

Islamic Perspectives

Formulating an Islamic Model of Science and Bioethics

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Abstract

This article formulates a model of Islamic science, medicine, and bioethics, part of the ongoing inner-Islamic discourse on the positioning of Islam vis-a-vis the life sciences and bioethics as developed within a non-Islamic context. It investigates the Islam-and-science paradigm considering the Islamic categorization of the sciences, provides a working definition of Islamic science including medicine and bioethics, and underlines the importance of Muslim legal rulings on these models.

This paper concludes that a universal model of science exists, and it is applicable to all systems based on specific world views. It is essential to be aware of the different models and separate universal knowledge from value-orientated interpretation and usage. Ideologically generated knowledge produced within a non-Islamic framework needs to be thoroughly scrutinized for conformity to Islamic concepts. It is rather the presence or absence of an enacted Islamic reference framework that contextualizes life sciences as being Islamic. Bioethics, however, are initially bound by the Islamic value system as enacted by legal ruling.

Key words: Islamic ethics, bioethics, Islamic science, Islam, science.

Introduction

Is there an Islamic, or rather a Muslim, science, and, if so, what makes science Islamic? What is the difference between Islamic or Buddhist or Western science? Is it justified to link science to a specific worldview, or is science absolutely objective and neutral? Can we adopt any scientific discovery blindly? How should we relate to bioethics? Is there an Islamic medicine or bioethics?

These and related questions are frequently raised

among Muslims. This paper will try to elucidate the complexity of science, Islam, and bioethics from different perspectives. It explores the different categories of sciences and their respective evaluation and relates them to the world view underlying the different approaches and uses of science. It also expounds on the differences between the Islamic scientific model and the predominant (secular Western) model. The paper then formulates a working definition of Islamic science, medicine, and bioethics.

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The Predominant Secular Capitalist (Western) Model in Comparison with the Islamic Model

The predominant model of science today is the

capitalist secular (Western) model. The intention here is not to belittle the scientific and technical achievements made under the tenets of this system. It is, however, vital to understand the different approaches of both models and value systems and recognize their possible impacts on the sciences and bioethics to avoid remaining in the predominant paradigm and to look for and understand the Islamic approach to find solutions to our current dilemmas.

The main feature of the secular capitalist model is the separation of life from any relation to the Hereafter. Religion – being reduced to private life and limited rituals – does not determine the public sphere. Capitalist concepts of life stand for an overemphasis on materialism turning into both hedonism and exploitation. Happiness is defined as the accumulation of ever-increasing material assets and the satisfaction of artificial needs. Globalization has finalized the proliferation of this politico-economic model that had already started in the wake of colonization.

The idea of separating life from the Hereafter clearly brought about a lack of a sense of responsibility in dealing with resources, environment, and life. Science is placed in this reference system, and no scientist works in isolation of its inherent values and political and economic systems where creation is merely an exploitable asset.

The Islamic model, on the other hand, is based on the uncompromised concept of the oneness (*tawhīd*) of Allah, the Creator and Sustainer, ﷻ and of His creation's servitude to anything or anyone but Him, denoted by the name Islam, which means "submission." The Islamic religion (*dīn*) regulates, through its legal system (*shari'a*), every human action regarding the human relationship towards the Creator, the self, and others. This regulation takes place in recognition of human instincts and needs, not in their suppression. Therefore, Islam is not just a religion in the contemporary understanding, but rather a way of life, composed of a set of beliefs (*'aqā'id*) and legal rules or systems derived primarily from the sources of revelation, the Qur'an and Sunnah (the authenticated reports of the sayings and actions of the Messenger Muhammad ﷺ), and secondarily from what they validate (*mā yurshidu ilayhi al-wahy*), specifically consensus (*ijmā'*) and analogy (*qiyās*). Because humans will be held accountable for their deeds, they have to abide by

the stipulations of Islamic teachings and legal rules. Creation may be used responsibly by way of avoiding excessive consumption, waste, oppression, and destruction. Happiness is defined as obtaining the Creator's reward.

The Paradigm Islam and Science – How Do They Relate?

