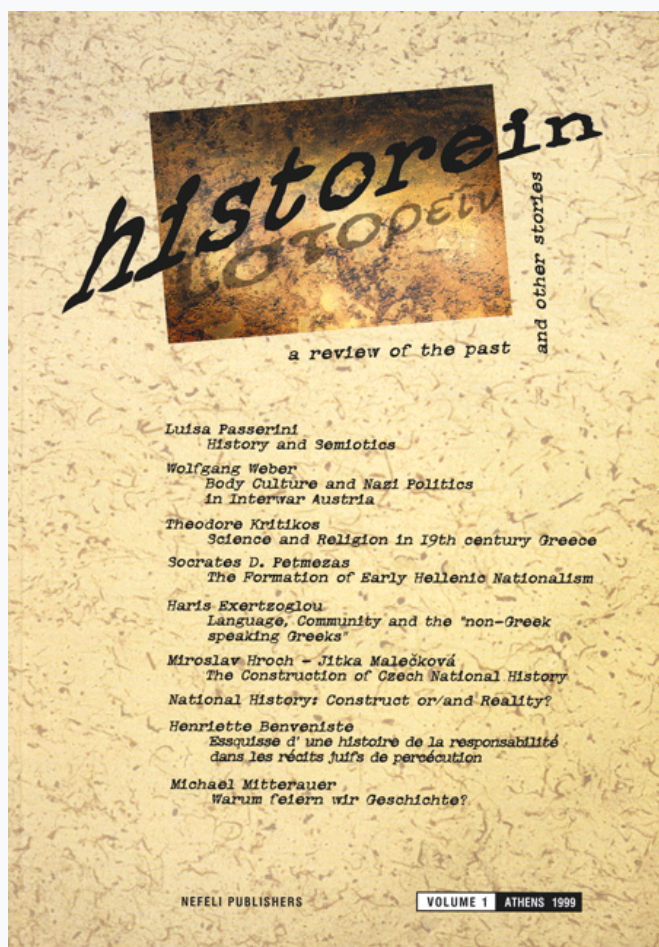


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Science and religion in Greece at the end of the nineteenth century

Theodore Kritikos

The study of the adventurous relation of religious and scientific ideas in 19th century Europe¹ has failed to highlight the rhetorical correlation between the promethean symbol, the Holy Bible, and the popularisation of scientific knowledge. So one does not expect to encounter such a perspective in scientific approaches to nature in Greece at the end of the nineteenth century.² Our surprise at the cultural expressions and behaviour of the people of a certain period attests to our fundamental ignorance both of the society to which we are referring and of the specific cultural habits of its members. Besides the expected turmoil caused by the acquisition of evolutionary ideas, the relation of religious and scientific ideas in late 19th century Greece reflects the interaction between the traditional cultural and social context and newly acquired intellectual habits. The historical co-existence of symbols in many cases not relegated to expected harmonised meanings helps us to understand the specific cultural process connected to the phenomena in question. This historical co-existence indicates the idiosyncrasy of the particular needs that prompt relevant behaviour. In our view, the symbolic co-existence of the light of Prometheus, the Holy Bible and the naive study of nature by simple people points to efforts of intellectual and cultural familiarisation with newly acquired scientific knowledge which was putting to trial collective representations attached to traditional cosmic idols.

Without covering the question of the encounter between religious and scientific ideas of 19th century Greece in its entirety,³ this article will focus on phenomena related mainly to the publication of the journal

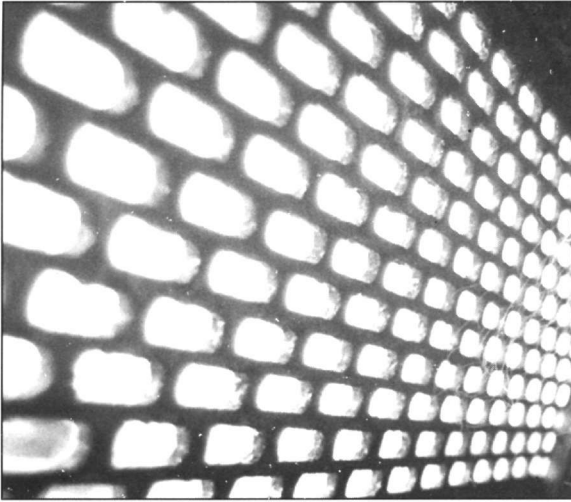
Prometheus. *Prometheus* claimed that the only thing that proved clearly the superiority of modern civilisation was the replacement of self-knowledge (γνώθι σαυτόν) with the knowledge of nature (γνώθι την φύσιν); that is, the elevation of the natural sciences reflected the adoration of nature.⁴ With the publication of *Prometheus*, the public expression of interest in the relation between religion and science reached a climax.

The dangerous ideas

Before dealing with the specific intellectual and cultural circumstances that motivated the initiatives under question, it is important to focus on the original introduction of Darwinian ideas, considered by many as responsible for numerous moral and social dangers. It was argued that these dangers, although not deriving from the same causes as in the West, were actually leading to the same circumstances in Greece, where Darwinian ideas were expected to have even worse repercussions.⁵ Publications dealing exclusively with Darwinian views were absent until the 1870s, and the first translation of the *Origin of Species* (1859) did not appear before 1915. However, in 1876 there appeared a book with the title *The Newest Phase of Materialism, that is Darwinism and its Unreality*.⁶ Public opposition to evolutionary ideas perceived as materialist ideology clearly preceded the actual scientific interest in Darwinian ideas and their introduction into academic teaching. This apparent 'paradox' actually confirms that the movement of ideas from the intellectual and cultural milieu towards the university is more intense than vice versa. Subsequently, the public use of scientific ideas threatening established forms of knowledge to a large degree overdetermines their establishment in the academic world. This was the main reason that made Greek scientists finally realise that the popularisation of scientific knowledge by the means of a magazine was more important.

