



Bioethics, Social Justice and the Human Person

Catholic, Muslim and Secular
Thinkers in Dialogue

**Report of the Science and the Human Person
Working Group**

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Contending Modernities



Contending Modernities is a multi-year, cross-cultural, interdisciplinary research initiative, based at the University of Notre Dame and including universities, colleges, institutes, and centers around the world. The initiative seeks to generate knowledge and understanding of the ways in which religious and secular forces interact in the modern world.

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The Science and the Human Person working group of the Contending Modernities initiative advances a global, interreligious and intercultural conversation about science, ethics, and the human future. It fosters collaboration among secular scientific communities and the world's two largest faith traditions, Islam and Catholicism, along with other secular and religious voices.

Members of the Science and the Human Person Working Group:

Former Co-Chair: **Thomas Banchoff** (Georgetown University)
Co-Chair: **Maura Ryan** (University of Notre Dame)
Co-Chair: **Abdulaziz Sachedina** (George Mason University)
Charles C. Camosy (Fordham University)
Ilia Delio, OSF (Georgetown University)
Thomas Eich (University of Hamburg)
Owen Flanagan (Duke University)
Sherine Hamdy (Brown University)
Damian Howard, S.J. (Heythrop College, London)
Ebrahim Moosa (Duke University)
Robert M. Tappan (Towson University)

This report focuses on the work of the Science and the Human Person working group between November 2012 and March 2014. Contributing authors: Scott Appleby, James Adams, Paola Bernardini, Jessica Shewan.

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Science and the Human Person: An Overview

Rapid advances in science and technology are raising fundamental questions about human life, flourishing, suffering and death. When does human life begin and deserve protection? How is deeper knowledge of genetics reshaping our conceptions of the human person? What does it mean to live and die with dignity amid 21st century medical technologies?

These and other ethical questions at the intersection of science and philosophy have a global character, encompassing all of humanity. They cut across national, cultural and religious boundaries. But most efforts to address them have centered on particular self-contained communities comprising scientists and physicians, or secular bioethicists, or religious experts, often speaking only to one another.

How, then, can Catholic, Muslim and secular actors and institutions work together constructively to engage the key scientific, technological and ethical challenges of what the sociologist Anthony Giddens has called “late modernity”? How can shared perspectives on the human person, developed through dialogue across religious and secular lines, better inform public discourse on the governance of science and technology?

With these two framing questions as its point of departure, the Science and the Human Person working group of the *Contending Modernities* initiative embarked on its first phase of lively and productive conversation. During a workshop held at the Berkley Center for Religion, Peace and World Affairs at Georgetown University on November 9-11, 2012, the working group developed a three-year plan of research, dialogue and education. During the first half of this period (covered by this report), the working group members invited specialists in several areas to explore with them fundamental, foundational themes and questions, via an ongoing online discussion hosted by the *Contending Modernities* blog and two international conferences.

The first of these conferences, hosted by the Kroc Institute for International Peace Studies at the University of Notre Dame, was held at Notre Dame on May 3, 2013. The second, hosted by Georgetown University in Doha, Qatar, was held in Doha on March 3, 2014. Each of these public conferences, which featured formal presentations and papers, was followed by a one-day private workshop of conference participants, designed to discuss the take-ways from the conference and plan next steps in research and writing.

The Science and the Human Person working group consists of two project areas. The *Engaging Tradition* team, headed by Abdulaziz Sachedina,¹ is committed to advancing a robust tradition of Islamic bioethics, one that moves beyond the application of specific religio-legal decisions (currently fatwas are the standard practice across the Islamic world) and initiates dialogue on the notion of human personhood with modern science and with other religious and philosophical traditions. [A fatwa is a legal opinion or learned interpretation that a qualified mufti or jurist gives on issues pertaining to Islamic law.]

The *Informing Public Discourse* team, led by Thomas Banchoff and, subsequently, by Maura Ryan,² seeks to promote a deeper intercultural and interreligious conversation about the dignity of the human person as a convening concept and moral imperative shaping the debate about the development and application of medical science. The team explores research and public discourse on reproductive technology, genetic engineering and neuroscience. Improving the quality of the public discourse on such issues, which is too often marked by either indifference or polarization, is a primary objective of the team.

Over the course of the consultations, writings and conferences mentioned above, three overarching themes emerged as a framework for research and continued debate: the fluidity and internal pluralism of the three discursive traditions; relationality as central to the core of the human person; and the need to interrogate the social and ethical implications of the production, management and distribution of medical technologies and practices.

While these themes represented three areas of convergence, the workshops, conferences, essays and blog posts also served to identify numerous points of disagreement as well as ambiguity. This becomes clear when the themes are examined in detail.

¹ Sachedina holds The IIIT Chair in Islamic Studies at the Ali Vural Ak Center for Global Islamic Studies at George Mason University.

² Ryan is the John Cardinal O'Hara, C.S.C. Associate Professor of Christian Ethics, and Associate Dean for the Humanities and Faculty Affairs at the University Notre Dame. Banchoff is Professor of Political Science and Director of the Berkley Center for Religion, Peace and World Affairs at Georgetown University. Upon his assuming the office of Vice President for Global Engagement at Georgetown in 2013, Banchoff passed the baton of Science and the Human Person leadership to Ryan.

The Inventiveness of Tradition: Shifting Catholic, Muslim and Secular Accounts of the Human Person in Dialogue with Science

BIOETHICS is a branch of applied ethics that emerged in the 1960s, owing to the development of biotechnological advancements that have raised new questions about the ethical status of human life from conception to natural death. Bioethics examines the moral principles and values that regulate the use of biotechnologies in, for example, stem cell research, organ transplantation and assisted reproduction.

NEUROETHICS is a branch of applied ethics that examines when and to what extent neuroscientific technologies should be applied. Neuroscience, the study of the functioning of the brain and nervous system, has developed rapidly through the use of ever more advanced and sophisticated innovations in brain imaging. Just as the development of biotechnologies provoked novel and pressing bioethical inquiry, so advances in our ability to comprehend and intervene in mental processes have led to the rise of neuroethics.

Members of the Science and the Human Person working group agreed on the need to dismantle the idea of a tradition as the carrier of a single conceptual system. To assert that Catholicism, Islam, and the Secular are discursive communities is to affirm that they are interpretive, internally plural, and constantly contested — theologically, ethically, philosophically, and politically. Each tradition depends on language and other symbols whose meaning is fluid, situational, and shifting. Each has its canons of knowledge and sacred scriptures that fuel the imagination but also propel adherents of the tradition to reach beyond the received texts and traditions to respond to changing signs of the times — discoveries, new evidence, new sensibilities.

We know that the tradition unfolds at several social levels: among virtuosos, elites, and the laity or “ordinary people.” This awareness adds another layer of complexity to what a “tradition” encompasses, in terms of making meaning and governing practices. The distinction between professed belief and operative belief may be useful to bear in mind here, suggested Damian Howard, S.J.³ While keeping in mind the official doctrines, canons, and rules set forth by the elites of these intellectual traditions, one must also pay close attention to other indications of how the discursive community in question actually negotiates real-world challenges.

³ Howard is Lecturer in Theology at Heythrop College, University of London.

Religious traditions, for example, are not static, monolithic, and opposed to scientific progress, as secularization theory had purported. Secular persons and outsiders to these religious traditions – and, in truth, even millions of Catholics and Muslims themselves – tend to view most religious tenets and teachings as closed to further self-examination or discovery. They are oblivious to the fact that these religious traditions, by virtue of their discursive nature, are continuously evolving and being reinterpreted in light of the present context, including modern scientific developments. At the same time, intriguingly, practicing Catholics and Muslims “on the ground” are constantly renegotiating the meanings and applications of these same tenets and teachings.

The subtle everyday contestations of religious authorities’ teachings by ordinary Catholics and ordinary Muslims exemplify what the religious studies scholar Robert Orsi has called “the theology of the streets.” In this vein Maura Ryan observed that lay parishioners in the Catholic Church often find ways of maneuvering through bioethical dilemmas by skirting specific Church rules. They may even do so, she noted, in the conviction that they are upholding fundamental Catholic values.

Thus, for example, the use of artificial contraception other than for medical purposes is strictly forbidden by the encyclical *Humanae Vitae* [1968]. Part of Pope Paul VI’s argument for enforcing this ban rests on the premise that the use of birth control denies the “total self-gift” meaning of human sexuality.⁴ However, social survey data has consistently shown that the majority of American Catholic couples, in an effort to preserve health, spousal love and familial affection, intermittently used birth control in order to provide restorative space between births. This was one example of what Ryan called “compatible contradictions,” which actually represent forms of “subversive continuity” with the Catholic tradition – in this case, a contradiction in the understanding of the implications of the dignity of human relationality within marriage.⁵

In short, religious as well as secular traditions are seldom univocal; there are constant disagreements and disputes about the application of values and principles. At the Doha conference Ehsan Shamsi Gooshki, Director of the Department of Medical Ethics at the Iran Medical Council and Deputy Director of the Iranian National Ethics Committee, criticized the mainstream understanding of a physician’s life-sustaining relationship with the patient in the Islamic clinical setting. Sometimes this relationship is interpreted too broadly, he complained, so as to imply that the life of the patient needs to be prolonged artificially even after any possibility of recovery or healing has disappeared. Muslim physicians, he argued, should reflect on the difference between active killing, abstaining from offering

⁴ Lisa Sowle Cahill, “Catholic Moral Theology Since Vatican II,” in Michael Lacey and Francis Oakley, eds., *The Crisis of Authority in Catholic Modernity* (Oxford University Press, 2011), pp. 196-197.

⁵ Christi Traina, Eugenia Georges, Marcia Inhorn, Susan Kahn and Maura Ryan. “Compatible Contradictions: Religion and the Naturalization of Assisted Reproduction,” In B. Andrew Lustig, Baruch Brody and Gerald P. McKenny, eds. *Altering Nature, Volume II: Religion, Biotechnology and Public Policy* (Cambridge University Press, 2008): 15-86.

life-sustaining treatment, and letting a patient die with dignity. While Shari'a [Islamic law] prohibits suicide and homicide, he continued, the Muslim juridical/ethical tradition permits shortening a person's agony at the time of death. According to Muslim tradition, people surrounding the dying person should pray that his or her anguish be shortened. What this shows, he concluded, is that in certain circumstances the choice to forgo life-prolonging treatment is morally legitimate.

