Chapter 2

Muslim Disquiet over Brain-Death: Advancing Islamic Bioethics Discourses by Treating Death as a Social Construct that Aligns Purposes with Criteria and Ethical Behaviours

Aasim I. Padela

Abstract

Though the Qurʾān refers to death as "certainty" (Q 15:99), modern biomedicine has shrouded this assured occurrence with multiple uncertainties. Ambiguities related to death frustrate clinicians' and patients' as they struggle to make ethical decisions near the end-of-life, and they confound philosophers, ethicists, and theologians as they critically examine contemporary practices around medicalized dying.

In this chapter, I suggest that bioethical deliberations over medicalized dying would be better served by viewing human death as a construct that joins the purpose for death declaration together with criteria for certifying death, and also connects to actions that stakeholders carry out when a person dies (also termed death behaviours). By doing so, ethicists will be better able to assess whether the purposes for death declaration, the criteria used to declare death, and the stakeholder actions that ensue are morally justified. Using examples from the academic bioethics literature, I will highlight shortcomings in Islamic engagement with the concept and practice of "brain-death" to demonstrate how the bioethical evaluation of brain-death and of end-of-life healthcare may benefit from considering human death to be a construct where death purposes, criteria and behaviours come together.

Keywords

Religion – Clinical Ethics – Dying – Palliative Care – Morality

1. Background

There are some vigorous debates over the extent to which religion plays a role in modern healthcare. These debates includes concerns over clinicians providing religious and spiritual support (Sloan and Bagiella 2000), religious frameworks being used to inform bioethical rules and regulations (Murphy 2012; Schuklenk 2018; Duivenbode and Padela 2019; McCarthy, Homan and Rozier 2020), and religious values being used to support modifying or limiting conventional

healthcare (Campbell 2018). Regardless of these important debates, religion and medicine both respond to the human condition. They address the existential questions of what we are, what will become of us, and what will be our end. While medicine and religion converge in responding to these queries, their epistemic frameworks differ and can lead to conflicts between patients, providers, and policy makers.

An area where differences in perspectives are readily observed, and where conflicts between various stakeholders may arise, is end-of-life healthcare. For example, the religious notion of "life after death" on account of a human soul may not square up with a biological notion that human life ends once organismal functioning ceases. Sometimes such differences have no bearing upon clinical care, but at other junctures different views lead to ethical conflict over when death should be declared, how the dying or dead patient should be treated, and what each stakeholder's moral duties are.

Herein, I will address this context by asserting that, at least in healthcare, death is a social construct where stakeholder purposes for death declaration, methods of death verification (or criteria for death certification), and human behaviours interact. Because the way in which we treat dead persons in society betrays how we, as a society, value life and humanity, great moral significance is attached to the behaviours that clinicians, families, religious professionals, and other stakeholders carry out post the death of an individual. This moral significance carries over and becomes attached to the criteria by which human death is assessed and certified, and further upstream to the purpose for which dead is declared.

Consequently, death constructs, criteria and behaviours are sites of much ethical debate and controversy. Differences in the purposes, means of assessing, and moral views on death result in multiple constructions of death within any given society. In my view, a failure to (i) recognize death as a construct and to (ii) acknowledge a plurality of death constructs, can lead to misdirected bioethical analyses and perceived conflicts between families, clinicians, religious professionals, and counselors at the bedside.

A cursory examination of empirical studies of Muslim patients, families, clinicians, and Muslim/Islamic critiques of "brain-death"[1] attests to these phenomena. Muslims by and large are

[1] I have placed the term brain death in quotations to highlight that the term is a misnomer and controversial. "Brain death" is often used colloquially to represent that neurological criteria for death have been met. Death here refers to death of the human being not of the brain because it is odd to attach the term alive or dead to organs, and that when