Nevertheless, the publication in 1890 of the journal *Prometheus* actually followed events, instead of preceding them. Already in 1887, *Anaplassis* was published in Athens, a monthly journal published by the society of the same name, which aimed "at contributing to the reformation and reorganisation of society through Christianity, served by the sciences and the arts."⁷ With regards to the relation between religion and science, the conclusion which seems to have emerged in an irrefutable way from the long-lasting research and discussions appears to have been clearly formed from the very start: "Every Christian truth compromises with the truths of the various sciences and is even validated by them. And whoever aims at the opposite, either misinterprets the Bible or misunderstands the sciences."⁸ This rhetorical merging of religion and science comprised a stable intellectual and cultural motif of a narrative which, as a form of Christian instruction for scientists, had the ambition to prove redemptive for the people. The dangers, and more specifically, the many moral and social dangers stemming from "abominable" teachings, actually produced the real motive for rallying both individual and collective action.

But, when did these dangers acquire a threatening dimension, and to what extent were they correlated to a particular form of internal action? Five years after the first publication of Darwin's *The Descent of Man*, that is in 1876, Spiridon P. Sougras, Doctor of Philosophy and a



theologian, stressed that the hasty and superfluous consequences of Darwinism oblige every scientist, and mainly theologians, not to remain indifferent to this matter, which shocks the basis of society, and possibly carries the repercussion of unfathomable disasters. Simultaneously, he disclosed that "this theory has started to expand in our society in a discreet and unquestionable way."⁹ Two years later, I. Moschakis, theologian and lecturer at the University of Athens, in a speech

to the society *Parnassos* on November 3, 1878, underlined that never before had the truths concerning God, the soul and future life been challenged in such a ferocious way, with such cruel language, and with such a vulgar and harsh style "as in our time". Of course, the lecturer of the National University was referring to contemporary European intellectual trends. Yet, his anxiety for local customs and habits is evident, and it was this worry that generated the lecture. So, as Moschakis informed us, "unfortunately, they are not few, those seeking to introduce us by any means, or indeed our society which needs solid food, to these materialistic ideas, which turned upside down or threaten to turn upside down nations which acquired many centuries ago the solid foundations of their political and cultural existence."¹⁰ A year later, in 1879, a treatise titled *Concerning the Atheistic Ideas of Our Time*, stressed that the circulation and the power of expansion of these conceptions in Greece may not possibly seem an important event, something that might explain why they had failed to make any special impression. And this, because these conceptions refer to isolated individuals and they even move underground, that is, in a way which is not exposed publicly. In the meantime, the author, Archimandrite Dionysius Latas, insisted that the research of these ideas is especially interesting in order to "acquire a clear and true idea of the position in which we are, and the point towards which we are moving, with a view to reaching it."¹¹ As we see, the attempt of a local evolution of materialistic ideas towards the end of the decade of the 1870s exists but its existence is rather weak, according to the evidence produced by their enemies; nevertheless, the opposition was organised systematically.

But if the dangers which appear seem to have been caused more by the evolution of the European cultural scene and the possibility of their absorption, than by already existing efforts for the diffusion of materialistic ideas in Greece, some initiatives which give evidence for the hesitant, but remarkable development of local interest in evolutionary ideas during this period are not absent.¹² Such interest arose during the decade of 1880, at the beginning of which (1882) the book by Buchner, *Power and Matter*, was translated into Greek.¹³ At the end of the



decade (1889), Dr. Simon Apostolides wrote a book with the title *The Psychoses. Medical, Sociological and Psychological Studies Concerning Mental Diseases*, which provoked intense reactions. More precisely, in this latter book, Aposolides underlined that "cerebral physiology tends to integrate with psychology", and that philosophy "started descending from the high peaks of cloudy metaphysics and follows with care and recognises the straight path of the experimental method of modern sciences."¹⁴ In the same decade, one should also mention the translation of the study of the German philosopher Edouard Zeller *About the Greek Predecessors of Darwin* (1886),¹⁵ which would be used by the scientists of *Prometheus* to stress that the theory of evolution "is purely Greek".¹⁶ The gradual introduction in Greece of the evolutionary ideas cultivated in the natural sciences in Europe made the theoretical development of the relation of religion with science a matter of utmost importance in the mind of those who believed that "the progress of science showed that every spiritual power is erroneous and non existent."

The rhetoric of convergence of religion and science

In 1884, the lawyer and scholar Ioannis Skaltsounis published a book with the title *Religion and Science*, where he hurried to soothe his readers from the anxiety which might have been cultivated by the spread of materialist and atheist teachings. According to the author, whoever reads the texts which support materialism, and especially everything published in Greece, will believe that the experimental sciences have already solved all cosmological and anthropological problems. In reality though, according to Skaltsounis throughout, it suffices to seek advice from the experimental scientists themselves in order to be persuaded that never before has science proved so unable to solve "the greatest problems" as during this period. Nevertheless, as underlined by Skaltsounis, anti-religious beliefs seem to spread to all the social ranks and to exercise a decisive influence on religious and moral beliefs, an influence which even verges on social turmoil.¹⁷ So, according to Skaltsounis it is urgent to examine theoretically the relation between religion and science, in order to prove that traditional religious culture is not threatened by the undoubted validity of contemporary science; on the contrary, religion can even be supported by science.

A collective social intervention is mainly urgent on the part of the bearers of religious culture,¹⁸ because the dangers to which the nation is exposed by the "shady" and "poisonous" spread of the teachings of impiety and skepticism are intensified, and aim at overturning the foundations of every religious dogma, "of every heavenly belief and every high Godly idea". The decision to form a defensive line against all emerging threats offers an explanation both of the name of this collective initiative (*anaplassis* means reformation, improvement), and of the attempted cultural programming with regard to contemporary scientific knowledge. It is also important to note that the invitation for collective action, inspired by "Christianism aided by sciences and arts", links

right from the start the immediate cultural needs with the highest national necessity: "We need unity, reciprocal help, resurgence, regeneration, reformation, organisation in order to save ourselves, so that we fulfill our mission as individuals and as a nation. This is a very high national need, which all of us feel but none of us openly confesses."¹⁹ The connection between religious culture and national cultural identity and science appears with emphasis from the very first moment, when the invocation of the corresponding symbolism is harmonised properly with the invitation for collective thought and action.