The contributions of Muslims to the sciences and the positive and affirmative position of Islam towards science have been addressed in numerous books and articles. Contemporary contributions have proposed paradigms on the relationship between Islam and science. Some of them propose that science is neutral.¹ Others call any science developed by Muslims over the ages Islamic.² Still others deny any form of "ideology" in science altogether.³ This paper does not discuss in detail these prolific writers and their views. It rather aims at a paradigmatic approach that may serve as a guideline in the evaluation and use of science.

Classical Islamic literature suggests several ways of classifying knowledge (*'ilm*). Al-Kindī (d.259 AH /873 AD), al-Fārābī (d. 338 AH /950 AD), al-Bīrūnī (d. 439 AH / 1048 AD), Fakhr al-Dīn al-Rāzī (d. 605 AH /1209 AD), al-Ghazālī (d. 504 AH/ 1111 AD), and other prolific Muslim scientists have made a major contribution to this classification.⁴ For the purpose of this paper, we may expound on ibn Khaldūn (d. 808 AH /1406 AD), who explained in book 6, chapter 4 of *al-Muqaddima, Fī asnāf al-'ulūm* ("On the types of sciences"), the distinction between the rational sciences (*'ulum 'aqliyyah*) and the transmitted sciences (*'ulum naqliyyah*).⁵ Whereas we arrive at the rational sciences through thinking and realization of reality, the Lawgiver has laid down the transmitted sciences, and they are, therefore, not subject to human ratiocination. Ibn Khaldūn describes rational or natural sciences as shared among nations, while the transmitted sciences are specific for the Islamic nation. Ibn Khaldūn used the reference to the Islamic nation exemplarily, implicitly stating that other nations may have their own specific transmitted sciences.⁶

There are other categorizations of knowledge. In contemporary usage, the term science (*'ilm*) is usually used for whatever has been arrived at by experimental methods, whereas whatever is not the result of the experimental method is referred to as *thaqāfah*.⁵

I would suggest the (conventional) distinction between *‘ilm* and *thaqāfah* in the sense that we understand *‘ilm* as scientific finding or knowledge that is not bound by any particular point of view in life. As this kind of knowledge is a description of a particular reality of life, it is universally usable and accessible without any impact on the particular world view of the scientist. Whether, for instance, the table of chemical elements was developed by an atheist, a Muslim, or a Hindu is not relevant. The construction of human cells and the role of proteins are objective descriptions of reality. From an Islamic point of view, we may understand that the use of this knowledge comes under the ruling of general permissibility, because there is no evidence in the Qur’an or the Sunnah of its prohibition (*al-aṣl fī al-ashyā’ al-ibāḥa mā lam yarid dalīl al-tahrīm*).

A research finding in contradiction to the Qur’an and Sunnah cannot be considered permissible knowledge, even if claims are raised that it is neutral. Revelation holds supreme authority over science. Science is not in authority over revelation. We may stipulate that applied sciences, mathematics, chemistry, physics, engineering sciences, life sciences, etc. fall under this kind of universal knowledge.

However, the way to interpret these findings as well as the way to use this knowledge is very much linked to an underlying world view. A person believing in the evolution of matter may see in the setup of a cell a particular stage of evolutionary development, whereas a Muslim recognizes this as one of the astonishing secrets of Allah’s ﷻ creation. A utilitarian opts for using nuclear energy for any matter that offers some kind of material benefit, with disregard of implications for humankind and the environment. A Muslim links the use of the knowledge of nuclear energy to the Islamic legal rule. We have to be careful not to adopt an ideologically bound evaluation, access, and way of use of this universal type of science on the basis of the general assumption that “science is neutral.”