disquieted by brain-death and conflicted over ethical duties in end-of-life healthcare (Duivenbode, Hall and Padela 2019; Khalid et al. 2013; Saeed et al. 2015; Rady and Verheijde 2013; Bedir and Aksoy 2011; Arbour, AlGhamdi and Peters 2012; Farah and Al-Kurdi 2006; Khan 2009; Krawietz 2003b; A.C. Miller, Ziad-Miller and Elamin 2014; Padela, Arozullah and Moosa 2013; Padela and Basser 2012; Padela, Shanawani and Arozullah 2011; Rady and Verheijde 2015; Rady and Verheijde 2016; Sarhill et al. 2001; Sheikh 1998; Kassim and Adeniyi 2010; Ahaddour, Branden and Broeckaert 2018; Khater 2005; Mohiuddin et al. 2020; Ahaddour, Broeckaert and Branden 2019; Muishout et al. 2018; Padela and Qureshi 2017; Borhani, Hosseini and Abbaszadeh 2014; Lewis, Kitamura and Padela 2020; Popal, Hall and Padela 2022). Consequently, I hold that ethical evaluation may be better undertaken when both religious and secular scholars separate the inquiries related to the ontological reality of death from the ethical evaluation of its social implications separate.[2] Holding human death to be a social construct facilitates such bioethical evaluation; therefore herein I will attempt to demonstrate the merits of such an approach through a critical appraisal of selected Muslim/Islamic bioethical literature on brain-death.

Before embarking on that exercise, a few provisos are in order. With respect to Islamic bioethics discussions and literature, I will share but a few examples of writings from the extant, academic bioethics literature.[3] And I will discuss these pieces with the aim of illustrating misdirected critiques of brain-death and the merit of evaluating death as a social construct. I readily acknowledge that significant Islamic bioethical discussions about brain-death and the ethics of end-of-life healthcare take place outside the confines of the published academic bioethics

---

neurological criteria for death are met all of the brain need not necessarily have ceased activity. Moreover, the term is a fact-value fusion. The medical fact that an individual who has met the neurological criteria for death will not be able to be revived to consciousness based on contemporary medical knowledge and technology is fused with the value that such a state represents a life not worth living or maintaining. Both the medical fact here and the value attributed to it are contentious. Throughout the rest of the chapter, I will not use quotation marks around the term for the sake of maintaining flow but nonetheless desire the reader to hold these controversies in his/her mind.

[2] To be clear I am advocating for epistemic humility and a critical realist approach. I will offer comments on ontology, epistemology, and constructivist approaches to knowledge later in this essay.

[3] By the academic bioethics literature, I am referring to peer-reviewed journals indexed in Medline, which is the preeminent biomedical bibliographic database. I also include monographs and chapters from bioethics-related books produced by academic biomedical publishers, i.e., Springer, or affiliated with universities or academic medical centers, e.g., University of California, as part of the academic bioethics literature.

literature, and that a critical literature review would require dissecting the arguments the authors present in greater detail than I intend to. However, given that there is no clear definition of what constitutes the field of Islamic bioethics (Shabana 2014; Padela 2013a), that there are debates over whether writings discussing religious perspectives on bioethical issues are part of academic bioethics or religious studies (Schuklenk 2018; Duivenbode and Padela 2019; Murphy 2012), and that it is methodologically impossible to canvass all writings of a bioethical nature by Muslims or those that involve Islamic frameworks given the diversity of languages and media forms they are produced in, my selection is justifiable. My exposition is simply focused on illustrating how parts of the extant discourse jumble together death purposes, criteria, and moral duties. I believe a modest review of the principal arguments of several writers suffices that aim.

Similarly, with respect to biomedicine, I acknowledge that there is no universal global biomedicine. Rather, various traditional, folk, public, and scientific models of health and healing operate within any given society to guide patient, provider and other healthcare stakeholder behaviours (Kleinman, Eisenberg and Good 1978; Kleinman 1980; Shweder 2008). In this chapter I point at ethical challenges related to end-of-life healthcare in allopathic hospitals. While ethical questions may be addressed differently in different societies, end-of-life healthcare issues are similar enough across societies, which illuminates how various cultural, religious, and biomedical views on death may be brought into alignment.

Finally, I would like to comment on social constructionism, realism, and moral relativism as it relates to this chapter. Social constructionism is an approach to scholarship that sees the world as being invested with meaning by human actors. While there are many different flavors to social constructionism, its supporters generally view knowledge as constructed and subjective (Burr 1998). This perspective appears to deny that there are objective realities/truths, and thus opens the door to moral relativism. Said another way, if all knowledge is constructed by the human mind, including knowledge about social phenomena or the nature and essence of things, then there are no fundamentals to constrain individuals (or societies) from refashioning categories such as race, gender, sexuality, disease, illness and the like (Burr 1998). In distinction, realists hold there to be objective truths that humans can discover, and this research approach focuses on describing such truths/realities. The camps grow more complex as some social constructionists can view knowledge as having subjective and objective poles (Andrews 2012), and critical realists readily acknowledge that what we can know (epistemology) does not fully match up with what is real

