

Scientists and Religion: A Comparison Between American and Brazilian Schola

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Very recently, Elaine Ecklund and collaborators have investigated the case of the conflict between religion and science among American academic scientists and, in the same context, the negotiation strategies of atheists and agnostics related to religion and family. Their research, published as a book and in three recent issues of *Journal for the Scientific Study of Religion*, found out that in contrast to public opinion and scholarly discourse, most scientists do not perceive a conflict between science and religion. In the same vein, the psychological conflict between science and religion was investigated some years ago in an academic Brazilian sample. Although the Brazilian sample should not be compared with the American on several grounds, the main result of the research seems to be the same: no conscious conflict between science and religion in both samples, in spite of a conflict uncovered at the unconscious level, among the Brazilian scientists. In this paper, a more strict comparison between the American and the Brazilian studies is proposed, regarding subjects, method and results. The main differences regarding the subjects were related to their number and scientific fields, much bigger and more diverse in the American than in the Brazilian sample. The main difference related to method was the general underlying assumption: While in the American study the empirical approach consisted of agree/disagree choices of formulated questions, the Brazilian approach consisted of listening to the subjects, and learning from them the relevant topics of their scientific and religious experience, at their conscious and, indirectly, unconscious level. As a consequence, the American approach was quantitative, and the Brazilian, qualitative. The difference regarding the results was rather conceptual than factual: The American study emphasized spirituality, while the Brazilian subsumed spirituality in religion. Finally, in order to strengthen a cultural understanding of the findings, a brief reference to some non-Western research on the relation between religion and science is added. A prospective post-doctoral research is on the way in Brazil, enlarging the sample of the Universities and the representativeness of the respondents, and using quali-quant methods.

Key words: science and religion; conflict; American scientists; Brazilian scientists.

Introduction

There is a long, though rather inertial tradition, in the academic settings and in the general population, that a clash exists between science and religion, especially the Christian religion. In order to examine the current situation in the Academy about this theme, Elaine Ecklund, a sociologist of Rice University, surveyed and

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interviewed samples of American scientists of the 21 top Research Universities in America. She had behind her the pioneering research by the psychologist J. H. Leuba (1916), revisited by E. J. Larson and L. Witham (1997, 1998, 1999). Resisting the inertia of such a tradition, Elaine Ecklund engaged herself and some collaborators to go to the field itself of academic scientists, in order to verify the scope and the very existence of that famous conflict. It was not necessary for her intent to discuss the questions about the changing nature of science and of religion along the times and places (Harrison, 2012), nor the various efforts for the overcoming the conflict between them (Barbour, 1966, 1999, 2000; Paiva, 2002), nor the positive influence religion can exert on scientific insight (Taylor, 1999). For her it was enough to address the American contemporary scene, in which, according to Larson and Witham (1997, 1998), while “scientists are still keeping the faith”, “leading scientists still reject God”, or, while “leading scientists still reject God”, “scientists are still keeping the faith”. Against this classic background, Ecklund and her collaborators endeavoured to search for what scientists really think nowadays about the relationship between science and religion. Their findings mostly opposed the current opinion of a conflict between science and religion, inasmuch scientists “negotiate boundaries between religion and science” and, if they are atheists and agnostics, “negotiate religion and family”.

The aim of this paper is to compare Ecklund’s research with a similar research on the relationship between science and religion done on Brazilian scientists of a top university (Paiva, 1993, 1994, 2000), pointing out convergences and divergences among them.

Research and Results

Brazilian research was done from 1990 through 1993, while Ecklund’s study of Religion Among Academic Scientists (RAAS) was completed from 2005 through 2007. Both studies aimed at examining the conflict scientists perceive between science and religion, but the emphasis of Ecklund’s research was rather epistemological, namely a “conflict paradigm”, while the Brazilian study was intended to be psychological, dealing with the conscious and unconscious dynamics of conflict, and employing explicit psychological models of conflict namely K. Lewin’s, on the conscious level, and psychoanalytical views (Freud, Anzieu, Kristeva, Green, Vergote), on the pre-conscious and even unconscious level. Both studies, besides, rested on the Leuba’s supposition that the understanding provided by secular science about the world would lead to dispense with a religious understanding of reality.

Both studies judged it important to address renowned scientists of the best academic institutions. Ecklund based its sample on top 21 Universities, while Brazilian sample was taken from only one top university, namely Universidade de São Paulo. This university is recognized as one of the top universities in Brazil, and due to its European, especially French origin, is supposed to be perhaps the most secularized academic institution in Brazil.