Robert Tappan and Thomas Eich illustrated an instance of a similar divide present within the Muslim world on the specific issue of IVF (in vitro fertilization).⁶ While the majority of predominantly Sunni countries permit assisted reproductive technology between a husband and wife but forbid the use of a third-party (heterologous) artificial insemination, "permissive fatwas for the use of egg and embryo donors, and surrogacy, have been granted by some Iranian Shi'i scholars."⁷ This phenomenon has encouraged "a certain degree of 'insemination tourism' from non-Shi'i regions of the Middle East to Iran."⁸

Interestingly, Muslim jurists on both sides of the divide have justified their decisions by reference to the protection of the dignity of interpersonal relations. On the one hand, Sunni authorities who had ruled out third-party assisted reproductive technologies "inexplicably view donor gametes as a form of adultery."⁹ As such, the prohibition of heterologous insemination and donor-assisted IVF also amounts to, in their view, to the protection of the dignity of the husband-wife relationship, albeit according to a different rationale. Others worry that the dignity of the child-parent relationship would be jeopardized, considering that a child's legitimate right to a sound lineage, or his interest in being informed about his or her biological descent — a point Islamic law emphasizes — would be made impossible with donated sperm and ova.

On the other hand, those who favor the legitimization of heterologous insemination argue that this is the only way to protect the legal rights of the offspring born through the application of assisted reproductive technologies (ART). In the latter case, the dignity of the foster parent-child relationship is considered instrumental for the protection of the rights of the children, who would otherwise be considered illegitimate and denied child support and family inheritance.

The latter argument would not hold, however, argued Ayman Shabana,¹⁰ if one were to consider the legal as well as ethical elements used by Islamic scholars

⁶ Tappan is Assistant Professor of Religious Studies (Towson University); Eich is Professor of Islamic Studies at the University of Hamburg.

⁷ Robert Tappan, "The use of assisted reproductive technologies in Iran," <http://blogs.nd.edu/contendingmodernities/2013/11/22/the-use-of-assisted-reproductivetechnologies-in-iran/>

⁸ Thomas Eich, "Islamic discourses on assisted reproductive technologies," <http://blogs.nd.edu/contendingmodernities/2013/11/12/islamic-discourses-on-assistedreproductive-technologies/>

⁹ Ebrahim Moosa, "Assisted reproductive technologies and parenthood in Islam: A response to Thomas Eich," [//blogs.nd.edu/contendingmodernities/2013/12/02/assisted-reproductivetechnologies-and-parenthood-in-islam-a-response-to-thomas-eich](http://blogs.nd.edu/contendingmodernities/2013/12/02/assisted-reproductivetechnologies-and-parenthood-in-islam-a-response-to-thomas-eich).

¹⁰ Shabana is Visiting Assistant Professor at Georgetown University in Qatar, and Director of the Islamic Bioethics Project.

in the determination of sound lineage. For example, while the definition of maternity is related to the concept of licit sex within marriage (*firash*), it is not entirely dependent on it, at least in the Sunni tradition. In cases of birth outside of marriage, the maternal connection, unlike the paternal one, cannot be severed. In this case, the child is not punished for the behavior of the mother, and ethical considerations would trump legal considerations. Thus, if one were to draw a parallel between adultery (illicit sex outside marriage) and ART, one could conclude that the same lineage resolutions applied to the children born out of marriage would also apply to the children who were born with donated sperm and ova.

While Shari'a prohibits suicide and homicide . . . the Muslim tradition permits shortening a person's agony at the time of death.

Within the tradition, Shabana noted, there is more than one opinion on the status and proper treatment of illegitimate children, including the possibility of acknowledging their paternity as long as this does not conflict with the principle of *firash* (i.e., if the mother is not married). But even the comparison between adultery and extramarital artificial insemination is not absolute, and there is a plurality of opinions among contemporary scholars concerning the conceptualization of the new types of relationships within the nuclear family in the wake of assisted reproductive technologies. These various opinions reveal a tension between Islamic legal rules pertaining to family issues and sexuality, on the one hand, and the ethical vision undergirding these rules, on the other.

Given this level of complexity of the negotiations that constitute “traditional” teachings and practices, none of the discursive traditions under discussion, religious or secular, is closed to self-scrutiny or immune to dialogue. Recognizing that Catholicism, Islam and Secularism are genuinely fluid, evolving, determinate but also ambiguous traditions of contestation, allows for deeper learning through dialogue with others.

Panelists at the Notre Dame conference in May 2013 highlighted these shared structural and procedural characteristics of the three discursive communities. They did so by exploring the ways their respective traditions have responded and are responding to shifting grounds of knowledge and discoveries of science. Ilia Delio, OSF,¹¹ for example, recalled Pope John Paul II's words on the reciprocal beneficial influence of science and religion: “Science can purify religion from error and superstition. Religion can purify science from idolatry and false absolutes.”

In an essay posted on the *Contending Modernities* blog, Delio argued that the focus of the Science and the Human Person project precludes an oversimplification

¹¹ Delio is Director of Catholic Studies at Georgetown University.

of personhood based on theological doctrine alone. Rather, “it is important to see theology within the larger context of cosmology and thus to understand the human person within the whole order of science, philosophy and theology [...] Both Christianity and Islam must [...] understand the human person in light of evolution. We cannot simply affirm the human person as *imago Dei* — we must also affirm that the human is evolution become conscious of itself.”¹²

Nidhal Guessoum¹³ offered an overview of the variety of positions within Islam regarding true religion’s proper relationship to science, ranging from those which view modern science as suspect because it separates itself from God, to those which argue for “theistic science” as a way of engaging modern science while still acknowledging divine reality. The rationalist Islamic tradition, which dates back to Averroes (1126-1198 C.E.), does not view science and theology as inherently contradictory. Rather, as Sachedina put it, “science is at the service of humanity to advance it to attain its divinely ordained personhood.”¹⁴ Guessoum argued that theology can and does adapt to scientific discoveries, not least on issues such as evolution, design, God’s action in the world and the nature of reality. Scott Appleby,¹⁵ a historian of Roman Catholic modernism, recalled a similar Catholic response to the often bitter debates over Darwinism at the turn of the twentieth century, when the Church produced proponents of “theistic evolution” in response to scriptural literalists and creationists who attacked Darwin not on the basis of his science, but on account of his agnosticism.

The compatible if evolving relation between science, religion and conceptions of the human person was the topic of the keynote address, delivered by Osman Bakar, at the Doha Conference in March 2014.¹⁶ Since the mid-twentieth century, Bakar said, scientists have attended to the genetic make-up or what might be called the inner world of the human being. Islam, too, has been interested in the study of the “inner cosmos” of the human person, which the Qur’an considers “signs of God.” Thus, we see a convergence between science and Islam, in that both chose this particular object of study. At the same time the methodology is strikingly different, Bakar acknowledged. Scientific positivism has attempted to explain the inner world only by way of genetic causality. For Islam, however, divine predestination (*qadar*) is an important explanatory element of human agency. Insofar as the study of the human genome confirms the Qur’anic teachings on mankind’s unique and special place in the universe, Islam has been receptive to its findings.

¹² Ilia Delio, “Science, Religion and the Human Person. A Response to Abdulaziz Sachedina,” <http://blogs.nd.edu/contendingmodernities/2013/08/23/science-religion-and-the-human-person-a-response-to-abdulaziz-sachedina/>

¹³ Guessoum is Professor of Physics and Astronomy at the American University of Sharjah, United Arab Emirates.

¹⁴ Abdulaziz Sachedina, “Reflections on Human Personhood,” <http://blogs.nd.edu/contendingmodernities/2013/08/21/reflections-on-human-personhood-anislamic-perspective/>

¹⁵ Appleby is Professor of History, Director of Contending Modernities, and Regan Director of the Kroc Institute for International Peace Studies, University of Notre Dame.

¹⁶ Bakar is the Director of the Sultan Omar ‘Ali Saifuddien Centre for Islamic Studies at the Universiti Brunei Darussalam.

Genetics has in fact shown that the human genome is completely different and in some ways more complex than that of any other living being. What Islam finds insufficient in the empirical methodology of the current science of genetics is its reductionist worldview, which identifies the genetic makeup as the exclusive causal mechanism determining human behavior. To the extent that this tendency is deepened, so too is the error of genetic determinism and the denial of *qadar*.

A variety of respondents to Bakar offered contrasting perspectives. Owen Flanagan¹⁷ pointed out that few philosophers of science or scientists would endorse mono-causal accounts of human behavior. Not all causes, he said, are in the brain or in the genes (but *this* assertion would gain less assent, perhaps, in the secular scientific community). From the time of the reception of James Watson's influential 1953

paper on the unit of inheritance, scientists began to shift their focus of attention from the macro-cosmos to the inner world of human personhood, Flanagan acknowledged, but he added that science has recently gone too far in elevating the brain or human genome to the principal cause of human agency.

In Doha, Flanagan argued for a more capacious understanding of human agency. In doing so he developed further the theme of his paper for the May 2013 Conference at Notre Dame, which was entitled "Three Images of Persons: Scientific, Humanistic and Spiritual."

Even from a purely secular perspective, each of these three images of the human person can be reconciled, he contended. The question of why and when self-sentient beings came to exist is asked by each tradition separately, but "it cannot be settled within each alone." Each discursive tradition offers a valid, although limited, account of the human person. Naturalists differ among themselves, he noted, and though few in this category claim with certainty that the human person is only his brain, others debate whether there are scientific grounds for ascribing spiritual meaning to the life of humans.

Based on empirical psychological studies and his development of the Aristotelian concept of *eudaimonia* (human flourishing), Flanagan noted that moral and non-physical elements of human personhood imbue human life with meaning. He traced several streams of inquiry and affirmation among scientists and philosophers, amounting to something approaching an acknowledgment of what the sociologist of religion Peter Berger classically described as "signals of transcendence" that can be perceived in such surpassingly human qualities of hope, joy, awe, dread and wonder. Few of these streams converge neatly within the post- Enlightenment terrain, Flanagan admitted, and few can strictly be called theistic. But almost all are potential bridges across the conceptual gulf currently dividing theists and atheists.

Flanagan's intervention resonated with the general acknowledgment of the inventiveness and fluidity of Tradition — indeed, of all three discursive traditions under

Each discursive tradition offers a valid, although limited, account of the human person.