As we see, the symbolic co-existence of the Holy Bible and of scientific knowledge of nature, metaphorically framed by scientists with the light of Prometheus, had already been expressed from the side of religious culture, from a perspective of defense and cultural reorganisation. By underlining the explosive development of contemporary science, the Greek scientists placed an emphasis on the practical applications which had already started to transform everyday life, and the way of thinking of man, and they stressed that 'darkness is not absent from the country, that is why we need the torch of Prometheus.' Despite the common rhetoric of integration of religion and science, the difference of emphasis is already clear from the first moment. The collective social intervention which is suggested from the side of the religious culture sees through the immediate moral and social dangers, where the scientists of *Prometheus* suggest scientific knowledge as the Promethean hope. But in order to understand the defensive attitude of the bearers of religious culture, as it developed in connection with the initiatives and the activities of the local scientific community, it is important to explore further the kind of integration of religion and science which both sides invoked.

Let us start with those who aimed at the validation of the great Christian truths by means of science, and at the guidance of society by means of the morality of the Gospel. The necessity of the modernisation of religion - so that it would parallel the spectacular scientific developments of the times - undoubtedly provided the primordial motive for the rhetoric of the convergence of religion and science. As Ioannis Skaltsounis, the most important member of *Anaplassis*, noted, Christian teaching should always keep the same pace with the intellectual and scientific progress of the people, in order to be able to "mould" its followers morally.²⁰

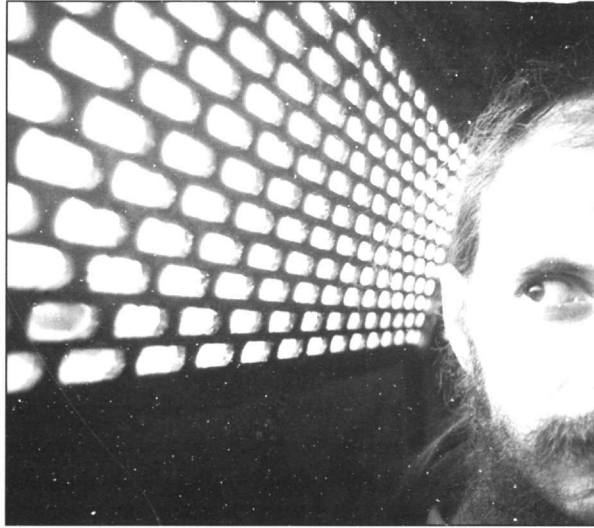
At the same time it was argued that religious traditions were essentially undermined by the experimental scientists, who teach and maintain that the progress of science has proved the non-existence of every spiritual power. It is especially worth noting that three years before the publication of the first issue of *Anaplassis*, special emphasis was given to the fact that materialistic conceptions were cultivated by experimental scientists. *Anaplassis* appeared having a declared aim, i.e. the validation of the great Christian truths by means of science. In other words, the opposition to materialism which was taken to invoke the progress of natural sciences, instead of leading to a certain kind of general, rhetorical opposition to natural sciences, finally led completely in the opposite direction, that is to the rhetorical convergence of religion and science. Is it one of the customary contradictions inherent in the history of ideas? Or are we dealing with a certain kind of political management of ideas which could enlighten us

about the ways with which newly acquired scientific knowledge communicates with the traditional cultural and social milieu?

We have already referred to the expressed need for a harmonisation of religion with contemporary intellectual and cultural developments. This kind of harmonisation offers the key to understanding the convergence of religion and science. In the thought of religious intellectuals, the Church had remained unshaken despite radical social and political rearrangements. So it is not difficult to understand that familiarisation with the dominant intellectual and cultural trends of the times and their subsequent appropriation were deemed to be the most appropriate methods for facing the opposing fear of novelty, as well as for the simultaneous strengthening of religious authority through its modernisation. Given that science as well as "art" were recognised as the authorities of "modern culture", imported to Greece from abroad "as a destructive epidemic" and threatening the nation through their distortion of the kind nature of the Greeks, this convergence of religion and science was essentially a cultural strategy of defense.²¹ The "disastrous results" of the absorption of "modern civilisation" could only be negated by a Christianity that converged with the sciences and did not distance itself from them, "as materialism and pantheism falsely preach". The appeal to a representation of Christianity of this kind was the best way for the refutation of every anti-Christian theory "with the weapons of reason and science", but also for the moral instruction of the youth according to the "absolute religious and moral truth of Christianity".²² The promotion of Christianity, of science and art, following this hierarchical order, as basic powers for the reformation and true progress of societies provided the cultural framework for the rhetoric of the convergence of religion and science. So, it is not at all strange that this rhetoric, being indifferent to cognitive questions in detail, was essentially aiming at a legalisation of religious interests with the use of a scientific language, strengthening in this way, according to Clifford Geertz, the symbolic system necessary for the religious phenomenon.²³ "Christianity and science agree concerning both ideas and feelings. They both love freedom, equality and justice", Dialismas claimed. "Christianity and science also identify concerning desires, because they both desire progress and happiness of humanity and the glory of its creator."²⁴

Any historical perspective of juxtaposition or even separation of religion and science in the past, the present or the future, becomes in this way non-existent, while the emphasis on moral intentions is enough to face, more precisely to overshadow, any specific cognitive matters. They converge, to the point of the integration of Christianity and science, because they have in common thoughts, feelings and desires. Christian dogmas are ascertained by the validity of science, and the discoveries of science compromise with the principles of Christianity. So, if at any time Christianity and science appear to conflict producing "martyrs such as Galileo", then we are dealing with essentially deceptive phenomena. But "let us not be deceived, Christianity has never collided with science."²⁵ When a certain difference or opposition between religion and science appears, we are not dealing with real Christianity or real science, but with their distorted images.

