

Science and Religion: A Brief Discussion

By Li Shen

Translated by Norman Walling, S.J.

(The following article was first published in Philosophical Studies Vol. 7, 1998, pp. 23-28.)

Introduction

The academic community in China has always paid close attention to the relationship between science and religion, past and present. The present article offers a discussion on the subject.

I. Science, religion, and social needs

In examining the relationship between science and religion we must not solely list facts, or take the part for the whole. We must begin by studying the nature of both, that is to take their innate characteristics as a starting point, and from there proceed to draw up a theoretical analysis. In this way what otherwise appears as contradictory phenomena can provide a basis for knowledge.

Religion and science are two social and cultural phenomena, and we know them mainly through their social aim, the objects they deal with, and the methods they employ. The aim of science is to know the world. In the narrow sense of the word, science designates the natural sciences whose aim is knowledge of the natural world. In the wider sense, science includes the social sciences whose aim is to understand human social activities. Science is but one part of human activity, for the practical activities of human beings are not only limited to knowing but also to using the knowledge obtained from science for personal well being.

The aim of religion is to solve problems human beings face in attempting to find happiness. People certainly do not create religion to harm themselves. Effective action is the first and foremost demand made on religion. Such action would correspond to the

various stages of practical human activities resulting from human knowledge. Furthermore, religion must give a reasoned explanation for its choice of activities for believers to act and especially to act out of conviction. Explanations require knowledge. Hence religion must resolve the problem of how it acquires its knowledge.

In the case of primitive human beings, knowledge and practice blended into each other. For them there was no difference between the cultural phenomenon of religion and science. The concept of gods rose mostly from errors in knowledge. We can also say that they were errors in science. As long as human beings were unable to fully expose the errors underlying their conception of the deity, their ignorance only kept on reinforcing their error. Social situations led to the development of various religions. We can conclude that religion is a social-cultural phenomenon produced by science, or more accurately, by a false understanding of science.

Human needs on the practical level (both material and spiritual) have been the fundamental agents responsible for science's development. Since there are human needs, it is inevitable that science will try to address these. No power can do away with human needs and no power can hinder the progress of science. Political power as well as other social phenomena, including religion, can determine their own destiny only in so far as they adapt to these human needs and to the degree to which they adapt.

Material needs are the most basic and important of all human needs. They influence science and are the underlying agents for the development of the natural sciences. The degree of scientific progress is determined by the store of knowledge accumulated from past ages and by the extent of social material needs. Up to the present time the rapid development of science has always been determined by the rapid rise of the means of material production creating material needs.

Political power and various social cultural phenomena with their own needs exert all kinds of influence on scientific development. However they can influence only the direction development takes. They develop some areas and ignore others and even increase or decrease the tempo of development. They do not have any real effect on how rapidly science develops and much less are they able to impede its essential progress. It is unrealistic, as far as the speed of scientific progress is concerned, to over emphasize cultural elements—including religious ones.

Religion was the earliest of human creations. It has a worldview with universal meaning and was the dominant ideology. Any ideology that plays a dominant role will and must adapt to social needs. It must leave sufficient room for science's free development. Concrete situations will dictate the progress of such a development. However, there must be freedom; there can be no exception whatsoever. The same naturally applies to religion. In this matter religion is not bestowing any special favor on science. It is human existence and progress itself that demand this adaptation.

No religion aims to develop science. This is true for primitive religions as well as for man-made ones. Primitive religions confronted the natural world. The main problems it wanted to solve were the contradictions that arose between humans and nature. The means it used were in the words of Marx "fantasy conquering natural forces." This means it used the gods to overcome natural forces. Magic¹ and prayer were its ordinary tools. It did not and could not develop science. Because it directed human endeavors towards magic and sacrifices to the gods, it slowed down much of human scientific endeavor. Viewed in this way primitive religion is not maligned when it is criticized for hindering scientific development. Furthermore, since primitive religion rose from scientific errors and made them into dogmas, it would necessarily come into conflict with science as it developed and corrected its errors.