¹⁷ Flanagan is Professor of Philosophy and Professor of Neurobiology at Duke University.

scrutiny by the Science and the Human Person working group. The multiple ways of constituting and imagining secularism, for example, underscores the contested and plural nature of the secular discursive community. The secular can at one and the same time refer to an agnostic, scientific discursive community; to a community committed to a Rawlsian type of neutrality in terms of religious and ethical goals; and, to an inclusive openness to all types of religious and non-religious, normative frameworks that foster human flourishing. In the latter sense, the secular discursive community would be friendly to religion, although not identifiable with any specific denomination.

On the other hand, secular science, with its own empirical methods of inquiry, is often perceived as antithetical to religious and metaphysical worldviews, holding the high moral ground of modernity. Max Weber's renowned lecture on "Science as a Vocation" sums up this common trend of much nineteenth and twentieth century thought: "If the natural sciences lead to anything and are suited to any belief along these lines, it is to make the notion that there is a 'meaning' of the world die out at its roots! And to conclude: science as a way 'to God'? Science, this specifically irreligious power? No one today in his heart of hearts is in doubt that science is irreligious, whether or not he admits it to himself."

And yet, as philosopher of science Lynn Joy recalled in the debate during the May 2013 conference, some of the greatest contributions to scientific advancements in the history of humanity have come from men and women who were also believers and could see God's imprint in the scientific study of nature.

In his response to Osman Bakar's address, Abdulaziz Sachedina emphasized the urgent need for science and religion to complement each other in their common study of the human person. The rational epistemic approach of science alone cannot disclose the purpose and meaning of human agency, he averred. Rather, this is exactly what the Qur'an does. The sacred text of Islam tells us that there is a divine blueprint (*qadar*) for all human beings. And yet everyone has the ability to bring changes, even when the DNA says otherwise. Divine will has predestined human beings to be free. If no mutability or change were possible, then prayer would have no meaning. Prayer is by definition a plea to God to fulfill our needs. However, the ability of human beings to change their circumstances through prayer is not equated in Islam with free will.

Noting that Catholicism and Islam have different if comparable views on the relationship between human agency, free will and Divine sovereignty, Maura Ryan suggested that dialogue between Islam and Catholicism can offer science a robust, critically informed anthropology. Both Islam and Catholicism depict the human person as spiritual and material, for example, even as they differ in how they understand this encounter. Their spiritual understanding of the body resists its commodification by modern scientific technologies. The influence works in the opposite direction as well. One case in point is the ongoing reinterpretation of human personhood and free will taking place in Islam and Catholicism in response to modern neuroscientific developments. In order to address the question of when human personhood starts, for example, or how the self is related to the body, the contributions of both science and religion must be taken into account.

During the Doha conference session entitled “Redefining the Scope of Shari‘a in Islamic Bioethics,” a panel of experts on Islamic reasoning explored the status of the human person. They delved with some technical detail into the internal logic and argumentation informing Islam’s contribution to a theological anthropology. They focused on the elements of Islamic reasoning that could be placed usefully in juxtaposition to—and in dialogue with — the secular anthropologies underlying Science as a regime of knowledge.

Both Thomas Eich and Mohammed Ghaly,¹⁸ for example, emphasized the fact that throughout history Muslim scholars have adjusted their interpretations of the Islamic teachings on the beginning of personhood (or ensoulment) in dialogue with the scientific knowledge of the age.

Over the first three centuries of Islamic history (until the 9th-10th century) the interpretation became dominant that the divine act of “ensoulment” takes place 120 days after conception.

A famous hadith reports the Prophet to have said: “Each one of you collected in the womb of his mother for forty days, and then turns into a clot (*‘alaqa*) just like that (*mithla dhālika*), and turns into a lump (*mudgha*) just like that, and then Allah sends an angel and orders him to write four things: i.e. his provision, his age, and whether he will be of that wretched or the blessed (in the Hereafter). Then the soul is breathed into him.”¹⁹ Professor Eich noted that the quoted hadith was understood from early on to speak about 120 days. There are other hadiths, however, which differ completely from this hadith and are not variants of it, and which speak about the 40th day (or 42nd or 45th). This material, he added, usually does not mention ensoulment.

Muslim scholars have adjusted their interpretations of Islamic teachings on beginning of personhood in dialogue with scientific knowledge.

Eich drew attention to the fact that commentators on hadith collections increasingly understood such differences in the hadith materials as tensions that needed to be resolved. Yet this resolution was attempted, he noted, not so much in dialogue with the scientific knowledge of the age, but through other methods of interpretation, such as linguistics.

According to some Shi‘i schools, added Sachedina, “it is possible to extrapolate [the texts on] the beginning of life [as occurring] from the time of conception.” One record of this interpretive tradition is found in the following dialogue between Sa‘id b. al-Musayyib (d. 715) and the fourth Shi‘i Imam, ‘Ali bin al-Husayn (d. 713): “I asked [the Imam]: ‘[In your opinion] do the changes

¹⁸ Ghaly is Professor of Islam and Biomedical Ethics at the Center for Islamic Legislation & Ethics (CILE) at the Qatar Faculty of Islamic Studies, Doha.

¹⁹ Quoted in Thomas Eich, “Decision-Making Processes among Contemporary ‘Ulama,” in J. E. Brockopp and T. Eich, eds. *Muslim Medical Ethics: From Theory to Practice* (University of South Carolina Press, 2008), p. 65.

from one state to another that take place (in the fetus) during the gestation occur with or without the spirit (*rūh*)?’ He said: ‘The changes occur through the spirit, with the exception of the preexistent life that is transferred in the loins of men and the wombs of women. If the fetus had no [independent] spirit other than the life that was there [because of the parent’s existence], it could not have changed from one state to another in the womb.’”

According to this interpretation, Sachedina wrote, not only does the act of ensoulment happen at conception, but it is in virtue of the soul being breathed into the body, that the “the fetus attains ontological unity and identity as a human person.”²⁰ This claim is not based on Qur’anic texts, or on Shari’a, Sachedina noted. Rather, it is based on reason. In Islam, reason belongs to the so-called “actual revelatory sources.” As the Qur’an teaches, God has endowed human beings with the capacity to inquire and make ethical decisions based on their conscience.

In this respect, Robert Tappan argued, there is some room at the normative level for “an Islamic common ground with the Catholic position” not only “on when to extend full recognition of human personhood,” but also on what a proper bioethics methodology consists of. As Sachedina has argued consistently, an Islamic bioethics cannot rely solely on the legalistic interpretation of the Qur’an, or the Hadiths of the Prophet, in order to respond to questions such as: Who is the human person? Why does the human embryo deserve respect? Offering a rational answer to these questions, Tappan noted in a blog post, becomes even more pressing considering that modern embryology often challenges the classical, textual-legalistic understanding of the beginning of human personhood.²¹

Contributing to this discussion at the Doha conference, Mohammed Ghaly recounted the proceedings of a recent symposium, sponsored by the Kuwait-based Islamic Organization for Medical Ethics (IOMS), which assembled eighty Muslim jurists and physicians to examine the impact of modern scientific developments on the understanding of the beginning of human personhood. The participants issued two major statements. First, the outdated opinions voiced by classical Muslim jurists cannot be taken to challenge the evidence provided us by modern science. Modern biomedicine has proved that fertilization marks the beginning of human life, which from that moment grows toward maturity.

Elaborating on this declaration, the late Egyptian-American, Muslim physician Hassan Hathout, one of the participants of the IOMS symposium, noted there that the modern study of embryology has shown that the fusion of the sperm and the ovum at conception results in a single-cell human zygote with 46 chromosomes– whose sequence (genome) is unique and different from that of any other

²⁰ Abdulaziz Sachedina, “Islamic Perspectives on the Ethics of Stem Cell Research,” in D. L. Kleinman, K. A. Cloud-Hansen, C. Matta, and J. Handelsman, eds., *Controversies in Science and Technology: From Climate to Chromosomes, vol. II* (Mary Ann Liebert Inc., 2008), 97.

²¹ Robert Tappan, “What or when is the person?” <http://blogs.nd.edu/contendingmodernities/2013/02/04/what-or-when-is-the-human-person/>

individual, human zygote.²² In light of science, Hathout continued, one should reinterpret Qur'an (23:12-14), which states: "We created man from an essence of clay, then We placed him as a drop of fluid in a safe place, then We developed that drop into a clinging form, then We developed that form into lump of flesh, then We developed that lump into bones, and clothed the bones with flesh. Then We brought him into being as a new creation."

This passage was traditionally interpreted by classical jurists to describe subsequent stages of creation of the human person, taking place over an extended period. However, Hathout suggested that 'Then' be substituted by "And," given that the corresponding Arabic word in this passage could take on a different meaning depending on the context in which it was used. If so, the different stages could be conceived as parallel, rather than subsequent. And the whole process of the creation of human life would be taking place in one single moment – at conception. Hathout, like classical Muslim scholars, believed that God breathes the soul into the human body. However, he also acknowledged that Science should not be expected to endorse an opinion about when the metaphysical act of ensoulment occurs. Rather, the bridge to science is the evidence that the embryo is a human being with the right to life – even prior to ensoulment.

The second position adopted by physicians and scholars gathered at the IOMS symposium, continued Ghaly, was to reject the claim that science offers only one explanation of the formation of human life—and one which contradicts Islamic teaching, properly understood. In elaborating this correction, the IOMS participants returned to the concept of ensoulment. Rather than being understood as merely a metaphysical process—that is, an assertion without hope of empirical support – ensoulment should be connected to the development of the human brain. Modern science has been able to measure the process of initial human brain development as occurring over the course of approximately twelve weeks. Therefore, the IOMS statement asserted, it is possible to ascertain that ensoulment occurs eighty-four days after conception.

This assertion required the assembled physicians and jurists to offer an alternative interpretation to the classical understanding of the renowned Hadith cited by Eich, according to which the Prophet Muhammad described the process of ensoulment. Mohammed Ghaly noted that some religious scholars in the past had explained that the meaning of this Hadith would change if one were to translate it differently, replacing the word 'then' with the word 'therein.'