Nevertheless, we should not ignore another argument which was put into service for the convergence of religion and science - which again presupposed and stressed the difference with the West. According to this argument, a break between religion and science happened in the past and was especially strong. But this break happened in the West and Papism was basically responsible for it. Papism, which anathematised every scientific work opposing its despotic principles, gave the signal for a relentless war, accusing every



scientist who had discovered something contrary to the word of the Holy Bible and its iron institutions.²⁶ With the French Revolution, Catholicism had been liberated from its papal bonds and scientists started "to reciprocate the same to Papism and science." According to this argument, the unjustified confusion between Papism and Christianity brought forth the historic rupture between religion and science. During this rupture, we saw the encyclopaedists of the eighteenth century and the materialists of the nineteenth century struggle with fanaticism in order to be sarcastic, ironic and to eradicate the Christian religion, "thinking that with this fall Papism and insufferable Papocracy in the West vanishes."²⁷ But if we can realise that the moral principles of Christianity oppose neither science nor logic, it then becomes evident that the "ruthless war" which exists between religion and science must stop and that both "enemy camps fighting among themselves" should reconcile. When a "sharp antithesis between faith and science" is detected, this has been achieved with sophisms, which have to be brought out in the open. It has, in other words, to become clear that we are not facing an antithesis between religion and science, but a fight of the religious faith against the faithless suppositions of certain scientists, that is a fight "of true science against the false and the faithless." Consequently, the conception that real religion and real science do not disagree and have no reason to come to conflict remains a stable conclusion;²⁸ but at the same time, out of the convergence of religion and science, the difference with the West, presented as a difference between the principles of Christianity and "the usurpation of Papism", is stressed with particular emphasis.

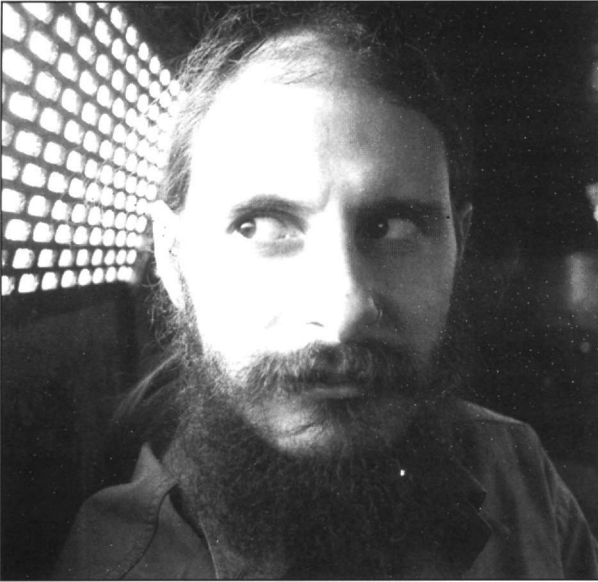
It is, however, important to follow analytically the attitude of scientists, especially after the attacks on the part of intellectuals defending religious culture. Following the numerous public debates which came to a climax after the translation of a series of lessons by Ernst Haeckel, published in *Prometheus*, and the corresponding attacks which the magazine received from the daily press,²⁹ mainly from publications in *Anaplassis*, scientists had many opportunities to clarify their position with reference to specific and more general controversial matters.

Pursuing a certain kind of discrimination between religion and science, the scientists of *Prometheus* were wondering at first if it was possible to detect something common between science and the Gospel, between science and Christian teachings. "Christ was neither a scientist nor a technician with a specific meaning of these words, he was not an Aristotle or Phedias, he was not Hegel or Shakespeare, nor Newton or Michaelangelo, because if he was one of them he would not be Saviour!" Consequently, whatever is referred to Christ, which has no relation with morality but with science and art, in reality has no relation with Him. This discrimination of course does not mean the rejection of Christian teaching. The moral superiority of Christian teaching is recognised as "the only one, invaluable real treasure of ours", which, as it is underlined, every human cannot do otherwise than accept. "Is there any Lamarck, finally, any Darwin, any Haeckel who did not bow with devotion in front of the Crucified as the teacher of the highest morality, as the saviour of humanity? All these are not only scientists, they are human beings. They need freedom, they need moral light and humanism." This discrimination of religion and science, which develops as a discrimination between moral teaching and scientific knowledge, does not at all exclude a relation between them. The moral teaching of Christ has nothing in common with science and art, though it is their "mother", since the highest qualities of man emerge from it. Putting an emphasis exactly on the spiritual powers of man, and mainly on the freedom of using them, to whatever best Christ gave to man, the Greek translator of Haeckel, in his response to relevant accusations, declared that every scientific theory and knowledge emerges from the free use of our spiritual powers. In this way, for the scientists of *Prometheus*, the autonomous progress of science and art does not finally come in contrast with Christian morality and teaching; but since it is exactly science that develops the spiritual powers of man, it is through science that "the aim and passion of Christ" are better served. That is why Haeckel can work for Christ and be his true follower, even more than those who defend religious dogmas.³⁰

The rhetorical convergence of scientific and religious culture, invoked by the scientists of *Prometheus*, aimed at the discrimination of religious morality from scientific knowledge, while at the same time pursuing cultural familiarisation with scientific habits. By excluding every possibility of separating religion from science, the corresponding convergence of religion and science, promoted from the side of the religious *Anaplassis*, was aiming steadily at the control of the local scientific language on the one hand, and the scientific legalisation of religious interests on the other. But when the intention for the intellectual and cultural familiarisation with the scientific method confronted a will for the religious appropriation of scientific knowledge, then the conflict became inevitable.

The conflict between religious and scientific culture

Every attempt to create a new cultural and by extension political idol of the cosmos, is directly connected with whatever is usually named a "moral crisis" of the times. And in Greece, "an important moral crisis is unfortunately pillaging". As the displacement of religion was considered exclusively responsible for the contemporary moral crisis,³¹ the possible separation of religion



from science evidently render the possibility of a separation of the religious narrative from the cultural and the political one. So, in order to avoid this separation, its consequences had to be stressed, which were supposed to guide to results "really horrible and disgusting and abominable".³²

The relation between religion and science, as outlined through a parallel reading of both journals, *Prometheus* and *Anaplassis*, was grounded on a rhetoric of convergence. However, despite the intention for a rhetorical

convergence between religion and science, the conflict was not avoided in the end. Although the main aim was the absorption of evolutionary ideas, wider cultural ideals were also manifested.

Diverse thinkers attempted to invent ways to face the dangers deriving from the introduction of the evolutionary ideas. They argued that science was obliged to converge with religion³³ and that science also ought to become national.³⁴ The conflict between *Anaplassis* and *Prometheus* did not so much concern the juxtaposition between the world of the scriptures and scientific knowledge in the fields of geology and biology. The translation of books which propagated evolutionary ideas brought into the foreground the conflict between the supporters of religion and the supporters of science. This conflict also represented antagonistic claims to the public, cultural and political spheres. It is important to study this claim in depth.