At this stage, the category of *thaqāfa* becomes active. *Thaqāfa* is an expression used here to designate any type of knowledge that is directly linked to an underlying point of view in life, i.e. “world view”, “religion” or “ideology”. Which sciences fall under this notion? In the Islamic context, the transmitted sciences of Qur’an and Hadith, *fiqh* (jurisprudence) and *uṣūl al-fiqh* (the bases of jurisprudence) are clear-

ly an expression of the Islamic world view. Other world views have produced their own models and scientific expressions. Most of what has been summarized under the title “human sciences” today is an expression of a Western secular culture and world view. We cannot speak of a neutral, universal description of reality anymore, but rather of an expression of a very explicit point of view, such as Darwin’s theory of evolution, which denies the existence of a Creator, the use of his “survival of the fittest” theory or historical materialism, which is an expression of a Marxist world view. In this case, the hadith of the Prophet ﷺ needs to be the basis of evaluation:

من أحدث في أمرنا هذا ما ليس منه فهو رد

Whoever introduces into this affair of ours what does not belong to it, will have it returned (i.e. it will not be accepted).⁷

In other words, the human sciences should be treated as specific expressions of a particular world view, and respective knowledge and theories are adopted only if they are in agreement with the Islamic world view.

A lot of medical knowledge and its use come under the described category of *thaqāfah*. Where should limits be set in medical treatment? The way to answer these exemplary questions is linked to the intellectual *überbau*, the concepts about life. A lot of what is today happening under antiaging research, for instance, is but a capitalist translation of the “search for the Holy Grail” or the “stone of wisdom”, the secret of eternal worldly life. This underlying concept is incompatible with Islamic teachings.

Having clarified this distinction between ideologically unspecified or universal knowledge and ideologically bound knowledge, we may concede that Muslims in the past – or more precisely, as long as Islam was present as a way of life – made this distinction. It may be for this reason that we do not find extensive classical treatises on this topic in the classical literature. Muslim scientists harvested available knowledge from other cultures since early Abbasid times. They adopted whatever did not contradict their belief system and developed it further. Given the above-mentioned distinction between different

types of knowledge, is it justified to call it “Islamic science?”

The term “Islamic science” as applied to natural and applied sciences would presuppose that science itself is Islamic, which denies our above-mentioned distinction. In contrast, can we speak of a capitalist science, Marxist science, Jewish, Christian, or Hindu science when designating the respective contributions to astronomy, physics, or biology? Is science itself attributable to being of a particular denomination? Or is it not rather the framework of reference, the societal model in which it was developed?

On these grounds we ought to speak of an “Islamic model of science,” i. e. science developed within or being the result of the framework of an implemented Islamic reference system. It is not necessarily a scientific model derived from the texts of revelation, but rather a model that develops within the societal framework of the rules and guidelines stated in these texts. Specific contributions can be made by Muslims working in this framework and observing the commands of their *dīn* as well as by non-Muslims. The large-scale takeover of scientific results at the advent of the European Renaissance by non-Muslim scholars testifies to the phenomenon of exchange. Research findings or means developed in different frameworks can be incorporated if there is no contradiction to Islamic teachings.

The same may be applied to the notion of “Islamic medicine.” Although the Qur’an and particularly the Prophetic Sunnah communicate a number of recommended medical treatments, there is no “revealed medicine” in that sense. The history of Islamic medicine has rather been initiated by the general guideline stipulated in the Sunnah:

إن الله تعالى أنزل الداء والدواء وجعل لكل داءٍ
دواءً فتداؤوا ولا تداؤوا بحرامٍ

Allah ﷻ sent down disease and treatment, and He made for each disease a treatment. So seek treatment, but do not treat yourselves with something prohibited.⁸

Muslim physicians gathered the available knowledge on medical treatment from all available sources, Greco-Roman, Indian, and Chinese. They incorporated what was not in contradiction to

Islamic beliefs and rules. In other words, they abided by the framework of an implemented Islamic reference system. The term *al-ṭibb al-yūnāni* (Greek medicine) stands for the incorporation of the Greek medical knowledge, whereas *al-ṭibb al-nabawi* (prophetic medicine) may be used in reference to the medical recommendations as communicated in the Sunnah. An Islamic medical model, therefore, is as such a model developed and practiced under observation of Islamic principles and guidelines.

The Islamic bioethical model is derived from the texts of revelation because it evaluates every action in the framework of the categories of the Islamic legal rule and evaluates the use of science. Within the described Islamic model of science and medicine, Islamic bioethics would be naturally linked to the sciences as the framework of their development. Difficulties or inconsistencies in applying the Islamic bioethical model may arise if science is not in this way Islamically contextualized, as is generally the case today with the absence of Islam as a way of life.

