

SCIENCE AND TRADITIONAL VALUES IN ISLAMIC SOCIETY

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People facing a national catastrophe or in a state of decay are usually conservative. They cling to what they have inherited from the fathers, and regard their preservation of it intact as equivalent to their own survival. In Islamic history, this predilection for survival created for itself an ideological instrument with two edges. On the one hand, it is the positive value of *taqlīd* or doing what the fathers have done, and, on the other, it is the negative value of *bidʿah* or innovation. The first is praiseworthy and guarantees salvation; the second is blameworthy and brings damnation. Every Muslim is taught that the road to felicity is the path which the *ummah*, or universal community of Islam, has followed in the past and is following: that outside the *ijmāʿ* or consensus of the community there is error, peril, misguidance, and certain death; and every Muslim child is exhorted to honor not only the faith of the fathers but their definitions as well—to avoid every deviation from their practice. The conservatives justify their thesis with abundant quotations from the Qurʾān, the Ḥadīth, and other Islamic literature.¹ Normative or scriptural Islam certainly demands of the Muslim loyalty to the faith of the fathers; and it counsels against innovations. But to say merely this is to oversimplify—in fact, to misunderstand. For Islam stresses loyalty to the faith in contrast to *riddah* or apostasy, that is, exit from the faith altogether and the rejoining of one's older faith.² The contrast then is not with heresy, which is deviation not so much from the faith as from the definitions of the faith without separation from the faith or its community.³ Islam has hardly known any "heresies" precisely because the religious and legal requirements of Islamicity have always been kept at a minimum.⁴ To use this as a plea for loyalty to the definitions of the theologians is to twist the original meaning of the Qurʾānic injunction.

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There is yet another side to this matter, where *taqlīd* is positively condemned by scriptural Islam. The lethargy of the pre-Islamic Meccans in rising to the new faith was a hindrance to the spread of Islam and was, therefore, condemned.⁵ To say of anyone that he is a blind follower of tradition, that he does not weigh his spiritual inheritance against new knowledge and newly discovered truth—in short, to impute to him stupidity and folly—is the strongest spiritual rebuke. “They do not reason,” “they do not consider,” “they do not think,” and the like, which can be found on every page of the Qurʾān, express this castigation of *taqlīd*. If the modernist were to assume the same prerogative of extrapolation as his conservative colleague, he would argue that the Qurʾānic condemnation of *taqlīd* touches all kinds of conservatism—including Muslim conservatism; the desideratum being that any faith, and pre-eminently Islam, should be held by conviction and not convention,⁶ that conviction is always personal and requires constant renewal.⁷

By far the greatest majority of contemporary Muslims adhere to *taqlīd*; and *taqlīd* is practically all they hear from their mullahs, ʿulamāʾ, Ṣūfī shaykhs, or pīrs. They have as yet hardly heard the modernist’s exposure of *taqlīd*’s un-Islamicity. Islamic modernism is to this day the concern of the elite in Muslim societies.⁸ The masses, being largely illiterate, have not yet confronted Islamic modernist thought, and continue to be spiritually dominated by leaders brought up under a *taqlīd*-ridden system of education.

THE WORLD VIEW OF TAQLĪD

A. *In the Realm of Knowledge.* Islam does claim that the Qurʾān is the repository of authoritative knowledge.⁹ On this point it is far more explicit than the Bible. The Qurʾān claims for itself the status of a book wholly revealed by God; and the tradition has interpreted this claim as meaning that every idea, sentence, word, letter, and vowel declension in it is divine.¹⁰ Moreover, the Qurʾān called itself Muḥammad’s only miracle, the only extraordinary proof of his prophethood,¹¹ and challenged all and everyone to produce but a few verses like its own.¹² The enemies of Muḥammad, especially those of his compatriots who commanded far greater mastery of the Arabic language than he did, tried and were humiliated.¹³ In truth, as far as at least one aspect of the Qurʾān, namely, the literary aesthetic aspect, is concerned, the Qurʾān stands in the Arabic language absolutely without parallel.¹⁴ It is itself the embodiment of the very standards of excellence. As far as the other aspects are concerned, that is, the truth value of its contents, the Qurʾān is equally unassailable because it makes no descriptive statement of nature or history which critical investigation can possibly find to be false or can question meaningfully.

It should be recalled here that the Bible's authority was questioned in the modern period because archeology, ancient history, astronomy, and the natural sciences established facts which were at variance with biblical claims. Objective study of the text exposed errors of simple arithmetic and Near Eastern geography. Finally, literary and textual analysis exposed the fact that the Bible is a collection of many books—a true library—written centuries apart, edited and re-edited, separated and regrouped, altered and corrected, with the result that the claims that it was the verbatim dictation of God, the writing of Moses, or that the prophetic books were the writings of the prophets themselves, were all utterly squashed.¹⁵ No such travails can happen to the Qurʾānic text because the Qurʾān makes no claims or assertions such as the descriptive sciences may question. On the one hand, its ethical or normative statements are safe *because* they are normative. On the other, its descriptive statements are safe because they belong to metaphysics and transcendental knowledge which science does not question *ex hypothesi*. The origin of space-time and of man beyond space or time, the claim of *creatio ex nihilo*, are not problems of science, properly speaking. Critical philosophy taught us that, whereas teleological explanations of phenomena can never be established, they can never be refuted—precisely because of their reference to a realm where science does not go, again by definition.¹⁶ Islam also makes a number of allusions to ancient history, such as Noah and the deluge, Abraham and the idols of Ur. But these are given, not as history (they fall in the realm of legend rather than in that of history), but as religion and morality, that is, as vehicles for a religious, moral, or exhortative message.