Those who published articles in the journal *Prometheus* stressed the ways in which modern Greek society could benefit from the scientific study of nature and the development of scientific research in Greece. These articles addressed social matters only when they concerned the translation and popularisation of contemporary scientific theories as well as the weak role of science in modern Greek education and culture.³⁵ The scientists did not defend materialism as an ideology so much as they defended the natural sciences as a cognitive paradigm. They juxtaposed the validity of scientific knowledge to the ideological positions of their opponents and argued that as scientists they knew in depth all the issues that were at stake in the science vs. religion debate. In general the authors of *Prometheus* defended scientific methods, without doubting the validity of Christian faith. They claimed that there should be a clear distinction between religious ideology and scientific knowledge and that science should have an authority over certain matters which until that time were under the authority of the scriptures.

On the other hand, the accusations against materialism condensed many moral, social and

political elements that concerned the fact that the vindication of scientific authority could lead to the marginalisation of religion in the sphere of politics, public life and culture. It was argued that the Church would maintain its important position in politics (να διατηρείται ζώσα και ενεργός εν τη πολιτεία δύναμις") only through "proper preaching on the contemporary needs of the nation." This preaching would demonstrate that the Church followed the nation's intellectual and scientific progress. The relation between the great truths of Christianity and the nation and the Church's intention to play an important role in society with the help of the sciences and the arts did not necessarily imply the secularisation of religious ideals. The advocates of the primacy of religious authority demanded that science not replace religion in politics and the public life. The members of *Anaplassis* did not address abstract religious or scientific ideas. They suggested that science and religion should actually collaborate in unity and stressed the need to avoid the separation between religious and political thought. The narrative of religion, they argued, should not be separated from the narrative of politics.

The position expressed by *Anaplassis* was similar to the position held by Apostolos Makrakis, a public figure who also defended religion in the context of this debate. Based on the Greek translation of the work of Ernest Haeckel, Makrakis defended "Christ and science" and argued that the authors of *Prometheus* were evidently "pseudo-Christians and pseudo-scientists".³⁶ Makrakis argued that the European supporters of the idea that there were not any limits to human knowledge were also pseudo-scientists. He stressed the fact that modern pseudo-science aimed at the definition of the limits of human knowledge, and sought to relieve Man of all questions that transgressed the world of the senses. According to Makrakis, modern pseudo-science suggested that there was nothing else beyond the world of the senses, and that even if there were something else the powers of the human mind were unable to understand it, or define it. He argued that the most prevailing manifestations of contemporary pseudo-science in Europe were materialism and positivism which had already produced the governing principles of public and private life.

European materialists and positivists claimed that they had discovered the ways to explain the causes of natural phenomena and human behaviour. For Makrakis these claims represented threats to the social authority of religion. In order to defend religious authority, Makrakis suggested that the materialist claims should be silenced and that Reason should be related exclusively with God. He also addressed the problem of correct use of Reason. He argued that, since it is with reason that we manage "to ascend from the conception and the consciousness of phenomena to the cause of their existence", the most proper way to avoid the development of an autonomous Reason, was to relate Reason exclusively with God. He argued that Reason was the most perfect instrument of the spirit, whilst the most perfect "idea of reason that is the idea of God, was the ultimate limit of the human intellect." The need to defend religion against the introduction of modernist ideas motivated an eclectic use of the keyword Reason. This eclectic use of the term Reason led to ambiguous readings that could always ground the arguments of the opponents of science. As Makrakis put it, "materialism and positivism are two ferocious animals, two monsters which have been cultivated with the help of reason, but which

at the same time fight against reason."³⁷ Makrakis identified himself as a "Professor of Philosophy and the Philosophical Sciences."³⁸ It is important here to understand the ways in which he related "philosophy" to "science". He comments that, "philosophy is a science of the highest order, because its relation to the other sciences is that of the queen or the mistress to her servants and slaves." Thus, philosophy defines the limits of all the other sciences. Makrakis argued that in order to make a clear distinction between philosophy and the other sciences we need a "full definition of philosophy". He suggested that philosophy is the love and science of the Logos, which is equal to God and which renders one divine." (φιλοσοφία ἐστὶ φιλία καὶ ἐπιστήμη τοῦ ἰσόθεου Λόγου, πρὸς τὴν θέωσιν ἀγούσα.). For Makrakis, philosophy occupied the highest position in the hierarchy of cognition.

This definition of philosophy was very different from the contemporary directions of European philosophy and demonstrated the possible convergence between religion and science. According to Makrakis, all the contemporary systems of modern European philosophy (including empiricism, idealism, pantheism, skepticism, criticism and eclecticism) were against "the initial knowledge of the conscience and the true word, and deprived their followers of the true knowledge and faith." He argued that Descartes deviated from the principles of the philosophical method, since he worked without a proper method and in an unreasoned way. He also argued that Kant created his own true and practical Reason, ignored the "true Reason of Man", rendered philosophy a clear science which resembled mathematics, and thus reinforced skepticism. Makrakis believed that this madness of modern philosophy, Spinoza's pantheism and Fichte's pan-egoism and other forms of materialism did not promote knowledge but destroyed the logic and moral nature of man. He wondered: "Until when will this blinding pseudo-science of the West plunder and dishonor Greece, the land of wisdom and science?"³⁹

The thought of Zikos Rossis, a professor of theology in the National University of Athens, represented a more refined philosophical convergence between science and religion. In one of his lectures, Rossis made a distinction between theology and philosophy and criticised Descartes and Hegel. He argued that philosophy derives from the attempts of the human mind to prove the truth of religious faith.⁴⁰

Both Makrakis and Rossis attacked the famous assertion of Descartes' philosophical position: "Cogito ergo sum". They suggested that the human mind acquires wisdom and produces scientific knowledge, not through doubting traditional and religious beliefs, but through an effort to ascertain them. Both thinkers refuted Descartes' idea that skepticism produced knowledge and suggested that all thought should aim at the manifestation of the superiority of religion. Rossis urged his students to study the sciences, but also warned against the conflict that he foresaw between science and religion. In 1876, he addressed his students in the following way:

