

## Reporting on "Islamic Bioethics" in the Medical Literature

### Where Are the Experts?

With the advancements of science and medical technology in recent decades, new ethical dilemmas have functioned as the catalyst for a renewed religious bioethical discourse. Moreover, with a growing Muslim population in the West, interest among health practitioners in Islamic and Muslim bioethics has grown. This interest is made apparent by the increasing number of medical articles highlighting "Islamic positions" on various bioethical issues.

There is an active discussion in the medical community on bioethics questions in general and religious and Islamic bioethics in particular. However, the reports on Islamic bioethics in the medical literature appear to demonstrate less concern with questions that are often raised by Islamic studies scholars. Such scholars often take more interest in the complexities of Islamic studies in general and the Islamic ethics and legal discourse in particular.

This difference in focus is the basis of the first question we ask: Are Islamic bioethics papers in the medical literature conversant with any discourse of religious doctrine, or are these the works of medical experts with limited (if any) specialized training in such discourse? If religious doctrines are referenced, a second question becomes: What are the materials and approaches utilized? For example, are there references to medieval debates, for example, *al-tahsin wa-l-taqbih*, regarding whether good and evil (or right and wrong) can be known independent of Revelation?<sup>1</sup> What, if any, Islamic legal framework is assumed?

If an Islamic legal framework is assumed, our third, and perhaps most important, question is: Which methodologies are employed when utilizing and referring to Islamic thought? In other words, does the author refer to the positions and methodologies of the well-known schools of law (*madhhabs*)?<sup>2</sup> Does the author refer to Muslim jurists (*fuqaha'*) as authorities? Or does the author attempt to deduce his or her own conclusions by direct recourse to Islamic scripture? If so, which texts are utilized, and on what basis?<sup>3</sup>

These questions, while important to scholars of Islamic intellectual history, law, and ethics, seem to be ignored among medical practitioners with a professed



interest and expertise in "Islamic bioethics." While articles in the religious studies literature thoroughly consider each of these questions, the questions seem to get short shrift, if any attention, in the medical literature.

There are many possible reasons for this. Medical practitioners are more often than not seeking to fill a void in order to satisfy practical, day-to-day concerns. This applied interest concerns itself primarily with the delivery of care to Muslim patients and by Muslim practitioners. It is less concerned with the philosophical and legal foundations that are the core interest of Islamic studies scholars. Their interest is less in developing ethical constructs and more in complying with them. In addition, because of their career research and intellectual focus, those writing for medical journals may not be aware, or are uncomfortable with, the methods and vernacular of Islamic studies scholars.

For Islamic studies scholars, these questions must be asked to maintain the integrity of their scholarly process. Issues of authority and the use of a consistent methodology form the yardsticks by which these scholars measure all legal and ethical decisions. Authors who come up short on these yardsticks lose legitimacy. The price paid for this emphasis is overlooking immediate questions of practical importance to physicians. Islamic studies scholars may not share the urgency of these bioethical issues and may not necessarily have to deal with the practical implications of this discourse. To that end, their peers and sources of criticism are rarely medical practitioners and researchers, and so there is little incentive to face their scrutiny in publication.

This difference in emphasis has led to a disciplinary and discursive schism. Potentially effective discourse that draws from both fields appears rarely, if at all. The result is twofold. First, Islamic constructs of philosophy and ethics are marginalized in the general discourse of medical bioethics, while meanwhile, recent developments in medicine and biology, with their ethical, legal, and social implications, receive relatively little or no attention by scholars devoted to the progress of Islamic studies.<sup>4</sup> Second, discussions of Islamic bioethics are often in the abstract and have little to do with Western Muslims who face these challenges daily.

While others may argue that discussions (such as those that occur at the Islamic Organization of Medical Sciences [IOMS], the Islamic Fiqh Academy in Jedda, al-Azhar, the Supreme Council of Iran, and others) are central to the discourse of Muslim religious scholars, we argue that such discussions and publications are virtually unknown to medical practitioners in North America and Europe, where most of the developments in biomedical research occur and where most standards of "best medical practice" are established. The practice of Islamic bioethics—be it at the bedside, in the research lab, or at a table establishing health policy—would greatly benefit from a closer relationship in the West of religious and biomedical scholarship.



For the research that forms the basis of this essay, we hypothesized that the majority of scholarship on MEDLINE makes little or no use of the discourse of Islamic studies; that available works are generally the products of medical experts with minimal specialized training in Islamic studies; and that majority of articles reviewed claim immutable authority and universal validity. Another objective was to quantify the number of articles that either report findings from anthropological or sociological studies of Muslim patients, or attempt to present a normative, "Islamic" view.