The questions of revelation versus reason and of scriptural authority versus science do not arise in Islam in the same sense they did in the case of the Bible. For, the conflict is not between science and the Qurʾān but between science and the Qurʾān's exegetes and interpreters. These have made all kinds of irrational and unscientific exegeses, of esoteric eisegeses. They, and not the Qurʾān, are the strongholds of *taqlīd* in the realm of knowledge. Despite all the honor in which their works are held, they are doomed to have no value but that of historical relevance. A great part of them is valuable only to the historian of the period in which they were written, who wishes to consult them as mirrors of the thinking of their day. Fortunately, such works in Islam are not holy, and their refutation by liberal and scientific thought has been in progress for over a century and a half. There is hardly a college graduate throughout the Muslim world who does not wish for this critical work to continue and for the hold of these authorities on Muslim minds to break away and disappear. Indeed, each Muslim is enjoined to search his scripture and understand it for himself as

Islam has no church and no *magisterium* to pronounce ex cathedra on the meaning of scripture. On this score, Islam is more Lutheran than Luther because its "*sola scriptura*" is enjoined absolutely without reservations. It is emphatic in its repudiation of the good which is not the result of conscious and deliberate willing and in declaring irrationalism and disbelief as equivalent and convertible.¹⁷ Revelation, in Islam, is above any reasoning, but not above reason. Neither is reason above revelation. Just like their opposites, they are equivalent and convertible.¹⁸ Revelation is not necessary, but an act of mercy, a gratuitous gift from heaven for correcting man's individual reasoning.¹⁹ But natural reason is perfectly capable by itself of arriving unaided at the truths of revelation. This is the moral of the story of Ḥayy ibn Yaqzān in terms of which Islamic thought had cast its essence at its highest moments of critical self-awareness.²⁰ Underlying this position is the assumption of the unity of truth.²¹ The reality of the cosmos, Islam holds, cannot be any different from what the Creator who made it has reported about it.²² To study the cosmos is to study revelation, and no conflict or difference between them can, by definition, be final. A second, third, and *n*th critical look must expose the underlying unity.

To sum up, we may say that, in the realm of knowledge, *taqlīd*, which consists in acquiescence to authorities other than revelation and reason, runs counter to normative Islam. The Muslim modernists realize this and that the task of repudiation of these authorities and recapturing of the freedom to research and to examine is gaining momentum with the spread of education and that, like the latter, its victory is certain.

B. In the Realm of Nature. For the Muslim man on the street, the world is composed of natural elements which obey certain laws, as well as of supernatural dependencies which often strike into the world of nature and bring about changes designed to satisfy unknown ends. Besides God, at whose command everything in nature moves, there are angels and *jinn* who can act efficiently in nature whether for a good or bad cause. Moreover, the common Muslim believes in the so-called *awliyā*³ or saints, whom God had for good reason endowed with the supernatural power to overrule the workings of nature at will and to perform *karāmāt* or "little miracles." Finally, the common Muslim believes that there are instruments and mechanisms (such as the talismans—Arabic: *ṭilasm*) by means of which any proper administrator of them can effect breaches in the laws of nature to suit his purposes.²³

The Muslim gets his notions of angels and *jinn* from the Qurʾān.²⁴ But he chooses to forget two Qurʾānic principles: First, that the Qurʾān limits the activities of angels and *jinn* to such as God alone permits, thus linking them inextricably to the divine dependency itself;²⁵ and, second, that such

divine initiative is claimed as a general principle of nature, never as interference in any particular working thereof, in any single nexus of cause and effect, or as a breach of such nexus.²⁶ The saints and the miracles he gets from a 1,000-year-old legacy of Ṣūfism, or Islamic mysticism, which taught this doctrine as a corollary of the saint's mystical union with almighty divinity.²⁷ The Ṣūfīs overlook the essential disparity of God and man taught by the Qur'ān,²⁸ as well as the Qur'ān's denial of miracles in general and of any miracles of Muḥammad except his connection with the Qur'ān which, as we have seen, is not at all attributed to him.²⁹ Finally, the Muslim inherits the instruments of magic from the tradition of esotericism and alchemy, which in the Middle Ages fused with the ancient religions of the Near East to constitute the mystical, gnostic popular religion of the masses.³⁰

The world of nature is, therefore, for the Muslim a mixture of the workings of nature and supernature. He interrupts his processes of research and knowing by injecting supernatural causation into the bargain which he finds satisfactory and obviating further research. As long as he does so, scientific research is impossible.

C. In the Realm of Human Action. In the view of *taqlīd*, the supernatural powers which interfere in nature and, hence, equally interfere in human life are, by definition, beyond impediment or frustration. What they decree will necessarily happen; and, in fact, all that happens does so necessarily because it is predetermined so to do by them. The only attitude consonant with this is passive acquiescence and surrender to the flow of events. Graver still, such flow is neither knowable nor predictable; for its necessity is merely the invincibility of an arbitrary agency. Kismet, or the silent acquiescence to the *fait accompli*, is only the ethical side of the gnoseological principle we encountered earlier. This notwithstanding, the common Muslim has found a way to influence and even determine supernatural power when it concerns his person, thus seeking a forged solution to a forged problem. Forgetting that Islam attributes transcendental knowledge to God exclusively,³¹ the Muslim implores, listens to, believes without question—and in the process is milked of his land, his wheat grain, his little wealth, his wife's jewelry, indeed even of his freedom and future earnings, by the charlatan magician esoteric Ṣūfī shaykh or pīr who has arrogated to himself the job of spiritual mentor.³²

Thus, the attitude requisite for technology—that is, for making use of scientific knowledge for subjugating and mastering nature, if such existed or were presented as a gift from the outside—is absent in popular Islam. Instead of the will to translate scientific knowledge into technology and production of goods and services, there is a blind rush to the shortcuts of

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magical manipulation. In popular Islam, therefore, nothing is remembered of the Islamic ethos, of man voluntarily assuming the *amānah* or divine trust first offered by God to heaven and angels and from which they shied away with panic and terror;³³ of his surpassing the angels by his involvement in this *amānah* to transform the world within and without into the likeness of the divine *sunmah* or pattern revealed for this purpose; of his inevitable responsibility as a Muslim for Islamic history which began as a will to a space-time kneaded and cut after the divine pattern. Nothing has become, through the centuries, a truer opposite of Islamic ethics than the practical ethic of the common Muslim.