Dear students, devote yourselves fully to the study of the sciences that you have chosen and aim at the renaissance of our nation. And bear in mind that all the Muses are sisters and that the sciences are complementing one another in the search for truth, although during their development they have often contradicted

each other. Do not value exclusively the particular science that you study and take into consideration also the other sciences and the principles of religion, especially when there is conflict between the sciences, or between the sciences and the religion.⁴¹

The term "philosophy" was thus closely related either to religion or to the concept of the nation. "Freedom" was another term that was closely related to religion and the nation. Aristedes Diomedes Kyriakos, a professor of theology at the University of Athens argued in favor of the possible convergence between religion and science by relating both to the notion of "freedom". On the 18th of May 1887, Kyriakos delivered a speech on the occasion of the 50th anniversary of the founding of the University of Athens. In that speech, he argued that religion, science, and freedom were "the greatest powers...that lead humanity to progress..." He thought that atheistic science was a pseudo-science and expressed his belief that true science and religion could be united, since people could believe in the scientific findings only through the intervention of religious faith.⁴² However, Kyriakos argued that the unity between science and religion was based on particular restrictions. He urged his students to use their scientific knowledge in order to enlighten and liberate both the Greek nation-state as well as the Greek communities in the Orient;⁴³ but, he also warned them not to forget that "the science should not offend the customs and the piety of the people, because otherwise it could be detrimental instead of beneficial."⁴⁴

It could be argued that the systematic and even polemic effort to unite religion and science was not grounded on particular scientific principles, but rather led to their production. This is after all a well-known process in the field of the history of ideas⁴⁵ and a key point for understanding the relation between religion and science in late-nineteenth century Greece.

Both the scientists as well as the defenders of religion referred rhetorically to the unity between religion and science. This unity was however disturbed by certain differences that concerned the idea of evolution, the legitimacy of scientific knowledge, and questions related to the origin of human existence. Scientists often argued that scientific knowledge was independent from religious faith. The notion of unity between religion and science –which was achieved through the intervention of the concepts of the nation and philosophy– did not recognise the intellectual independence of scientific knowledge. The hegemonic idea that science was not independent from religion constituted an obstacle for the advancement of scientific studies.

The study of the relation between religion and science in late-nineteenth century Greece offers an insight into the general intellectual climate as well as the political and cultural representations that developed in this period as a response to European versions of modern thought.⁴⁶ The popularisation of modern representations of the world and the gradual secularisation of culture related science exclusively to practical aims such as hygienic practices and industrial methods and did not encourage any further development of scientific research. Greek culture and society were not prepared to accept the imaginary independence between scientific knowledge, religion and morality.⁴⁷ In this context, Anastassios Chrystomanos, a great supporter of science, argued that the development of natural sciences would lead to moral elevation.⁴⁸ In the same context,

the journal *Prometheus* ceased its publication since it expressed a culturally weak position, whereas the journal *Anaplassis* managed to survive.

The history of the conflict between science and religion refers us to the historic encounter between a traditional culture and European modernity. The eventual hegemony of European principles of cultural modernisation made possible the rhetorical convergence between religion and science.

¹ See John Hedley Brooke, *Science and Religion*. Cambridge: Cambridge University Press, 1991; Owen Chadwick, *The Secularisation of the European Mind in the Nineteenth Century*. Cambridge: Cambridge U.P., 1993; Tess Cosslett (ed.), *Science and Religion in the Nineteenth Century*. Cambridge: Cambridge U.P., 1984; Charles Coulston Gillispie, *Genesis and Geology: A Study in the Relations of Scientific Thought, Natural Theology, and Social Opinion in Great Britain, 1790-1850*. Cambridge, Mass.: Harvard University Press, 1996; Alfred Kelly, *The Descent of Darwin: The Popularisation of Darwinism in Germany, 1860-1914*. Chapel Hill: University of North Carolina Press, 1981; David C. Lindberg and Ronald L. Numbers (eds.), *God and Nature: Historical Essays on the Encounter between Christianity and Science*. Berkeley: University of California Press, 1986; Harry W. Paul, *The Edge of Contingency: French Catholic Reaction to Scientific Change from Darwin to Duhem*. Gainesville: University Presses of Florida, 1979.

² See *Προμηθεύς* (Prometheus), 1:1(6 January 1890), p. 1.

³ See J. W. Draper, *History of the Conflict Between Religion and Science*. New York, 1874, second edition London, 1875; A. D. White, *A History of the Warfare of Science with Theology in Christendom*. New York, 1896. As Owen Chadwick notes, Draper almost exempts Protestantism from the attack against science; Draper however includes in his relevant comment the Greek church as well: "I have little to say respecting the two great Christian confessions, the Protestant and the Greek churches. As to the latter, it has never, since the restoration of science, arranged itself in opposition to the advancement of knowledge" (from the preface to the second edition, p. x). In Chadwick's opinion, the context shows that Draper means "As to the former"; see Owen Chadwick, *The Secularisation of the European Mind in the Nineteenth Century*. Cambridge: Cambridge U.P., 1993, pp. 162, 275.

⁴ *Προμηθεύς*, 2:1(13 January 1891), p. 2.

⁵ See Ioannis Skaltsounis, *Θρησκεία και Επιστήμη* (Religion and Science). Trieste, 1884, pp. 13-14.

⁶ See Kostas Krimbas, "Ο Δαρβινισμός στην Ελλάδα" (Darwinism in Greece) in *Θραύσματα κατόπτρου*. Athens: Themelio, 1993, pp. 81-108.

⁷ *Ανάπλασις* (Anaplassis), 1:1,2(September and October 1887), p. 1.

⁸ *Ibid.*, p. 2.

⁹ S. P. Sougra, *Η νεωτάτη του υλισμού φάσις ήτοι ο Δαρβινισμός και το ανυπόστατον αυτού* (The Newest Phase of Materialism, that is Darwinism and its Unreality). Athens, 1876, p. 6 and 10.

¹⁰ I. Moschakis, "Μελέτη περί υλισμού" (A study on materialism), *Παρνασσός*, 2 (1878), p. 926-7.

