

# Sciences and religion: Their interaction in the borders of Europe (1832-1915)

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The topic of this paper will be the interaction of scientists with religion in 19<sup>th</sup> century Greece.. This research is part of a project undertaken by the Hellenic Research Foundation to map the relations between the discourses of nature and religion in eastern Christianity, from the late antiquity to the present. Again, my aim today will be much more modest. I will focus on the public utterings, in the sense of the term pioneered by Jan Golinski, of Greek men of science to discuss how they dealt with religion within their discourse.

Now, to start, recent scholarship has identified three patterns of coexistence of science and religion (and here I follow John Hedley Brook):

The first such pattern is conflict. This is perhaps the most well-known. The events around Huxley and Buchner are such examples. The second pattern is isolation. In these cases, science and religion had distinct domains, which intersected only by chance and not for long. On the whole, what scientists did was irrelevant to religious discourse. Finally, there is integration. In many periods and in many cases, religion and science were seen as reinforcing one another, either partially or totally. The whole movement of natural theology, Pasteur 's declarations about abiogenesis and God, or the Mertonian analysis of Protestantism and the scientific ethos are such examples.

But what happens to those patterns if we situate our viewpoint in spaces where none of the usual tacit assumptions about science, religion and polity can be unproblematically considered as valid? The Modern Greek State is such an example. Recognized as a state in 1828, it was the result of a local struggle against the crumbling Ottoman Empire, of severe internal conflict and of gunboat diplomacy initiated by Russia, Britain and France. The emerging Greek nation eventually coalesced around language, Greek Orthodox religion and its lineage to classical antiquity. At the same time, and very early on, it acquired several of the trappings of modernity, such as a rather expansive for the era educational system, a University in Athens, an Observatory, a Polytechnic School, Botanic Gardens and science museums. Finally, the very influential Greek Orthodox Church declared its autonomy from the Patriarchate in 1833, prompting a massive internal rearrangement.

So here we have a new polity in a flux, a fledging nationalism, a state church under strain and the institution of sites of scientific practice, all happening within a very short period of time. Alongside these, there is a story to be told about the place of Greece within the world, as perceived at the time by the Greeks themselves. In the first years of the Greek state, there was a general enthusiasm for Western achievements. The might and character of Western Europe were to be emulated. Greece was to bring the light of civilization to a barbarous East.

However, when Greece found itself on the receiving end of gunboat diplomacy during the Crimean War, this attitude changed. Greek national identity became even more immersed in its ties to Classical Greece. Western morality became much more suspect, though Western might remained undeniable. Greece then saw itself as a ‘model kingdom of the East.’ Note the ambivalence here. The

divide was not between Europe and the rest. The civilizational divide lied between the West and the East. And Greece was not an ipso facto European state, because the concept itself was meaningless. It was a state which aspired to acquire all the best traits of the West while belonging to the East. At some point, however, the West became Europe and Greece became a part of it. However, it was far from self-evident, not to mention unproblematic, that this would be so the time.

Now to focus on the people I call Greek men of science. Who were they?

They usually had studied abroad in some of the best universities of their time, either through scholarships or by actually growing up in one of the thriving Greek communities all over Europe. They were few in number, and only in the late decades of the 19<sup>th</sup> century do we see more than 30 being active at the same time. Most of them worked in the Faculty of Philosophy in the University, in the Polytechnic School, in the Military Academy, sometimes in all three. They were thus very much honored and prestigious employees of the Greek State. They were also ipso facto distinct members of the Greek intellectual life. They gave lectures in clubs and societies, they wrote articles in the press which were then printed and sold as pamphlets and they undertook expeditions and projects for the state. A full explanation of their role would get us off topic. What I would like to emphasize here is that they were few, highly visible, well-educated and articulate. They were also respected not specifically as men of science which were also professors, but as professors whose expertise happened to be in science. This is important because the University of Athens, which was the locus of their activities, was not founded to promote useful knowledge or a modernistic ethos. To quote its first historian Ioannis Pantazidis in 1889 “Its main mission was to revive the ancient Greek glory”. A Student Union is even more specific, in a pamphlet of 1887. Greece was then

embroiled in struggles to annex other Greek speaking communities within the Ottoman Empire. The students of the University thus write : “The University has its national mission to create pioneers of freedom, rather than Savignys, Pasteurs or Kourtiouses”. Nationalism was the main discourse within the Greek intellectual field. And the university was to be one of its main instruments.

In the light of all the above, a casual look at the interaction of Greek scientists with religion, brings out a rather dull picture.

From the 1830s to the 1860s, none of the first generation of Greek science professors tackled religion directly. At most, they referred to it en route to another argument. After the 1870s, Darwinian evolution sporadically appeared in Greek discourse, mixed with heavy Haeckelian undertones and provoked a number of storms in several teacups. Materialism followed suit. The high point of the drama was when the prominent Professor of Geology Kostantinos Mitsopoulos, a staunch supporter of evolution, was forced to shut down in 1892 one of the first Greek science journals, Prometheus, of which he was the director and founder.