The results of our survey demonstrate that the majority of these articles make little or no use of the discourse of Islamic studies more commonly found in religious studies and Islamic studies journals. Furthermore, most of the articles fail to suggest the existence of such an exchange of ideas. As a result, they imply a monolithic, static nature to the canon of Islamic bioethical discourse. Some of the articles are less normative discussions of bioethics and more empiric reports of findings from anthropological or sociological studies of Muslim patients, despite being found under the heading of "bioethics."

### Methods

To obtain a list of reports in the medical literature, we completed a literature search on MEDLINE, the journal search database for the U.S. National Library of Medicine (NLM) in Washington, D.C. It references approximately sixteen million citations dating back to 1950 (NLM Web site). We completed a basic Boolean search strategy on their PUBMED search engine (search completed September 26, 2005). Our search was "(Islam OR Muslim OR Arab) AND bioethics [sb]." The "bioethics [sb]" term refers to a strategy developed by the NLM to facilitate searching for citations to articles in the area of bioethics. We originally included the term *Arab* in hopes of obtaining citations from Arab countries, also deliberately excluding other regions for comparative analysis.

After this initial search strategy produced 497 citations, we individually reviewed each title and abstract to determine whether the paper was relevant to our study. We included any articles that broadly or specifically referred to issues of pregnancy, cloning, abortion, birth control, or assisted reproductive technology. We additionally included articles referring to solid organ transplantation, life support, end of life, hospice, palliative care, euthanasia, or death and dying. Any articles about general bioethics without a particular clinical subject were also included. To capture as many articles as possible, articles felt to be relevant by only one investigator were not excluded from analysis. We excluded articles that were not in English or did not expressly relate to the topics noted above.

This initial abstract/title review left 146 articles for further inquiry, and we subsequently read each article independently. We used a predetermined set of questions to assess each article. Each article was marked by the type of journal



(specialty medical, ethics, nursing, social science, other). The geographic origin of the journal, first author, and patient population (where appropriate) was recorded. If a particular denomination or sect of Islam could clearly be identified in the report, it was recorded in our database.

Up to ten criteria were recorded as possible sources of Islamic jurisprudence: Qur'an, hadith or Sunna, *madhhabs*, group consensus statements, statements of individual scholars, citation of general legal principles, and fatwas from governments, religious institutions, and local entities. If the author made a statement without citing any source, this was also recorded.<sup>5</sup>

### Results and General Findings

Of the articles that met our search criteria, 34 were excluded from further analysis (see table 1). This left 112 articles, which we used for our study.

TABLE 1. Articles excluded from further analysis

9	No reference in article to Islam
1	Not in English
24	Not obtainable from our university library consortium
34	TOTAL

Most of the articles we found were general pieces on bioethics (see table 2). Of the general articles, most were about multiple religions, and Islam was among the included faiths. We examined the "multiple faiths" articles to determine the relative weight given to each religious group. We found that while Islam received relatively less attention in a large number of the articles, the difference was minimal. However, in virtually none of the articles did Islam receive a substantially larger portion of the text of the article. It is to be wondered if the readership of most medical journals can assume at least a cursory understanding of basic precepts of Islam (or any religion, for that matter).

TABLE 2. Topics of the journal articles

General bioethics	47
Islam only	19
Multiple religions	28
Abortion / embryonic stem cells / birth control	40
"End-of-Life" (withdrawal of life support / hospice / brain death)	19
Organ transplantation	17
Empiric studies of Muslims	23



### Geography of the Articles and Authors

We were interested in the question of where the discourse was occurring and where it came from. We hypothesized that a geographic discordance would exist between those who practice and write about medicine and bioethics and those with an interest in the study of Islamic law. The authors and journals (see tables 3 and 4) came from a variety of locations. Journals from the United States and Europe dominated the citations, but the greatest number of authors came from countries in the Middle East.

TABLE 3. Author geographic origin

Middle East	39
Israel	10
Turkey	7
Iran	5
Kuwait	4
Saudi Arabia	4
United States	29
Europe	18
Africa	10
South Africa	8
South Asia	5
Southeast Asia	4
Canada	4
Other	1
No location identified	3

TABLE 4. Journal geographic origin

Europe	47
United States	39
South Africa	12
Middle East	8
Canada	3
South Asia	2
Southeast Asia	1

These results reflect MEDLINE's focus on North American and Western European journals. Approximately two-thirds of journals indexed in MEDLINE are based in one of those two regions. Relatively fewer journals in MEDLINE come from Africa, Asia, and Eastern Europe. We speculate that we might find more citations from other more internationally oriented databases such as EMBASE, which is



maintained in Great Britain and focuses less on North American journals. However, EMBASE has fewer citations and is used less by health practitioners in North America. It should also be noted that the removal of the term *Arab* in our search resulted in no loss of articles from this distribution. Of countries outside the United States and Europe, the most citations came from Israel (10), South Africa (8), and Turkey (7), with no other nations producing 5 or more citations in our search.

