Building Links between Science and Religion in Mexico

Carlos Ramos, author
Jaime F. Castillo, Speaker

Abstract

The objective of this paper is to show how the dialogue between science and religion is being built in Mexico. The first part deals with the general relationship between science and religion. The second part highlights the peculiarities, advantages and problems that exist within the Mexican context, and focuses on how socio-economic, religious and cultural factors affect science-religion dialogue. Lack of financial support, and the difference between popular religious tradition vs. real theological understanding are some of the obstacles presented here. The third part considers Mexican culture from historical and educational perspectives, and spurs a discussion of its repercussions on the science-religion dialogue in both public and private universities.

Biography

*Prof. **Carlos Ramos** was born in Puebla, Mexico in 1969. He received his Bachelor´s degree in Philosophy from Puebla State University (UPAEP) in 1992, and obtained his Master's degree in Philosophy from Atemajac Valley University in Guadalajara, Mexico. Prof. Ramos has collaborated with the Center for Science and Religion Studies (CECIR) at Puebla State University with the papers "Nezahualcóyotl's Way of Thinking" and "Theology and Science in the Galileo Case". He is currently professor of Philosophy at Puebla State University.*

*Prof. **Jaime Francisco Castillo** is professor of Software Engineering at Puebla State University (UPAEP), in Puebla, Mexico, where he has been teaching for the past 12 years. He obtained his Bachelor's in Information Technology in 1989 from the University of Puebla Valley (Puebla, Mexico), where he also obtained his Master's in Business Administration in 1994. Jaime specializes in software quality assurance and systems development project management. He has directed several educational joint venture projects with San Diego State University and with the University of Central Oklahoma, where he has done postgraduate studies in IT. Jaime is a founding member of the Center for Science and Religion Studies (CECIR) at Puebla State University, and in January 2002, was co-collaborator of the Latin American Workshop of the Science and Religion Course Program and the VI International Encounter of the Centers of Culture.*

1. INTRODUCTION

In pop culture, science and religion are conceived in such a way that science is considered as a discipline of human undertaking that has its own identity and characteristics. At the same time, it is differentiated from religion, another human discipline that also possesses its own, unique identity and characteristics. Science and religion are considered as two distinct areas which, under the influence of 19th-century positivism, were set out to oppose each other like two chess opponents by Western culture, in which the Science side would check-mate the Religion side. However, if we discuss the links between science and religion, it is not as important to accentuate the differences between them -much less allude to confrontation between them- as it is to highlight the possibility of their intercommunication. In this latter sense, one must first take into consideration that the conditions for the possibility of an intercommunicative link between science and religion is the human being or person. Actually, many people experience an admiration for the reality that leads one to contemplate why or how things work, which then leads to researching an answer to his/her questions. This in turn initiates the scientific activity that satisfies the human necessity for knowledge, for as Aristotle suggested, the desire to know is part of every man's nature. Nonetheless, people frequently also experience the desire for salvation or the necessity for an absolute meaning of human life, which then opens the door to religion.

For this reason, two necessities appear on the human horizon. On one hand, there is human's thirst for knowledge, which science seeks to satisfy. On the other hand, there is the need for an absolute meaning of life, which religion seeks to respond and satisfy. As a result, the human being is a condition of possibility -among others- for establishing a communicative link between science and religion. The intercommunication between science and religion in function of humans then becomes not only an epistemological need but also an anthropological one. It can then be said that two important parts that exist within an intercommunicative link between science and religion are the epistemological and the anthropological.

2. AN ANALOGOUS TYPE OF INTERCOMMUNICATIVE LINK BETWEEN SCIENCE AND RELIGION

Before we explain why an intercommunicative link between science and religion is actually analogous, it is important to describe how the word "analogous" is used here.

An analogy is defined as words that have both a common meaning as well as different, individual ones. If we consider the word “life” for example, we can say that humans have life, animals have life, plants have life, and that viruses are alive. However, at the same time, human life is different from animal life, plant life or viral life, which in fact are all different ways of life all together. As we can see, the word “life” applies with a common meaning to people, animals, plants and viruses, but at the same time implies a different meaning, since the fulfillment of human life is different than that of animal, plant or viral life.

Once we comprehend the term “analogous”, we can say that the link between science and religion offers a dual analogous tendency. A first analogous tendency would highlight the need for dialogue between science and religion as a common element, which is both an epistemological and anthropological necessity. However, the different meaning is specified by the type of science or religion to be intercommunicated. For example, discussing social science is not the same as discussing natural science, just as a discussion about Christianity differs with that of a discussion about Islam or Buddhism.

A second analogous tendency would also have the double epistemological and anthropological need for establishing ties between science and religion in common, the diversity lying in the particular socio-cultural context in which one seeks to carry out intercommunication. In other words, the proposal of building links between science and religion in the U.S. context is not the same as that of the European context or that of the Arabic Islamic countries. The specific point of this paper, then, is to show how links of intercommunication between science and religion are built in Mexico, thereby emphasizing peculiarities, advantages and problems existing within the Mexican context.