(ontology) (Miller 2013). Moreover, there are interpretivists, subtle realists, positivists and other groups of scholars who variably view the social world as created, negotiated, sustained and modified by human agents, and each group takes a different position on the relationship between knowledge and reality (Berger and Luckmann 1991; Andrews 2012; Burr 1998). Notwithstanding these complexities, my assertion is that death has a subjective reality; it means something to human actors, and accordingly we must study these diverse meanings in order to make moral assessments of what it means and how we should behave around it. I am not arguing that death has no "true" or reality, rather I would argue that various aspects of death are disclosed as it is probed using social scientific, natural scientific, affective and other research methods (Padela 2022). Indeed, I more closely ally myself with subtle or critical realism than social constructionism as I find those approaches more consistent with Islamic views on the nature of human knowledge (Padela 2022). My cause for treating death as a social construct is to clarify the social contexts and moral worlds of contemporary allopathic healthcare, and thus inform cogent Islamic bioethical deliberations over the ethics of end-of-life healthcare.

This chapter will proceed as follows. In the next section, I will delineate different views on death to lay bare diverse perspectives on the ethical questions surrounding death in biomedical and religious settings. Death will be discussed as a sociological as well as a scientific entity, and the different legal, policy, biomedical, and religious purposes that death serves will be examined. Thereafter, I will use examples from the academic bioethics literature to highlight Muslim disquiet over brain-death. Specifically, I will highlight critiques offered by different stakeholders (jurists, philosophers, and clinicians) to suggest that these views are based on differing purposes for death, and that viewing death as a construct might serve to enhance moral evaluation. In the subsequent section of the chapter, I will offer a modest intervention to bring various perspectives on death into alignment. I will argue that moral evaluation must connect the purposes of death, the criteria used to adjudicate it, and the behaviours that will ensue when it is declared. I will close this piece by reflecting on the how religious, biomedical, and social scientific perspectives need to come together to address critical problems within the nascent field of Islamic bioethics.

2. What is Death? Researching its Realities from an "Alien" Perspective

The Qurʾān metaphorically refers to death as "[the] certainty" (Q 15:99), yet contemporary biomedical understandings and capacities have shrouded this assured occurrence with multiple

uncertainties. What physiologic event marks the death of a human? Does the human body undergo multiple forms and types of deaths? What clinical procedures are sufficient to certify one has died? Is the soul's departure from the body manifested physically? How certain is the diagnosis of brain-death? Does medical care hasten or forestall death? These uncertainties work their way into clinical encounters near the end-of-life where clinicians, patients, and religious leaders contend with decisions about advanced directives, therapeutic goals, withdrawing and withholding life support, and verifying death. Ambiguities related to death also confound Islamic legists and Muslim health policy makers who debate which views align with the Islamic moral tradition.

The importance of death within religious theology, biomedical practice, and society is clear. Yet, while it may seem intuitive, death is not a straightforward concept. Defining death is a challenge and explaining the diverse symbols and behaviours surrounding human death is even more difficult. Consider for example that the Qurʾān refers to death (*mawt*) as created by God to test humankind (Q 67:2). Prophetic statements further relate that death will be brought forth of the Day of Judgement as a calf to be slaughtered by angels so that everlasting human life ensues (al-Bukhārī n.d., #6548). Thus, its reality from a religious lens is more complex than simply the absence of life. The same holds true in the secular space as Alexander Capron, the Executive Director of the US Presidential Commission on the uniform determination of death act, notes "the belief ~~that~~ defining human death is a medical matter misapprehends the undertaking. At issue is not a biological understanding of cells and organ systems, but rather a social formulation of humanhood. Through a formal declaration of the points at which life begins and ends society determines who is a full human being with rights and responsibilities." (Rich 2014; Capron 1995).

Relatedly, both at the bedside and at the proverbial juridical table, Muslim thinkers must appreciate that death has multiple different meanings within the house of biomedicine and of Islam. Within *medicine*, clinical guidelines for declaring death as the cessation of cardiopulmonary or brain function do not fully map onto *biological* definitions of death as the loss of integrative capacity or an inability to maintain homeostasis (Veatch and Ross 2016; Shewmon 2001; Truog and Miller 2014; Gervais 2014). Within the Islamic tradition, *metaphysical* speculations about death representing the dissolution of the soul-body connection are related to, but also separate from determinations of what physical markers should be the *legal* thresholds for human death (Krawietz 2003b). In both biomedicine and Islam, discussions of human death involve social, biological, legal and ethical considerations and different understandings from within each of these disciplines

are found.