In other words, the described reference system cannot be complete as long as Islam remains an individual matter. Even if the Muslim scientist today may decide individually what is morally right or wrong, he or she is subject to the system. This influence or subjugation may be conceptual or institutional. However, this is in no way intended to release any Muslim scientist of the burden of responsibility in verifying whether his research and its instrumentalization is Islamically justifiable. Research and scientific endeavours are bound by the Islamic legal rule, and they may cover a variety of verdicts from permissibility to prohibition. A complete Islamic reference system is dependent on the enactment of Islam as a way of life in its belief (*‘aqīdah*) and systems, and only this holistic presence and implementation will guarantee the proper application of knowledge, *‘ilm* and *thaqāfah* alike.

This Islamic model of science as described above is not part of our contemporary reality. In the best case, an individual Muslim scientist is aware enough to check the Islamic suitability of his research. The public discourse in the Islamic world is still characterized by the paradigm of reacting, either positively or negatively, to what has been developed in a different framework, instead of implementing an innate Islamic model.

Islam and Bioethics

The term “bioethics” is generally referred to as a set of ethical considerations with regard to the development or use of techniques and cures in the field of medicine and the life sciences.⁹ This “branch of applied ethics” emerged as a distinct field of study in the 1960s. With the immense advancements in the life sciences in recent decades, bioethics seems to have become as important and prominent as the proper sciences. The public and academic bioethical discourse worldwide is as diversified as the philosophical, ideological, and professional background of those who are involved.

Although this branch of applied ethics is linked to normative ethics, these ethical considerations have different sources. What is deemed to be ethical or unethical differs tremendously from culture to culture. In a secular capitalist environment, the recommendation to abort a fetus with Down syndrome, even in the third trimester of pregnancy, may seem “ethically justifiable” as it “alleviates the mother (and society) of the unbearable burden”. Abortion on the grounds of this “psychological pressure” is still commonplace in many industrialized countries. From an Islamic perspective, abortion in such a late phase would be justifiable only if the mother’s life is materially and feasibly endangered, not on grounds of any fetal malformation.¹⁰

From an Islamic perspective, the term “ethics” (*akhlāq*), its scope, and place within Islamic culture and civilization may require some explanation. Where should ethics be placed in the history of Islamic thought? Is the human mind able to determine what is good or bad in things and actions without revelation? Can a human be held accountable for committing a wrong action prior to knowledge on any communication by the Lawgiver, i.e. Allah ﷻ? The early generations of Muslim scholars have discussed these pivotal ethical questions under the famous headline of *al-taḥsīn wa al-taqbīḥ al-`aqliyyayn* (declaring something as good or bad by reason). They answered with different approaches. We ought to be aware that this discourse, which involved a number of other questions as well, took place in the wake of the formation of *‘ilm al-kalām*, the science involved in seeking theological principles through dialectic, and was personally as well as conceptually closely linked to the formulation and formation of

uṣūl al-fiqh, the theoretical foundations of Islamic law. These developments did not lead to an independent science of “ethics.” I assert that ethics can never be seen in separation from Islamic law.

The various answers given to our initial questions testify to this. A group known as the Mu`tazilah stipulated that the human mind is indeed able to make an independent moral judgment and that humankind is, accordingly, accountable for its deeds even prior to any communication by the Lawgiver, i.e. Allah’s ﷻ guidance through revelation. The Ash`arites advocated that the human being is in absolute need of revelation to differentiate between good and bad, while the Maturidis suggested that the human may arrive at some conclusions concerning the good and bad actions himself but is still bound by the Islamic legal rule.¹¹ In other words, the human intellect is subject to revelation, even if it cannot understand it in every case. With regard to ethics, we may conclude that we are not able to define ethics without reference to the texts of revelation.

Our judgments of “ethical” or “unethical” on Islamic grounds need to be based on the Qur’an and Sunnah. Ethical values as such are not self-subsistent as they are never dissolved from actions. Therefore, they are bound by the evaluation of the particular action as prohibited (*ḥarām*), disliked (*makrūh*), optional (*mubāḥ*), recommended (*mandūb*), or obligatory (*wājib*).