Ecklund’s sample permitted a large number of subjects, which provided a general landscape of the American academic world, whose data could be collected through survey and appropriately dealt with statistics. Beside the large sample, Ecklund addressed seven academic fields of the natural and social sciences, namely biology, chemistry, physics, sociology, economics, psychology and political science. Instead, the Brazilian sample was small, not representative nor subjected to questions related, for example, to confidence in the existence of God, or religious attendance or frequency of prayer, but spontaneously offering the researcher the relevant questions for his study. If people know the relevant questions, it would be feasible to extend the research to a representative sample of the academic scientists in Brazil, which is now on the way, as a

post-doctoral investigation. The Brazilian sample comprehended scientists of only three fields, which represented, however, the three main historical challenges to Christianity, namely, physics, biology and history. Following current trend in sociological methodology, suggested, for example, by Hervieu-L  ger (1998), Ecklund and collaborators deepened their research interviewing 275 scientists from the seven subfields of their sample, agreeing with D. Hervieu-L  ger (1998) that proposed personal in-depth interview as a highly desirable tool of research in the Sociology of Religion. In Brazil this method, notably founded in psychological methodology, was recently used in a large study about the transformations of religious affiliation in the Brazilian society (Negr  o, 2008).

The Brazilian research was done only through in-depth interviews with 26 respondents, 10 from physics, eight from zoology and eight from history. The mean time of the American and the Brazilian interviews was approximately the same, varying from 35 minutes to two hours, in the Brazilian sample, and from 20 minutes to two and a half hours in the American sample.

Interestingly, the guidelines for the interviews in the Brazilian research were very similar to the questions proposed to the American interviewees. In the Brazilian research,

“[t]he axis of the interview was the current answer of the scientist to the questioning of science and of religion, be it in the cognitive order or, more generally, in the arrangement of their lives. Around this axis, were inserted references to their family environment and to the years of their academic formation; to the influence of their father, mother or other people, favorable or adverse to religion and to science; their religious upbringing; a distinctive experience, that brought them near to or far from religion or science; to the stance of their teachers and colleagues on religion; to the impact of science on their previous religious formation; to the upbringing of their children” (Paiva, 2000, p. 61).

In the American research, in order to “allow discovery of new categories and strategies for how scientists structure meanings of religion, science, spirituality, and the relationship between these”, the topics were the following:

“1. How do religion and spirituality come up, if at all, in the course of your discipline? 2. How about in teaching does religion or spirituality come up at all in interactions with students or teaching and in what kind of ways? 3. [...] How does religion (or spirituality) influence the work you do as a scientist? 4. [...] How does being a scientist (if it does at all) influence how you think about or view religion? 5. Some say there is a “conflict between science and religion”. How would you respond to such a statement? 6. How about now for you personally, how would you describe the place of religion or spirituality in your life? 7. What religious or spiritual beliefs do you hold? 8. if you have a religious tradition, in what specific way does being part of that religious tradition influence your life now? What kinds of things do you do to practice being part of that religious tradition?” (Ecklund, Park., & Sorrell, 2011, p. 555).

As can be seen, the central intention and the central method for actually acquiring an understanding of how scientist relate themselves to science and religion were rather similar in both studies. The difference in the methodology between them rests on the steps each takes in order to have a more complete idea of the current state of affairs: While the American study has begun with a very large survey, with general items, to be responded through a Likert-like scale, finally collapsed into a dichotomous agree/not agree, and afterwards refined the survey data into more personal information, the Brazilian study began with personal information of the respondents and will extend that information to a representative sample of scientists. What seems interesting to the writer is the essential place taken by the in-depth interview method in both investigations. It appears that the important questions are not easily addressed in previous surveys, because the true meaning of the items in the survey is missed or confounded as a consequence of their necessarily general phrasing. So, not

seldom a small sample, rightly addressed, gives more information than a large one, confirming Vergote's dictum "the life of a man is the best experiment" (personal communication).

What is clearly the aim of both studies is the question of conflict between science and religion, among scientists. The writer will now examine, compare and discuss the results of each study.

A first general, and surprising, result is the absence of conflict in both American and Brazilian scientists. Among the American scholars, "most scientists do not perceive a conflict between science and religion" (Ecklund & Park, 2009, p. 276), "only a minority of scientists see religion and science as always in conflict" (Ecklund, Park & Sorrell, 2011, p. 552). A not infrequent reason for this is the acceptance of Gould's "non-overlapping magisteria"; another reason, the awareness of existing leading scientists, as biologist Francis Collins, who are religious; family life, for example a religious spouse or the upbringing of children in a community that gives them a moral environment, is another reason for searching to compound, in real life, scientific beliefs and religious choices. Among the Brazilian researchers, among whom several say they never have thought of the question science/religion, some do not consider religion a bearer of an epistemological power, and, hence, see no conflict between science and religion; others shelter within the regions of their life space a place to colleagues who maintain together religion and science, but they themselves give no relevance to these regions, and therefore are not in conflict; others do not seem to experience a personal conflict, because they topologically separate science and religion; some others positively valued both regions, without positing a relation between them; others, finally, articulate somehow science and religion, giving them a complementary function, and experience no conflict (Paiva, 2000). These data are not sufficient, however, to assert the existence of a Social Representation of Religion among Brazilian academics, because religion is not for them a topic of conversation nor a means of familiarizing the unknown (Paiva, 1999). Both American and Brazilian scholars have been addressed at their level of consciousness, through neat and direct questions in America, through Lewinian modelled suggestions in Brazil. In this sense, it can be said that American researchers feel no particular difficulty related to religion, in its epistemological dimension, and that Brazilian academics do not experience a psychological uneasiness related to religion in their everyday life.