In the Qurʾānic creation story of the first human, Prophet Adam, states that God taught Adam the "names of all things" (Q 2:31). Some commentators such as Abul Aʿla Maududi (Abū l-Aʿlā Mawdūdī, 1903–1979) interpret this verse to mean that the reality of things was disclosed to Adam, while others view the verse as indicating that the ability to name and label things is intrinsic to the human being. Either way, it appears that the tradition would permit us to ask and resolve for ourselves: what is death? For our purposes, I suggest we take on the following thought experiment to begin mapping out understandings of death: If we were scientists from a different planet visiting Earth, how might we investigate human death?

For one, we might seek a *biomedical* understanding of its nature. We could catalogue differences in the state of the living human and the dead one, and then observe the processes and order by which these changes occur. Additionally, we may examine clinical practices around death determination and verification across different contexts. We might also conduct experiments to ascertain whether human death is different from the death of animals and plants. These natural scientific approaches would illuminate *criteria for death* as a matter of biological and biomedical science.

Notably, in the US there are two overarching criteria by which death is declared, cardiopulmonary and neurologic. Individuals are legally declared dead based on either (i) the irreversible cessation of circulatory and respiratory functions, or (ii) the irreversible cessation of all functions of the entire brain, including the brain stem (Uniform Law Commission 1981). However, depending on the situation these criteria might be flexed. For example, in order to resolve bioethical tensions about the futile resuscitation of patients with miniscule chance of "meaningful" recovery, some ethicists note that the irreversible cessation criterion refers not to the physiological permanence of such a state, rather it should be tied to the assessment that it is likely that such a state would not be reversed even if cardiopulmonary resuscitation is undertaken (Bernat 2010). Others argue that irreversibility must be interpreted in light of ethical and practical constraints as in the case where a patient has decided they do not want to be resuscitated (Lizza 2005). In this scenario physiological permanence and irreversibility is disregarded in order to respect the patient's wishes. On the opposite spectrum, clinicians may opt to accept a cardiac notion of death over a neurological notion based on family and patient choice. These examples illustrate how various purposes for death declaration cause biomedical practice to stretch and flex

the criteria by which to determine death.

Furthermore, different disciplines may arrive at their own death criteria. For example, religious frameworks may adopt a metaphysical view whereby separation of the soul from the body represents death. Should metaphysical occurrences be deemed to have physical correlates, death criteria may include observable signs reflecting the departure of the soul. Positive law, on the other hand, does not offer deliverables upon which to build up its own criteria and may instead incorporate biomedical criteria. Illustratively, the legal threshold in the US referenced above is based on accepted medical standards. In other jurisdictions, legal thresholds may involve religious or cultural norms as well. The way in which a discipline arrives at death criteria depends on its epistemic framework, and how it negotiates different claims about the reality of death.

Another investigative approach might involve observing *behaviours* surrounding death. This sociological approach aligns with treating death to be a construct. Within psychology, a construct refers to an analytic tool which facilitates an understanding of human behaviours, and in sociology a construct represents a specific interconnected set of values and beliefs that manifest in human behaviours and understandings (Thomas 1966).[4] A sociological construct is imbued with meaning by the language, symbols, and behaviours used to convey the construct's significance. Considering death to be a sociological construct would mean that different groups and cultures can hold different definitions of death, that definitions and behaviours towards death can change over time, and that there is no singular correct perspective on what death signifies. Consequently, this approach would entail examining how people treat the dead to glean the significance of that state, and analysing how people behave when death is near, and when it is declared, to understand the importance of death and the various relational changes that ensue. These sorts of studies entail looking at *death behaviours*, and actions that can be undertaken when a human being is termed dead. A fuller sociological study may also involve reviewing the legal and policy actions taken by various parties when death occurs to glean its societal impact, as well as analysing the symbols used to describe death to glean its cultural significance.

Beyond death behaviours, another way for us to research human death would be to consider the *purposes of death*. By purposes I mean the functions death serves. For example, death serves

[4] Note that all sciences are built on systems of constructs, for example gravity is core to physics, and *istiḥāla* (essential transformation) is an operative construct within Islamic law.

legal purposes such as being the condition for disbursing the decedent's estate, and dissolving business and martial relationships. Relatedly, death serves policy objectives. For example, different fiscal policies and safety regulations govern the transport of dead human bodies than the transport of the living. Death also serves various biomedical purposes. Counts of human deaths are used to assess the virulence of diseases, the efficacy of clinical treatment and research protocols, and the safety of drugs. It also represents the point the decedent's tissues can be used for teaching or research purposes (with consent). At the same time, human death in the context of medical practice, represents a moral endpoint at which the duty to rescue is obviated from healthcare workers. Hence, there are indeed a host of purposes for death declaration.