The main problem facing man-made religions was human society, whose main efforts were directed towards solving social contradictions between individuals. The reason primitive religions evolved into man-made religions was not because they wanted to but because social needs themselves had evolved. As primitive humans confronted nature and tried to resolve problems between themselves

¹ The term used in the original Chinese text translates as sorcerer, or sorcery. However the meaning as used by the author seems to come closer to the English word "magic", not the legerdemain of a stage magician, but that meaning as defined by Random House Dictionary of the English Language, 1973 edition: "The art of producing a desired effect or result through the use of various techniques, as incantation, that presumably assure human control of supernatural agencies or the forces of nature." I believe that this meaning is closer to the author's use of the word "sorcery or sorcerer" in the original text and is so translated in most places where the author uses "sorcery." Trsl.

and nature, they also had to resolve contradictions among themselves and in this way man-made religions emerged as a response to needs.

Man-made religions also relied on gods to resolve contradictions among themselves. Despite different peoples at different times having different concepts of gods, the gods in man-made religions—at least that one dominant god, who was considered all good, all beautiful, all knowing and all-powerful—were considered identical. Man-made religions wanted to resolve social problems but because they relied upon or drew support from their gods they, too, were unable to promote the development of the natural sciences. Consequently, they were by necessity in the same fix as primitive religions that distanced human endeavors from the natural sciences and hindered their development.

It is also an incontrovertible fact that in those situations where religious ideology held a dominant position in society, scientific progress never ceased making headway. Today's science and technology, that is our modern high tech society, is the successor to this science of earlier times. In the age of primitive religions people did not solely seek solutions from the gods for everything. They could not. They knew that prayer alone would not give them needed clothing or food, but realized they had to exert their own efforts to find them. These primitive peoples, then, not only created primitive religions, but also developed their own skills to produce what they needed to sustain life. In doing this they acquired a fuller awareness of the natural world and social realities. Though this awareness appears to be very childish, crude and even full of errors to us moderns, the knowledge obtained from it comes, without doubt, under the domain of science and not of religion.

II. Religious needs and science

Man-made religions should not only make room for the development of the natural sciences as social needs grow, but also develop some aspects of the natural sciences in line with their own needs. Although in principle it attributes to God's will the beginnings and results of its actions, it also knows that it must exert its own efforts as well. Moreover owing to the ever increasing enrichment of human culture, man-made religions cannot avoid providing a rationale for their actions. This rationale should not only depend on its knowledge of society, but also use and rely on knowledge of the

natural world. To gain such knowledge it must develop both natural and social sciences. It should develop various aspects of science according to the varieties of its teachings. Ancient believers belonging to different religions and races chose to develop astronomy. This was not only because theirs were agricultural societies, but also because the gods they believed in were closely allied with the heavens. China's ancient Daoists devoted themselves to chemistry because they were looking for immortality through its use.

During the ages when man-made religions were the dominant social ideology, humankind still had to resolve contradictions between themselves and the natural world and wanted to do this more effectively. Although there was considerable progress made in understanding the natural world, this knowledge was still in essence inadequate to explain society and the natural world. This "considerable progress" made man-made religions reject some of their primitive religious magic. Their "inadequacy to explain society and nature" made them retain some of their primitive practices. Concrete situations determined which practices they rejected and which they retained.

The rejection of magic among man-made religions was a common phenomenon. In Western nations during the Middle Ages, the Christian Church persecuted sorcerers, especially witches. In ancient China emperors constantly suppressed sorcerers and their witchcraft. Governments did the same, even framing laws against their existence. Power, both political and temporal, lay behind these persecutions. However, the ideological reason behind them was scientific. Scientific progress made people realize the absurdity of such practices. Actually we can say that this was a struggle between old and new ways of understanding reality. The real cause, then, behind sorcery and magic was errors in understanding.

