

THE ROUTLEDGE COMPANION
TO RELIGION AND SCIENCE

Edited by
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and Michael L. Spezio

 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

First published in 2012
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data

The Routledge companion to religion and science / edited by James W. Haag, Gregory R. Peterson, and Michael L. Spezio.

p. cm.

Includes bibliographical references.

I. Religion and science. I. Haag, James W. II. Peterson, Gregory R., 1966- III. Spezio, Michael L.

BL240.3.R685 2011

2011.65-dc22

2011011491

ISBN: 978-0-415-49244-7 (hbk)

ISBN: 978-0-203-80351-6 (ebk)

Typeset in Goudy Old Style
by Taylor & Francis Books



Printed and bound in Great Britain by
CPI Antony Rowe, Chippenham, Wiltshire

MUSLIM ETHICS AND BIOTECHNOLOGY

Ebrahim Moosa

Introduction

Muslim reflections on biotechnology are marked by vast discrepancies in the representations of reality (epistemology) that impact ethical deliberations. Due to the cultural and political diversity of Muslim societies around the globe, reaching meaningful consensus is difficult. Given major transitions that Muslim ethical practices experience under pressures of rapid modernization and globalization, with its accompanying agonies, debates about biotechnology show the vulnerability of Muslim ethics from a variety of perspectives.

When Professor Cole-Turner (Chapter 39 in this volume) links biotechnology to justice, it immediately triggers the question of the political, even though he does touch on a range of issues that go beyond it. Institutional politics do indeed connect and shape the life worlds inhabited by a differentiated humanity; so politics does indeed affect the most sensitive and deepest recesses of our beings. For a religious humanity, confronting a range of challenging and practical bioethical questions within larger structures of governance, from globalization to liberal capitalism, debates about biotechnology often sponsor a set of larger concerns. Such concerns are mediated by what one could best call "political theology:" how Muslims mediate and relate to the human-divine nexus. Humanity has always been challenged in how to deal with the larger forces beyond its control. How does God act in the world; how does divine power and influence intervene, and at what point does human responsibility and ownership begin? At more critical moments in the lives of human beings, in almost all traditions, believers struggle with questions about how divine justice (theodicy) works in the world, if at all. Or are humans always at the will of an omnipotent and omniscient Creator whose will we can only faintly descry, but never fully grasp? These questions become especially relevant when the vehicle of human life and vitality, the body, is afflicted with disease, illness, and disrepair.

Theology and global technology

Configuring the divine-human nexus in an age of science and hyper-techno-science brings with it a certain conceit: a hubris that we had finally conquered nature.

Probing the outer limits of our vast cosmos together with finding the arrow of time in evolutionary biology within two centuries can often show a picture of human vanity. So when the next generation of cutting-edge physics and biology comes on stream in the form of nanotechnology, genetic reproduction, human embryonic stem-cell research, enhancement, and germline therapies, our humanity is saddled with the hubris of a post-human age coupled with a surge in anxiety and trepidation about our capacity to self-implode. It is at this stage that we are confronted with major questions about the viability of our collective future. Newer installments of techno-science raise new questions for ethics and challenge the philosophical frontiers of thinking about the human as we know the species. Our reality, accelerated by biotechnology, is one where our bodies and our technologies enframe and act upon each other in unprecedented ways. And we are always already acting and shaping our biotechnical reality, just as we are being shaped by it. With the advance of a new generation of biotechnologies, some of the earlier bioethical qualms surrounding organ transplantation and brain death suddenly sound remote, if not passé, though not entirely.

On the face of it, biotechnology tends to have a semblance of being global. But it is possibly the best candidate for the term "glocal," an awkward neologism that connects the global to the local, or the local to the global. What might appear to be global vestiges are actually connections forged between numerous global elites and consumers of biotechnology around the world. Concurrently there are also entire, if not larger, global networks of people who are deprived of the fruits of biotechnology. Economically deprived and less visible communities in both developed and developing countries might receive only the dregs of such global dispersal of expensive and intensive biotechnological therapies. For some of the poor in the world, the low fruits are what they enjoy of biotechnology, such as immunization, HIV-AIDS tests and, if they are extremely lucky, basic healthcare. That might be the sum total of the benefits of biotechnology the largest segment of human beings in the world currently enjoy. At the same time, for the affluent of the world, biotechnology can bring the benefits of organ transplantation and super-advanced surgeries, give access to anti-retroviral drugs that can restore a viable life to AIDS sufferers, and offer advance reproductive and fertility treatments for those who desperately want offspring. The key moral question is the following: Can biotechnology be democratized and made accessible to the most deprived? Would this not be one of the moral determinants about the viability and future of this technology? Is biotechnology on the same democratic trajectory as, say, computer and cyber technology? If so, such considerations could be a game-changer.