Our thought experiment suggests that scientific approaches to understanding death could entail examining *death criteria*, *death purposes* and *death behaviours*. Taken together these inform *death constructs* that operate within society. The moral assessment of death constructs thus involves examining the "rightness" of death purposes, criteria, and behaviours. Operatively, in any given context, a specific purpose for death is identified, which then leads to the selection of criteria to verify death has occurred, and subsequently death behaviours are enacted by various stakeholders. This procedural flow is routine at the proverbial death bed in hospital where clinicians, family members, and religious leaders surround the patient in their final moments; Death criteria are identified, a physician certifies death by assessing if those criteria are met, and then the clinical care team, family members and religious professionals carry out various death behaviours.

Before proceeding further, it is critically important to recognize that there can be significant interaction between death purposes and criteria. For example, in some jurisdictions religious exemptions allow patients (and families) to object to one biomedically-sourced criterion for death in lieu of another that aligns with their religious values (Son and Setta 2018; Grodin 1994). This illustrates how religious purposes and death behaviours influence biomedical practice. Moreover, it highlights how the biomedical construction of death is multi-faceted rather than singular, and that different purposes lead to different notions of what constitutes human death in halls of medicine.

As we move to consider Islamic bioethical approaches to death, a careful observer, be they an alien scientist or an ethicist, must acknowledge that there is multiplicity and plurality among *death behaviours*, *criteria*, and *purposes.*

3. Islamic Bioethical Disquiet over a Modern Form of Death

Over the past decades, there has been a rapid medicalization of the dying process around the globe. In developed nations most people die in medical facilities, surrounded by machines and sterility rather than in the confines of their home surrounded by their loving relatives. Burgeoning technology and medical capacities have contributed to this shift as access to healthcare facilities has increased, and doctors are now able to use novel technologies to sustain critically injured individuals for greater periods of time. While this progress has saved many lives, it has also left many individuals befuddled as new forms of living and dying are instantiated. Brain-death has entered our collective vernacular, and the idea of physical reanimation tickles our imagination. While movements advocating releasing ourselves from the confines of the human body such as transhumanism have gained traction, so too have organizations that assist individuals with ending their own life when it is self-judged to be too cumbersome.

As biomedicine has made liminal states between traditional markers of life and death possible, and societal debates over the medicalisation of dying have taken hold, Muslim thinkers have also entered the discourse. Islamic legists are debating the concept of and criteria for brain-death. For instance, Muslim philosophers and theologians are reengaging lines of inquiry into the relationship between the soul and body, and Muslim clinicians are analysing religious bioethics discourses seeking answers about ethical duties surrounding death. These engagements reveal disquiet over the ways in which death is managed and adjudicated in biomedicine. In what follows, I use contentions over the notion of brain-death from various Muslim corners to highlight this unease and confusion over death purposes and criteria.

3.1 *Islamic Legists*

In response to the increasing calls for deceased organ donation programs and clarity over brain-death in Egypt, Muḥammad Sayyid Ṭanṭāwī (1928-2010), the former rector of al-Azhar and grand *muftī* of Egypt, declared the matter of ascertaining the occurrence of death to be a medical and not a religious affair (Hamdy 2012). Several, prominent juridical councils have since concurred that physician experts can set the legal standards for death in Islamic law (al-Bar and Chamsi-Pasha 2015a). On the other hand, Ṭanṭāwī's contemporary colleague, ʿAlī Jumuʿa (Gomaa, b. 1952) also former grand *muftī* of Egypt, advocates a large role for religious scholars and sees the issue not to

be about applying the label of death to a physiological state, rather it is about uncovering a reality. He notes "it is not just a technical medical issue, it's also a human and moral issue ... doctors cannot say it is only for them alone to decide. We [religious scholars] must get involved … the issue is not about definitions [of death], the issue is about uncovering the truth [reality] about something" (Hamdy 2012, 73).

The Jordanian legist, Muḥammad Naʿīm Yāsīn (Muhammad Naim Yasin), an authority on Islamic medical jurisprudence envisages an interplay between religious and medical authorities on the concept of and criteria for death. He asserts that Islamic scholars should have the dominant role in identifying principles, definitions and conditions for death based on scriptural sources. Muslim clinicians, on the other hand, should apply these religiously-derived definitions to their practice (Krawietz 2003a), as they bear the responsibility for certifying when life ends (Qazi et al. 2013). A similar view is advanced by the American jurist, M. Amin Kholwadia (Stodolsky and Kholwadia 2021).