The magical elements that remain in man-made religions are the direct reasons for conflicts between science and these religions. Although in principle the aim of these religions was not to obtain supernatural powers, yet, owing to tradition and the differences of social strata among believers, they have been unable up to the present time to free themselves from the odium caused by these magical elements. Therefore, these religions still have much to do before they can accept scientific advances. They must continue to purge

themselves of undesirable elements. This effort will benefit both society and these religions.

As new scientific achievements emerge, new forms of magic also appear. This is one of the long-term contradictions that exist between religion and science. Religion cannot avoid accepting new scientific achievements, yet, in its own interests, it finds it impossible to accept these achievements in all their details. Religion will change them, even convert them into new forms of magic that in turn either exaggerate or distort the effectiveness of these achievements. True, scientific progress compels religion to make changes, yet in its turn religion uses all its energies to twist and channel these achievements to its own advantage. This is unavoidable even though scientific technology is making such great advances in today's high-tech society. The reason lies in the fact that these scientific advances are understood by very few in society and only these few can make use of them. This is similar to the human body. As it develops it passes through all the stages of evolution. Human knowledge as it increases also passes through each stage in the evolution of human knowledge. Social education enables people to pass through the thousands of years that human thought has taken to evolve in the shortest possible time. However, limitations in social education cause some people to stagnate at one particular stage of development, for example, the age of primitive magic where the most backward things were construed as the dawn of a new future.

In earlier times those groups who regularly used magic as the base of their religious activities were labeled as sorcerers or "heretics." What were then called "heretical churches" are the equivalent of today's "new religious movement." In our opinion, a scientific name for these "new churches" should be "religions based on magic" or simply "magic churches."

The aim of science is knowledge. Both human needs and knowledge increase and evolve continually. The result of this evolution is that, what were originally new scientific discoveries have now become common knowledge. Science itself also needs to venture into new territories. Therefore, growth and innovation are the lifeblood of science. Religious teachings, on the other hand, demand stability. Teachings that undergo continuous and rapid changes will not merit the faith of the masses. Therefore, once human knowledge, obtained from scientific activity, whether accurate or erroneous, enters into the religious domain, it becomes established, stable, and

unchangeable dogmas. There is no need to mention that errors occur in scientific knowledge. Certain elements in scientific knowledge will, with the passing of time, become out of date or even erroneous and perhaps come into conflict with new understandings.

The persecution against scientists that followed the new theory of the solar system was not an instance of religion attacking science, or of religion's persecution of science. It was, basically, that dogmas of an old scientific view conflicted with a new scientific data. It was a persecution of the "church" against the new scientists, who persisted in maintaining their new scientific propositions. What was in conflict, at that time was the new with old sciences. In this battle the Catholic Church in Europe played the role of defender of the old science.

The reason that the Catholic Church presented itself as the guardian angel of the old science was to prove that religion (not only Christianity but other religions as well) could accommodate science. In the persecution the Church labeled these new scientists false scientists. The church thus did not appear as a defender of an old science, but rather as the defender of science itself.

Religion needs to accept some of the achievements of science, but by its very nature, it has to turn scientific conclusions into dogmas. These sooner or later inevitably conflict with newer scientific developments. The immediate outcome of this conflict is determined by the condition of each side's relative strength. However in the long run the new science wins out.

Modern science originated and developed in Europe. The so-called conflict between science and religion also developed there. This conflict was in fact between modern science and Christianity. The victory went to science—more accurately to the new science. Before the development of this new science, Christianity had given science some limited role, for example, Christian schools taught the theories of Aristotle. In this period before the new science emerged, some believers, even some churchmen, engaged in scientific work out of religious motivation to praise God. Copernicus, a Catholic priest, was one of these. Christianity not only tolerated their work, but also needed it. This is to say that their work was a necessary constituent of church work in the Middle Ages. What the medieval church was unable to tolerate were the new results obtained from their work. Consequently, the Church rejected the theory that the sun

was the center of the solar system and Galileo and others were persecuted.