Despite the North American and European focus of the journals, it was notable that more often than not the authors of the reports originated from regions with large Muslim communities (table 3). Over half of the articles had authors from the Middle East, Africa, and South and Southeast Asia. However, not all countries contributed equally. Of countries outside of North America and Europe, Israel produced the most authors writing about Islam and Muslims, followed by South Africa and Turkey. We speculate that this is the result of closer ties between these countries and the North American / European academic enterprise.

### *Types of Journals, Types of Articles, and Their Subject Matter*

We were particularly interested in the forums through which Islam was being presented to the medical community. These, we felt, would be reflected in part by the types of journals publishing these reports and would also be manifested through the types of articles found in our search. The journal origins of the articles found were as follows: sixty-three of the citations were found in specialty medical journals; twenty-five were in journals specializing in social studies of medicine and biology; thirteen were found in what we identified as ethics journals; seven had nursing care as their focus; and the remaining four articles were either primary news citations (for example, *New York Times*) or other non-peer-reviewed sources.

The fact that a majority of articles were found in medical specialty journals again reflects the disciplinary focus of MEDLINE. However, since most of these journals lack a disciplinary focus on ethics in general and religious bioethics in particular, we can only speculate about the quality of peer review of such articles. The lack of focus, coupled with the short length (typically fewer than three thousand words), of the reports was associated with a general superficiality of articles attempting to explain Islamic or Muslim positions on bioethics.

### *Empiric Studies of Muslims*

We hypothesized that because of the disciplinary focus of MEDLINE on testable hypotheses and empiricism, more often than not articles citing Islam or Muslims would be attitudinal surveys, which are commonly published in the medical literature. Twenty-three of the articles were classified as "empiric studies." This figure changed with the inclusion of "South Asian" or exclusion of "Arab" into our



search strategy, suggesting that some of the empiric studies included may not have been considered "Islamic." However, those articles that did fall out of our search strategy were all excluded in the second round of article exclusion (from 146 to 112). Of the twenty-three included articles, two were single cases of a bioethics issue involving a Muslim patient. Four were attitude surveys or focus groups of physicians, and two were of Islamic religious scholars. The remaining fifteen reports were attitude surveys of Muslims, mostly relating to issues of pregnancy and pregnancy termination.

While fewer than expected empiric studies were found, this reflects the focus of our original literature search and serial exclusion strategies. For comparison, MEDLINE was queried using the search term "(Islam OR Muslim) AND attitude" (search completed January 31, 2006). We found 315 citations, most of which would not have been excluded had they been found in our original search. Because our focus was not on empiric studies of Muslim attitudes on bioethics, this was not pursued further. However, the question of the relationship of bioethics scholarship to lay Muslim attitudes on bioethics questions is important and deserves further study.

### *Comprehensiveness and Depth of Islamic Citations*

It is one thing to quote primary and secondary sources of Islamic law and another to deliberate on and interpret those sources so as to give them adaptability for coping with present needs. To the latter end, we evaluated the sources, as well as the depth, of quotations of primary literature made by the ethics authors. We also investigated the extent to which the intervening centuries of jurisprudence were evaluated. Also of interest was the diversity of viewpoints and schools cited in the name of "Islam."

The denomination of Islam mentioned most in the bioethics articles reviewed was overwhelmingly Sunni. Although denominations were not explicitly mentioned in the majority of the articles, we inferred a Sunni denomination based on the cited scholars, *madhhabs*, and use of hadith collections in the reports. Only five reports were exclusively about Shiites, and seven more explicitly mentioned both Shiites and Sunnis.

### *Sources of Jurisprudence*

Although the Qur'an was the most frequently cited source of Islamic jurisprudence and principles of Muslim bioethics (see table 5), only slightly fewer than half (55 of 112) cited what most agree to be the bedrock of Islamic thought. Likewise, references to the Sunna, hadith in general, or to specific hadith were found in 34 articles. However, virtually none of the articles provided any interpretative analysis, much less a pluralistic analysis, of mentioned Qur'anic verses or hadiths.