For most Muslims, and Muslim-majority societies, questions of biotechnology intersect with at least three large sets of issues. The first are socio-economic and political realities. These socio-economic and political realities are immensely diverse across different Muslim contexts: they either facilitate, or impede access to, advanced science, or otherwise distort access along lines of privilege and class. The second are biocultural and psycho-social questions. By this I mean the way science and technology produced in the West are translated and received within the social imaginaries of individual Muslims and collectivities, and how biotechnologies ultimately become enacted in their lived reality. The third cluster of issues relate to

Muslim moral philosophies and theologies that are, by their very nature, complex examples of work in progress. For multiple reasons not easily distilled here, there remains within Muslim cultural settings an urgent but unattended debate about a cluster of burning epistemological questions: Whether representations of reality are both legitimate, theologically and culturally speaking; and accurate, scientifically speaking. For a whole host of reasons – resulting from colonization, postcolonial blues, and globalization questions such as epistemic dislocations – fractures and contestations over knowledge within many Muslim societies both exacerbate and impact debates affecting Muslim ethics (Rees 2010).

Biotechnology as a field of modern moral inquiry offers a window to our struggle, as humans, with the big questions of life. It brings us face-to-face with questions such as: How do divine intentions and purposes play out in relation to human will, agency, and freedom? How do we, as humans, flourish alongside the natural and inanimate resources that enclose us? When are we treating and medicating ourselves, and at what moment are we enhancing ourselves to the point of playing God, with an excess of vanity on our part? How do we judge our flourishing to be wholesome and responsible, and how do we know our actions are destructive and irresponsible? When does consumption turn into a fit of self-gratification that adds to the depletion of natural resources, making us complicit in possibly bequeathing a scorched Earth to our not-too-distant posterity?

When biotechnology is linked to concerns about justice, it takes the debate to those thought processes and practices that animate our perceptions of what is moral. Justice might appear to be a neutral category, but it is not. Even in a common culture, justice might only barely have a common sensibility, if people share a political and economic system that has attained a modicum of moral consensus. Otherwise, notions of justice and moral truths are as fractured and relativistic as the multiple audiences that “justice” serves. In a cross-cultural and comparative religious perspective, questions of justice become even more compounded, making the search for common understandings more challenging, but there is surely no need to despair. Despair sets in only if one is locked into a singular understanding of the issues, and in the search of singular solutions. Hope lies in appreciating the diversity of the challenges and the complex ways in which humans appreciate the issues.

Technology and bioethics in the mirror of tradition

Contestations between the bearers of the modern traditions, such as those who have access to advance science, modern social science, and the humanities, versus positions advanced by proponents of traditional forms of learning and culture, serve as two extreme polarities. Often, reality is marked by the in-between positions navigating these two extreme boundaries, since reality is never neatly sliced. Biotechnology surely poses major challenges for Muslims living in Europe, North America, and those prosperous parts of the Muslim world such as the oil-rich Gulf region, where medical infrastructures resemble those in developed societies. Yet for Muslims living in rural Mali or the slums of Jakarta in Indonesia, biotechnology might be thinkable only to the extent that artificial fertilizers and genetically modified seeds bring with

them new hazards in agriculture and food integrity, compared with a time when farmers used natural compost and people consumed food grown from unmodified agricultural seeds.