But the research in Brazil, revealed, in addition, a host of conflicts in the life of scientists on the pre-conscious and unconscious level. These results were made possible because, thanks to a psychoanalytical listening, the respondents could be heard "with the third ear" not exactly in what they said but in the manner they talked. Indeed, "listening with the third ear" (Reik, 1948) allowed the researcher to capture valuable indicators of pre-conscious or unconscious processes, such as

"..., vacillations, delays and accelerations, laughs, repetitions, stressed accentuations, hybrid word compositions, sudden interruptions, more or less out of place, of topics such as guilt, sin, punishment. These interruptions that rarely related to God are turned toward the Church, almost always the Catholic Church, that is said to be cynical, violent, hypocrite, oppressive, turned to sin, dominant, and which is rejected by almost all of the respondents. The references to the religion are assimilated with those to the Church that has been the actual religious matrix for the interviewees. The charges against the Church suggest that they did reject her as a bearer of paternal characteristics and, at the same time, reject the paternal God whom she conveys. On the contrary, the interviewees did *not* reject the maternal characteristics of God, in their personal history, equally conveyed by the Church, and they put them in an intimate, fused God of a religion without a church. There are clear hints that the God who does not correspond to the interviewees is the one who establishes the law: right and wrong, good and evil, sin and punishment, revenge, oppression, rigidity, authoritarianism come up when the subject matter is the Church and her God. This is a paternal God. On the contrary, the God who corresponds to the idea and to the desire of these interviewees is an intimate God, without an external social bond, and even without limits with humanity and nature. Such a God, who fills the psychological structures of unity, is a maternal God" (Paiva, 2000, p.

140).

Conclusion

This kind of non-conscious conflict between science and the religion of a paternal God is not purely intellectual, but follows the narcissistic wound inflicted to man by a personal principle external to him, and amounts to the conflict between autonomy and dependence resulting from the Oedipian moment of castration, not overcome by the identification with a lovable father. That is to say this conflict is somewhat shared by all humans, especially by all believers in a fatherly God, as Christians do, and is not specific to the scientists (Vergote, 1967).

In the remaining of this paper, the writer will discuss briefly the meaning of the concepts of religion/spirituality, and add a quick reference to European and Asian views on the conflict between science and religion.

Ecklund and her associates restrain themselves from discussing the exact meaning of religion and spirituality, whose complexity they acknowledge, and present them as synonyms, ready to accept a more nuanced definition from their respondents. The results of their survey and interviews show, however, a huge preference for the term spirituality. The writer personally is diffident of the interchangeability of these terms (Paiva, 2005; Aletti, 2012), and argue for maintaining their concepts distinct. Religion is a personal and social relationship with God, while Spirituality, although originally and longstandingly related to Christianity, has acquired a diffuse meaning, that encompasses all kinds of transcendence above a harsh material life. The acceptance of spirituality in the current sense seems to be a phenomenon American, possibly opposing religion, and is not coincident with most European uses of the word (Stifoss-Hanssen, 1999). For this reason, the writer thinks that Ecklund's and Associates' precious research differs from the research done in Brazil on the relation between science and religion. In fact, it seems insufficient for clarifying our question to accept a noble attitude of the person towards something spiritual, that can simply be something not crudely material (Solomon, 2002). This never made a problem, because, as Freud (1939) carefully wrote in *Moses and Monotheism*, science is always related to intellectuality (*Geistigkeit*) and not to *Geistlichkeit* (religious spirituality). But, how can it relate to religious spirituality? The writer thinks that some more conceptual refinements would be welcome in order to understand how scientist really relate, or do not relate, to religion.

Finally, the writer would only remember that their question is typically a Western question. Not only because science, as they discuss it, is a Western accomplishment, but because its struggle, when it happened, has been with Christianity. Islamic science sees no opposition with Al-Qur'an: On the contrary, science rediscovers what is already in the Holy Book (Khalili et al., 2002; Murken., & Shah, 2002; Asad, 1993; O'Reilly, 2012). A personal experience the writer had in the Sendai University, in Japan, stroke the writer very much: After convincingly expounded the research on science and religion in the top university of São Paulo, the audience not only was not moved by my exposition, but simply told the writer: Thank you! But, where is the problem?

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