MODERN ATTITUDES TO SCIENCE

For many centuries, the foregoing description has been true of popular Islam; and, on this account, the Muslim world has hardly known any scientific progress since the close of the twelfth century. When modern science first came to the Muslim world with the Sorbonne professors and experts of the Académie Française who accompanied Napoleon to Egypt, the Muslims reacted in a manner consonant with this world view, calling science the work of the devil.³⁴ As they lost ground to the enemy, and the West encroached more and more upon their land and resources, they began to realize that science is the greater power and that its nature and methods run quite opposite to their traditional view of the world.

From this tragic confrontation, two attitudes to science emerged, one antagonistic to science and continuing the tradition of *taqlīd*, the other friendly to science and seeking a new relationship between science and Islam.

Based on the belief that science is all the work of the devil, whose success cannot but be ephemeral, the first view counselled condemnation of science and patient resistance to its victories. Some enthusiasts even attempted to refute modern science and deny its accomplishments. Others, in greater despair, identified the works of science as heralds of the end of the world. Naturally, the critical empiricism of science was detrimental to their world view; but theirs was a cause doomed. The triumph of Western power was equally the triumph of science; and the more this science-based power conquered, the more ground this world view began to lose. Even the master guardians of *taqlīd*, namely, the Azhar hierarchy in Cairo, had but to lay their eyes on the libraries, laboratories, chemical and military factories, and workshops which the Napoleonic expedition had brought to Egypt, to desire science in good Islamic conscience—indeed, wishfully to predict that “its very successes will soon be the Muslims’ own, changing the very face of Egypt.”³⁵ Detrimental to science as its attitude may be,

taqlīd has absolutely no chance of survival as scientific knowledge spreads through education, whether in school or through audio-visual aids, such as the cinema and the transistor radio.³⁶

The second attitude approved of science and blessed its pursuit. Its adherents, however, did not all maintain the same relation to Islam. The secularists, whose case was intellectually the easiest and most barren, endorsed the unscrupulous pursuit of science as a matter of spiteful liberation, not only from the superstitions of popular Islam, but from Islam altogether. They hoped—erroneously, of course—that science would elbow Islam out of existence because of an intrinsic opposition between Islam and the scientific method. This view had few adherents, mostly non-Muslims, but eloquent advocates.³⁷ Most of them were driven to this position by an inherited enmity to the political dominion of Islam. Yesterday they were the allies of colonialists and missionaries. Nowadays they make common cause with the forces of nationalism, and a number of them are probably the allies of communism. Nonetheless, their view had many practitioners who pursued science and modernized with furious resolution and boldness while keeping their mouths shut regarding the relation to religion. The greatest of them were Muḥammad ʿAlī and his descendants, the Khedives of Egypt, on the practical level, and Jurjī Zaydān and the Dār al Hilāl school of Egyptian writers, on the literary.³⁸

While he may rest assured that science will triumph in Islamic society, it is equally certain that the secularist will never see the fulfilment of his wish for the dissipation of Islam. The capacity to adapt itself to new challenges and to absorb and digest them is innate to Islam.³⁹ Furthermore, Islamic modernism has identified itself, not without reason, with the progressive forces which count on science and research to secure a brighter future. In fact, in modern Islamic terminology, progress, science, well-being, power, liberty, and dignity have become equivalent to, and convertible with, piety, the will of God, and the will to a space-time in which “God’s word is the higher.”⁴⁰ It is unlikely, therefore, that the order of the future in Muslim society will be anything but Islamic.

TWO SCHOOLS OF ISLAMIC MODERNISM

However, it is misleading to assume that this favorable attitude to science on the part of Islamic modernism is everywhere uniform and the same. Within this camp, two diverse schools are clearly discernible. Both schools agree on the desirability—nay, necessity—of both science and Islam; and the problem on which they divide is the kind of approving relation Islam has or should have with science. For lack of a better name, let us call the first the “One-Book School” and the second the “Two-Book School.”

The One-Book School asserts that Islam, and hence the Qurʾān, is the fountainhead of all knowledge, human or divine, scientific or religious, of this world or of the next. The scientific knowledge of the world as well as the achievements of technology are all there, in the Qurʾān, if not directly expressed, then indirectly through its figures of speech and other allusions. Whether in his laboratory, in the sky, or under the earth, the scientist, with all his discoveries, is only writing footnotes to the Holy Book, and the relation of such footnotes to the principal text is that of an instance to the general scientific principle in the case of a theoretical discovery, and that of a concretization of an idea in the case of a technological invention. Thus, by all kinds of exegetical—nay, eisegetical—acrobatics, the followers of the One-Book theory found in the Qurʾān the theories of heliocentricity, circulation of the blood, evolution, aviation, microbes, submarine vessels, space travel, and will probably find all the science and technology of the future.