The Muslim physicians and religious scholars who participated in the IOMS assembly agreed to disagree on the exact interpretation of scientific findings and textual passages. Their final declaration thus reflected a compromise arrived

²² Hassan Hathout, "Islamic Concepts and Bioethics," in B.A. Brody, B.A. Lustig, H.T. Engelhardt Jr., L.B. McCullough, eds., *Bioethics Yearbook: Theological Developments in Bioethics: 1988-1990* (Kluwer Academic Publishers, 1991), 107.

at through a collective juridical reasoning effort. By way of collective *ijtihad* (independent religio-legal reasoning), they determined that:

- 1) life in the absolute sense begins at fertilization;
- 2) therefore, life must be protected as soon as the ovum is implanted in the mother's womb; and,
- 3) human life begins with God breathing the soul into the ovum.

While the IOMS meeting represented a step forward in the effort to establish a common normative framework on beginning-of-life issues with both physicians and jurists involved, observed Ghaly, it did not engage the critical mass of philosophers and theologians required by a thoroughgoing Islamic bioethics. In order to decide whether and when the soul is breathed into the human body, one should first attempt to define what the human soul is, and this is typically a philosophical, rather than a scientific question. Science can tell when the brain is formed, but not when the self comes into being, or what the relationship between the brain and the self is.

Classical Islamic scholars such as Raghīb al-Isfahani and al-Ghazali had attempted to offer such an explanation of the relationship of the mind to the self. Ebrahim Moosa²³ offered remarks on the significance of these renderings. Both men were theologians who also engaged philosophy, he noted, and, as such, they were as interested in metaphysics as they were in science. According to Isfahani and Ghazali, the self, the essence of human personhood, was constituted by the interconnectedness of the soul (*nafs*), the heart (*qalb*) and the capacity to reason (*aqal*), all imbued by the spirit of God (*ruh*) in the act of creation. This view not only obviously resists the reduction of the human person to the brain, but implies that one may be a human person even without a (functioning) brain, inasmuch as the person is also a living body and soul.

Catholicism shares this view of the human person, observed Charles Camosy.²⁴ Both Catholicism and Islam are indebted to the moral anthropology of Aristotle, who argued that human persons are embodied substances of a rational and relational nature. It follows that both religious traditions value the dignity of the less privileged and more vulnerable individuals whose mental capabilities are not functioning properly.

Damian Howard explored the points of comparison between Islamic and Catholic anthropologies in remarks that built on Osman Bakar's description of the human person as a microcosm of divine creation. Howard said that although this notion does not belong as such to a contemporary Catholic imaginary, there are aspects of the metaphysics of Aquinas which had been teased out by W. Norris Clarke, SJ, and which view human personhood as an intensification of the ultimate structure of being, in other words, a microcosm. Hence, Catholics believe that reality itself

²³ Moosa is Professor of Religion and Islamic Studies, Duke University.

²⁴ Camosy is Assistant Professor of Christian Ethics at Fordham University.

Both Catholicism and Islam are indebted to Aristotle, who argued that human persons are embodied substances of a rational and relational nature.

is ultimately personal. Accordingly, the Science and the Human Person working group might add to its research agenda a study of the implications in the clinical setting of this common notion of human personhood. “One’s anthropology is not just encoded in a concept,” he remarked. “It’s also played out in practices, narratives and institutions.”

In a related blog post, Howard elaborated on this theme by drawing on Charles Taylor’s *A Secular Age*: “[Taylor] goes beyond telling a story about concepts and their evolution to analyze how these concepts filter into what he calls the social imaginary,” Howard writes. This collective apprehension of the world and its mysteries is a key to understanding how formal concepts and teachings come to be enacted in social realities.²⁵

Building on these insights about discursive traditions and science, the working group members attempted to unpack the social imaginaries at work in bioethics and related normative debates. Their instinct was to do so by historicizing mainstream positions in each tradition and interrogating the authoritative sources and thinkers upon which these positions were based.

²⁵ Damian Howard, “A Reply to Thomas Banchoff and Abdulaziz Sachedina (part 2),” <http://blogs.nd.edu/contendingmodernities/2013/09/04/a-reply-to-thomas-banchoff-andabdulaziz-sachedina-part-2/>

The Dignity of Human Relationality as a Foundational Principle of Bioethics and Neuroethics

Where, then, might the three discursive communities find common ground in the effort to anchor bioethical debates in a foundational concept of the human person? *The capacity of human beings to enter into and sustain relationships of mutual self-giving* emerged as a point of consensus, though this relational capacity would be described variously. Indeed, the speakers and writers commented from a diverse array of backgrounds and areas of expertise — from the fields of theology, history, ethics, neuroscience, philosophy and the social sciences. Nonetheless, the majority concurred that “to be in relation to others” is a constitutive dimension of the special dignity accruing to the human person. What it might mean to “be in relation,” who would be included in the category of “others,” and similar fundamental questions about this formula stimulated a variety of responses. But each of the intellectual and moral traditions represented in the conferences, essays and blog posts acknowledged the availability of resources within the tradition for further exploration of human relationality as the cornerstone of personhood.

In his essay for the May conference, Thomas Banchoff underlined the need to move from ontological to ethical, social, and political considerations regarding how humans should be treated with justice. Acknowledging that the human embryo is a person does not yet answer the questions of whether the human person is worthy of respect from conception until natural death, whether IVF is legitimate, or whether abortion and artificial contraception are immoral. It is the idea of human dignity, Banchoff argued, which bridges the gap between ontology — who the human person is — and normativity — how the human person should be treated. Indeed, conceptions of human personhood implicate not only the realm of bioethics, but also debates about a living wage and foreign aid. Whereas it is imperative that the value of human dignity be kept in the center of the conversation, we must nonetheless ask: “Where does the dignity of the human person come from?”

Broadly speaking, Banchoff writes, one can distinguish secular-scientific and religious foundations:

For Catholicism and Islam. . . the dignity of the human person has divine foundations. Because God created each of us, and cares for each of us, each individual person has an intrinsic and inviolable dignity. The moral theology of the person is most developed in Christianity; it is connected with the mystery of the Trinity (one God in three persons), and in the Incarnation (God becoming a human being). But the idea of the person, as a creature of an all-powerful and merciful God, also plays an important role in Islam. God reveals his law to humankind and calls us to live as His co-regents on earth, honoring one another with recognition and respect.²⁶

New knowledge about the plasticity of the brain offers more insight into the ways that brain, body and culture are all intertwined.

In both Islam and Catholicism, that is, the relation of humankind with the Creator accounts for the dignity of the human person. From a secular and scientific angle, “some emphasize our shared capacity for independent thought; in line with Immanuel Kant, they see absolute autonomy and rationality as a foundation for human dignity. Others focus more on our ability to identify and sympathize with others, an approach related to Jean-Jacques Rousseau’s concept of *pitié* and Adam Smith’s ‘moral sentiments.’” In fact, Banchoff noted, “recent advances in evolutionary biology and neuroscience have deepened our understanding of this latter, relational approach to the foundations of human dignity.”²⁷

The biological studies of Arnold Gehlen, for example, have highlighted the lack of sophistication of the sensorial apparatus in human infants, which makes them dependent on nurturing for an extensive period of time. And the philosophical investigations on rational choice by Jürgen Habermas have led some to question the Kantian idea of the absolute autonomy of rationality. The same “rational explanations of action,” in fact, “assume that actors are embedded in contexts and entangled in biographical involvements when they make decisions.”²⁸

Speakers on the “Neuroscience and the Human Person” panel at Notre Dame elaborated on Banchoff’s intervention. Ilia Delio, for example, argued that “modern science transforms our understanding of personhood from fixed autonomy to deep interconnectedness.” The recent move away from a Newtownian mechanistic understanding of the world toward process-oriented

²⁶ Thomas Banchoff, “Human persons and human dignity: implications for dialogue and action,” <http://blogs.nd.edu/contendingmodernities/2013/08/19/human-persons-and-human-dignityimplications-for-dialogue-and-action/>

²⁷ Ibid.

²⁸ Jürgen Habermas, *Between Naturalism and Religion* (Polity Press, 2008), 161.

sciences informed by evolution has shown that the brain and body are more interconnected and less static than was previously believed, she noted. This new knowledge about the plasticity of the brain offers more insight into the ways that “brain, body and culture are all intertwined.”

In her essay, entitled “Neuroscience and the Religious Self,” Delio recalls the revolutionary contribution of Antonio Damasio’s prize-winning book, *Descartes’ Error: Emotion, Reason and the Human Brain*. This book “has revealed the interplay between emotions and cognition in the construction of self, a revolution insofar as mind, consciousness and self were thought to be distinct from body and emotions.” Damasio’s work “suggests that feelings are the basic elements in the formation of the proto-self and core self; hence, a change in emotional life, for example, due to brain injury, can induce a change in self.”²⁹

In another essay, Delio contrasts this new understanding of the plasticity of the human brain with the previous notion of the human mind as distinct from the material brain. This dualistic notion, which in turn led to the belief in humans as individual, autonomous and superior creatures, was shaped by socio-historical developments such as the invention of the printing press, Cartesian philosophy and the Reformation. Yet the turn to a conception of humans as embedded beings is not a novel one. Evoking the Latin roots *per* and *sonare*, Delio interprets the ancient sense of the word “person” as “to sound through,” as in a theatre mask that amplifies a speaker’s voice. “What is conveyed in the word ‘person’ is relationality; a person is defined not by what someone does (that is, function) rather by who one is related to (for example, the character in a play),” she writes. “Hence, personhood is manifest in relationality.”³⁰

Echoing his Catholic colleague, Ebrahim Moosa emphasized that an appreciation for human embeddedness in culture was evident in early modern Muslim thought, particularly in the writings of Shah Waliyullah of Delhi. Waliyullah proposed that theological revelations are mediated by the culturally informed mind of the prophets who received and transmitted them. From these insights Moosa derived a conception of humans as “neurocultural beings,” which comports with recent scientific discoveries about how perception in the brain relies on previously formed connections as well as new sensory inputs.