The ethical value itself needs to be evidenced in a text (*naṣṣ*) of the Qur’an or Sunnah and contextualized by an action. This statement has two implications. One, the human being does not judge based on his own opinion (according to the majority Ash`arite position by which I abide here). Two, what may be referred to as ethical in other cultures is not necessarily ethical from an Islamic point of view. Even if there are similar ethical concepts in a number of cultures, they can only have an Islamic validity if they are supported by evidence on an Islamic basis. The commonalities in a number of ethical concepts of divergent provenance may be explained by the fact that all human beings are created in a state of what the Islamic texts refer to as *fiṭra*, the natural and uncorrupted state of being. It is part of the human *fiṭra* to worship one Creator, and the inclination to recognize truth is innate as well. The reception of Beauchamp’s and Childress’s theory of ethics on the

four cross-cultural principles (respect for autonomy, beneficence, nonmaleficence and justice) by some Muslim authors is therefore not unproblematic.¹²

Allah ﷻ states:

وَنَفْسٍ وَمَا سَوَّاهَا فَأَلْهَمَهَا فُجُورَهَا وَتَقْوَاهَا

And (by) a soul and Him who perfected it, and inspired it (with conscience of) what is wrong for it and (what is) right for it.¹³

However, the natural state of *fiṭra* may be superseded by socialization processes. The Prophet Muhammad ﷺ reportedly said:

ما من مولود إلا يولد على الفطرة، فأبواه يهودانه
أو ينصرانه أو يمجسانه

Every newborn is born in the state of *fiṭra*. It is rather his parents who turn him into a Jew, Christian, or Magian.¹⁴

In this light, it does not seem farfetched to state that some basic ethical values, being rooted in *fiṭra*, should be recognizable upon comparison of different cultural contexts. As stipulated above, any action needs to be guided by the Islamic legal rule, which in turn is in need of textual evidence in the sources of Islamic law.

From a meta-ethical basis, reflecting the nature, origin, and source of ethics, ethics originate in the Creator's communication to mankind. Even if the human mind is able to develop basic ethical concepts based on the inclinations of the natural state in which it was created, it cannot be left alone in defining what is ethical and what is unethical. An individual automatically behaves ethically if he or she abides by the Islamic legal rule. Realizing ethical values is therefore a result of abiding by Islamic rules. An Islamic model of bioethics is therefore determined by the set of Islamic legal rules and their application related to the life sciences. On a meta-level, these actions are guided and decided on the basis of the sources of shariah.

Bioethics and the Role of the Islamic Legal Rule

Based on the binding nature of the Islamic legal rule on any activity of life, vital questions of medical treatment and science have always been of interest to Islamic legal scholars, the *fuqahā'*. Rules, regulations, and general manners in the relationship between doctor and patient, for instance, are to be found within the legal compendia and the professional (*adab*) literature. In the same way, we may find professional ethics related to other professions. It may be helpful to reflect on why classical Islamic literature does not offer a terminological equivalent to our modern term "bioethics." The reason for this is most likely that what was known of the life sciences in the past has always been integrated in the deliberations on the related Islamic legal rule and the related professional ethics.

Within the legal system, there are a number of mechanisms and guidelines that may come to bear in any legal decision. These are also applicable in bioethical decision making, particularly in borderline cases. Although Islamic law is not flexible in the sense that it may be bent according to personal likes and dislikes, it has an innate dynamism in incorporating any newly arising situation into the corpus of the law.

If the answer to a particular question is not explicit in the texts, it is the task of the specialist scholars or *mujtahidūn* to interpret the text so as to derive the Islamic legal rule from the sources. This procedure is in need of a very high qualification and follows a catalogue of conditions, criteria, and procedures. In the medical field, it requires additional scientific expertise. What is not mentioned in the texts of revelation is subject to *ijtihād*, the process of deriving legal rules from the sources, and may take different rulings. In other words, two scholars may arrive at different conclusions on a particular case, depending on their way to understand the texts and the use and evaluation of the evidences. A definitive legal rule, *al-ḥukm al-shar'ī al-qaṭ'ī*, is therefore not subject to a difference of legal opinions. However, what may be understood (linguistically) in different ways or is a result of the process of *ijtihād* may be subject to diverse legal opinions. The term *al-ḥukm al-shar'ī al-ẓannī* applies to this category that covers most Islamic legal rules. This innate mechanism of Islamic law should not give way to the misconception that everything is debatable or that Islam is a