Obviously, this school was overenthusiastic for science and overhasty in its attempt to reconcile it with Islam. Whether in the Arab world or in the Indian subcontinent, this school has indeed helped reinforce the forces of progress and awakening; but on the intellectual level, it produced nothing but apologetics. Indeed, the suspicion cannot be ruled out that, in its estimation, science is prior to Islam; for it is science that really furnishes the norm of measurement when Islam is put to the test. Sir Sayyid Ahmad Khan's classical statement, "Therefore, in this age . . . a modern *ʿilm al kalām* [philosophical theology] is necessary by which we may either demonstrate the principles of modern science to be erroneous or else show that the principles of Islam are not opposed to them,"⁴¹ betrays this tacit assumption of priority. "The principles of Islam" are thus subjected to the test of "conformity with nature" or science; and, though the finding is that "when rightly understood . . . the Qurʾān and Islam . . . do stand this test and are therefore in harmony with science and progress," they neither constitute an independent realm, nor furnish the norms of judgment.⁴² Actually, this school is under the predicament of having little notion of what Islam is about besides the observance of ritual and some customs and the overt expression of one's Muslimness through self-declaration as such. This deserves—and does so rightly—the absurd appellation "Islamism" which has often been attributed to the school, for it is more concerned with the consciousness of being an adherent of Islam than with realizing the duties and values of Islam, of being Muslim.⁴³ Its so-called harmony with science and the principles of nature, therefore, cannot but be superficial; for it is not a harmony with the inner principles and values of Islam but with the will thereto. In actual fact, it is a will to modernity, pure and

simple. Had modernity been one where the vogue or supreme desideratum were not science but something else, the One-Book theory would probably have sought and found harmony with that thing, whatever it might be. Despite the charity of admitting that its kind of apologetics may have served a good purpose, it must be recognized that traditional values in Islamic society would be in a sorry plight if this were the only movement on which to depend.

The greater weight in Muslim modernism belongs to the Two-Book theory. Deriving its inspiration from the core of the Islamic tradition, and making good use of the best which that tradition has produced, the Two-Book theory holds the unity of God inseparable from the unity of truth, but recognizes two open ways to it: the way of revelation and that of natural science. Revelation, it claims, does inform us about reality in a direct and intuitive way. Though at times the pursuit of truth by means of revelation has followed methods which can hardly be called rational, this theory holds that revelation in Islam has never alienated itself entirely from reason and has never lost touch with the critical stand. Corroborating this claim is the significant fact that no Muslim has ever written a "dogmatic theology" in the full sense of the term "dogmatic." Despite this precaution of revelation vis-à-vis dogmatism, the Two-Book theory holds that there is yet another way to reality—the way of natural science—which must be rational enough to satisfy the most fastidious critic. The world of nature, it asserts, is an open book for those who have the intellectual sophistication to read; and what they read therein by means of the empirical method is reality, certainly a more or less perfect measure of it, yet the same reality as revelation had informed us about in its intuitive way. Man's understanding of either will never be complete; but because they both pertain to the same reality, they are, in final analysis, subject to the same laws of intelligibility and, hence, equally critical and rational.

The Two-Book School welcomes science as an avenue to the single reality which is God's creation and, hence, to the single truth which is God inasmuch as he may become the object of human knowledge through his creation. It regards science as integral to Islam and equivalent to piety.⁴⁴ It does not conceive of the work of the scientist as an amoral, areligious quest of an autonomous reality independent of God (the Hellenic or any other view in which God is a *deus otiosus*), or of a reality which is the only one that is (the materialist view). Nor does it conceive of science as a pursuit of mastery over the forces of nature, pure and simple, rather than the discovery of truth (the utilitarian, relativist view). It regards the Muslim scientist as seeking, above all, to understand nature as God's creation; and his putting its forces at the service of man as a by-product of such

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understanding, a privilege granted him by the Creator of these forces. As a Muslim, the scientist can never be dictated to by nature and the technologist can never be dominated by his inventions. Above nature stands God; and above the machine stands the Muslim's God-granted privilege of usufruct of the forces of nature. This connection with divinity, with God's will or values, spiritualizes his quest and animates it. It even promises him greater achievement in the fields of science and technology than has so far been achieved anywhere because, in addition to all the promptings which faith in causality furnishes, his soul is moved by motives of an entirely different order. His research must at least satisfy the demands of causality; but this for him is only the beginning. Beyond, his soul yearns for values which demand the transformation of creation itself, the theater and matter of his destiny.

The most illustrious teachers of the Two-Book theory are Muḥammad ʿAbduh in the Arab world and Muḥammad Iqbāl⁴⁵ in the Indian subcontinent.⁴⁶ Their thoughts diverge on many points and nothing could be more different than their backgrounds and education. However, in their attitudes to nature, to the sciences of nature, and to the place of scientific knowledge in the Islamic order of things, their minds converge and unite under the aegis of their common faith.

CONCLUSION

We may say that there are two Islams in the world today: The first is the Islam of the Qurʾān and the *sunnah* (example) of the Prophet insofar as it can be critically ascertained; the second is the Islam of the masses of Muslims, their common popular beliefs, and customs. The first Islam is scriptural and normative; the second is descriptive and is the object of empirical sociology. The first is the divine pattern which God has revealed and into the likeness of which the Muslim is to knead and mold creation. It is the ideal ought-to-be. The Qurʾān is its repository and final authority. The second is the human fallible and often-mistaken attempt by the Muslim to live up to the divine ideal. It has no single or final authority because, while basing itself on the thinking and deeds of ancestors especially selected from the age of Muslim decline, it depends on the living authorities who direct its adherents to the arbitration of circumstance. The first Islam has the most favorable attitude to science; the second is severely antagonistic to all scientific research. Whereas the first believes it has everything to gain from the progress of science, the second believes it has everything to lose.

The march of science, however, is inevitable, and its eventual victory over the second Islam is equally so. Any friend of science will therefore

wish for that day to come, and, indeed, he will hasten it. But he should remember that in this very matter he can have no better ally and friend than the first Islam. Indeed, since the first Islam is a real force within the Muslim's consciousness circumstantially covered with the ashes of a long decline, it is vain to think that it can be overlooked, bypassed, or successfully combated. The problem of the progress of science in Islamic society is, therefore, not how far can that society liberate itself from the clutches of its religion, but how more truly Islamic can it make its educational programs.