This “relational” notion of the mind-body problem is not to be equated with the reductionist claim that the self is totally encapsulated in the neural activity of the brain, or in bodily emotions, Moosa explained. Were it so, there would be no way to explain how the self remains one and the same, notwithstanding the changes undergone by the body. He contrasted this non-reductionist understanding of the mind-body problem with that influential current of scientific thought represented by Benjamin Libet’s experiments on neurological processes. Those experiments

²⁹ Iliia Delio, “Neuroscience and the religious self,” <http://blogs.nd.edu/contendingmodernities/2014/02/18/neuroscience-and-the-religious-self/>

³⁰ Iliia Delio, “How Essential is the Human Person?” <https://blogs.nd.edu/contendingmodernities/2013/02/01/how-essential-is-the-human-person/>

collapsed the human mind into the brain, thus denying any role to free will and moral responsibility.³¹ According to this reductionist model, W. R. Klemm writes, “humans cannot consciously initiate a choice, because the motor cortex ‘readiness potential’ begins to develop 400 ms [microseconds] before a subject is consciously aware of an intent to act. But, since awareness of intention occurs 150 ms before actual movement, it is possible that one can freely choose to veto or inhibit an act that is triggered by subconscious command.”³²

On the question of freedom and moral responsibility Gregory Peterson³³ analyzed challenges raised by ongoing neuroscientific and psychological research. Peterson illustrated the nature of these challenges by describing recent experiments by Desmurget, et al., which provide evidence that direct electrical stimulation of the brain’s right inferior parietal region can give rise to desires to move a limb, and increased stimulation can provoke the illusion that one has already done so. Such experiments do not “disprove” the capacity for free will, but require us to think carefully about both the nature of freedom and its limits. Understanding the nature and basis of freedom has also become important for our understanding of legal responsibility, as testified by the growing use of brain scans in criminal court cases. But along with challenge there is also promise, as testified by ongoing research into moral character—research which helps us think about both normal and optimal moral functioning.

James Giordano³⁴ also underscored the centrality of the biological-social-relational element in neuroscience and neuroethics. Not only is it essential to understand the brain as an evolving organ, but neuroscience and neuroethics must also consider how self-reflective humans use technological advances to shape their biology and environments. He queried, “How do we use neuroscience [...] as both a lens to study the brain in an embodied individual who is embedded in culture, and also recognize that the lens turns back to us as a mirror?” Neuroethical inquiry, discourse and practice can address the possibilities, issues and problems spawned by the use of neuroscientific techniques and neurotechnologies upon a pluralist world stage. Giordano urged, however, that humans must acknowledge their responsibility for the constructive use of new technology: “We are deeply nested in our environment, and we change that environment, as any natural living organism does.”

³¹ According to Libet, “freely voluntary acts are preceded by a specific electrical change in the brain (the ‘readiness potential’, RP) that begins 550 ms [microseconds] before the act. Human subjects became aware of intention to act 350-400 ms after RP starts, but 200 ms before the motor act. The volitional process is therefore initiated unconsciously. But the conscious function could still control the outcome; it can veto the act. Free will is therefore not excluded. These findings put constraints on views of how free will may operate; it would not initiate a voluntary act but it could control performance of the act.” Benjamin Libet, “Do We Have Free Will?” *Journal of Consciousness Studies* (1999: 6):1.

³² W. R. Klemm, “Free will debates: Simple experiments are not so simple,” in *Advances in Cognitive Psychology* (2010; 6): 47-65.

³³ Peterson is Professor of Philosophy and Religion at South Dakota State University.

³⁴ Giordano is Chief of the Neuroethics Studies Program in the Center for Clinical Bioethics at Georgetown University.

Based on these premises, Giordano and his colleagues at the Georgetown University's Neuroethics Studies Program are working to develop a new "principled neuroethics that is ecologically grounded and that provides naturalistic support" to cultural and religious traditions. In Doha, Elisabetta Lanzilao reported the details of this new initiative.³⁵ "This model of neuroethics," she explained, is "cosmopolitan in scope and communitarian in application." As such it is poised to achieve, in Rawls' words, "the transition to an internationally viable *modus vivendi*" and will remain a work-in-progress.

Culture is a distinctive product of the human race, reflecting the essentially relational nature of personhood. Owen Flanagan has noted that "communitarians and liberals both believe that social relations are among life's greatest goods" – a view reflected by social psychological research which show that a human being's sense of self-esteem is "typically gained and sustained only in ongoing and mutually supportive interpersonal relations."³⁶ The empirically supported findings of the 2012 World Happiness Report, published by the Earth Institute at Columbia, show that friendship, social capital and trust are the most important determinants of human happiness, broadly construed. Understanding the "causes, conditions and constituents" of human flourishing is important for bioethics and neuroethics, Flanagan emphasized.

Banchoff, applauding the scientific research supporting a relational understanding of the human person, contended that a cross-cultural affirmation of "the relational person" is central for developing a shared secular and religious foundation for defending the principle of human dignity. In practice, however, "we know that this broad contemporary convergence around the idea of the human person and human dignity coexists with fierce disagreement on a range of ethical and policy questions" such as in-vitro fertilization, human cloning, abortion, and euthanasia. Such disagreements apply not only across the secular-religious divide, but also within the same religious or secular tradition.

Writing along similar lines in a subsequent post, Damian Howard offered this cautionary statement: "The quest for human dignity is not all about who has the most beautiful ideals; it must also be about beautiful outcomes [...] This raises the questions of how ideas and principles can penetrate social life and bring about real social change."³⁷

The intersection between these religious and secular ideals, bioethics, and the wider field of social ethics is the third dominant theme, and provides the focus of the following section.

³⁵ Lanzilao is a Ph.D. candidate at Georgetown University's Department of Liberal Studies.

³⁶ Owen Flanagan, *Varieties of Moral Personality. Ethics and Psychological Realism* (Cambridge, Mass.: Harvard University Press, 1991), 133.

³⁷ Damian Howard, "A Reply to Thomas Banchoff and Abdulaziz Sachedina (part 2)," <http://blogs.nd.edu/content/modernities/2013/09/04/a-reply-to-thomas-banchoff-andabdulaziz-sachedina-part-2/>

The Social and Ethical Dimensions of Access to Modern Medical Science

The working group members repeatedly called attention to pressing questions of social justice in a globalizing economy. Specifically, they raised the issue of the unequal, elites-driven distribution of medical technology, vaccines, antiretroviral drugs and other high-end achievements of medical scientific research and production. Public discourse surrounding bioethics must expand to consider not only the appropriate applications and use of biomedical technology, but also the selection of the recipients of these services and treatment options. Most troubling was this question put by one discussant: Does exclusionary social policy itself bespeak shifting conceptions of the human person?

The Muslim interlocutors were especially passionate in calling attention to the ways in which controversy over access to medical services of this kind has become yet another weapon in the geopolitical and religious/cultural propaganda and sometimes shooting wars afflicting many regions. Catholic and secular interlocutors also noted that in some settings, end of life decisions, choices about organ transplantations and the application of neuroscientific advances are deeply intertwined with economic and political structures and imperatives that require greater moral scrutiny.

Though not originally charged with exploring broader social and economic issues related to the impact of scientific research on conceptions of the human person and the functioning of the human brain, the working group raised several contemporary bioethical questions in order to connect theoretical discussions of personhood to everyday social issues facing communities around the world. Through discussions of issues such as organ transplantation, euthanasia, infertility treatment, abortion, embryology research, and the use of brain imaging, working group members called for a more expansive approach which places each of these questions, and the people who confront them, in their social, political and economic contexts.

Thus, for example, Charles Camosy criticized the “closed home” model, which takes the (isolated) individual or nuclear family as the basic social unit. The closed home model makes it unthinkable, for example, for economically unprivileged couples struggling with a multiple pregnancy to rely on the help of the extended family. In order to bring this model in line with both Catholic and Muslim conceptions of human flourishing, Camosy said, “we must work to make our families, neighborhoods, religious communities, and governments better able and willing to be the communities” that resist consumerism and support vulnerable populations.³⁸

³⁸ Charles C. Camosy, “The Case of the ‘Two-Minus-One’ Pregnancy,” <http://blogs.nd.edu/contending-modernities/2013/09/19/the-case-of-the-two-minus-one-pregnancy/>

In support of Camosy's argument, Maura Ryan emphasized that isolating bioethical issues from broader social ethical challenges gives too narrow an understanding of what is at stake:

Bioethics, including most of what would be called theological bioethics, has paid scant attention to issues of social justice — questions such as unequal access to scientific advances, global marketing of pharmaceuticals and biotechnologies, local and global disparities in vulnerability to disease and untimely death, and the impact of environmental degradation on health and well being — and even less to the far-reaching impact of economic and political decisions on health outcomes. [...] We are unlikely to see the long-overdue conversation between bioethics and social ethics until we begin to acknowledge the costs of political choices and until the range of what counts as a “life issue” is expanded to include things like the effect of environmental policies on children's health, the relationship between for-profit marketing and development of drugs and access to affordable treatment for AIDS, TB and malaria, and the role of poverty, gender-discrimination and violence in undermining the conditions for childbirth and child nurture for many women and children.³⁹

Professor Moosa noted that certain bioethical questions are more pertinent in some cultural settings than others. For Muslims in West Africa, for instance, deliberations over the use of advanced medical intervention to prolong life is less relevant, but other debates, such as the implications of brain death, are still very active. Any ethical discourse must possess a degree of “cultural literacy” to ensure that it serves the population in question. He suggested that focus groups might be a helpful method for both informing and evaluating communities' responses to ethical dilemmas.

The tight connection between human personhood, human dignity and the social, political and economic practices governing the accessibility and application of medical science was an overarching concern of Sherine Hamdy.⁴⁰ Her conference and written contributions focus on a basic dilemma: “We are asking, ‘Where is the human soul? When does the person begin?’ But we also have to be asking about

³⁹ Maura Ryan, “Bridging Bioethics and Social Ethics, A reply to Charles Camosy and Sherine Hamdy,” <http://blogs.nd.edu/contendingmodernities/2013/09/27/bridging-bioethics-and-social-ethics-a-reply-to-charles-camosy-and-sherine-hamdy/>

⁴⁰ Hamdy is Associate Professor of Anthropology at Brown University.

when certain people's lives are being valued over other people's lives." While the first type of "questions are recognizably the stuff of 'bioethics,' they barely skim the surface of deep structures of global inequality that value some lives over others."⁴¹

Taking an example from her research in Egypt, Hamdy noted that concerns about the legitimacy of organ transplantation overshadow the ethical question of who can have access to medical treatment in the first place. Poor women, who are often legally divorced on the grounds of not bearing children, are unable to afford treatment for renal failure, for example. Echoing the work of Sachedina and others who have voiced the need for a less juridical (fatwa oriented) approach to such questions, Hamdy stated: "The problem with fatwas is that a fatwa is by definition an answer to a question. And what it doesn't show is all the things that [are not] asked, because they're so normalized, that could also be in grave violation of very basic Islamic bioethics." In regard to the issue of liver transplantation, Hamdy continued, it is not enough to debate whether it is *halāl* or *harām* (religious-legally permissible or forbidden, respectively), or if medicine or bioethical principles used by physicians can justify the procedure. Rather, she urged, we might need to first ask: What are the underlying forces predisposing vulnerable populations to disease?