After that, Greek scientists mostly stuck to their discipline while paying lip service, or actual homage, to Greek Orthodox sensibilities. Finally, the rise of Greek communism in the 20<sup>th</sup> century brought about a much more severe ideological war. All in all, a rather anti-climactic story.

However, if one digs a bit deeper, the picture changes considerably. First of all, we must note that Greek men of science consistently argued over a period of 80 years for the basic morality of the scientific enterprise.

From the inaugural lectures of the very first professors in the 1830s to the jubilees for retiring professors in the 1920s, public utterances overwhelmingly referred to the morality inherent in doing science. Alongside practical utility and the use of history (an interesting subject which is outside our scope here), morality emerges as one of the main discursive schemes used by Greek scientists. And it is in that point that religion comes to the fore. Heracles Mitsopoulos, the uncle of the previously mentioned Konstantinos Mitsopoulos, says in 1845, in his inaugural lecture as professor of Natural History

“The Natural Sciences, gentlemen, exercise and strengthen our intellectual fortitude, educate and improve our spiritual ethos and support and consolidate our religion”.

This, I argue, is the main point in a nutshell. Greek scientists, anxious to convince the emerging Greek public sphere of the necessity and status of their practice, appropriated a number of already prevalent rhetorical schemes and values. Morality was one of them and it is there that they interact with religious discourse. In a variety of ways, religion and science will be portrayed as the twin pillars of morality, either antagonistically or synergistically. Heracles Mitsopoulos later on in the same lecture says that, apart from religion, only science has produced so many martyrs for the betterment of society.

Anastasios Christomanos, legendary Professor of Chemistry, student of Liebig and Bunsen and recognized patriarch of Greek Chemistry by his contemporaries, tackled the same problem in the same manner 30 years later, in 1877. In an article titled, tellingly, *‘Morality is promoted through Natural Sciences’*, he argued that science is the best road towards an ethical education. Religion, in his account, only cultivates social morality, whereas science cultivates inner morality, which is superior.

Dimitrios Stroumpos, the only professor of Physics in the University until the 1870s, gave a Provostial address in 1858. There he claims that divine providence always made sure that wrongly accused scientists (and he cites Aristotle, Hypatia, Galileo and others) were restituted later on. His successor in the Chair of Physics, Timoleon Argyropoulos more or less echoed the sentiment in his own Provostial address in 1898, where he noted that all Great Men of science had a great love for God. The examples are many and they extend to the scientists themselves. In an 1896 article devoted to honoring Anastasios Christomanos, there is special mention of his religious upbringing in Vienna. Every Sunday, we are told, he helped out in the local church, only to run immediately after to the chemical lectures of Professors Pisko and Shroetter.

In the jubilee of another chemist, Anastasios Damvergis, in 1917, the elderly scientist was described as an ‘untiring hierophant of science’ which approached his discipline’s ‘sanctified temple’ for the betterment of society. The same Anastasios Damvergis had given in 1900 a lecture devoted to the life and work of the recently deceased Robert Bunsen, who had been his teacher. Not surprisingly, Bunsen is described as “ablaze from the sacred fire of science”, a man who was moral, modest, noble, gentle, charismatic, simple and ingenious. All in one sentence.

Thus, what is at work here is neither integration, nor peaceful coexistence and certainly not confrontation. It is Greek men of science harnessing religion as an exemplar of morality and putting science next to it. This is not of course to say that more simple ‘Natural Theology’ arguments did not exist. They did, and in great numbers. Greek men of science regularly talked about how some natural phenomena proved the wisdom of the creator. Theodoros Orfanidis, the first professor of Botany, wrote in an 1866 article devoted to Geoponics

that “man is a logical animal which communicates with his creator through his reason”. Konstantinos Mitsopoulos, the Professor of Geology, wrote in an article on atmospheric air that in its properties “we see the wise hand of the Creator”. And so on and so forth. However, these utterances were made off-handedly, unsystematically and usually as sidenotes. The representation of science and religion as twin sources of morality, on the other hand, was always constituted as a coherent argument.

Another way to approach the issue is to ask whether Greek men of science had a choice. That is, could it be that they could not but harness religion in that specific way in their public discourse? But the answer must be no (as far as counterfactual answers go). In Greek intellectual space, one of the main justifications for pursuing science was because of its power to dispel prejudice. However, the omnipresence of the Orthodox Church under Ottoman rule meant that the great majority of folk medicine and folk magic called directly on religion and frequently, on the local priest.

Disease, bad luck, weird natural phenomena were dealt with by invoking the power of saints, Jesus or the Virgin Mary, often through ritualized blessing. Thus, we would expect Greek scientists to confront heads on such superstitions and write articles condemning such practices. But this is not the case. When they do talk about superstitions, they are vague and rather generalistic in the way they go about condemning them.

Finally, what about the Darwinian debates and the shutting down of journals I mentioned earlier? If anything, that would be the defining instance of a direct confrontation between religious and scientific practice. But again, the situation rapidly becomes more complicated as we look closer into it.