¹¹ Dionysius Latas, *Πραγματεία περί των κατά τους χρόνους ημών αθεϊστικών ιδεών* (A Treatise Concerning the Atheistic Ideas of Our Time). Athens, 1879, p. 72.

¹² It is important to note that in 1877 the curator of the Botanical Garden, Theodore von Heldreich, began a correspondence with Darwin (included in Krimbas). Let us note that on the 27th January/8th February 1878 Heldreich wrote to Darwin: "Il n'est pas sans quelque danger et il faut encore assez de courage moral pour avouer, et se rallier à vos principes en ce pays, où l'on est encore sous l'empire du dogmatisme. Il faut préparer les esprits lentement et avec précaution; cependant la Verité triomphera encore ici, et il faut espérer que ce jour

ne cera pas trop éloigné." Krimbas, "Ο Δαρβινισμός στην Ελλάδα", p. 90.

¹³ This book was translated into Greek in 1882 by Andreas P. Pharmacopoulos a student at the Medical Schools of Paris. According to Stamatis D. Valvis (the translator of Haeckel's studies), it was a mediocre translation, see *Προμηθεύς*, 2:12 (24th March 1891), p. 99.

¹⁴ See Simon Apostolides, *Αι Ψυχώσεις. Μελέται ιατρικά, κοινωνιολογικά και φιλοσοφικά περί φρενοπαθειών* (Psychoses. Medical, Sociological and Psychological Studies Concerning Mental Diseases). Athens, 1889, preface. In reaction to this book a natural scientist, Them. I Michalopoulos, argued that such views were only supported by the "dying materialism of the West"; see , *Προς τι αι Ψυχώσεις; ήτοι τα υλιστικά φιλοσοφήματα και αι φυσικά επιστήμαι* (Why the Psychoses? That is the Materialistic Philosophic Thoughts and the Natural Sciences). Athens, 1889, p. 7.

¹⁵ The translation of the study *Περί των Ελλήνων προδρόμων του Δαρβίνου* (About the Greek predecessors of Darwin) was made by Margaritis Evangelides, lecturer of the history of philosophy at the National University; see *Φιλοσοφικά Μελετήματα* (Philosophical Studies). Athens, 1886.

¹⁶ *Προμηθεύς*, 1:49(9th December 1890), p. 401.

¹⁷ Ioannis Skaltsounis, *Θρησκεία και Επιστήμη*, p. 5.

¹⁸ On the content ascribed to the term 'culture' in this article, see Clifford Geertz, "Thick Description: Towards an Interpretive Theory of Culture" in *The Interpretation of Cultures*. London: Fontana Press, 1993, pp.3 - 30. But since historical change is the basic characteristic of the phenomena which concern us here, the dangers which lurk in every exclusive interpretative approach of culture should not escape our attention. We must avoid both a conception of inertia, which does not explain historical change, and a conception of evolutionism. The action of historical agents develops with the abridgement of internal and external elements, which are in a dialogue with innovation, in order to construct a cultural identity. The object of our study is the historical construction of a cultural identity. See Bertrand Badie, in *Culture et Politique*. Paris: Editions Economica, 1993.

¹⁹ *Ανάπλασις*, 1:1, 2 (September and October 1887), p. 1.

²⁰ Ioannis Skaltsounis, *Θρησκεία και Επιστήμη*, p. 16.

²¹ The term "art" refers to technology as well as the fine arts: "Art applies its ideas of the intellect on matter, and it has the same relation to science that the hand has with the eye. Art gives us bread, clothes and housing. Art transforms the whole of nature to a servant of the human being; humanity acquires with art mines, plants, and animals; with art the three basic elements, fire, air, and water, are transformed to be servants of the human being". Art also "produces architects, sculptors and painters, soldiers, farmers, and industrialists", see *Ανάπλασις*, 1:1, 2(September and October 1887), pp. 3, 24 -25.

²² See "Επιστολή Ι. Σκαλτσούνη προς τους ιδρυτάς του εν Αθήναις Συλλόγου 'Η Ανάπλασις'", *Ανάπλασις*, 1:1, 2 (September and October 1887), p. 7.

²³ Clifford Geertz, "Religion as a Cultural System" in *The Interpretation of Cultures*, pp. 87-125.

²⁴ K. A. Dialismas, "Αι τρεις αναπλαστικά δυνάμεις" (The three regenerative powers), *Ανάπλασις*, 1:1, 2 (September and October 1887), p. 23.

²⁵ Ibid.

²⁶ The distinction between Protestantism and Catholicism is not absent, although it is not often encountered. As the professor of theology at the University of Athens Anastasios Diomedes Kyriakos insisted in his speech to the society "Parnassos" on the 16th January 1887, all those educated at the universities of the Protestant countries never became enemies of science. On the contrary, the Catholic clergy of all the Catholic countries remained active fighters of science and freedom. Thus, every educated and liberal man in these countries should consider Catholicism as "his natural enemy". "But why", Kyriakos wondered, "should this enmity be conveyed to Christianity and the Protestant and Orthodox countries, if the clergy of these countries do not participate in this modern Catholic crusade against science and freedom?" See A. Diomedes Kyriakos, *Μελέται* (Studies). Athens, 1887, pp. 225-227.

²⁷ Spiridon Sougras, *Βραχεία τινά περί πίστεως και επιστήμης* (Some Words about Faith and Science). Athens, 1885, p. 4.

²⁸ Spiridon Sougras, however noted that scientists "who liked novelty" had always the tendency to distance themselves from religion; see *ibid.*, p. 4.

²⁹ See the newspaper *Λόγος*, 24 November 1890; 1 December 1890; 17 November 1890; 15 December 1890; 5 January 1891; 12 January 1891; 16 February 1891, 2 March 1891; 16th March 1891; and 13 July 1891. See also the newspaper *Καιροί*, 12 December 1890; 13 December 1890; and 22 December 1890.

³⁰ *Προμηθεύς*, 1:51, 23 December 1890, pp. 416-8.