TABLE 5. Number of articles citing a particular source as the basis of the author's stated opinion

Primary Sources	
Qur'an	55
Hadith/Sunna	34
Principles of Islamic Law	
<i>Madhhabs</i>	35
"Legal principles" ( <i>maslaha</i> , etc.)	18
Historical or current citations	
Person	34
National fatwa	22
Regional/local fatwa	26
Group/organization ruling or consensus statement	24

Some reports made reference to principles or schools of Islamic jurisprudence. Thirty-five articles mentioned the *madhhabs*, with seven specifically mentioning a ruling by a *madhhab*. Eighteen articles mentioned at least one legal principle, such as *maslaha*, *qiyas*, *ijma'*, *'urf*, *ijtihad*, or others. Thirty-four articles mentioned a devotional scholar of Islam or Islamic law by name. Many of the persons referenced were historical figures (al-Ghazali [d. 1111], Rumi [d. 1273], Ibn Taymiyyah [d. 1328], and others), but several articles either cited or were full interviews with contemporary scholars, such as a recent grand mufti of al-Azhar, Ayatollah Sistani, Abdulaziz Sachedina, and Hassan Hathout, an obstetrician in the United States who has written extensively on Islamic bioethics relating to pregnancy.

There was a wide distribution for the number of sources mentioned. For this part of the analysis, only reports not categorized as "empiric studies" were used. Only five of the reviewed articles included more than five source categories as we categorized them. Thirteen reports mentioned five source categories, sixteen mentioned four, and thirteen mentioned three. Nearly half (forty-one of eighty-nine) articles mentioned fewer than three categorized sources. Fourteen reports mentioned only two categorized sources, and thirteen mentioned only one. The remaining thirteen articles that mentioned no source are described below.

Twenty-eight articles made no reference to any Islamic text or any sources of jurisprudence in their explanation of Islamic or Muslim bioethics. Fifteen of these twenty-eight articles were empiric studies of Muslims. These empiric investigations were generally attitudinal studies, either in a survey or focus-group format. The remaining thirteen articles (including the "author reply") had no citation of primary texts, made no reference to principles or schools of Islamic jurisprudence, and made no mention of contemporary or historical persons or organizations.<sup>6</sup> Of these thirteen articles, five were letters to the editor and were relatively



shorter than the articles in general. Most of these articles were comparative studies of multiple religions.

Some of the reports cited actual individuals, such as the grand mufti of Jordan<sup>7</sup> or of al-Azhar.<sup>8</sup> A small number additionally referred to religious organizations, such as the Azhar fatwa committee and the Supreme Scholar Forum of Saudia Arabia.<sup>9</sup> In all of the articles there were fewer than thirty references to statements made by a Muslim professional society, Sharia council, or other organization with a professed interest and focus on either medicine or Islamic law. Conference meetings and symposia were cited in a small number of the references. Although the majority of reports were in North American and European journals, only four<sup>10</sup> mentioned any Islamic meetings or councils based in Europe. In the articles that mentioned these deliberative proceedings or centers of discourse, there was no mention of the deliberative process per se, any dissent, or points of contention. We concluded from this finding that few professionals with an interest in Islamic bioethics are turning to organized forums of discourse as the source from which they determine guidelines of best practice. The few that do cite such forums do so without depth of scrutiny.

### *Claims and Assertions of Universality*

We found fewer than expected reports that explicitly framed the Muslim legal discourse as monolithic and referring to all Muslims around the world, although some did. One article, for example, claimed the existence of a central authority for Islam, referring to the Muslim Law Council of Great Britain as "a body that is to Muslims what the Vatican is to Catholics."<sup>11</sup> Others made broad statements about Muslims. One article commented that "Muslims prefer to die in their own homes."<sup>12</sup> Another article suggested, "Strict Muslims will not agree to organ transplants, and the subject should not be raised unless the family initiated the discussion."<sup>13</sup>

Several reports referred to Sunnis and Shiites monolithically. For example, one article noted that the fatwa it reports on "has the backing of . . . both the major Muslim groups, the Sunni and the Shia."<sup>14</sup> Only seven reports<sup>15</sup> specifically mentioned both Shiite and Sunni denominations in their attempt to characterize Muslim positions on bioethics issues. One article went so far as to claim that "Muslims have no sects. There are two major schools of thought in Islam, the Shia and the Sunni."<sup>16</sup> Although it is a common perception that Shiite Muslims follow a central authority, this perception was not specifically suggested in any of the reports we reviewed.

Answers to the question of which reports implied or explicitly stated a "universalist" or immutable theme to their understanding of Islam turned out to be more elusive than originally anticipated. We attempted to approach the question again, looking for articles that suggested that the process of establishing Islamic law was



ongoing. Only five were agreed upon; these were the same five that gave reference to a deliberative process. An example of a relatively more comprehensive report is as follows:

The general Islamic view is that, although there is some form of life after conception, full human life, with its attendant rights, begins only after the ensoulment of the fetus. On the basis of interpretations of passages in the Qur'an and of sayings of the Prophet, most Muslim scholars agree that ensoulment occurs at about 120 days (4 lunar months plus 10 days) after conception; other scholars, perhaps in the minority, hold that it occurs at about 40 days after conception.