NOTES

1. In support of *taqlīd*, conservatives usually press into service such Qurʾānic verses as exhort to patience and resolution. The verses, "O you who believe, strengthen yourselves with patience and prayer; for God is with the patient. We shall try you with some fear, hunger, poverty, loss of life and wealth; but joy to the patient! Who, in the face of disaster, resolutely say, 'We are God's and to Him we shall return!'" (Qurʾān 2:153-57); and "Those who violate the covenant of God after they have entered therein, denying what God had enjoined and spreading evil—Those are certainly the losers!" (Qurʾān 2:27); and "Be not like her who ravelers her knitting after she has made it fit and fast. . . . Let not your foot slip down once it is firmly established and thus expose yourself to the suffering incumbent upon those who turn away from the path of God . . ." (Qurʾān 16:92, 94), are popular in conservative apologies. Against innovation, the conservatives cite the following: "Some people acknowledge God but understand Him in a peculiar way. Their faith is strong as long as their fortune is good; but once they are put on trial they give up their faith for something else, thereby losing both this world and the next" (Qurʾān 22:11); "It is He Who revealed to you the Book some verses of which are precise and their meaning is unmistakable and others are equivocal. Those whose faith is faulty follow the latter with a view to innovate and to interpret as they wish" (Qurʾān 3:7); "Abū Saʿīd al Khudārī reported that the Prophet said: 'The time is near when the most fortunate Muslim will be the one who, by following his goats far above the mountaineers would avoid getting himself involved in innovations in religion'" (The Supreme Council of Islamic Affairs [ed.], *Al Muntakhab min al Sunnah* [Cairo: Dār al Kitāb al ʿArabī, 1961], I, 297); "Jābir reported that the Prophet said: 'The best words are the words of God and the best guidance is that which Muḥammad brought. The worst of all things are the new; every innovation is an error and a misguidance'" (*ibid.*, II, 169). For an early analysis and refutation of *taqlīd* by a Muslim thinker, see Taqiyuddīn Aḥmad ibn Taymiyyah (1263-1328), *Minhāj al Sunnah al Nabawiyyah* (Cairo: Mustafā al Bābī al Ḥalabī, 1938); Shāh Waliyullah (1703-81), *ʿIqd al Jīd fī Aḥkām al Ijtihād wa al Taqlīd* (Cairo: Al Azhar Press, 1939).

2. "They [your enemies] will continue to fight you until they turn you away from your religion. Whoever of you turns away from his religion and dies an unbeliever will lose his works in this world and suffer eternally in hell" (Qurʾān 2:218).

3. To my knowledge, there is no statement in the Qurʾān enjoining loyalty to the faith that is not directed against apostasy or *shirk* (i.e., association of other beings with God). Nor is there any statement enjoining loyalty to the *theo-legomena* of the faith, because these came after the Qurʾān.

4. Basing itself on the verse "God will not forgive any associating of aught with Him; but He will forgive, to such as He wishes to forgive, the lesser sins" (Qurʾān 4:47, 115), Islamic law has prescribed that whoever solemnly testifies that there is no God but God, and that Muḥammad is the Prophet of God, is a Muslim (see Asaf A. A. Fyzee, *Outlines of Muhammadan Law* [2d ed.; Oxford: Oxford University Press, 1955],

pp. 46–51; Muḥammad ʿAbd al Karīm Shahrastānī, *Al Milal wa al Niḥal*, ed. Muḥammad Faṭḥallah Badrān [Cairo: Al Azhar Press, 1947], p. 53).

5. “Likewise, We have not sent before you a prophet but that the evil-doers among his people objected ‘We found our fathers following a certain course and we shall follow in their footsteps.’ He said: ‘What? Will you persist even if I bring you a better guidance than your fathers had left for you?’ So We punished them . . .” (Qurʾān 43:24–26; see also 7:27; 21:53; 26:74, where Abraham reprimanded his people for blindly following their ancestors in idol worship and disregarding his monotheistic breakthrough).

6. “The Bedouins of the desert claim that they have *īmān* [faith by conviction]. Say [to them] ‘You do not yet have that. Rather you have *islām* [acquiescence, or faith by convention]. *Īmān* has not yet entered into your minds . . .’” (Qurʾān 49:14).

7. Hence the Qurʾānic position that *īmān*, or faith by conviction, increases by adducing new evidence and new signs (Qurʾān 3:173; 8:2; 9:125; 48:4; 74:31).

8. ʿAbbās Maḥmūd al ʿAqqād, *Al Islām fī al Qarn al ʿIshrīn: Ḥāḍiruh wa Mustaqbaluh* (Cairo: Dār al Kutub al Ḥadīthah, 1954). The same point is held by most notable Western treatises on modern Islam, e.g., Charles C. Adams, *Islam and Modernism in Egypt* (London: Oxford University Press, 1933); H. A. R. Gibb, *Modern Trends in Islam* (Chicago: University of Chicago Press, 1947); Wilfred Cantwell Smith, *Modern Islam in India* (London: Victor Gollancz, Ltd., 1946); and Wilfred Cantwell Smith, *Islam in Modern History* (Princeton, N.J.: Princeton University Press, 1958); G. E. von Grunebaum, *Modern Islam: The Search for Cultural Identity* (Berkeley: University of California Press, 1962).

9. “That is the Book which no doubt can penetrate and which contains the guidance of the pious. . . . In truth We revealed it, the truth to tell. . . . God has revealed it in the best of form” (Qurʾān 2:2; 17:105; 39:23). These are only exemplary; like statements asserting the divine origin, perfection, authority, and superiority of the Qurʾān are ubiquitous in the text.

10. This was the outcome of the Muʿtazilīh controversy of the ninth century concerning the createdness or uncreatedness of the Qurʾān (Shahrastānī, *op. cit.* [n. 4 above], pp. 62, 82, 98, 102, 114, 119; *Encyclopaedia of Islam* [Leiden: E. J. Brill, 1918–1933], q.v. “Muʿtazilīh, Qurʾān”; T. J. De Boer, *History of Philosophy in Islam*, trans. E. R. Jones [London: Luzac & Co., 1933] pp. 43 *et seq.*; H. A. R. Gibb, *Mohammedanism* [London: Oxford University Press, 1949] pp. 110 *et seq.*).