With the new science making further advances, Christianity still keeps to its tradition of tolerating science. Some Christians continue to engage in scientific work considering it a good way to praise God. They continued to study the natural sciences out of religious fervor and even use it as a motive for their scientific studies. Nevertheless, their work is, as in the past, permitted and even praised in so far as it does not conflict with Christian doctrine. However, significant scientific progress is very difficult as long as activities are confined within the narrow limits defined by religion.

In the post Copernican era, one of the greatest achievements of the new science was Vatican II's proclamation that righted the wrongs done to those scientists the church had persecuted. Even though this exoneration came a little late in the eyes of scientists, yet after so lengthy an historical period this proclamation finally clearly stated that the church accepted the results of the new science.

After analyzing the historical relationship between religion and science we can now see that the engagement of religion, especially man-made religions, in scientific work is only partial and affects only that small area having some connection with its teachings. Science's conflict with religion is also, therefore, only partial and does not affect the whole of science. Those areas of science that have no connection to religious teaching, and hence do not conflict with them, give science room to develop in relative freedom. Man-made religions do not seek to explain all natural phenomena. They can even completely bypass these explanations and devote all their energies to social questions. In this way religion and science can form relationships similar to two countries with different social systems that live in peaceful coexistence. As a matter of fact this is the common way of proceeding in the present time.

Looking at the historical or the modern situation, religion is not the only, indeed it is not even the main, social element linked to scientific progress. Politics, economics, war, law, even literature and the arts are all in one way or the other linked to science and can either promote or hinder its development. Some of these elements, if compared to the relationship between religion and science, have far greater consequences. It is unrealistic to over-stress the importance of religion's influence on scientific progress.

The special attention given to the relationship between religion and science began in the Middle Ages when the church started to persecute the new breed of scientists. At that time and prior to it, religion was the predominant ideology in society. All other social phenomena had to refer to it to determine their role in society. Now the situation is quite different. The position of science in society is higher than that of religion whose existence in and value for society must now be determined by its attitude towards science. It is with this understanding that we proceed with our discussion. For us, this situation is worth applauding.

III. Religion and Science: Environmental and moral questions

Science has gone through blood and fire, but its indomitable spirit of struggle and extraordinary knowledge has enabled it to become the most important of all cultural phenomena in society. Science has conferred great knowledge and power on human beings, enabling them to become the only creatures on this planet that can do practically whatever they wish. By means of science human beings radically changed the face of the planet and are now attempting to reach other planets as well. Over a long period the knowledge and power gained from science have energized and inspired the human race. For this, people are grateful to and praise science. They even consider that science is the only authentic reality. It is not only omniscient, but also all powerful: it is the highest good that humans can reach. Science takes the place of God and religion. In reality it is wrong to equate science with religion. However, it is a historical fact that much of the devotion that people formerly paid to God is now paid to science.

However, people soon discover that science cannot be equated to the authentic reality, and that it does not bring complete happiness to humankind. People use much of the power science puts into their hands to destroy themselves and others. Science enables humankind to change nature so radically that it is now able to obliterate it. Such destructive power in the hands of human beings threatened their own existence. Natural resources are becoming exhausted and the environment is being destroyed. People see that the ecological devastation has already caused many species to disappear, and they became very concerned that the same fate awaits

them. These facts have increased the number of voices negatively critical of science.

The chief critics of science at the present time are found in countries and regions where science has made the greatest strides. Some people think that science has already reached the limit of its development, that no further advances are possible. Past scientific development was in the main good for humankind and brought many advantages, but the future looks rather bleak. "Robots will destroy humanity;" people say, "progress must be limited." Such statements are common. Moral and ethical critics admit that science does give power and knowledge to human beings, but it does not confer moral judgment. Among these critics, religion again seems to be introducing its own peculiar values. These critics are not limited to religious people; even many non-believers think that religion can provide a moral sense to humanity that, in turn, will give direction to science. This means that science "saves" only the body whereas religion is the sole savior of the soul. Science does create a material civilization but it brings much evil in its wake. Therefore these people conclude that only religion can ameliorate this situation.