³¹ In one of his speeches in 1887 with the title "The causes for the religious indifference of our era", Kyriakos argued that the weakening of the moral power of modern society does not concern Greece, but the whole of Europe. "The same thoughts, tendencies and circumstances prevail everywhere. Every new idea and discovery, every new discovery is generalised like lightning." See Diomedes Kyriakos, *Μελέται*, p. 216. This argument concerning the easy and quick circulation of ideas in Europe is often used in order to argue that the moral crisis in Greece is imported.

³² *Ανάπλαισις*, 1:1, 2 (September and October 1887), p. 786.

³³ See Athanassios Petrides, "Περὶ Παραδείσου και Κολάσεως" (Concerning Paradise and Hell under a scientific view), *Παρνασσός*, 13a (1890), pp. 378-388.

³⁴ The relation between religion and science, as it was developed by the scientists of *Προμηθεύς*, was relevant to the question of national identity, since "we are Christians, because we cannot be otherwise, because we are Greeks." See *Προμηθεύς*, 1:51 (23 December 1890), p. 418. It is also important to note, that for the connection between nation and science, scientists did not always need the intervention of religion. By referring to ancient Greek science, Greek scientists at the beginning of the 20th century referred to a national scientific tradition and overshadowed the scientific revolution of modern times in order to give emphasis to the cognitive continuity between themselves and Aristotle. See Theodore Kritikos, "The question of the national scientific tradition and Greek scientists of the beginning of the 20th century," *Τα Ιστορικά*, 22 (1995), pp. 119-140.

³⁵ For a critique of the sciences in Greece, see "Αι φυσικαὶ επιστήμαι ἐν Ἑλλάδι" (The natural sciences in Greece), *Προμηθεύς*, 2:19 (12th May 1891), p. 159 and "Αι φυσικαὶ επιστήμαι ὡς ἐγκυκλοπαιδικὰ μαθήματα", *Προμηθεύς*, 2:29-30 (21 July 1891), p. 236.

³⁶ See Apostolos Makrakis, *Επιστημονικός έλεγχος του ζωολόγου Ερνέστου Χαίκελ διδασκάλου του Καρλ Μαρξ και των ἐν Ἑλλάδι μαθητῶν αὐτοῦ* (Μαρξισμός = Κομμουνισμός) [Scientific Control of the Zoologist Ernest Haeckel Teacher of Karl Marx and his Students in Greece]. Athens, 1963, p. 5. These are texts which refer to the juxtaposition between Apostolos Makrakis and the scientists of Prometheus. This republication implies a possible connection between the evolutionary ideas in Greece in the late nineteenth century and Socialism, a connection that was well-established in other European countries. See also Dionysius Latas, *Πραγματεία περὶ των κατὰ τους χρόνους ἡμῶν αθεϊστικῶν ιδεῶν*. However, this connection between the evolutionary and socialist ideas in late nineteenth century Greece did not seem to develop. See Panayiotis Noutsos (ed.), *Η σοσιαλιστική σκέψη στην Ελλάδα* (The Socialistic Thought in Greece). Athens: Gnosis Publications, 1990, vol 1, p. 104.

³⁷ Makrakis, *Επιστημονικός έλεγχος του ζωολόγου Ερνέστου Χαίκελ*, pp. 70-73.

³⁸ In order to justify his title Apostolos Makrakis argued that "a general law prevails among people that each bears the title of the science which he has mastered." See, Apostolos Makrakis, *Η φιλοσοφία και αι φιλοσοφικαί επιστήμαι* (Philosophy and Philosophical Studies). Athens, 1876, vol. 1, p. xvi.

³⁹ *Ibid.*, see mainly pp. 31-32, 119, 279-282, 479. See also Apostolos Makrakis, *Αι τρεις φιλοσοφικαί πραγματεΐαι* (The Three Philosophical Treatises). Athens, 1867, p. 50.

⁴⁰ Zikos Rossis, *Λόγος κατ' ἐντολήν της Ακαδημαϊκής Συγκλήτου* (Speech at the order of the Senate of the Academy) delivered on 30 January 1876, Athens, 1876, p. 15.

⁴¹ *Ibid.*, p. 28.

⁴² See A. Diomedes Kyriakos, *Μελέται*, pp. 309 and 313.

⁴³ In 1889, he argued that science concerned all Greeks, "free and enslaved alike". See Kyriakos, *Λόγος εις το υπέρ των ευεργετών του Πανεπιστημίου μνημόσυνον* (A Speech for the Memorial of the Benefactors of the University). Athens, 1889, p. 13.

⁴⁴ Ibid., A. Diomedes Kyriakos, *Μελέται*, p. 315.

⁴⁵ As John Hedley Brooke argues "comparative studies of the reception of Darwinism in different European cultures indicate that the popularisation of evolutionary science was rarely, if ever, a straightforward process in which the science of an elite simply diffused downwards to a mass audience. Darwin's science was actively seised. It was vulgarised in the promotion of particular political goals, and these in turn, often reflected local circumstances." See John Hedley Brooke, *Science and Religion*. Cambridge: Cambridge U.P., 1991, p. 302.

⁴⁶ A. Constantinides, for example, who taught physics and chemistry in high schools of Athens and attempted through various publications to popularise the natural sciences, stressed in 1884 that it was necessary in an era in which railway was annihilating long distances for sciences to become accessible to everybody; see A. Constantinides, *Η Επιστήμη* (The Science). Athens, 1884. The efforts to create at the University of Athens a department of physics and mathematics that would be autonomous from the department of philosophy became systematic at the end of the nineteenth century. This department was founded in 1904. See Theodore Kritikos, *Η πρόσληψη της επιστημονικής σκέψης στην Ελλάδα: Η φυσική μέσα από πρόσωπα θεσμούς και ιδέες (1900-1930)* [The Reception of Scientific Thought in Greece : Physics out of Persons, Institutions and Ideas (1900 - 1930)]. Athens: Papazisis Publications, 1995.

⁴⁷ As it was argued, "the independence of morality is the decadence of morality" and "the independence of morality is atheism in practice." See Dionysius Latas, *Πραγματεία περί των κατά τους χρόνους ημών αθεϊστικών ιδεών*, p. 87.

⁴⁸ See Anastassios Chrystomanos, "Η ηθική προάγεται υπό των φυσικών επιστημών" (Ethics is promoted by natural sciences, *Παρνασσός*, 1 (1877), pp. 50 - 57.