To exemplify her point, Hamdy noted that environmentalists have demonstrated that state management of water systems, including damming projects and the maintenance of irrigation canals, "plays an important role in disease incidence." In the case of Egypt, for example, the construction in 1970 of the Aswan High Dam provided hydroelectricity throughout the country. Yet it also led to a reduced water flow, which eventually led to an epidemic of liver failure throughout the country. "Where were the voices of bioethicists," Hamdy asked, "when it came time to assess the human costs and benefits of building the Aswan High Dam, and the resulting permanent restructuring of the ecology and landscape? [...] Where were the voices of ethicists in assessing the ambitious public health campaign that yielded unintended disastrous results?" What we find in this example, she explained, "is further evidence that the field of bioethics – in secular and religious forms – often arrives to the scene too late." And, she added, "it continues to focus on small-scale questions – for example, 'Is it ethical to transplant a liver lobe?' – when liver transplants, ethical or not, will never be able to alleviate a national-epidemic at the scale of Egypt's liver disease problem."

⁴¹ Sherine Hamdy, "Reframing Islamic Bioethics," <http://blogs.nd.edu/contendingmodernities/2013/09/18/reframing-islamic-bioethics/>

Robert Tappan amplified this line of inquiry. What the field of secular and religious bioethics needs is a “reflective equilibrium” between a principle-based approach of the sort articulated by Beauchamp and Childress,⁴² and a contextual approach that considers socio-political factors — for example, power disparities involving gender or class — as part of the decision making process. Feminist thought has begun to be integrated into Islamic Studies, he acknowledged, but more needs to be done to integrate Muslim women’s voices into the relatively young field of bioethics. In the West, feminist bioethics started to be developed about thirty years ago, reshaping in important ways the principle-based approach, which had identified autonomy as the basic principle of bioethics.⁴³

Gender considerations should play a central role, Tappan asserted in Doha, in the application of assisted reproductive technologies (ART). Yet even there, the implications of gender in the theory and practice of Islamic bioethics have not been sufficiently examined. In Iran, for example, some jurists have decided that the sale of women’s gametes [cells involved in sexual reproduction] is permitted, without considering the undue pressure that this practice imposes on poor women, or the health costs (i.e. future infertility) associated with it. Moreover, Tappan added, few women serve in the Parliament, or work as physicians, making their voices heard only in the last stage of the deliberation, when the commodification of gametes has already been legitimized.

⁴² Tom L. Beauchamp is Professor of Philosophy at Georgetown University, and Senior Research Scholar at the University’s Kennedy Institute of Ethics. James Franklin Childress is the John Allen Hollingsworth Professor of Ethics at the Department of Religious Studies at the University of Virginia. Their book, *Principles of Biomedical Ethics* (Oxford University Press: 2012, 7th ed.), presents a cross-cultural theory and practice of biomedical ethics, based on four universal principles: beneficence, non-maleficence, respect for autonomy, and justice.

⁴³ Robert Tappan, “A Response to Sherine Hamdy and Charles Camosy,” <http://blogs.nd.edu/contendingmodernities/2013/09/24/a-response-to-sherine-hamdy-andcharles-camosy/>

The Doha Workshop

Participants in the Doha workshop (held the day after the conference, on Tuesday, March 4) discussed the gaps in the current literature, the practical needs of religious leaders and medical practitioners, and the conference themes that call for further exploration and research.

Many participants called for a systematic consideration of the epistemology of bioethics. For religious thinkers, this would include the theological as well as philosophical foundations of knowledge regarding the human person. Religiously derived principles would also affect the methodologies and goals of the (Islamic or Christian) bioethicist. The challenge, then, is dialoguing with secular bioethicists to determine precisely how to incorporate, where possible, theological insights into the trilateral conversation — especially given the fact that theology, per se, is not recognized as a source of knowledge by many scientists and ethicists. One interlocutor suggested that it might be useful to “create a typology of how bioethics is understood in the secular sphere, and consider what can be taken from that in order to provide a typology for Islamic bioethics.”

Building a bridge between epistemology, ethics and practice engaged the workshop participants, who recognized the need to specify “clearly defined ‘ought’ questions that can be translated into policy.” For example, one speaker noted, it is not enough for Muslims to ask, “What do we think about organ transplantation?” but rather, “What do we do in this specific situation?” That is: “How are the orienting values and principles regarding bodily integrity and human dignity best served in this specific situation, with its medical, economic, psychological, etc. complexities?” This is the kind of question about which religio-legal and ethical thinkers may disagree, and need to be in dialogue. Giving due weight to the complexities of the case is one of the contributions to be made by ethical reasoning. Asking the right questions is another. As one discussant summarized the point: “How do we create a framework, which allows people to navigate a range of issues and make informed decisions?” The question of ‘what’s new’ is crucial to situational ethical reasoning. It must inform the move from theoretical considerations to an evolving practical framework for action.

What resources within Islam are available to Muslim thinkers? To be specific, is the tradition of legal reasoning and the reliance on fatwas sufficient to the contemporary ethical task?



The debate on the state of Islamic bioethics is closely tied to the debate on the nature of Shari‘a, which is often translated with the word “Islamic Law.” “But does Shari‘a only include law, or is it more comprehensive than that?” asked Ayman Shabana. “According to the classical understanding, Shari‘a is a codification of an ethical vision. There is no separation between law and ethics in classical Islam. When we speak of the difference between law and ethics, we bring a modern categorization into Shari‘a.” As for situational reasoning, Shabana added, fatwas in the classical tradition were always based on the social context of the time. “Even today, there are a few jurists who would question the role of experience and custom. What is lacking, though, is the adaptation of fatwas to modern science.”

Ebrahim Moosa endorsed the call for a more nuanced understanding of the term “Islamic law,” which, he pointed out, is a colonial designation for Shari‘a. Indeed, Shari‘a originally consisted more in a duty-based ethics. *Fiqh* (Islamic jurisprudence) consisted in the codification of ethics into religious law on the part of the jurists. Abdulaziz Sachedina agreed: The Prophetic language of Islam was ethical, he declared. “It was persuasive, not definitive or coercive like fatwas are. *Fiqh* can be used as the raw material for Islamic bioethics. Bioethics, however, needs to go further than that to explore what the jurists didn’t say about the ethical foundation or the reason behind their rulings.”

“Traditional authorities do not train in scientific discourse,” Moosa explained. At most, they rely at least marginally on context in order to produce their rulings. Overall, human experience only plays a small part for traditional scholars, since their approach is more normative than contextual. And the experience they rely on is mostly the experience of the past, of those Muslim scholars who lived in the early years of Islam. Partly, this is due to the fact that scientific developments are seen as a product of the modern West. Hence their resistance to science is equated with resistance to the West.”

Mohammed Ghaly responded to this conversation by contending that the situation characterized by Moosa and Sachedina was true until the 1980’s. Since then, legal scholars have realized the importance of collective *ijtihad*, of reasoning together with people outside the field of law, particularly with physicians. “Their collective *ijtihad*, however, does not yet include philosophers or theologians to the same extent that Sachedina’s project for an Islamic bioethics advocates for. Even social scientists are minimally involved. The problem, then, is not to get rid of fatwas. Rather it is to expand and broaden their sources.”

Charles Hirschkind⁴⁴ expressed discomfort with talk about the inadequacy of juridical reasoning in Islam. Muslim jurists have their own ways of seeing the problem, he observed. What is the notion of the human presupposed by fatwas? “In the area of organ transplantation, for example, fatwas presuppose a specific view of human suffering. In general, a distinctive anthropological view of the human person informs fatwas. This view is worth examining.” According to Hirschkind, the effort of developing an Islamic bioethics that goes beyond the fatwa-oriented approach

⁴⁴ Hirschkind is associate professor of anthropology at the University of California, Berkeley.

might run counter to the sensibilities of the majority of ordinary Muslims, who are used to consulting the *faqih* to learn what is wrong and what is right. [A *faqih* is a jurist, an expert in Islamic jurisprudence.] In Egypt, he noted, fatwas seem to be more flexible and context-sensitive than has been depicted so far. “I think of fatwa (reasoning) as more of a contextually attuned practice. Egyptians ask for fatwas, and if they’re not happy with the response, they often seek another opinion. In any case, when the petitioners come, the mufti asks them to explain the situation and the mufti’s ruling, drawing on the legal traditions, is presented on the basis of the contextual information available to him. He seeks to provide an answer adequate to that context. So the fatwa practice has a flexibility that other aspects of juridical production do not have. It would be interesting to study how muftis respond to petitions for organ transplants. What do they take into consideration? The kind of suffering? Whether or not the people have children? What the implications will be without treatment? With such data we could get a clearer picture of certain issues of relevance to that context.”

Shabana responded by reminding his colleagues that “no matter how contextualized fatwas are, *faqihs* are not trained in new scientific or biotechnological developments. Therefore their fatwas on organ transplantation or assisted reproduction (just to cite a few) often miss out on an important element of decision making.” *Fiqh* literally means understanding, he noted – understanding of both the sources and the contexts. Without proper knowledge of the science and medical technology, he concluded, contemporary interpreters are at a loss.

This debate points to the need for this working group to distinguish between the aspirational and the actual state of Islamic bioethics, Moosa urged.

In sum, participants agreed that the relationship between religious law and ethical reasoning is a subject that needs greater elucidation, both within our group and for the broader educated public. Within the group, however, significant progress was made on the issue of the applicability of the fatwa tradition to today’s bioethical and neuro-scientific puzzles.

What are the immediate challenges in developing Islamic bioethics?

Dialogue in response to this question proceeded roughly as follows:

- When we speak about personhood in an abstract and philosophical sense, we should also discuss the practical implications of these different conceptions of personhood. We must set forth an “action theory” – a framework that has its roots in philosophy and theology. Muslim and Christian practitioners need such a framework.
- Yes – when I encounter a patient, how do I frame my ethical ideas? Treat the patient in a just manner, autonomy, do no harm...
- A principle-based approach could be helpful. A practical framework should help practitioners make decisions.
- Of course, there is sometimes – often? – a disconnect between the values and the practice. And, within a given society, we encounter different cultural values and norms.