11. “. . . And the unjust, having consulted in secret, asked: ‘Muḥammad is only a man like you. Would you then accept his magic in full day?’ . . . They said: ‘What does this man seek, who eats food and goes about in the market place? Had God sent with him an angel to warn, or given him a treasure, or a [terrestrial] paradise from which to eat? Is he not merely a man under spell?’ . . . Thus We have revealed to you a spirit from Our realm, previous to which you knew neither book nor faith. We have made it [the book revealed to you] a lighthouse of guidance. . . . Those who do not believe in the Final Day ask you to alter the revelation and to bring them a different Qurʾān. Answer: ‘It is not up to me to change it; I only repeat what is revealed to me. . . . Had God not willed it, nothing might have been recited to you by me. Have I not been, before this came to be, a fellow of yours for almost a lifetime without any revelation? Do you not reason?’” (Qurʾān 21:3; 25:7–8; 42:52–53; 10:15–16).

12. “And if you doubt what We have revealed to Our servant, produce a chapter like any of its chapters and call forth your witnesses if you really mean it” (Qurʾān 2:23; 10:37–38; 11:13; 28:49–50; 52:33). The Qurʾān asserts: “Say, even if men and *jinn* were to assist one another to produce a Qurʾān such as this, they will not succeed” (Qurʾān 17:88).

13. The Ḥadīth has reported a number of such attempts on the part of the greatest contemporary poets of Arabia, namely, al Walīd ibn al Muḡīrah, ʿUtbah ibn Rabīʿah, Unays, and others (see *Al Muntakhab min al Sunnah* [n. 1 above], II, 156–68; or any other Ḥadīth collection, q.v. “Qurʾān”).

14. A modern student, following in the footsteps of the older generation of orientalists, writes: "It is a matter of faith in Islam that since it is of Divine origin it is inimitable, and since to translate is always to betray, Muslims have always deprecated and at times prohibited any attempt to render it in another language. Anyone who has read it in the original is forced to admit that this caution seems justified; no translation, however faithful to the meaning, has ever been fully successful. Arabic when expertly used is a remarkably terse, rich and forceful language, and the Arabic of the Qurʾān is by turns striking, soaring, vivid, terrible, tender and breathtaking. As Professor Gibb has put it, 'No man in fifteen hundred years has played on that deep-toned instrument with such power, such boldness, and such range of emotional effect.' It is meaningless to apply adjectives such as 'beautiful' or 'persuasive' to the Qurʾān; its flashing images and inexorable measures go directly to the brain and intoxicate it" (J. A. Williams, *Islam* [New York: G. Braziller, 1961], p. 16).

15. H. H. Rowley, *The Growth of the Old Testament* (London: Hutchinson University Library, 1950); H. H. Rowley (ed.), *The Old Testament and Modern Study* (London: Oxford University Press, 1961); Stanley B. Frost, *The Beginning of the Promise* (London: S.P.C.K., 1960); Geddes MacGregor, *The Bible in the Making* (London: John Murray, 1961); Ernst Würthwein, *The Text of the Old Testament*, trans. P. R. Ackroyd. (Oxford: B. Blackwell, 1957).

16. Immanuel Kant, *Critique of Pure Reason*, trans. F. Max Muller (2d ed.; New York: Macmillan Co., 1949), pp. 516 ff.; Immanuel Kant, *Critique of Judgment*, trans. James C. Meredith (Oxford: Clarendon Press, 1911), pp. 61 ff.

17. Qurʾān 2:171. Commenting on verse 2:111 ("Bring forth your evidence if you are truthful in your claims"), a modernist writes: "The Qurʾān taught the Muslims always to ask for the evidence, to build their convictions on evidence. It is natural that the author of a conviction should ask his opponent to produce his evidence; and that was the practice of our noble predecessors. They upheld the evidence, demanded it for everything and forbade the acceptance of any claim without it. It was the ignoble later generations that demanded and applied *taqlīd* and forbade the seeking of evidence against what they taught, until Islam almost became its very opposite. . . . Instead of evidence and proof, they demanded conformance with this and that authority, not that these authorities are God or His Prophet, but mere Toms, Dicks and Harrys" (Muḥammad ʿAbduh, *Al Manār* [Cairo, 1933], VI, 902).

18. A. J. Arberry, *Revelation and Reason in Islam* (London: George Allen & Unwin, 1957), pp. 34 ff.

19. Qurʾān 21:107.

20. The story was known for centuries. It was rewritten by Ibn Sīnā, and rewritten again by Ibn Ṭufayl. It is the story of the lonely child growing in the woods and nursed by a gazelle. As the child grows, his mind asks questions and finds the answers on the basis of evidence furnished first by the senses, then by the inductive understanding, followed by deductive logic and metaphysics. When, finally, circumstances bring the nature-man back to civilization, and he discovers the truths of revelation, he finds them perfectly in accord with the truths of nature. Thus, by natural reason alone, the truths of revelation are reached because they are one with the truths of nature (see George Sarton, *Introduction to the History of Science* [Baltimore: Williams & Wilkens, 1931], II Part I, 354 ff.; G. Quadri, *La philosophie arabe dans l'Europe médiévale* [Paris: Payot, 1960], pp. 71 ff., 95 ff., 154 ff.; or any other history of Islamic philosophy, q.v. "Ibn Ṭufayl").

21. Costi K. Zurayq, "The Essence of Islamic Civilization," *Middle East Journal*, III, No. 2 (April, 1949), 125-39.

22. On this point, most of the philosophers and the theologians agree, basing their argument on the Qurʾānic principle that the works of nature are "signs" and "pieces of evidence" of God.

