

ISLAM AND SCIENCE:
A FALSE STATEMENT OF THE PROBLEM

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Stating the problem under discussion as “Islam and Science” is false because this formulation implies that there is such a thing as a reified and ahistorical and hence immutable “Islam” that is responsible for advancing or impeding scientific activity, both past and present. In fact, Islam, like all other religions, is the specific ideology of a particular, historically determined society (i.e., Islam in Baghdad in the 830s, in Damascus in 1300, in Cairo around 1000, etc.) and has itself no historical agency; what that particular society accomplishes in the way of science wholly depends on who is using that ideology (if it is being used) and to what ends. The analysis of scientific activity in Islamic societies, therefore, can proceed only from the investigation of the social and political factors at play in each particular case. Injecting the notion of “Islam” into these discussions merely obfuscates the issue and confuses students, distracting them from historical analysis and political action.

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The problem that this journal is established to discuss with the hope that eventually some solutions may emerge, is stated in terms which themselves are part of the problem. The expression “Islam and Science” contains two terms, each of which, unless there are further qualifications—and there usually aren’t—is taken to represent a self-contained and essential entity, and the implied question (made explicit in the editor’s

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guideline statement to the author of these remarks) is that of their compatibility and mutual relation both now and in history. It is as if the problem were, to put it in plain terms, if Islam was responsible for the glory of medieval Islamic civilization and the emergence of hundreds of scientists who taught not only Muslims but also Europeans, then why is the same Islam not creating the same circumstances of scientific efflorescence today (or, to put the second question negatively, why is Islam responsible for the decay and scientific backwardness that one sees today in the Islamic world). This understanding and formulation of the problem are completely false. They are false because “Islam” was no more responsible for the achievements of the medieval scientists than it is responsible for the present decay. There are two basic reasons for this.

First, there is no such thing as a monolithic, essential “Islam” which can be seen as the historical agent of these developments both in history and the present. This notion of “Islam” as an irreducible entity that can be precisely defined and taken to be the agent of all change in Muslim societies is basically an idealist orientalist notion that has no historical validity either in representing historical reality or in explaining history.¹ At the same time, however, it also has its counterpart in the Muslim notion of an ideal “Islam” as existing at the time of the Prophet which is taken to be normative. A kind of Islam at the time of the Prophet certainly did exist, but it was neither monolithic nor normative: it was in constant flux as it was developing throughout the Prophet’s career, something which was indirectly acknowledged by the early Muslim scholars who, first, categorized and discriminated the Qur’ānic surahs into Makkan and Madinan periods, and second, established prior and posterior stages in the development of Qur’ānic and hence Muslim dogma through their use of *asbāb al-nuzūl* criticism and especially that of *al-jarḥ wa’l-ta’dīl*. If, therefore, one wishes to adopt as normative an idealized “Islam” during the time of the Prophet one would have to decide which year’s—or even months’—version in the life of the Prophet that “Islam”. And if that is taken as normative, it would invalidate all later and positive developments in Islamic dogma which allowed it to adapt to changing circumstances. There is, then, no historical essential “Islam” either in the orientalist view

1. For a broader statement of this position with pertinent references see Gutas, Dimitri, “Certainty, Doubt, Error: Comments on the Epistemological Foundations of Medieval Arabic Science” in *Early Science and Medicine* vol. 7 (2002) pp. 277-8.

or that of Muslims who would locate it in the time of the Prophet. There are many different understandings of Islam, each identified by its historical time and locality, and with multiple contents, not always in harmony with each other.