Konstantinos Mitsopoulos, the victim of the confrontation so to speak, continued his upwards mobility after the closing of the journal. He became Provost of the University and later of the Polytechnic School. He also received a luxurious jubilee for his 25 years as a professor in 1901. In the proceedings of the celebration, one would expect to find some hints about his adventures with religious zealots, either by him or by one of his many students. In fact, the opposite is true. All of the speakers exalt his work as a paragon of religiosity. Moreover, Mitsopoulos was the President of a Society of Religious Intellectuals and in fact dedicated half his own speech to describe how science can lift us from the clutches of a 'miry materialism'. Mitsopoulos apparently was very much involved with powerful religious organizations, in both Athens and his ancestral hometown of Patras, as was his uncle before him. He seems to have had a falling out with some of his religious patrons over the matter of a Folk University, invoking their ire and bringing on their attack on his journal. Indeed, for the remainder of his years, he continued to be a staunch defender of Orthodox Christianity, as well as a believer in evolution without any more apparent problems. Thus, his conflict with religious authorities seems to be more an internal ecclesiastical matter than a confrontation between science and religion.

Similarly, his fellow Professor of Botany Spyridon Miliarakis, not only translated articles about Darwin in Greek in 1880, but also wrote a treatise on the evolutionary descent of man in 1906. He too was confronted by religious intellectuals, but it bears mentioning how. A telling example was his critic Alexander Kavadas, a student of theology who later studied in Oxford and ended up the Orthodox Archbishop of England. Kavadas wrote a book in 1908 whose main premise was that evolution had been proven to be scientifically wrong. Moreover, Miliarakis had violated his own standards: He claimed that these theories would benefit society, when they would do nothing of the sort even if they were true. That this was a valid line of attack can be seen by a



speech given by Miliarakis himself. In 1904, he gave a lecture to celebrate the inauguration of a new botanical laboratory. While defending the necessity of these expensive laboratories, Miliarakis says:

“I must emphasize that these institutions do not at all aim at providing practical benefits, but rather have as a goal the theoretical investigation of flora... We regularly state the material benefits from studying science. We rarely talk about the spiritual gains... As if man is only made from flesh and the needs of his spirit are of lesser value”

Thus, the spiritual gains of truth are indeed essential for science. Kavadas is justified to invoke them in confronting Miliarakis. Notably, in the same speech, Miliarakis cites Rudolph Virchow to argue that science has become a new religion in itself. The parity between science and religion extends beyond morality.

Of course, Greek scientists had no qualms in condemning the excesses of Western Christianity. After all, the Great Heroes of Science whose history they were fond of describing had to be heroes against something. Putting forth the history of one's discipline was the established way of giving a Provostial or an inaugural lecture in 19<sup>th</sup> century Greece. It is in these occasions that Greek scientist talked of ‘the Middle Ages, shrouded in religious darkness’, of the ‘suffocation of the light of reason under misguided religion’, of ‘Galileo being haunted by philosophers and clergymen alike’ and so on and so forth. Western Christianity, which of course they do not call by that name but of which they speak, is not part of the Greek intellectual sphere. If anything, and especially in the final decades of the 19<sup>th</sup> century, it the telltale sign of the ambiguous and morally suspect Westerners. In those cases, there is even a narrative constructed of how true science fled to Alexandria and later to Byzantium,

where it was preserved and kept alive. History, religion and the all- important direct descent from classical antiquity were ensured in one stroke.

And now to sum up. In this paper, I examined the public utterances of Greek men of science in order to bring forth how they saw the relation between science and religion. What emerges from this first discussion is not a picture of confrontation, isolation or simple integration.

In 19<sup>th</sup> century Greece, one of the main ways science experts interacted with religion was by appropriating elements and themes from it. Science was to be recognized as a moral force alongside religion, and as such, religious archetypes, such as the martyr, the apostle and the sanctified temple, were harnessed to describe science itself.

Vice versa, when religious defenders entered in debates, they themselves used the rhetoric and norms of scientific discourse.

The rise and constitution of Greek nationalism, or perhaps we could say Greek self-conceptualization, demanded that science becomes part of the national master narrative. It was in that field that science confronted, espoused or harnessed religion. In most cases, the relation between the scientific and religious domain is one of siblings being mutually supportive or quarreling , rather than of hostile domains of inquiry.

And that points to my final tentative suggestion. It could be the case that spaces like 19<sup>th</sup> century Greece can help us reproblematicize the patterns of interaction between scientific and religious practice. Perhaps we can do more than describe the interplay between science and religion as taking place in a stage created by nationalism, modernity or Europeanism (if you pardon the lexicological barbarism). A more fruitful way could be to show how they were

intricately involved in the emergence of such ideologies, how they both shaped and followed the contours of such discourses and how they acted confrontationally or synergistically in more levels than the usual field of theories and events. In the end, perhaps the interplay between science and religion can be shown to be one more field where modern science and modern Europe were mutually constitutive.