Debates about the next generation of biotechnological issues under the impact of heightened Darwinian impulses, ranging from molecular genetics through stem cells and regenerative medical technologies, arrive at a time when Muslim ethicists are barely coming to grips with an earlier generation of biotechnology: transplantation surgery, brain death, artificial enhancements. Let's examine practices of transplantation surgery in places such as Egypt and Pakistan in order to review the fascinating responses. In Egypt, momentous and highly publicized and mediatized disagreement on transplantation surgery has created high levels of confusion among healthcare practitioners and sections of the religious establishment about the permissibility of such procedures in terms of Islamic law (Hamdy, 2006). Ironically, some former transplantation surgeons have publicly renounced their involvement in transplantation surgery, explaining that the body is sacred and that their surgical procedures involved mutilation and an affront to the integrity of the body (*ibid.*). Given disagreement among religious authorities as to whether brain death constitutes an acceptable definition of death in terms of Muslim ethics and law, the topmost juriconsult (*mufti*) of Egypt, Shaykh Ali Jumu'a has declared live transplantation to be impermissible. Relying on the expert opinion of the physicians, Jumu'a has argued that his opposition was premised on the disagreement among medical experts and physicians themselves as to whether brain death qualifies as an indicator of death. Jumu'a hints that if the medical experts gained greater consensus on brain death, then he might review his own view on the subject. Ironically, these debates, which surfaced in the late 1990s, were preceded decades earlier by official rulings by Egyptian religious authorities about the permissibility of organ transplantation procedures (Moosa 1999). With an active professional community engaged with transplantation practices, bioethical issues not only become complicated and ambiguous, but they also connect to lived reality. Nevertheless, cornea transplantation is popularly accepted from cadaver donors, possibly because its materiality is different from the transplantation of, say, a kidney or a heart, even though the principal objection to transplantation should be valid in this case, too.

In Pakistan, the gulf between healthcare professionals and the religious authorities on crucial bioethical issues has remained as wide as ever (Moazam 2006). According to ethnographic studies, families and patients do demonstrate a sense of altruism in donating organs. However, there is little evidence that religious authorities are consulted in many of the bioethical deliberations taken by medical professionals. In 2010, Pakistan passed a law regulating transplantation and human tissue donation, even though the practice has been in vogue for some time. Meanwhile, religious authorities have yet to validate or proscribe transplantation surgery in terms of Islamic ethics. The partition between stakeholders in transplantation surgery, such as physicians, and the religious authorities in Pakistan is so polarized that conversations between those sectors are limited (Moazam 2006). In the absence of a national ethics forum, from the outside it appears that the incommensurability in world-views held by the various stakeholders might be the reason for the deadlock, although this might in itself not truly reflect the full and complex reality of Pakistani society.

Surely people in the Muslim world do encounter a new generation of biotechnology in one form or the other. Enthusiasm for the novel clearly is a factor. Often debates about technological transfer occur without adequate discussion about cultural adaptation and moral domestication of such practices. Another factor is that governance of both politics and medical politics inhibits contestation and debate about the merits and demerits of biotechnologies. Some of these tensions arise from what might on the surface appear to be irreconcilable differences. When Cole-Turner (Chapter 39 in this volume) argues that a whole new generation of biotechnological innovations form part of a Darwinian template of evolutionary science, then such discussions would certainly raise the theological red flag for some Muslims and give them pause. In many Muslim societies, Darwinism has had an uneven reception, being subject to mistranslation and suspicion, and has mostly been met by rejection (Elshakry 2003). One of the paradoxes, however, is that while many Muslim thinkers and professionals might resist the *philosophy* of Darwinism, there is very little attention to the glaring contradiction that people profit from research and technologies that are the products of evolutionary modes of thinking.

Darwinism was viewed to be part of a naturalistic philosophy that made nature autonomous and independent of divine intentions, with an open-ended, if not undetermined, *telos*. But, more significantly, naturalism challenged inherited Muslim theological precepts that were part of a speculative philosophical tradition. Many precepts and concepts, especially about nature, gender, sexuality, and race, were treated as essences in the speculative tradition. Now these concepts were being challenged, and for all practical purposes were supplanted by the rationality of empirical science. For some Muslim thinkers, this open-ended idea of nature threatened their *telos*-driven theological doctrines, centered on two crucial aspects: firstly, a purposive notion of nature; and secondly, a belief in a fixed and permanent human nature. Both aspects were once viewed as the ontological pyramid that gave coherence to a body of knowledge that supported certain theological beliefs. Among such beliefs were the twin ideas of divine creation and the finitude of the material world.