There is nothing novel about such a formulation; it applies to all religions, and it is time for students of the Muslim world to take it seriously. To take as example the first two centuries of ‘Abbāsīd rule in Baghdad when the Graeco-Arabic translation movement was in full force, the great scientific efflorescence that was seen during this period was quite unrelated to anybody’s understanding of Islam—or, to put it differently, there is no discernible evidence in the sources that the set of beliefs adhered to by the ‘Abbāsīd elite at that time and place, and which comprised Islam in their view, was in any way instrumental in their promotion of scientific and philosophical activity:² religion was quite neutral in these historical developments. The same kind of neutrality of Islam as a religion vis-à-vis scientific developments has been also observed for later centuries and different localities in the Islamic world.³

Parenthetically, I would like to add an argument here from the Islamic tradition itself. Muslim scholars in the third and fourth centuries of the Hijra well understood the multiformity of historical Islam and the impossibility—even inadvisability—of either developing an essentialist or Muslim idealist concept of “Islam” or trying to define “orthodoxy.” Nothing proves this better than their adoption of different sets of Qur’ānic readings (*qirā’āt*) and of different legal schools (*madhāhib*) as normative and equally “orthodox.” They did this for both epistemological and social reasons: they knew that it was impossible to verify the various traditions about these matters which all came from extremely respected and venerated teachers, and they understood perfectly well the chaos that would ensue if they tried to impugn the authority of any one of them and impose only one faction’s understanding of Islam as normative.⁴ This flexibility in self-definition by Muslims because of historical realities was

2. Gutas, Dimitri (1998), *Greek Thought, Arabic Culture*, Routledge, London, pp. 191-2.

3. Cf. Dallal, Ahmad, “Science, Medicine and Technology” in Esposito, John (ed. 1999), *The Oxford History of Islam*, Oxford University Press, London and New York, pp. 155-213.

4. Cf. Gutas, D., “Certainty, Doubt, Error,” pp. 286-7.

well ingrained in medieval Islam and it should form the object of serious study by modern researchers.

Second, Islam, as a religion, and at whatever historical moment it is taken, is a specific ideology of a particular, historically determined society. As such, like all other social ideologies that command adherence and respect by the majority of the population because of their emotive content, it is inert in itself and has no historical agency but depends completely on who is using it and to what ends. In other words, like all ideologies, it is an instrument that can cut both ways, good and bad, and as such it lends itself to manipulation by the managers of society who may use it for whatever purposes their interest dictates. Thus, even if one takes a historically circumscribed definition of Islam as the set of beliefs of a Muslim population at a particular time and a particular place, even this Islam has no historical agency in itself but has to be seen in the context of the use to which it was put by those who wielded power at that time and place. To take another example from the early ‘Abbāsīd period, a most crucial period for the development of the sciences in the Islamic world, we can consider the case of the caliph al-Ma’mūn who, in need of legitimation for his rule after a fratricidal civil war, saw fit to make use of religion for this purpose and presented himself as the champion of Islam in order to concentrate power in his hands. This policy took many forms (the institution of the *miḥna* being the most famous one), including intensified warfare against the Christian Byzantines. In the propaganda campaigns initiated in his time, the Byzantines were portrayed as deserving of Muslim attacks not only because they were “infidels” but also because they were culturally inferior to Muslims who—in contradistinction to the Byzantines—appreciated ancient Greek science and had such books translated into Arabic.⁵ The circles around al-Ma’mūn who were responsible for these campaigns thus used religion for the purposes both of anti-Byzantine propaganda and of supporting al-Ma’mūn’s scientific agenda, not that “Islam” as such had anything to do with the scientific activities themselves. Or let us take another well-known example, the attitude of various legal scholars toward the study of logic. There is the famous fatwā by the Shāfi‘ī Ibn al-Ṣalāḥ (d. 643/1245) who considered it unlawful,⁶ that of the equally Shāfi‘ī Taqī al-Dīn as-Subkī (d. 756/1355)

5. Gutas, Dimitri (1998), pp. 83-95.

6. Text and translation by Goldziher, I. (1915), “Stellung der alten islamischen Orthodoxie zu den antiken Wissenschaften” in (1916), *Abhandlungen der*