- In many countries there are “best practices” and clear guidelines for addressing or resolving problems raised by medical procedures. However, in many Muslim societies such guidelines do not exist. We are not going to *influence* policies in many situations; rather, the creation of policies is the reality. Therefore there is a need for Muslim societies to learn from other experiences . . . we must inventory the countries that do have clear guidelines. A region-specific map would be helpful.
- At the same time, before we (Muslims) decide on priorities, it is important to have a process of compiling and reflecting on what has already been done — the scope of what has been addressed by Islamic scholars.
- A geographical focus is very important — there are many practical differences between contexts and this needs to be explored further. Are there theological, political, geographical reasons for the differences between country-by-country approaches and practices? There is a need for an analysis and exploration of the roots and reasons for different practices. Looking at these differences, we can identify the commonalities — the principles that transcend geographical boundaries.
- What we as bioethicists want to do, is to clarify what is the ‘right’ thing. Most of the time these issues are *not* “situation oriented.” For example, the conundrum of delivering bad news, and how to do it, what to say and what to omit, the benefit of not providing information — this is a near-universal “situation.” If we know it is the right thing to deliver information, it should be a standard practice. That is, our knowledge of regional and cultural issues should not necessarily stop a person from doing the right thing.
- But you must admit that there will always be gray areas . . . As a physician, I assume that the best thing to do is to deliver information — if a patient has decided that they don’t want to know, then should I respect their wishes? The perspective matters.
- Patient autonomy and family autonomy — how do we balance the impact? Who is the contract with?
- [But] people and practitioners need answers. What is the right thing from an Islamic point of view? As a practitioner, I need a document that outlines these issues — in order for the patients to be able to agree with the physician.

How should the Science and the Human Person working group proceed to the next stage of its work? The working group is engaged at three levels: discussion and dialogue, research, and practical/applied. “Public education” is an additional level, yet to be formulated. A summary comment: “We have begun to make progress on setting the normative terms and framework, which will have implications for practice-oriented discussions. To follow up on this initial progress, we need to create programs that explore these issues in depth and build upon the core conversations that are often repeated in symposiums.”

Other participants added: Neuroscience should be a more exclusive focus of these deliberations. The programs to come should focus on specific issues within neuroscience, building on the epistemological parameters that have already been established. These parameters can continue to be refined, but we should not wait for them to be perfected, for that will never happen.

Attention should be given, another speaker suggested, to how various medical technological interventions are introduced into society and disseminated. This follow-up would be in keeping with emphasis on social justice.

What perspectives are not fully represented? What issues need greater attention?

In answer to these questions, a recurring topic of conversation was gender. Many, though not all, felt that this topic would stimulate mutually critical correlations between traditions and disciplines. The discussion about gender and relationality, one participant noted, speaks directly to the idea of the human person.

The place of the secular in the conversation was a subject of concern as well. In some ways ‘science’ has been standing in for “the secular,” but that is problematic. There is a need to engage with the secular as a specific tradition. Finding the right voices for this type of conversation is difficult but necessary.

If we’re going to be so bold as to invite jurists to converse with others, one workshop participant commented, there also has to be a parallel process in the Muslim world for a dialogue between physicians and patients – this is a rarity. Another participant, speaking from a Catholic background, reminded the workshop that both Muslims and Catholics “shop around” among their respective ulama and priests to find opinions or rulings that match their predispositions and suit their own needs.

A member of the Science and the Human Person working group summarized her “take-aways” from the Doha conference and workshop by reinforcing the call for:

- Broadening the scope of Islamic bioethics from the juridical to the ethical; “the field has come a long way but needs to go further.”
- Continuing the explorations of *subjectivity* and modern personhood – specifically, how personhood is variously conceived within these three traditions.
- Examining the theological underpinnings of clinical decisions. How can we advance the practice of raising ethical and religious questions in a clinical setting – where religious perspectives are ignored and sometimes seen as whimsical?
- Focusing more systematically on the challenges of neuroscience to religion.

Finally, several participants asked, how can the Science and the Human Person working group help shift the discourse to the people, who have to make the decisions for themselves?

In sum: During the course of the discussions and writings, the members of the Science and the Human Person working group, with the help of interlocutors drawn from several nations, grappled with what the sociologist of religion Christian Smith, speaking at the May 2013 conference, called “the emergent view of human personhood.”

Smith anticipated the discussion about relationality and neuroscience in his presentation of a sociological framework for conceiving the human personhood, one that aims to comport with both religious and secular traditions. Smith’s conception of personhood rejects a reductionistic view of humans by describing persons as an emergent entity that is more than the sum of its various capabilities. When questioned about the implications of such a model for the status and treatment of other animals or living organisms, he maintained that “[persons] are centers with purpose,” which includes responsibilities to other life forms.

According to the theory of emergence, Smith explained, just as a person cannot be reduced to the sum of his or her capabilities, so, too, the human brain can do things “infinitely beyond what the simple sum total of all of the cells themselves could do.”⁴⁵ The physical human brain, for example, gives rise through emergence to higher-level affective and mood experiences. These, in turn, have the causal capacity to influence the physical operations of the brain.

While Smith’s precise formulations are distinctive to his own work, the Science and the Human Person working group identified the need to examine more in depth the implications, in the clinical setting, of this non-reductionist notion of human personhood — paying special attention not to conflate the modern notion of subjectivity with the more spiritually, philosophically and theologically informed idea of emergent personhood. Notably, working group members were not content to engage only on the level of theory; they also asserted that common commitments to human personhood and dignity must guide the application of new biomedical technology towards the advancement of, in Flanagan’s words, all that is “good, true and beautiful.”

The Science and Human Person Working Group is preparing a volume of essays that will build on the themes outlined in this report. Through companion chapters and case studies, the authors will bring together a problem-oriented approach with a contextual analysis that takes into consideration the influence of geopolitics and gender, to cite only two of the variables, on bioethical practices.

⁴⁵ Christian Smith, *What Is a Person?: Rethinking Humanity, Social Life, and the Moral Good from the Person Up*, (University of Chicago Press, 2010), 35.

Appendix: Conference Panelists and Participants

Scott Appleby is Professor of History and the John M. Regan Jr. Director of the Kroc Institute for International Peace Studies at the University of Notre Dame. Appleby is the author or editor of several books, including *Strong Religion* (2003, with Gabriel Almond and Emmanuel Sivan), *The Ambivalence of the Sacred: Religion, Violence and Reconciliation* (2000), *Spokesmen for the Despised: Fundamentalist Leaders of the Middle East* (1997); *Being Right: Conservative Catholics in America* (1995) and *Church and Age, Unite! The Modernist Impulse in American Catholicism* (1992). In 2010, he founded *Contending Modernities*, which he directs at the University of Notre Dame.

Osman Bakar is the Director of the Sultan Omar 'Ali Saifuddien Centre for Islamic Studies, at the Universiti Brunei Darussalam. A Professor Emeritus of Philosophy and former Deputy Vice-Chancellor at the University of Malaya, from 2005-2008, Bakar was a Professor of Islamic Thought and Civilization at the International Institute of Islamic Thought and Civilization; he has also been the Malaysia Chair of Islam in Southeast Asia at Georgetown's Prince Alwaleed Bin-Talal Center for Muslim-Christian Understanding. Bakar is a member of the World Economic Forum's West-Islamic World Initiative for Dialogue. His publications include *The History and Philosophy of Islamic Science* (1999) and *Tawhid and Science* (1991).

Thomas Banchoff is Vice President for Global Engagement at Georgetown University and founding director of the Berkley Center for Religion, Peace, and World Affairs. He also serves as Professor in the Government Department and the School of Foreign Service, Georgetown University. His research centers on religious and ethical issues in world politics.

Charles Camosy is Assistant Professor of Christian Ethics at Fordham University. His writing addresses the ethical complexities of stem cell research, the treatment of critically ill newborns and related bioethical issues. Camosy is author of *Peter Singer and Christian Ethics: Beyond Polarization* (Cambridge University Press, 2012), and *Too Expensive to Treat?: Finitude, Tragedy, and the Neonatal ICU* (Eerdmans, 2010). His new book *For Love of Animals: Christian Ethics, Consistent Action* (Franciscan Media, 2013) was released in October.

Ilia Delio is Director of Catholic Studies at Georgetown University. Her research concentrates on science and religion, with a focus on transhumanism, nature and ecology, and evolutionary theology. She is the author of fourteen books including *Care for Creation*, which won two Catholic Press Book Awards in 2009. Her new books include *The Unbearable Wholeness of Being: God, Evolution and the Power of Love* (Orbis, 2013), and *From Teilhard to Omega: Cocreating an Unfinished Universe* (Orbis, 2014).

Thomas Eich is Professor of Islamic Studies at the University of Hamburg in Germany. He is trained as a social historian of the 19th century Middle East and in classical Arabic and Islamic studies, with a longstanding interest in bioethics. He is author of *Islam und Bioethik* (Reichert-Verlag, 2005) and co-editor of a volume on *Muslim Medical Ethics* with Jonathan Brockopp (University of South Carolina Press, 2008). His research focuses on questions relating to the beginning of life. Eich explores such issues through an analysis of contemporary discussions among Muslim religious scholars. In addition, his recent research focuses on earlier Islamic legal sources.

Owen Flanagan is the James B. Duke Professor of Philosophy and Professor of Neurobiology at Duke University. His research specialties include philosophy of the mind, philosophy of psychology, philosophy of social science, ethics, contemporary ethical theory, moral psychology, and Buddhist and Hindu conceptions of the self. He is the author of several books, including *The Science of the Mind* (MIT Press, 1984; 2nd edition, 1991); *Identity, Character, and Morality: Essays in Moral Psychology*, edited with Amelie O. Rorty (MIT Press, 1990); *Varieties of Moral Personality: Ethics and Psychological Realism* (Harvard University Press, 1991), and *The Bodhisattva's Brain: Buddhism Naturalized* (MIT Press, 2011).