Scholars of jurisprudence do have some differing opinions about abortion. Abortion has been allowed after implantation and before ensoulment in cases in which there were adequate juridical or medical reasons. Accepted reasons have included rape. However, many Shi'ites and some Sunnis have generally not permitted abortion at any stage after implantation, even before ensoulment, unless the mother's life is in danger. Abortion after ensoulment is strictly forbidden by all authorities, but the vast majority do make an exception to preserve the mother's life. If a choice has to be made to save either the fetus or the mother, but not both, then the mother's life would take precedence. She is seen as the root, the fetus as an offshoot.<sup>17</sup>

We found the papers generally to be against both abortion and termination of life support before "complete" cardiac arrest. These findings were not without exception. For example, one reference suggested, "Prolongation of life by artificial means (such as a life support machine) is strongly disapproved of unless there was evidence that a reasonable quality of life would result."<sup>18</sup> As well as being a sweeping generalization, this contradicted the majority of reports we found.<sup>19</sup> However, this particular dissenting reference comes from the *British Medical Journal*, which enjoys one of the widest readerships of medical journals around the world.

### *Depth of Reference*

Regardless of the number of sources referenced, we found in our review of the eighty-nine "nonempiric" studies that when reports noted sources of Islamic law and jurisprudence, they made only passing reference. In only a few articles (we would agree on only eleven)<sup>20</sup> did we feel that any reference to a deliberative process was made, or that there was anything other than full consensus on these issues. Of these eleven articles, four were arguably social science studies of Islamic law.<sup>21</sup> As an example, the ethics discourse that developed between Mu'tazilis and Ash'aris (which we would argue plays at least some role in every Islamic bioethics argument about a new medical technology) was referenced only once: "Within the different schools of thought different opinions exist, about the



concepts of good and evil. For example between the Ash'arite- [sic] and the Mu'tazila schools."<sup>22</sup>

### Discussion

This study analyzed articles discussing the position(s) of Islam on various biological and medical ethics issues, with emphasis on beginning-of-life and end-of-life issues. We observed that there is often a problematic geographical disconnect between the authors of these articles and the journals in which the articles are published. Observation was also made that many of these articles were published in specialty medical journals, which, given the subject matter, probably lack rigor of peer review. This seems to have been confirmed by our finding that most of these articles tended to be superficial in some way. Only a handful of articles adequately highlighted the rich, complex nature of "the Muslim body politic." Indeed, some of the articles presented Islam as a monolith, disregarding any diversity of opinions that might have developed since Islam's inception. Other articles resorted to a few isolated viewpoints, with some basing their normative positions on the views of just one scholar or institution.

From discussions with several of the authors of articles in this study, our findings reflect, in part, editorial bias rather than author bias. According to these authors, medical journal editors accepted relatively few of their articles. For those that they did accept, they demanded substantial shortening and simplification of complex issues relevant to their subjects. Determining how much of our findings reflect journal editorial demands over author demands goes beyond the scope of this article but is nonetheless deserving of further study.

It would be especially difficult for readers of many of these journal articles to learn that a rich variety of Muslim viewpoints exists, much less what those dissenting opinions might be. Equally surprising was the discovery that of all the articles studied, only seven mentioned a specific *madhhab* opinion. Even where there was a comprehensive inclusion of various viewpoints, not once was there an explicit elaboration of the methodology employed in reaching normative conclusions. Moreover most of the discussions in the articles appeared to speak of Islamic law as if it were divorced from specific regional contexts.

Our study has afforded important insights into the nature of these articles. Problems abound in the medical literature when the following questions are considered: 1) To what extent are the authors of these articles familiar with religious discourse and doctrines in general? 2) What are the general materials and approaches utilized, that is, if there is an apparent tension between "Reason" and "Revelation," how are such tensions resolved? Which approaches are utilized? 3) If a legal framework is used, what is the legal methodology employed, and are there sufficient references to the spectrum of scholarly viewpoints? Moreover, are specific regional contexts taken into consideration? It is important to note that the



few somewhat comprehensive articles each focused on a specific regional context. If journal articles on the position(s) of Islam on various biological and medical issues are to be taken into consideration among Islamic studies scholars as satisfactory works of Islamic law and ethics, then these are some of the problems that will have to be addressed.

This study leads to another, more complex and challenging question. In discussing issues of Islamic bioethics, what is the relationship between medical professionals, biomedical scientists, and religious scholars? Is any one more deserving of authority than another? Some religious scholars believe that medical professionals without Islamic training deserve only a limited role in the discourse. One goes so far as to say:

The Islamic world has become plagued with armchair pontificators who are self-declared experts and who decree what Islam is because they *will* it to be so . . . self-declared experts who claim to take the job of reforming Islamic thought without being minimally qualified to do so. Typically these magic-wand reformers are by profession engineers, medical doctors, or even social scientists who might be competent as sociologists or political scientists, but their knowledge and command of the Islamic intellectual tradition or its texts is minimal at best. Despite their poor knowledge of Islam, or perhaps because of their unfamiliarity with the Islamic intellectual tradition, these magic-wand reformers write . . . sweeping and unsubstantiated generalizations about what Islam is and what it ought to be.<sup>23</sup>

While this view is perhaps particularly uncomplimentary, authors should be careful not to stray far from their field of training, study, and expertise.