23. For a historical account of the superstitious life of Islamic society in Egypt by

a native, contemporary historian, see Jabarti, *ʿAjāʾib al Āthār fī al Tarājim wa al Akhbār* (3 vols.; Cairo: Būlāq, 1910); and by a Western orientalist, Edward W. Lane, *The Manners and Customs of Modern Egyptians* (London: Everyman's Library, n.d.); by leaders of Muslim modernism, *Al Manār* (Cairo, 1927-34) (see n. 17 above). For a similar account regarding the Indian subcontinent, see Shah Waliyullah, *op. cit.* (n. 1 above); and Murray L. Titus, *Islam in India and Pakistan* (Calcutta: Y.M.C.A. Publishing House, 1959), pp. 137 ff., 153 ff.

24. Qurʾān 6:112; 43:36; 58:19; 19:83; etc.

25. "We [the angels] do not come down to earth except when commanded by your Lord. For to Him belongs all that is before us and all that is behind us and all that is between" (Qurʾān 19:64). The revelation of this verse was, according to the Ḥadīth, occasioned by the Prophet's asking Angel Gabriel to make his visits more frequent (*Al Muntakhab min al Sunnah* [n. 1 above], II, 254-55).

26. The Qurʾān is replete with statements of which the following is typical: "The creation of heaven and earth, the succession of night and day, the vessels which cross the seas for the use of men, the fall of the rain which brings life to a dead earth, the animation of the creatures, the orientation of the winds and subjection of the clouds between heaven and earth—All these are signs for those who reason" (Qurʾān 2:164). Such statements and all those which include assertions about one or more *āyah* or "given sign" imply a view of nature as an open book which man can read and research in and which, when properly read, cannot but teach man the knowledge of God. The path of science, i.e., of discovering the laws of nature or creation is a valid alternative to that of revelation, the truth which is the object of both being one and the same. This "Enlightenment" view is not only held by the Muslim modernist, in the eyes of whom the Enlightenment failed in the West for lack of rationalist nerve vis-à-vis persistent attacks on two fronts, skeptic British empiricism and dogmatic Christian theology. The Enlightenment view is essentially that of Islam. It was also Al Ghazālī's, the father of the medieval Islamic synthesis, who called nature *taṣnīf* ("composition"), the very word used for the writing of an author (*Ihyāʾ ʿUlūm al Dīn* [Cairo: Al Maktabah al Tijāriyyah al Kubrā, n.d.], IV, 435-47; G. H. Bousquet, *Ghazali: Vivification des sciences de la foi, analyse et index* [Paris: Librairie d'Amérique et d'Orient, Adrien-Maisonneuve, 1955], pp. 429-31).

27. Conservative Muslims continue to hold to this view despite a fair amount of sophistication in other fields. The latest statement on doctrine by the Islamic Congress (Sayyid Sābiq, *Al ʿAqāʾid al Islāmiyyah* [Cairo, February, 1964], p. 215) admits the possibility of occasional "breaches" of natural law on the part of the saints, as well as the authorship of the devils (or the non-Muslim *jinn*) of a great many evils in the world (*ibid.*, pp. 134, 144).

28. Qurʾān 2:116; 3:18; 5:72-75; 6:100; 10:66; 21:22; 42:11.

29. "Those who disbelieve say: 'If only he brought about some miracle.' But you [Muḥammad] are only a warner . . ." (Qurʾān 13:7). "Say: Miracles belong only to God. . . . No prophet may bring forth a sign except with God's permission" (Qurʾān 10:20; 13:38). Add to this the Qurʾān's caustic remark to the Prophet almost despairing of converting his fellowman: "And if they persist in turning away from you, would you wish you could penetrate through the earth or ascend to heaven on a ladder, that they may believe? . . . Do not be like the ignorant" (Qurʾān 6:35; see also 6:50; 7:187).

30. E. W. Lane, *op. cit.* (n. 23 above); E. W. Lane, *Arabian Society in the Middle Ages* (London, 1883); Al Jabarti, *op. cit.* (n. 23 above); Alfred Guillaume, *Prophecy and Divination: A Study of Man's Intercourse with the Unseen World* (London: Hodder & Stoughton, 1938), contain numerous instances and anecdotes culled from Muslim history. Consider also a report on suppression of the teaching of geography in Saʿūdī Arabian schools in Khālīd M. Khālīd, *From Here We Start*, trans. this author (Washington: American Council of Learned Societies, 1953), pp. 138-40. The *New York Times* of June 5, 1966, reported "Sheikh ʿAbd al ʿAzīz bin Bāz, Vice-President of the Islamic University at Medina, wrote an article that appeared January 11 in two Arabic news-

papers: 'Much publicity has been given . . . to the theory that the earth rotates and the sun is fixed. . . . I thought it my duty to . . . guide the reader to the proofs of the falsity of this theory. . . . Hence I say the Holy Koran, the Prophet's teaching, the majority of Islamic scientists and the actual fact all prove that the sun is running in its orbit, as Almighty God ordained, and that the earth is fixed and stable, spread out by God for his mankind and made a bed and a cradle for them, fixed down firmly by mountains lest it shake. . . . Anyone who professed otherwise would utter infidelity and deviation, because such an act is a charge of falsehood toward God, the Koran and the Prophet.' "

31. Qurʾān 6:59, 73; 10:20; 11:123; 16:77; 27:65; 34:3; 52:41; 53:35.

32. W. Crooke, *An Introduction to the Popular Religion and Folklore of Northern India* (Allahabad, 1894); L. Bevan Jones, *The People of the Mosque* (Calcutta: Y.M.C.A. Press, 1932).