These varied perspectives exemplify debates among religious scholars about the validity of neurological criteria for death in Islamic law and whether religious scholars or medical experts have the primary role in defining death. Generally speaking, scholars fall into one of two camps; some legists and juridical councils consider brain-death to satisfy legal thresholds for declaring death and implicitly give medical science a continued role in determining death criteria, while others consider brain-death to represent a human being that is dying but not dead and that the traditional criteria of cessation of heartbeat and breathing should be maintained as markers for human death (Padela, Arozullah and Moosa 2013; al-Bar and Chamsi-Pasha 2015b).

The impetus for bioethical deliberations over brain-death, within both Muslim and non-Muslim circles has been the advent of organ transplantation. Brain-dead individuals represent a source for life-sustaining and/or life-saving organs since clinical research suggests better outcomes when organs are received from brain- dead donors as compared to those declared death after cardiopulmonary cessation, though more recent data suggests comparable outcomes (Demiselle et al. 2016; De Vleeschauwer et al. 2011; Molina et al. 2019; Chen et al. 2017; Van Loo et al. 2017; Shahrestani et al. 2017; Bellingham et al. 2011; Gavriilidis and Inston 2020; Xue et al. 2017). Moreover, a greater number of organs can be procured from brain-dead donors. Consequently, the main purpose of ascertaining death in this context is to save or sustain another's life. Additionally, death also marks the moral endpoint at which the clinical care of the patient (the potential donor)

can cease. It thus appears that in this scenario, death serves biomedical purposes[5] and informs the behaviour of clinicians, the dying patient, his/her relatives, and the patient afflicted within organ failure and his/her social circle.

If death purposes are restricted to biomedical practice and behaviours, then one could argue that death criteria should be derived based on biomedical science. Indeed, biomedical science reveals the optimal conditions and methods for procuring organs so that the most lives benefit, and it also reveals when continued medical care is inefficacious or harmful. Religion has no primary deliverables to offer these equations, rather religious values are applied to biomedical data about the efficacy of organ donation, transplantation, and clinical therapies. Similarly, the death behaviours that are enacted in the context of organ donation, for example the ways in which donor families and recipients interact and the tributes paid to the brain-dead donor, are unified by the biomedical death purpose(s). If the biomedical context was not present such activities would not carry meaning. As such death purposes and death behaviours in this context are connected by the biomedical conceptualisation of death.

The foregrounding of the biomedical context is what proponents of brain-death criteria as legitimate in Islamic law have in mind. Doctors are the experts in this domain and as such have the authority to setup death criteria when biomedical purposes are primary. Religious scholars, in this context and according to this view, have a different role, rather than setting up the criteria for death they should assess the moral dimensions of the human behaviours around brain-death as well as the purposes of death. Hence it is perfectly within scope for religious scholars to condemn vivisection for organ procurement, and to argue that the societal need for organs does not justify a new conception of human death.

Islamic juridical deliberations confuse, and are confusing, when criteria for death are debated without seeking logical connections between death purpose(s), criteria, and behaviours. Said differently, religious critiques of brain-death are incomplete when the entire death construct is not addressed, and evidence from religious sources that speaks to each of the three dimensions of the construct is not marshalled.

For example, some jurists heatedly debate whether the brain is the "seat" of the soul, holding this to be a prerequisite for legitimating brain-death within Islamic law (Moosa 1999;

[5] By biomedical here, I mean purposes related to health and healthcare in society.

Ebrahim 1998; al-Awadhi 1985). Yet, the brain-death construct holds no metaphysical truths and such deliberations are, in my view, tangential to the ethical assessment of the death purposes and the death behaviours around brain-death.