3. EXISTING FACTORS IN MEXICO FOR LINKS BETWEEN SCIENCE AND RELIGION

The following highlights three factors that are conditions of possibility in order to establish links between science and religion: social-economic, religious and cultural.

3a. The Social-Economic Factor

Building communication links between science and religion implies an interdisciplinary labor in which experts from diverse disciplines must embrace disciplines other than their own. For example, a specialist in one area must learn about the essentials of another area that is not his/her own, with the goal of being able to carry out a manner of communication that must flow from the well-understood discipline to the little-understood one. If there is no interest in researching the most basic or meaningful parts of the

unknown area, an understanding about other areas could therefore not exist, nor could the link between science and religion be established.

The above-mentioned then supposes a research effort in which one not only researches his/her own area or discipline, but also the most essential or important of other disciplines. For example, if we discuss the relationship between the Big Bang theory and the Bible's Creation theory from the book of Genesis, the theologian must at least learn about the astrophysics elements that make the Big Bang theory plausible, and the astrophysicist must at least understand the meaning of the word "creation" in the biblical context, in order for the said link between the Big Bang and biblical Creation to exist.

If scientists and theologians must not only research about their own fields but also about other ones, then the above-mentioned supposes a double research by both parties. There is then a key word here: research. All research implies an academic space that requires economic funding, which can be illustrated with the concept of an airplane. In order for an airplane to fly, it must first roll its wheels; if not, it would not gain momentum and therefore would not be able to take off, regardless of the fact that the airplane does not fly with its wheels nor drive on highways. Likewise, economic resources are like the airplane's wheels, in order for academic research to gain momentum and lift off the flight in the direction of the search for links between science and religion.

In the economic area, Mexico has presented economic crises in 1976, 1982 and 1994, the last of which was catalogued by some analysts as being the worst economic crisis since the times of the Mexican Revolution (1910-1920). Since then, if economic resources have been scarce for one's own discipline, they have been even almost nonexistent for interdisciplinary research, like that which is necessary for intercommunication between science and religion. To all this we can add the individual economic factor of those Mexicans who could indeed carry out the construction of links between science and religion; many times, the work factor is more important for these Mexicans than the academic one. This situation provokes a reduction in human resources, that is, of people who are free of economic worries and who may dedicate themselves to research, in order to carry out the labor of intercommunication between science and religion.

To summarize, in Mexico there are few people privileged enough to have enough economic resources, at either an institutional or individual level, to do interdisciplinary research that embraces both science and religion. Furthermore, said individuals are like islands in an immense ocean, in that though they may be doing interesting or beautiful things, they are practically unknown.

3b. The Religious Factor

We have already mentioned that the link between science and religion offers an analogous perspective depending on the type of religion. In Mexico the predominant religion is Catholicism. It is interesting to note that three important elements involved in the formation of the Mexican nation were the King of Spain, the Catholic church and the traditional concept of the Virgin of Guadalupe (Miguel Hidalgo convoked the independence of Mexico while holding a banner with this image in September of 1810). The profound religious spirit inherited by the prehispanic people of ancient Mexico is then added to these three elements, taking into account the fact that the famous human sacrifices of the Mexica people were not considered barbarous acts but rather profoundly religious ceremonies. We can then say that in Mexico, the current religious spirit can be categorized as being principally Catholic with a Guadalupan accent. As a result, the link in Mexico between science and religion is considered from the perspective of the Catholic religion. This offers a defined religious horizon on which a dialogue between science and religion can be based. However, the great disadvantage of this religious aspect in Mexico is the large abysm that exists in the majority of the Mexicans between popular Catholic religiousness and theological knowledge about the fundamentals of Catholic religion. In effect, the Catholic religious spirit of most Mexicans lies in the practice of customs inspired by Catholicism promoted by ancestral family traditions or by canonic commandments of the Church, which generally tend to form intense religious experiences. To illustrate, one calls to mind the manifestations of religious fervor provoked by the visit of Pope John Paul II to Mexico. He was so impressed by such fervor that he coined the phrase, “Mexico, Always Faithful”. On the other hand, such religious fervor is counter-balanced by a great ignorance of the Catholic religion’s theological bases, which coexists in many people, even those intellectually prepared. Such ignorance has inspired many people to question their own faith and consequently leave Catholicism in favor of non-Catholic, Christian groups such as Jehovah’s Witnesses, Mormons or Born-Again Christians. To summarize, the largest advantage Mexico has is the existence of its primarily Catholic spirit, which is however counter-balanced by its lack of theological knowledge of the principles of the Catholic religion. The existence of links in Mexico between science and the Catholic religion supposes that the people who carry out such links possess such fundamental theological knowledge.

3c. The Cultural Factor

Proposing the topic of intercommunication links between science and religion undoubtedly implies cultural labor, since science and religion, along with art, technology, language, traditions and customs, form an integral part of culture.