Our ultimate ambition is better collaboration among scholars of Islamic law, clinicians, and medical researchers. This study reveals that before this ambition might be realized, there is much to be done. There is a wide geographic distribution of journals and authors, with notable discordance between the two. In addition, while most government- and industry-funded medical research occurs in North America, Europe, China, and India,<sup>24</sup> and despite their large Muslim populations, there was a relative dearth of articles from those countries. Furthermore, few authors who asserted an Islamic or Muslim stance expressed nuanced positions that reflected a complex nature to the ethics questions put before them.

Several criticisms of this study can be made. Perhaps the most important is that it was based on a premise that medical journals are a proper forum in which to find elaborate discourse on Islamic law. In general, the degree to which religion is studied in the medical literature is a point of controversy. While some suggest that the number of articles addressing religion as a clinical issue may be increasing,<sup>25</sup> others suggest that the general presence of religion in (clinical) ethical discourse between peers is not.<sup>26</sup> The conclusion that might be drawn from this is



that religion in general is not finding a place in bioethical discourse. If that premise is true, then the lack of Islamic bioethics articles may well be par for the course. That said, it is notable that similar searches for Jewish and Christian bioethics respectively produced nearly three times (1,384) and ten times (4,771) as many references as those resulting from the search for Islamic bioethics. The fact that Muslim bioethics articles are underrepresented in the medical literature has been reported elsewhere<sup>27</sup> and is arguably the biggest measure of the Islamic bioethics canon's inadequacy in the medical literature.

Another concern might be that MEDLINE misses an important set of references with its focus on Western Europe and the United States. This argument is real<sup>28</sup> and reflects a cultural dominance of Western Europe, North America, and Anglo-speaking nations and institutions in general. While we agree with this concern, we also believe that MEDLINE is the largest and most commonly used database for references, including most Muslim-majority countries (MEDLINE Web site). Furthermore, it is precisely this cultural context that is not being adequately analyzed through a prism of Islamic ethical construct.

Any one exploration of the depth of Islamic bioethical discourse is arbitrary and far from an adequate measure of its quality. For this reason, more collaborative efforts between physicians, researchers, patient advocates, general bioethicists, and scholars of Islamic law are needed, specifically in the United States, which has its own unique and diverse Muslim population; its own social and ethical issues relating to biology, health, and medicine; and its own forum for ethical discourse. While this survey of the state of Islamic bioethics in the medical literature is admittedly superficial, we hope that it sparks greater interest in collaborative efforts and focuses attention on a subject of profound importance and deserving of our collective attention.

#### NOTES

1. Generally it has been assumed that the Mu'tazilis and Twelver Shiites tended to place greater trust in the intellect (*'aql*) in making moral decisions, while the Ash'aris tended to downplay the role of the intellect. As for the Traditionalists, their most prominent representative, Ibn Taymiyya (d. 1328), assumed an ostensibly intermediate position. For a more detailed discussion of this medieval discourse, see A. Kevin Reinhart, *Before Revelation: The Boundaries of Muslim Moral Thought* (Albany: State University of New York Press, 1995); Sherman A. Jackson, "The Alchemy of Domination? Some Ash'arite Responses to Mu'tazilite Ethics," *International Journal of Middle East Studies* 31 (1999): 185–201.
2. These include the Hanafi, Maliki, Shafi'i, Hanbali, and Ja'fari schools of law.
3. In other words, which Qur'anic verses and hadiths (and hadith collections), if any, are referenced? And in interpreting the texts, how is priority assigned? For example, a pressing question that has led to much controversy in general bioethics circles is that of defining death and the end-of-life. While withdrawal of other "life-supporting" interventions (such as prayer and leeches) and the question of who "killed" a victim (say, if multiple



assailants stabbed the same person) were debated, the definition of death was a question largely ignored by Islamic scholars. The question was generally moot until the advent of mechanical ventilation in the 1960s and its widespread use in the decades after that. Now multiple controversies exist around "brain death," cardio-pulmonary resuscitation, artificial hearts, and organ transplants. These questions are being asked by Muslims around the world, with few answers available to medical practitioners.