Not long ago, Muslim theologians in the Middle East and South Asia, important men such as Shaykh Hussain al-Jisr, Jamal al-Din al-Afghani, and Ashraf Ali Thanvi, scrutinized both naturalism and Darwinism in the late nineteenth and early twentieth centuries. They latched on to the evolutionary aspect of the emerging philosophy of science, and used it as a catchphrase to debunk, if not discredit, the philosophy of modern science, labeling it as materialistic and diabolical in its essence, especially when the narrative of science lacked any reference to a creator deity. Despite being vilified as ungodly and materialistic, both science and technology took off in the modern Muslim world with gusto, with no-one able to shut the floodgates. Religiously motivated Muslim critics cultivated an ambivalent relation to modern science: many critics condemned the evolutionary philosophy of science but welcomed its practical fruits. Some correctly claimed that, historically, Islamdom was no stranger to an empirical tradition of inquiry. And, theologically speaking, intellectuals generally separated the practice of science and its applications from its underlying philosophy. Yet strong theological opposition to evolution has effectively stifled any meaningful debate about the subject in Muslim circles, even as

techno-science moves into higher gear, and both engulfs and shapes the reality of Muslim societies.

Resurgent scripturalism for most of the twentieth century foreclosed serious debate about Muslim theology. A sclerotic, scripture-based theology mined scientific truths from the teachings of the Qur'an – an apologetic venture made popular by authors such as the Egyptian Tantawi Jawhari, who related scientific discoveries to the Qur'an's observations of nature and its allegedly scientific features, supplemented more recently by the work of a French convert to Islam, Maurice Bucaille. All of these efforts tried to show that the Qur'an's observations of nature did not contradict scientific fact. Many Muslim traditionalists criticized this approach, arguing that, in the end, it made science the touchstone of validating scripture, but it did not put an end to the wildly popular enterprise of proof-texting the validity of science from scripture. Thoughtful thinkers asked: What would happen to the authority of scripture if scientific observations were altered? Would such change imply that the scriptural evidence was now wrong too? Despite many calls to found a Muslim theology that was compatible with modern science, such efforts invariably ran aground in apologetics mired in pseudo-science and pseudo-theology. A good example is the well heeled anti-evolution campaign waged by the Turkish popular preacher Harun Yahya (2010). The creationist and intelligent design gospels promoted in the West, especially in the United States, are harnessed to bolster Yahya's and other similar campaigns among Muslims.

But more often, these occasional stirrings and search for an Islamic approach to science were spurred by impulses to marry knowledge, including knowledge of science, to religious identity. It was believed that Muslim faith-claims also offer a unique view of empirical reality. Yet one cannot rule out that it could also be a strong case of wearing tinted glasses. The boundary between the facts of knowledge and the meaning of such knowledge, it seems, might have been blurred. Such initiatives went by the label "Islamization of knowledge" (al-Faruqi 1982) This venture had a brief flutter in the 1980s but had petered out by the 1990s, even though it is still fostered in some circles. Shrouded in triumphalist garb, Islamization meant that Islam's revelation would always be vindicated by science, provided science, in its own self-understanding, also yielded to certain Islamic theological propositions, especially in the realm of values and axiology. Sound reason, it was claimed, would always square with revelation if the latter was properly understood. Other thinkers advanced a new theology of science premised exclusively on Qur'anic foundations, which amounted to a crude scripturalist account of science but which, like its Islamization counterpart, was largely still-born (Nadvi 1989 [1409]).

Crisis of epistemology in Muslim ethics

What all these efforts cumulatively do signify is that there is a great deal of anxiety in dealing with emerging knowledge traditions. However, it also shows that very few Muslim thinkers and institutions recognize that the epistemological grounds of understanding the world from a believer's perspective have shifted, and that the pre-modern theologies require recasting and updating. While this desideratum is

frequently upheld as a pious hope, it is perhaps often done in a piecemeal, *ad hoc* fashion. More often, these pious hopes surface in the domain of ethical deliberations over new generations of techno-science, where such theologies are practically enacted, instead of when theoretical debates about the theology of science are entertained. Muslim discourse on the bioethics of science is often steeped in an ethical pragmatism about the permissibility or impermissibility, and the beneficence or malfeasance, attached to the discoveries of techno-science. What is lacking, and remains elusive, is a critical and informed discourse about the philosophical grounds that underpin a contemporary Muslim moral and ethical vision in a prospective manner.