33. Qurʾān 33:72.

34. Al Jabartī, *op. cit.* (n. 23 above), III, 35–37. After telling how pleasantly surprised the Muslim divines were who visited the French factories, laboratories, and libraries and saw for themselves the accomplishments of French science, al Jabartī, the greatest historian of the period, quotes Shaykh Ḥasan al ʿAṭṭār, Rector of Al Azhar, as saying: "Our country must needs change; and many unknown disciplines [branches of knowledge] must be renovated." Al ʿAṭṭār himself wrote: "Many of the books of the French have been translated in our time, in which we read many of their works and came to know of their accomplishments in engineering and natural science. These books tell of the military industries and the instruments of fire. They elaborate their principles and laws and systematize them into an independent science with many branches. Whoever is anxious enough to read these strange compositions will learn many precise and scientific truths" (ʿAlī Mubārak, *Al Khīṭaṭ al Tawfiqīyyah fī Tarjumat al Shaykh Ḥasan al ʿAṭṭār* [Cairo: Būlāq, 1924], IV, 38).

35. *Ibid.*

36. Corroborating this view is the account of the history of education at Al Azhar University of the Azharite Muḥammad ʿAbdullah ʿInān, *Tārīkh al Jāmiʿ al Azhar* (2d ed.; Cairo: Muʾassasat al Khānījī, 1958), pp. 151 ff.

37. For a sampling of their thinking on the place of Islam in society, see my discussion of secularism in *On Arabism*, Vol. I: *ʿUrūbah and Religion, a Study of the Fundamental Ideas of Arabism and of Islam as Its Highest Moment of Consciousness* (Amsterdam: Djambatan, 1962), pp. 212 ff.

38. The periodical *Al Hilāl*, the main organ of the school, made its debut in 1892 and has been appearing regularly since. Its greatest challenges to the conservatives were articles written by the strongest adherent of the school, Salāmah Mūsā, during the 1930's and 1940's. Replies and refutations to these articles from the opposite camp appeared in *Majallat al Azhar* during the editorship of Muḥammad al Khidr Ḥusayn and Muḥammad Farīd Wajdī (1930–52).

39. On this point see Gibb, *Modern Trends in Islam* (n. 8 above), chap. ii; von Grunebaum, *op. cit.* (n. 8 above), chap. i.

40. Qurʾān 9:41.

41. Sir Sayyid Aḥmad Khān, *Lectures*, ed. Munshi Sirāj al Dīn (Sadhora, 1892).

42. Sir Sayyid Aḥmad Khān, *Al Tahrīr fī Uṣūl al Tafsīr* (Agra, 1892), pp. 10–11; Fazlur Raḥman, "Modern Muslim Thought," *Muslim World*, XLV, No. 1 (January, 1955), 18. In the Arab world, the efforts of this school have led to the same results. Its principal proponent, Muḥammad Farīd Wajdī, wrote: "What is reason and what is religion? What are the boundaries of their jurisdiction? Do they both seek to dominate man, so that in the end man belongs to the winner? . . . Islam is natural religion . . . whose truths are corroborated by the natural sciences" (*Al Islām fī ʿAṣr al ʿIlm* [Cairo: Al Maktabah al Tijāriyyah al Kubrā, 1350/1932], I, 105–6, 253–54).

43. For an analysis of the principal claims of "Islamism," see my *ʿUrūbah and Religion* (n. 37 above), pp. 172–97.

44. Perhaps the noblest and most eloquent praise of science ever written by man

has come from the pens of Muslims moved by this kind of consideration. Consider *Jāmi' Bayān al 'Ilm wa Faḍlīh wa mā Yanbaghī fī Riwāyatih wa Ḥamlīh* ("The Comprehensive Account of the Enlightenment and Virtue of Science and of the Prerequisites of Telling Its Truths and of Carrying Its Mission") by the greatest Andalusian theologian and exegete, Abū 'Umar Yusuf 'Abd al Barr al Qurṭubī (d. 463/1071) (Cairo: Maṭba'at al Mawsū'āt, 1320/1902).

45. "In Islam, the spiritual and the temporal are not two distinct domains. . . . In Islam it is the same reality which appears as the Church looked at from one point of view and the state from another. . . . Islam is a single unanalysable reality which is one or the other as your point of view varies. . . . This ancient mistake arose out of the bifurcation of the unity of man into two distinct and separate realities which somehow have a point of contact, but which are in essence opposed to each other. The truth, however, is that matter is spirit in space-time reference. The unity called man is body when you look at it as acting in regard to what we call the external world; it is mind or soul when you look at it as acting . . ." (Sir Muḥammad Iqbāl, *The Reconstruction of Religious Thought in Islam* [Lahore: Shaikh Muḥammad Ashraf, 1958], p. 154).

46. 'Abduh writes: "The Muslims have neither opposed science, nor were opposed by science except from the day they alienated themselves from their religion and opposed the study of it. In the measure they separated themselves from knowledge of religion they separated themselves from science and denied themselves its fruits, whereas in the past, the more they knew in religion, the more they did in the sciences of nature. Other people found that the more they cling to their religion, the more they alienate themselves from science, and vice versa. That is why they clamour that science is the work of reason, that reason has no jurisdiction in religion, . . . and that religion is the work of the heart, . . . that the two are disparate and never meet [p. 160]. . . . But here [i.e., in Islam] reason and heart do meet. . . . Do not think like some naive men do that there is a difference between them, . . . both are two eyes of the soul by which it knows, . . . they are mutually dependent. The soul cannot enjoy the advantage of the one unless it can enjoy that of the other. True science is corrective of the heart, and the sane heart is the best co-operator of science. Perfect religion is both knowledge and judgment, mind and heart, reason and perception, critical thought and intuition. If one falls down, religion cannot stand on the other . . ." (Muḥammad 'Abduh, *Al Islām wa al Naṣrāniyyah ma'a al 'Ilm wa al Madaniyyah* [Cairo: no publisher, n.d.], pp. 159–60, 142–43).