A more appropriate question religious scholars have taken up is whether brain-death criteria are legitimate indicants for death within Islamic legal epistemology (Padela, Shanawani and Arozullah 2011; Padela, Arozullah and Moosa 2013). Here detractors argue that neurological criteria for death cannot supplant traditional indicants for human death in classical legal manuals because they are not scripturally sourced. However, the opposing camp rebuts this critique by noting that indicants for death in legal manuals, signs such as the rigidity of the body and the sinking of the temples, are also not scripturally-sourced, rather they are based on custom and observation. Rather than basing their critique of criteria upon precedent, a better tactic would be for religious scholars to raise questions about the accuracy of brain-death diagnosis. Relatedly, they could be critical of the variance of brain-death criteria around the globe (Braksick et al. 2019; Greer et al. 2008; Hornby et al. 2006; Pandey et al. 2017; Powner, Hernandez and Rives 2004). By developing such arguments, a biomedical construction (brain-death) that serves biomedical purposes would be critiqued on the basis of biomedical sciences. Given the inherent inaccuracies in diagnosis and variability in criteria, Islamic scholars could reasonably assert that the clinical foundations of brain-death are too shaky to base human death criteria upon. Unfortunately, more often than not, jurists defer to physicians and do not interrogate the probabilistic clinical practice. Nonetheless, critiquing death criteria without also examining the purpose for which these criteria are used, and the human behaviours that are involved, results in a partial moral evaluation.

If jurists were to view brain-death not as a metaphysical truth but as a construct, then they could better aim their critiques at the moral purposes brain-death serves using religiouslysourced arguments. They would also be better able to use Islamic ethico-legal principles to opine on the behaviours that are enacted by multiple actors in the context of brain-death. And if they foregrounded the biomedical context that connects purposes with criteria and behaviours, they would be able to levy a biomedically-sourced critique of brain-death criteria.

3.2 *Muslim Philosophers*

In the academic bioethics literature several Muslim philosophers draw upon Qurʾānic exegesis and Islamic discussions about the soul's nature and function to marshal arguments for and against this

notion of death.

For example, Ahmet Bedir and the late Şahin Aksoy, both philosophically trained Turkish ethicists, delve into Qurʾānic verses and Prophetic traditions describing the departure of the soul from the body and the moment of death. These scriptural evidences suggest that the human soul animates the body, and note various departure points for its separation including the feet, the throat, via breath, and from the cheek (Bedir and Aksoy 2011). Death, therefore, is a metaphysical event with physical indicators. This idea is supported by Islamic law which recognizes many different physical signs as markers of human death including the bending of the nose, sagging of the skin, and others (Brockopp 2003). In their view, brain-death cannot be legitimated in Islam because this form of death disregards metaphysical realities. It is also faulty because the brain-dead patient still maintains the indicators of life noted in Islamic legal manuals (Bedir and Aksoy 2011).

In contrast, Omar Sultan Haque, a social scientist, a clinician, and a philosopher, embraces brain-death. He argues that the loss of personhood should align with a notion of death, and that this idea is reflected in the Qurʾānic usage of the term *nafs* when referring to death, as in every *nafs* shall taste/endure death (Q 3:185 and 21:35). With this toehold, he refashions concepts of soul (*rūḥ*) to develop a naturalistic account of embodied consciousness as personhood drawing in works penned by Ibn Sīnā (Avicenna, d. 428/1037) and others. He argues that the brain-death both fully accords with contemporary neuroscience and philosophy of mind, and is amenable to being grafted onto the Islamic tradition as death proper (Haque 2008).

Harkening back to the idea that death constructs bring together death purposes, criteria, and behaviours, the aforementioned philosophical/theological critiques appear to address the brain-death construct incompletely. Rather than debating purposes, criteria, and behaviour, some Muslim philosophers primarily focus on the conceptual underpinnings of brain-death and how it may account for Islamic theologies of the soul. While this enterprise has scholarly merit, it fails to address clinical and bioethical challenges that lead to advent of brain-death, and thus may find little purchase in healthcare circles.

Overlooking the purpose for which brain-death was "created," in my view, leads to this neglect and a somewhat off-base critique. Firstly, the purpose of brain-death is not to account for Islamic theologies of the soul. Neither is brain-death meant to resolve critical tensions in Muslim philosophy of mind. Religious sources discuss the soul in order to explain the reality of human existence and to motivate living righteously. Moreover, Islamic scholarly writings on the soul, its

functions, and its purposes are speculative in nature. There are multiple different, and equally legitimate, notions of the soul that represent an orthopraxy that is centuries old. From time to time, Muslim thinkers have found neuroscience to support one or more of these notions, but there has been no definitive conclusion or universally-accepted notion (Brown 2013). Hence basing a conceptual critique of brain-death based on a speculative theology may be problematic.

What is clear however is that brain-death sheds no light on the moral life, nor does it lay claim upon the reality of human nature. Whether brain-death fits, or can be made to fit, with Islamic theologies of the soul does not directly address contextual purposes of, and criteria for, brain-death. Rather, at best, these discussions can inform death behaviours because whether the concept of brain-death aligns with traditional understandings of soul and human death, can impact how Muslims behave around it.