who considered it neutral,⁷ and what amounts to a fatwā, the Mālikī Ibn Rushd's (d. 595/1198) *Faṣl al-maqāl*, in which it is deemed to be lawful.⁸ Theologians also took divergent views: The Zāhirī Ibn Ḥazm (d. 456/1064) was of the opinion that logic alone should be used in the religious sciences to the exclusion of the lesser and traditional methods of argumentation, the Shāfi'ī al-Ghazālī (d. 505/1111) allowed the application of both logic and traditional methods to the study of religious texts, while the Ḥanbalī Ibn Taymiyya (d. 728/1328) completely rejected the use of logic.⁹ What this evidence indicates is not that "Islam" is for or against science and its method, logic (if it did, which scholar's version of "Islam" would one take as normative?), but that religious arguments can be found for any position.¹⁰ The historically sound question to be asked of this evidence, therefore, is to analyze the social and ideological context of each scholar, their motivations and the purposes for which they supported the positions they did: whose interests they were promoting and why. In other words, the problem is not religious or confessional, but historical, political and social; and once "Islam" as a heuristic and historically productive category is removed—once, that is, the question ceases to be "Islam and Science" but rather "the sciences in Islamic societies"—then research can proceed along historical lines without the distorting effects of the assumption of an essentialized and reified "Islam."

That the problem is political and social becomes manifest when one looks at the contemporary situation of the Islamic world. One of the questions the editors of this new journal wished to be addressed was how

Königlich Preussischen Akademie der Wissenschaften (Philos.-Hist. Klasse, 1915, Nr. 8), Berlin, pp. 35-9; English translation in Swartz, M.L. (1981), *Studies on Islam*, Oxford University Press, New York and Oxford, pp. 205-6.

7. Translation in Rosenthal, F. (1975), *The Classical Heritage in Islam*, University of California Press, Berkeley and Los Angeles, pp. 81-2.

8. Hourani, G. F. (1967), *Averroes on the Harmony of Religion and Philosophy*, Luzac & Co., London.

9. See Brunschvig, R. (1971), "Pour ou contre la logique grecque chez les théologiens-juristes de l'Islam: Ibn Ḥazm, al-Ghazālī, Ibn Taymiyya" in *Convegno Internazionale 9-15 Aprile 1969*, Rome, pp. 185-209; reprinted in his (1976), *Études d'Islamologie*, Maisonneuve et Larose, Paris, pp. 303-27.

10. This applies, again, to all religions. One need only think of the good and evil that has been committed in the name of Christianity and Judaism, both in history and in the present.

the Muslim world could reinvigorate its intellectual and scientific tradition. But asking this question in the context of a discussion of “Islam and Science” is irrelevant. How can modern scientific research be conducted when there is no access, for all the young people aspiring to become scientists, to information and financial means? And in which state in the Islamic world is there unfettered access to information of all sorts, when the various regimes cling to power through restrictions of free speech and constant surveillance of citizens and the harassment (and worse) of dissidents? To put it plainly by highlighting one aspect of the problem: in which modern state of the Islamic world is there a research library of the caliber of a major American or northern European university library, with open stacks and borrowing privileges? It is instructive to compare this situation in the modern Islamic world with that in the medieval, when there was a plethora of libraries with holdings in all the arts and sciences, especially in Baghdad;¹¹ but even a provincial prince’s library, that of the Samanids in Bukhara, where Ibn Sīnā worked, contained “books whose very names are unknown to many and which I [Ibn Sīnā] had never seen before nor have I seen since.”¹² Would there have been an Ibn Sīnā, a philosopher and scientist of his stature, without the Samanid library? If then free access to a research library is a necessary (though clearly not sufficient) condition for scientific work, what does “Islam” have to do with the existence of libraries or not, in the various Muslim societies, past and present? And when young Muslim students leave their countries, study in Europe or North America, and become scientists of renown, is it “Islam” that made them scientists—or conversely, is it “Islam” that kept their less fortunate brothers and sisters who could not leave home from becoming scientists? The current scientific backwardness of the Islamic world, just like its medieval superiority, is thus clearly a political and social issue, and those who wish to study the questions this journal is setting out to answer would do well to look at the political and social structures of Islamic societies and states, past and present. Injecting the notion of “Islam” into these discussions merely obfuscates the issue and confuses students, distracting them from historical analysis and political action.

11. See article “Maktaba” in the *Encyclopaedia of Islam* for an overview and references.

12. Gutas, Dimitri (1988), *Avicenna and the Aristotelian Tradition*, Brill, Leiden, p. 29.