Anxiety-ridden sentiments mixed with theological undertones often surface strongly in encounters with biotechnological practices. Anxieties peak in discussions over genetics, where incredible as well as intimidating feats of techno-science potentially lie in store. Let's for the sake of convenience use the rubric "genetics" to cover a host of issues related to the transfer, use, manipulation, and experimentation of genetic materials. In dealing with some of these issues, many Muslim authorities frequently deploy a text of the Qur'an as a proof-text in these debates and wave it as evidence of prohibition of the use of genetic therapies. The verse in question goes back to a conversation between God and Satan before the latter's expulsion from Eden for refusing to honor Adam (Fadel 2001). At that moment, Satan promises God that he will avenge his expulsion on the children of Adam, striving henceforth to "disfigure the creation of God." Generations of Muslim exegetes understood that phrase to mean Satan threatening to sponsor the moral corruption of Adam's offspring and to disfigure their moral selves. However, in a post-Darwinian era, techno-science meets crass scripturalism to give that very same verse a completely new application and meaning: now it means Satan will enable humans to molest the genetic composition of their bodies! What better illustration of grotesque disfigurement of the body than messing with genes? In the view of many Muslim ethicists of a traditionalist, and even those of a revivalist, bent, this Qur'anic verse serves as a cautionary tale of the physical disfigurement of creation that awaits humanity experimenting with evil and profane science.

Two principal objections are frequently made against genetic engineering. Firstly, this brand of techno-science opens the door to asexual reproduction (Ahmad 2003). Secondly, it is argued that, in its essence, genetic engineering is a violation of human dignity and as such scoffs at the sanctity of life. More generally, many Muslim religious authorities view genetic engineering procedures as a frontal assault on the structure of the Muslim family, where the notion of paternity is upheld as a central artifice. Paternity in terms of Islamic law is established only within a heterosexual marriage. Asexual reproduction threatens the biological architecture that informs classical Islamic law. Intergenerational inheritance of property occurs along the lines of kinship associations in Islam, and therefore the hype of biotechnology surrounding genetic engineering threatens that specific narrative of kinship relations the way we know it. Genetically engineered offspring, it is feared, will find themselves in a legal and ethical no-man's-land in terms of existing Islamic criteria, challenging the entire system. One concern most religious experts voice is that asexual reproduction will promote discrimination between different *kinds* of offspring: children with

naturally reproduced genetic make-up who will be subject to one set of rules versus children bearing artificially engineered genetic make-up who will be subject to a different set of norms. In short, what they dread is discrimination coupled with normative anarchy.

Much of the reaction to genetic engineering on the part of Muslim traditional jurists and ethicists points to the cloning of the sheep named Dolly as an indicator of the malevolent trajectory of techno-science (Sachedina 2009). Most fear that human cloning would be the ultimate perversion of reproduction the way we know it, and fears of its sinister consequences abound. While a very few scholars are unconditionally open to the possibility of therapeutic uses of genetic engineering, the majority of views canvassed and reviewed by Abdulaziz Sachedina on this topic expressed extreme caution blended with suspicion about the purposes of such techno-science (Sachedina 2009). Others in south Asia, especially in Pakistan, were outright dismissive of the merits of therapeutic uses of genetic engineering (Madani 2003, 2005a).

Critical changes in the construction of knowledge have created a crisis in Muslim epistemology. Since the seventeenth century, the new ideal of knowing is through *doing*, or knowing by *construction* (Funkenstein 1986). This definition of knowledge is the one that principally informs techno-science. In the view of Muslim traditionalists, the only knowledge worth pursuing was that which led to knowing God. All other modes of knowledge fell in the ancillary category of necessary, but secondary. As long as the dissonance in the social imaginaries fostered by techno-science and Muslim ethics persists, the communicative deficit between these two ethical regimes will remain high, for they, in effect, speak different languages.

Issues and trajectories in Muslim ethics

In a constantly mutating futuristic techno-science context, a backward-looking casuistic logic of the deontological *fiqh*-tradition of Muslim ethics is less helpful. Hence I propose the need to develop broad normative principles that are tightly hinged to a philosophical-theological narrative which begins to tease out the potential moral quandaries of social existence in which techno-science is part of our knowledge system.

Two kinds of traditionalists often respond to Muslim ethical issues. The first are traditionalist clerics, who provide a perspective from Islamic law and the canonical authority of the tradition. Another type of traditionalists self-identify with what I would call metaphysical traditionalists. The French thinker René Guénon's views on science often inform this perspective. Science, in this view, is portrayed as a "profane science" that had violated the principles of a "sacred science," namely metaphysics. Until this metaphysical breach in modern life is mended by a return to sacred science, and its propositions restored, this crisis will endure (Guénon 2001). Seyyed Hossein Nasr channels this perspective in his many works on science, faith, and ethics in Islam (Nasr 1993, 2006). Modernist perspectives in Islam range from those who try to bind science to some crass version of scripturalism, to more nuanced views, but neither is satisfactory (Sardar 1985; Hoodbhoy 1991). Here, too, there is an absence of a rigorous and robust

engagement with both the juridical and theological traditions of Islamdom and a critical philosophical approach to techno-science and its globalization through economies of scale.