4. Even within the devoted (non-MEDLINE referenced) bioethics literature, examples of more thorough, albeit still superficial, articles exist; see, for examples, Gamal Serour, "Islamic Developments in Bioethics," *Bioethics Yearbook* 5 (1997): 171–88; and Hassan Hathout, "Bioethics Developments in Islam," *Bioethics Yearbook* 3 (1993): 133–47. There are, of course, notable exceptions. For examples, we suggest the following books (which are, admittedly, not solitary articles): Rispler-Chaim, *Islamic Medical Ethics*; and Brockopp, *Islamic Ethics of Life*.

5. We felt that religion, geography, and culture might be conflated in the MESH-based categorization scheme that is the basis of MEDLINE searching. To assess the validity of our search, the authors implemented a PUBMED search using "South Asia AND bioethics [sb]" (search completed January 31, 2006), as well as with removing "Arab" from the original search term. The "South Asia" search produced 172 abstracts that were then reviewed for possible citations missed by our initial strategy. Removing the term *Arab* gave 398 citations, 99 fewer than our original strategy. In reviewing these articles, we noted that we would have included an additional 20 references, all of which were empiric studies. The 99 citations removed with the removal of the term *Arab* were also largely empiric studies.

6. K. M. Ajlouni, "Values, Qualifications, Ethics and Legal Standards in Arabic (Islamic) Medicine," *Saudi Medical Journal* 24, no. 8 (2003): 820–26; S. M. Alibhai and M. Gordon, "Muslim and Jewish Perspectives on Inappropriate Treatment at the End of Life," *Archives of Internal Medicine* 164, no. 8 (2004): 916–17; author reply 917; F. Berker, "Not Contradicting the Religion: Islam Has Been Putting an Emphasis on Family Planning for 14 Centuries," *Integration* 47 (1996): 4; A. M. Clarfield and others, "Ethical Issues in End-of-Life Geriatric Care: The Approach of Three Monotheistic Religions—Judaism, Catholicism, and Islam," *Journal of the American Geriatrics Society* 51, no. 8 (2003): 1149–54; Eisenberg and Schenker, "Ethical, Legal and Religious Aspects of Preembryo Research," 11–24; A. R. Gatrads and A. Sheikh, "Palliative Care for Muslims and Issues before Death," *International Journal of Palliative Nursing* 8, no. 11 (2002): 526–31; Michael Gordon and Shabbir M. H. Alibhai, "Ethics of PEG Tubes—Jewish and Islamic Perspectives," *American Journal of Gastroenterology* 99, no. 6 (2004): 1194; F. Moazam and A. M. Jafarey, "Pakistan and Biomedical Ethics: Report from a Muslim Country," *Cambridge Quarterly of Healthcare Ethics* 14, no. 3 (2005): 249–55; S. Naamane-guessous, "Traditional Methods Still Widely Used," *Planned Parenthood Challenges* 1 (1993): 14–16; S. Patterson, L. Balducci, and R. Meyer, "The Book of Job: A 2,500-Year-Old Current Guide to the Practice of Oncology; The Nexus of Medicine and Spirituality," *Journal of Cancer Education* 17, no. 4 (2002): 237–40; K. S. Prabhakar, "Cadaveric & Living Organ Donation: Natural Limitations; Possible Solutions; Singapore Experience," *Annals of Transplantation* 9, no. 1 (2004): 31–33; A. Sheikh, "Death and Dying—A Muslim Perspective," *Journal of the Royal Society of Medicine* 91, no. 3 (1998): 138–40.