The first mistake people make when speaking of science is to confuse it with technology. They also attribute to it the crimes that the irresponsible actions of technology, engineering, and industry commit. Ecological disasters are primarily caused by irresponsible actions of industry and it is science that recognizes these harmful effects. Before science recognized the negative effects of technology and industry, it perhaps could be charged with some responsibility for the destruction of the environment. However, now that it has recognized these negative effects, it cannot be blamed when people continue to develop industry without any regard for its negative effects. These are crimes of certain interest groups. Moreover, to eliminate the damage that industry has brought to the environment, we must in the long run rely on science itself, on what science has discovered about the relationship between industry and the ecology and use the means that it provides to eliminate these ill effects.

Human morality has changed constantly throughout the ages. The development of science has no doubt played an important role in these changes. Science, technology, and industry have radically changed the conditions of human existence as well as the relations between peoples. What was considered immoral in the past may now be considered moral, and vice versa. Science has also changed

religion that puts itself forward as the source of morality and its patron saint. In today's society the degree to which religious sects were discriminated against in the past has toned down considerably. We can say that the religious wars of the past cannot occur today. Actions that were considered immoral in the past and were strictly forbidden have today met with some degree of tolerance. Old norms of morality give way to new ones and are gradually accepted by religion. Looking at the matter from this aspect we can say that it is science that has provided humankind with a new morality and given it new means of production and a new life style.

Religion accepts science's responsibility for humanity's material civilization while it offers humanity a spiritual civilization. From an historical perspective this is a welcome step because religion no longer seeks to lord it over every cultural attainment. Everybody should welcome this development. Religion, more accurately religious organizations, must now honestly face their responsibility to society, to humankind and to themselves.

Nonetheless, we must avoid the error of thinking that only religion offers a morality to humanity. Even if religion never existed, people would still have a morality. This is a self-evident truth. The fact that at present religion opts to focus solely on morality and not concern itself with those areas of human life that include science, politics, and law means that it is adjusting and adapting to a new situation. This happens because it has lost the high position it once had in society. We must not forget the moral decadence created by religion when it was the predominant force in society.

It is also an error for people to propose that science be concerned with material civilization and allow religion to look after morality. Those guilty of this error do not see social sciences as true sciences. If people would seriously and conscientiously consider that economics, political science, history, ethics, law, etc. are true sciences, then, they would also recognize that science offers the most reliable means for establishing a human morality—more reliable than the moral direction religion offers. If progress in the natural sciences has freed religion from troubling itself over people's material life, then, progress in the social sciences should also free religion from troubling itself with people's spiritual life. Science needs a spirit of self-sacrifice, but this spirit does not need to draw its inspiration from religion. People need morality, but morality is not the sole possession of religion. The human spirit needs to have a destiny, but it can be

realized outside of religion. Non-believers can be noble-minded; in fact, they can be even more noble-minded than religious believers, and discover meaning to their lives that brings peace. In our opinion, this destiny is greater than that offered by religion. Bertrand Russell in his *History of Philosophy* highly praises Socrates' noble and high-minded spirit in facing death. However, if he knew that death ends in nothing and that after dying he could no longer discuss learning with his friends Tyros and Homer, he would be even more noble and high-minded.

Today's high-tech society offers religion the most modern means to transmit their teaching. They no longer need, as in the past, to keep preaching into everybody's ears. This technology brings many advantages to modern social life and can be used by religion. This is the "gospel" that high tech offers religion. As it adapts to this technology, religion must sooner or later adjust its teachings. Religious organizations also will sooner or later find their place in society. As they discover their role, they can rely upon their organizational skills to teach that God's will consists in wanting human beings to strive ever harder to build a society based on goodness and high moral standards. There is no doubt that religion's best service to and highest destiny in today's society is to create a social morality. We see many religious organizations already making efforts along these lines. "Moral Religion" is the important precept for them. However, we must be careful that secular people, thinking that they must seek morality solely from religion, fail to recognize their ability to create their own morality.