Often, traditionalist clerics view moderns and their lifestyles to be uncritically in the thrall of modern science and hence panglossian – a demeanor of being unwaveringly or unrealistically optimistic about anything, and in this case being enamored by the wonders of techno-science. Often, traditionalist concerns sound as if they are informed by the pessimism that authors such as Dominique Janicaud, Renée Fox, and Judith Swazey have voiced about biological futures in their many writings (Fox and Swazey 1992, 2002; Janicaud 1994). In my view, the traditional clerical views (barring exceptions, of course) are often poorly informed about science, and hardly have intimate experience with practices of science and life worlds premised on science, save as consumers of medicine or modern high-tech communications, from cell phones to the internet. Yet most clerical or metaphysical traditionalists often resist calls to revise Muslim theology in the light of newer developments in science, technology, and human experience. Underlying such reluctance is an assumption that pre-existing, pre-modern metaphysics and its compliant theologies are magical elixirs that would kick in as remedies if only we returned to traditional epistemology.

Among the clerical traditionalists, there is a predisposition for what I call the hyper-juridification of Muslim law and ethics. The default mode in ethics in the realm of modern scientific developments is to approve of new technologies by way of a vague and almost intuitive account of either beneficence (*maslaha*) or maleficence (*mafsada*). Or, if the scales between the two are balanced, then there is a predisposition to err on the side of the precautionary principle (*al-darar yuzal or la darar wa la dirar*). Both these aphorisms, that “maleficence ought to be eradicated” or, “do not inflict harm nor reciprocate with harm,” equivalent to the “no harm, no harassment” principle in secular ethics, stem from a universe when Muslim epistemology was largely entrenched in a rational speculative mode with a commensurate ethical tradition. Harm and good in a world governed by social scientific and empirical rationalities require very different indices of measurement. Contemporary Muslim ethicists can no longer be content in quantifying beneficence or maleficence by an intuitive measure, or by the lights of scriptural reasoning, but rather they will require concrete empirical indicators in addition to other indices. If the measure of good and harm remains some abstract quality, then it is inevitable that the dissonance between the instrument of measurement and the measured thing is going to be at considerable variance. This is also the area in which Muslim bioethics specialists will be required to deliver innovative solutions.

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Further reading

What a more fully fledged Muslim bioethics would look like remains a work in progress, yet some rudimentary outlines are clearly demarcated. Debates in Muslim bioethics are often framed in a discourse of juridical theology marked by the polarities of either pragmatism or idealism, lacking a nuanced and reflective middle space. Perhaps Abdulaziz Sachedina's *Islamic Biomedical Ethics: Principles and Application* (cited above) most adequately captures some of the intra-Muslim debates while making some comparative evaluations with secular and Christian ethical traditions. Apart from a plethora of writings in the vernacular languages of West Asia and South Asia on this topic, these views were often distinguished for their defensiveness of traditional Muslim doctrines rather than engaging biotechnology and science. At best, a few essays address the topic substantively in a preliminary fashion.

Mohammad Fadel, "Islam and the New Genetics," addresses some of the challenges posed by genetic technology, as does Sachedina's previously mentioned book. However, Muslim bioethicists have as yet to write about biotechnology in the light of larger ethico-philosophical questions, where the mutations between life and politics and the boundaries between molecular biopolitics and human vitality are being reconfigured, apart from a modest attempt on my part in Ebrahim Moosa, "Neuropolitics and the Body," in *Religion and Society: An Agenda for the 21st Century*, Gerrie ter Haar and Yoshio Tsuruoka (eds) (Brill, 2007) and "Languages of Change in Islamic Law: Redefining Death in Modernity" (cited above). Farhat Moazam's *Bioethics and Organ Transplantation in a Muslim Society: A Study in Culture, Ethnography, and Religion*, along with a few dissertations that might soon appear as monographs, map the history and journey of science and biotechnology in Muslim societies. Notable among the latter are the PhD studies of Marwa Elshakry, "Darwin's legacy in the Arab East: Science, religion and politics, 1870-1914" and Sherine Hamdy, "Our bodies belong to God: Islam, medical science, and ethical reasoning in Egyptian life".