7. S. S. Banwell and J. M. Paxman, "The Search for Meaning: RU 486 and the Law of Abortion," *American Journal of Public Health* 82, no. 10 (1992): 1399-1406.
8. Z. Badawi, "The Role of the Church in Developing the Law: An Islamic Response," *Journal of Medical Ethics* 28, no. 4 (2002): 223, discussion 229-31.
9. O. Asman, "Abortion in Islamic Countries—Legal and Religious Aspects," *Medicine and Law* 23, no. 1 (2004): 73-89.
10. "The Muslim Law (Shariah) Council and Organ Transplants," *Accident and Emergency Nursing* 4, no. 2 (1996): 73-75; D. Carlisle, "Life-Giving Fatwa," *Nursing Times* 91, no. 29 (1995): 14-15; S. D. Lane, J. M. Jok, and M. T. El-Mouelhy, "Buying Safety: The Economics of Reproductive Risk and Abortion in Egypt," *Social Science and Medicine* 47, no. 8 (1998): 1089-99; A. Siddiqui, "Ethics in Islam: Key Concepts and Contemporary Challenges," *Journal of Moral Education* 26, no. 4 (1997): 423-31.
11. Carlisle, "Life-Giving Fatwa."
12. A. R. Gatrad, "Muslim Customs Surrounding Death, Bereavement, Postmortem Examinations, and Organ Transplants," *British Medical Journal* 309, no. 6953 (1994): 521-23.
13. J. Green, "Death with Dignity: Islam," *Nursing Times* 85, no. 5 (1989): 56-57.
14. Ibid.
15. A. S. Bhashti, "Islamic Attitude towards Abortion and Sterilization," *Birthright* 7, no. 1 (1972): 49-51; Carlisle, "Life-Giving Fatwa"; M. M. Golmakani, M. H. Niknam, and K. M. Hedayat, "Transplantation Ethics from the Islamic Point of View," *Medical Science Monitor* 11, no. 4 (2005): RA105-9; B. Larijani and F. Zahedi, "Islamic Perspective on Human Cloning and Stem Cell Research," *Transplantation Proceedings* 36, no. 10 (2004): 3188-89; A. R. Omran, "Children Rights in Islam from the Qur'an and Sunnah," *Population Sciences* 9 (1990): 77-88; N. Sarhill and others, "The Terminally Ill Muslim: Death and Dying from the Muslim Perspective," *American Journal of Hospice and Palliative Care* 18, no. 4 (2001): 251-55; J. G. Schenker, "Assisted Reproductive Practice: Religious Perspectives," *Reproductive Biomedicine Online* 10, no. 3 (2005): 310-19.
16. Sarhill and others, "Terminally Ill Muslim."
17. Daar and al-Khitamy, "Bioethics for Clinicians," 60-63.
18. Gatrad, "Muslim Customs Surrounding Death."
19. We do not wish to imply that one position is more sound than the other(s). We highlight it only to illustrate the point that such discrepancies or disagreements exist in the literature. The existence of such disagreement is problematic inasmuch as the supporters of such positions do not acknowledge dissenting views in their articles.
20. S. Aksoy, "A Critical Approach to the Current Understanding of Islamic Scholars on Using Cadaver Organs without Prior Permission," *Bioethics* 15, nos. 5-6 (2001): 461-72; M. al-Mousawi, T. Hamed, and H. al-Matouk, "Views of Muslim Scholars on Organ Donation and Brain Death," *Transplantation Proceedings* 29, no. 8 (1997): 3217; Daar, "Ethical Issues," 1402-4; A. F. Ebrahim, "Islamic Jurisprudence and the End of Human Life," *Medicine and Law* 17, no. 2 (1998): 189-96; Najma Moosa, "A Descriptive Analysis of South African and Islamic Abortion Legislation and Local Muslim Community Responses," *Medicine and Law* 21, no. 2 (2002): 257-79; Obermeyer, "Reproductive Choice in Islam"; F. Rahman, "Islam and Medicine: A General Overview," *Perspectives in Biology and Medicine* 27, no. 4 (1984): 585-97; V. Rispler-Chaim, "Islamic Medical Ethics in the Twentieth Century," *Journal of*



*Medical Ethics* 15, no. 4 (1989): 203–8; G. I. Serour, M. A. Aboulghar, and R. T. Mansour, "Bioethics in Medically Assisted Conception in the Muslim World," *Journal of Assisted Reproduction and Genetics* 12, no. 9 (1995): 559–65; Siddiqui, "Ethics in Islam"; J. Syed, "Islamic Views on Organ Donation," *Journal of Transplant Coordination* 8, no. 3 (1998): 157–60, 162–63.

21. Al-Mousawi and others, "Views of Muslim Scholars"; Moosa, "Descriptive Analysis"; Obermeyer, "Reproductive Choice in Islam"; Rispler-Chaim, "Islamic Medical Ethics."

22. A. van Bommel, "Medical Ethics from the Muslim Perspective," *Acta Neurochirurgica: Supplement* 74 (1999): 17–27.

23. Khaled Abou El Fadl, *The Great Theft: Wrestling Islam from the Extremists* (San Francisco: Harper, 2005), 108.

24. American Association for the Advancement of Sciences, *Guide to R&D Funding Data: International Comparisons* (Washington, D.C.: American Association for the Advancement of Sciences, 2006).

25. L. T. Flannelly, K. J. Flannelly, and A. J. Weaver, "Religious and Spiritual Variables in Three Major Oncology Nursing Journals: 1990–1999," *Oncology Nursing Forum* 29, no. 4 (2002): 679–85.

26. D. Lukoff and others, "Religious and Spiritual Case Reports on MEDLINE: A Systematic Analysis of Records from 1980 to 1996," *Alternative Therapies in Health and Medicine* 5, no. 1 (1999): 64–70.

27. P. Rodriguez del Pozo and J. J. Fins, "Death, Dying and Informatics: Misrepresenting Religion on MedLine," *BMC Medical Ethics* 6 (2005): E6.

28. A. Loria and P. Arroyo, "Language and Country Preponderance Trends in MEDLINE and Its Causes," *Journal of the Medical Library Association* 93, no. 3 (2005): 381–85.