“pluralistic system.” Scholars may arrive at different conclusions as to the lawfulness of different aspects of organ transplantation but what should be given preference is the strongest view in terms of its legal evidences. The Islamic system also knows a mechanism to lift the difference of opinion by decree of the head of state who may adopt one *ijtihād* where necessary and declare it as the officially valid one (*tabanni al-hukm al-shar'i*). A lot of the Muslims' contemporary confusion on this matter needs to be referred back to the lack of understanding these mechanisms. The absence of this framework makes the concept of Islamic bioethics appear fragmentary.

A particular societal model that acts as a reference framework may be responsible in raising particular questions, which will then be “exported” to different bioethical frameworks for answers. The equation of brain death with death, for instance, is a direct result of the technical developments in the field of life support technology and the exigencies of a highly developed organ transplant machinery. Organ transplantation is more successful if the organs are sufficiently provided with oxygen as is the case when blood circulation still takes place, even after the occurrence of brain death. Hence, to declare brain death as death may be viewed as a requirement to facilitate organ transplants.

The acceptance of brain death as death seems to have been discussed without reflecting the rationale of its existence. To declare a person dead, from an Islamic perspective, demands absolute certainty. Based on the legal principle that certainty cannot be removed by doubt (*al-yaqīn lā yazūl bi al-shakk*), the criteria to declare a person dead need to be as certain as life itself.¹⁵

It ought to be pointed out here that while declaring a person dead brings about all the legal implications (inheritance, waiting period for the widow etc.), switching off life-support machines would not necessarily depend on this verdict. This may be considered as a form of medical treatment that does not promise betterment and therefore comes into the category of being optional (*mubāh*). It may be continued as well as discontinued. In this case, brain death may serve as an indicator.

Islamic law has not only set the objectives but also specified the means followed to achieve this aim. “The end justifies the means” is in contradiction to the Islamic approach. The important aspect here

is that, from a holistic point of view, Islamic ethics cannot be dissolved from the entire framework that makes up society, legislation, political system, and peoples' values. In other words, to enact this Islamic bioethical approach properly, the entire Islamic system needs to be a reality. In its absence, the concept of Islamic ethics will remain individual and fragmentary.

The Islamic Bioethical Model in Reference and Actualization

The Islamic model of bioethics is bound by the injunctions of Islamic law (*fiqh*). In contrast to science itself, the bioethical model – as being made up of Islamic legal rules – is derived from the sources of revelation, Qur'an and Sunnah, and what revelation guides to. It involves definitive and nondefinitive rules, the latter being subject to difference of specialist opinion.

One of the dilemmas of Islamic bioethics is that it is expected to answer questions that have come into being within a secular capitalist model of science and its application. This fact forces any Islamic bioethical approach into the position of reacting instead of proacting. As the two underlying paradigms do not match, the Islamic bioethical approach will either appear as a hindrance to technological development or compromise some Islamic principles to make them match the reality at hand.

Conclusion

There is no particular Islamic science apart from the transmitted Islamic sciences. The universal form of *ilm* is interchangeable between the different models based on specific world views. However, it is vital to be aware of the differences between the models and separate knowledge from value-orientated interpretation. In contrast to this, ideologically generated *thaqāfah* emanating from outside the Islamic system asks for thorough analysis for contradiction to any Islamic text. What makes science Islamic is the presence of an Islamic reference framework in which it is activated. Islamic bioethics are bound by the Islamic value system as enacted by the legal rule.

The above definitions are a necessary initial step to create awareness and understanding among Muslims. It will, however, remain a futile endeavour as long as we do not understand that the complex discussed above is only one aspect of the dilemma we

face. As long as we do not manage to return to Islam as the *dīn* that Allah ﷻ has chosen and completed for us, we will remain living and acting in paradigms that are alien to Islam and prevent us from achieving Allah's ﷻ pleasure.

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