Mohammed Ghaly is Professor of Islam and Biomedical Ethics at the Center for Islamic Legislation & Ethics (CILE) at the Qatar Faculty of Islamic Studies, Doha. He is author of *Islam and Disability: Perspectives in Theology and Jurisprudence* (Routledge, 2009). Ghaly received the Veni award from the Netherlands Organisation for Scientific Research to fund his research project *Islamic Biomedical Ethics: The Interplay of Islam and the West*.

James Giordano is Chief of the Neuroethics Studies Program in the Edmund Pellegrino Center for Clinical Bioethics, and is a professor on the faculty of the Department of Neurology and Graduate Liberal Studies Program at Georgetown University. His ongoing research addresses the molecular and behavioral neuroscience of pain and analgesia, the neurophilosophy of pain and mind, the neuroethics of pain research and treatment, and the ethical issues arising in and from advancements in neuroscience and neurotechnology. He is author and co-editor of many books, including *Scientific and Philosophical Perspectives in Neuroethics* (Cambridge University Press, 2010), with Gordijn, Bert.; *Neurotechnology: Premises, Potential and Problems* (CRC Press, 2012); and, *Neuroscience and Neurotechnology in National Security: Practical Capabilities, Neuroethical Concerns* (in press, 2014, CRC/Taylor-Francis Press).

Nidhal Guessoum is an Algerian astrophysicist, currently Professor and Interim Head of Physics at the American University of Sharjah, United Arab Emirates. He has published widely on science, education, the Arab world, and Islam. He is the author of *The Story of the Universe — from primitive conceptions to the Big Bang* (in Arabic, 4 editions) and *Islam's Quantum Question - Reconciling Muslim Tradition and Modern Science* (2011).

Sherine Hamdy is an anthropologist at Brown University with longstanding interests in cross-cultural approaches to medicine, health, and the body. Her first large research project was based on two years of fieldwork in the Egyptian cities of Tanta, Mansoura, and Cairo, and culminated in her book *Our Bodies Belong to God: Organ Transplants, Islam, and the Struggle for Human Dignity in Egypt* (University of California, 2012) which received an Honorable Mention from the 2013 Clifford Geertz Prize of the American Anthropological Association's Society for the Anthropology of Religion. Her article "When the State and Your Kidneys Fail: Political Etiologies in an Egyptian Dialysis Ward" (*American Ethnologist* 2008) won the 2009 Rudolph Virchow Award from the Society of Medical Anthropology.

Charles Hirschkind is an associate professor of anthropology at the University of California, Berkeley. His research interests concern religious practice, media technologies, and emergent forms of political community in the urban Middle East and Europe. His book, *The Ethical Soundscape: Cassette Sermons and Islamic Counterpublics* (Columbia University Press, 2006), received the Sharon Stephens First Book Award from the American Ethnological Association and an Honorable Mention for the Clifford Geertz Prize in the Anthropology of Religion.

Damian Howard, S.J., is Lecturer in Theology at Heythrop College, University of London. His research engages with Islamic theology and contemporary Islamic thought, drawing parallels and contrasts with the concepts and experiences that shape the Christian tradition. He is the author of *Being Human in Islam: The Impact of the Evolutionary Worldview* (Routledge, 2011), and *Christian-Muslim Relations* (University of London, 2013).

Ilhan Ilkilic is an Associate Professor in the Department of History of Medicine and Ethics at Istanbul University. A doctor, medical ethicist and scholar of Islam, Ilkilic was the first Muslim to be appointed to the German National Ethics Council, in April 2012. Previously a lecturer at the Institute for History, Philosophy and Ethics of Medicine at the University of Mainz, Ilkilic directed a research project examining medical ethical decisions about death in intercultural contexts. His research interests include Islamic medical ethics and bioethics; the physician-patient relationship in transcultural settings; health literacy and ethics; and e-health, culture and ethics. Ilkilic is the author of a number of publications in the field of Islamic Medical Ethics.

Elisabetta Lanzilao is a Ph.D. candidate at Georgetown University's Department of Liberal Studies. Her research focuses on foundational models of human rights, with a specific focus on Islamic theoretical and practical approaches to International human rights — particularly to the right to health care. She is currently investigating hermeneutical approaches to Islam that allow for a fruitful interaction between the 'universal'/'super-historical' and the 'contextual'/'contingent', with a specific focus on Islamic neuroethical implications and gender issues in the Middle East.

Ebrahim Moosa is Professor of Religion and Islamic Studies at Duke University. His research interests span classical and modern Islamic thought, with a focus on Islamic law, history, ethics, and theology. He has published articles on bioethical issues dealing with the human body and end of life decisions. Moosa is the author of *Ghazali and the Poetics of Imagination*, winner of the American Academy of Religion's Best First Book in the History of Religions (2006) and editor of the last manuscript of the late Professor Fazlur Rahman, *Revival and Reform in Islam: A Study of Islamic Fundamentalism*.

Gregory Peterson is Professor of Philosophy and Religion at South Dakota State University. Peterson's primary area of research is in religion and science and ethical theory, with special attention devoted to the biological and cognitive sciences and their implications for religious and philosophical approaches to human nature. He is author of *Minding God: Theology and the Cognitive Sciences* (Fortress Press, 2003). He is also co-editor of the Routledge *Companion to Religion and Science* (Routledge, 2012).

Maura Ryan is the John Cardinal O'Hara, C.S.C. Associate Professor of Christian Ethics and Associate Dean for the Humanities and Faculty Affairs at the University Notre Dame. Her primary interests are bioethics and health policy, feminist ethics, and fundamental moral theology. She is the author of *Ethics and Economics of Assisted Reproduction: The Cost of Longing* (Georgetown University Press, 2012) and co-edited a book on Global Stewardship with Todd David Whitmore in 1997. In 2007 the University of Notre Dame press published her co-edited volume, *A Just and True Love: Feminism at the Frontiers of Theological Ethics*.

Abdulaziz Sachedina is the IIIT Chair in Islamic Studies at the Ali Vural Ak Center for Global Islamic Studies at George Mason University. His research focuses on Islamic law and theology, with a concentration on social and political ethics, interfaith and intrafaith relations, and biomedical ethics. Sachedina's publications include: *Islamic Messianism* (State University of New York, 1980); *Human Rights and the Conflicts of Culture*, co-authored (University of South Carolina, 1988); *The Just Ruler in Shiite Islam* (Oxford University Press, 1988); *The Prolegomena to the Qur'an* (Oxford University Press, 1998); *The Islamic Roots of Democratic Pluralism* (Oxford University Press, 2002); *Islamic Biomedical Ethics: Theory and Application* (Oxford University Press, February 2009); *Islam and the Challenge of Human Rights* (Oxford University Press, September 2009), in addition to numerous articles in academic journals.

Ayman Shabana is Visiting Assistant Professor at Georgetown University in Qatar and the Director of the Islamic Bioethics Project, which includes two research initiatives: the Islamic Medical and Scientific Ethics collection and database and the *Encyclopedia of Islamic Bioethics*. He is the author of *Custom in Islamic Law and Legal Theory: The Development of the Concepts of `Urf and `Adah in the Islamic Legal Tradition* (Palgrave, 2010).

Ehsan Shamsi Gooshki is Director of the Department of Medical Ethics at the Iran Medical Council, and Deputy Director of the Iranian National Ethics Committee, where he works to develop the discourse of medical ethics in Iran. His main research focus concerns end of life decision-making and the ethical, jurisprudential, and legal aspects of Do Not Resuscitate (DNR) orders in the Iranian health system, with an emphasis on the right of patients to participate in their medical decisions.

Christian Smith is the William R. Kenan, Jr. Professor of Sociology and Director of the Center for the Study of Religion and Society at the University of Notre Dame. His research focuses on religion in modernity, adolescents, American evangelicalism, and culture. He is the author of *Moral, Believing Animals: Human Personhood and Culture* (Oxford University Press, 2003) and *What Is A Person?: Rethinking Humanity, Social Life, and the Moral Good from the Person Up* (The University of Chicago Press, 2011).

Robert Tappan is Assistant Professor in the Department of Philosophy and Religious Studies at Towson University. His research focuses on Islamic ethics, theology, and law, with particular focus on Islamic biomedical ethics, Islamic views on animals and the environment, and Islamic ethics of war and peace. He has published a book chapter titled "More Than Fatwas: Ethical Decision Making in Iranian Fertility Clinics," in *Islam and Assisted Reproductive Technologies: Sunni and Shia Perspectives* (Inhorn and Tremayne, eds.), and has authored several encyclopedia articles about Islamic ethics. Tappan is currently preparing his first book, tentatively titled *The Bioethics of Assisted Reproduction in Islamic Iran*.

Daniel Stoll is the Associate Dean for Academic Affairs at Georgetown University School of Foreign Service in Qatar. Prior to joining SFS-Qatar, he held a number of positions at the University of Missouri-Kansas City (UMKC), including Assistant Vice-Provost for International Initiatives. From 1988 until 1998 he was a Foreign Service Officer with the U.S. Department of State with postings in Baghdad, Iraq and Johannesburg, South Africa. He received his Ph.D. from UMKC, his MA from Georgetown University, and his BA from St. Olaf College. His research interests include the role of multilateral institutions in the international system and U.S. foreign policy in the Middle East. He is a co-author of *International Conflict over Water Resources in Himalayan Asia*, and co-editor of and contributing author to *The Politics of Scarcity: Water in the Middle East*.

Jonathan VanAntwerpen is director of the Social Science Research Council's Digital Culture program, director of the Religion and the Public Sphere program, and editor-in-chief of *The Immanent Frame*. VanAntwerpen is coeditor of a series of edited volumes on secularism and religion, including *Habermas and Religion* (Polity, 2013), *Rethinking Secularism* (Oxford University Press, 2011), *The Post-Secular in Question* (NYU Press, 2012), *The Power of Religion in the Public Sphere* (Columbia University Press, 2011), and *Varieties of Secularism in a Secular Age* (Harvard University Press, 2010). He has also written on secularism and transitional justice, philanthropy and the politics of reconciliation, American higher education, and the history of sociology.

Frieda Wiebe is the Director of the Library at Georgetown University School of Foreign Service in Qatar. She gained MLS and MBA degrees from the University of British Columbia in Canada. Frieda was the co-principle investigator on the recently completed Islamic Medical & Scientific Ethics database development project funded by the Qatar National Research Foundation (QNRF) and is a research administrator on the current Encyclopedia of Islamic Bioethics project, also funded by QNRF.

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Catholic, Muslim and Secular
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Contending Modernities