The first cultural factor in Mexico has to do with history, and was the positivist lay legacy from the second half of the 19th century. Mexico obtained its independence during the 19th century, and, following the failure of Agustín de Iturbide's empire, Mexico became the stage for a political, ideological and military struggle between Liberals and Conservatives, the first of which would become triumphant due to the important figure of Benito Juárez in 1867. Since the Liberals won, they promoted a lay mentality within the Mexican culture, according to which a real separation between Church and State could exist. In other words, religion would become a private matter reserved for the intimacy of the family and temples, and would not interfere with the areas of society, politics or education. Otherwise it would have gone against the established social order that was neutral when dealing with any religion. Even the government emanated by President Benito Juárez sustained hints of religious persecution, in order to exclude religion from these three areas. Furthermore, toward the end of the 19th century, the positivist ideology grew during the extended government (almost 30 years) of President Porfirio Díaz. In this period, truth was that which could be demonstrated by scientific experiments, which thereby reduced the concept of religion to the level of superstition or individual sentimentality. From this positivist lay perspective, the importance of the establishment of links between science and Catholic religion was almost none.

This positivist lay perspective of the 19th century made the Catholic religion be seen by many intellectual and cultural circles in 20th century Mexico as something of the common people, and was even interpreted as a by-product of the people supplied by a clerical institution. As a result, many people in Mexico considered the Catholic religion as a pretext of the ecclesiastic hierarchy to have political power. In summary, the positivist lay perspective, fueled by the political interpretation of the Catholic religion, constituted an obstacle for building a communication link between science and religion in Mexico.

A second cultural factor in Mexico has to do with education, namely the problem of cultural illiteracy. During the 20th century, the Mexican government began direct combat against illiteracy, and took charge of promoting education. Sweeping educational programs abounded in the propaganda of the Mexican governments, and indeed, a great impulse toward the construction of schools and educational institutions had begun. The biggest disadvantage here is that these programs unfortunately have nurtured two negative aspects: a focus on quantity and carelessness toward quality, and an extensive, tiresome educational bureaucracy. For this reason, a vast majority of young people who enter universities such as

the University of Mexico can read and write, although they do not know how to read and how to write, a situation that is generally referred to as cultural illiteracy. In addition, the cultural level of many elementary-level teachers is very limited. The educational situation in Mexico has an impressive cultural set-back. Although it is true that not all Mexicans can be like writer Octavio Paz, it is true that many Mexicans don't read the literature of Octavio Paz, and that among the few that do, only a small portion understand it. It is without a doubt that with cultural illiteracy, it is impossible to try to establish links between science and religion in Mexico; those who do not know, for example, how modern science emerged in the 16th and 17th centuries, already have a deficiency concerning how to face the problem of links between science and religion.

The third cultural factor in Mexico also has to do with education, and considers the social and cultural institutions - the universities- in which academic spaces are propitiated for serious and rigorous research. It is important to remember that the word "university" refers to the universality of knowledge, and that the university is the cultural institution –by excellence- in which diverse areas of knowledge can be obtained on a superior level. It is in the university where we find the ideal ground for cultivating links between science and religion. In Mexico, there are two kinds of universities: public and private. The former is sponsored by the government by means of resources from public funds, and the latter by either Catholic religious orders or by private initiative. Both types of universities have advantages and disadvantages. The greatest advantages of the public universities are the economic and logistic resources; actually, the highest-quality research in Mexico is carried out in public universities. However, the biggest disadvantage of these universities is that in many cases, the research is done depending on the political groups in power that usually do not have pro-university interests (as we have seen with the famous University of Mexico strikes). Another disadvantage is the presence of corruption in the university organization; for example, the sabbatical year, which should be a year dedicated to academic labors, in many cases turns into a year of vacation. On the other hand, the private universities, although seemingly unaffected by the bureaucracy virus, have precarious economic and logistic resources. This results in very limited university research capabilities, and an almost impossible sabbatical year. Economic urgency forces the private universities to therefore make the increase of their student bodies their number-one priority. Another problem that private universities have in Mexico is the uncontrolled demographic explosion of unlicensed private universities. These small programs claim themselves to be universities with a minimum of only three or four undergrad degree programs and a three- or four-story building, which gives them the ability to register with the state's Secretary of Education.

A fourth cultural factor in Mexico has to do with an academic culture that derives from a dependency on research done in Europe or the U.S. Many intellectuals disrespectfully denominate it “second-hand academic culture”. The social-academic effect of this derived culture is a university ring of scholars closed toward links between science and religion.

CONCLUSIONS

The Mexican panorama may not appear to be very supportive of dialogue between science and religion. However, regardless of the limitations mentioned, there are many Mexicans (both university and non-university) who are interested in the topic of links between science and religion. The positivist lay legacy left its historical impact on Mexican culture, and furthermore, many Mexicans prefer the great religious fervor that still remains in Mexico today. The experiences we have had in our university during conferences, courses or discussion panels regarding science and religion has been a positive reflection of both aspects. They have both instilled interest in people especially in the area of science, and continue to provoke curiosity regarding dialogue between these two distinct worlds. Therefore, promoting the labor of building links between science and religion by means of discussions, publications and courses is the challenge we face in Mexico.