically fruitful discussions. The really important differences were in the attitudes towards such discussions—differences in the intensity of the interests. For example, both the confucians and the Buddhists thought such theoretical questions as the eternity or infinity of the universe, the void, etc. to be useless, whereas the medieval Christian scholastics were deeply involved in debates concerning such questions. Some Christian natural philosophers even used certain theological points as excuses for discussing such problems as motion, heavenly bodies and light.²⁶⁾

My queries and reflections in the preceding pages do not yield a set of neat conclusions. But it is important to realize that the relation between science and religion cannot be so simple in China or in any other traditional culture, and that to understand it we need to look at many other aspects of the society and culture, not just its science and religion. The result will enhance our understanding of the entire society and culture, of which

22) Joseph Needham, for example, sees the influence of the doctrine in the interest of the Buddhists in embryology: *Science and Civilisation*, volume II, p. 402.

23) A typical example of the neo-Confucian criticism of the doctrine can be found in Ch’en Chun (陳淳, 1153–1217), *Pei-hsi tzu-i* (北溪字義, c. 1200), ch. 2, p. 39.

24) For a discussion of such explanations, see my forthcoming article, *op. cit.* (note 15).

25) E.g., John E. Murdoch and Edith D. Sylla, “The Science of Motion: The Role and Scope of Motion in Medieval Natural Philosophy”, in Lindberg, ed., *op. cit.* (note 20), pp. 206–264, especially pp. 219–221.

26) Murdoch, *op. cit.* (note 21), pp. 278–279.

science and religion are parts. When we deal with a society in which these two are important we tend to note connections, interactions, and sometimes even causal influences between science and religion in that society. Seventeenth-century England is a classic example. In traditional China, however, such examples are hard to find.