On the other hand, as noted in the previous section, critiques about the legal standards for verifying death, as illustrated by Bedir and Aksoy, may be valid. If Islamic legal manuals base their indicants of death upon the lack of soul-body connectivity, one may argue that an "Islamic" criterion for death in the hospital should do so as well. However, Islamic legal manuals note many different physical indicants for death based on custom and do so for purposes that are different than the purposes behind brain-death. These purposes must be foregrounded in any analysis of the dissonance between brain-death criteria and those in legal manuals.

Alternatively, brain-death's relationship with personhood can be subject to critique based on Islamic philosophical and theological frameworks. Indeed bioethics scholars debate the philosophical basis of brain-death diagnosis and whether it does/should differentiate persons from non-persons, given that there are different versions of brain-death criteria (McMahan 1995; Blain-Moraes, Racine and Mashour 2018; Rich 1997). Yet, personhood itself is a culturally-defined notion that is subject to change. There was a time when females were not considered persons, and when black people were considered lesser persons.

As we saw above with some jurists, some Muslim philosophers discuss the brain-death construct in a partial way, and neglect to address critical features of the biomedical context in their discussions. One may argue that a philosophical or a theological examination does not require delving into the biomedical dimensions of brain-death. Yet since brain-death is a product of biomedicine, biomedical stakeholders have primacy over whether the brain-death is accepted as a standard for human death in society and is part of clinical practice, and Muslim philosophers are

writing pieces for the academic bioethics community, neglecting the biomedical dimensions of brain-death is a critical flaw. In my opinion, Muslim philosophers would be better able to aim their critiques, or advocate for the acceptance, of brain-death, should death be viewed as a sociological construct that brings together human purposes, criteria, and behaviour. Moreover, a holistic moral evaluation of brain-death demands that human purposes and behaviours are assessed.

3.3 *Muslim Healthcare Providers*

As a group, a significant proportion of Muslim healthcare providers who might be tasked with declaring death and a host of other death behaviours express disquiet over brain-death. For example, a national survey of Muslim physicians in the United States reported that nearly half did not consider brain-death to be death proper (Popal, Hall and Padela 2021). A smaller study of Muslim healthcare professionals, including chaplains, reported that half of participants felt that families should be given choice over whether brain-dead examinations are performed given the moral significance and ethical conundrums associated with the diagnosis (Lewis, Kitamura and Padela 2020). Muslim healthcare providers unease with brain-death occurs at both the conceptual and practical levels, and they use religious and biomedical sources in their critical arguments.

Mohammed Rady, a critical care physician at Mayo Clinic in the United States represents one prominent voice among this group and levels his critique at death criteria. From a religious perspective he contends that brain-death cannot be equated with death because, according to him, the Qurʾān and Prophetic traditions unequivocally characterize death as a "single irreversible event" where the soul leaves the body (Rady and Verheijde 2016; Rady and Verheijde 2015). In his view, because individuals who are declared brain-dead retain somatic integration, either intrinsically or via supportive medical technology, such individuals cannot be considered dead because they do not meet the biological definition of death, and neither can be considered dead by religious criteria because the soul may still be attached to the body (Rady and Verheijde 2015). He asserts that leading Islamic jurists and juridical councils that consider a brain-dead state to meet the legal standards for death in Islam have erred by misinterpreting both the scriptural and medical evidences for human death (Rady and Verheijde 2013). Sherine Hamdy, an anthropologist who has studied the organ transplantation and brain-death debates in Egypt, reports that Ṣafwat Luṭfī (Safwat Lotfy), a prominent critical care physician at Cairo University, similarly critiques several Egyptian religious authorities as having misunderstood the clinical and biological bases of brain-

death, as well as the scriptural texts defining death (Hamdy 2012). Rady and colleagues also harshly critique the purposes for brain-death, believing that dead donor rule is threatened by donation after brain-death, that the biomedical push for organ donation and brain-death has trampled over religious liberties and the rights of citizens (Rady, Verheijde and Yanke 2017; Rady and Verheijde 2013; Rady, Verheijde and McGregor 2006; Rady and Verheijde 2018).

Among the clinical intelligentsia a different perspective is offered by Faisal Qazi, a neurologist and bioethicist located in California. He acknowledges uncertainties surrounding the clinical diagnosis of brain-death, but he points out that Islamic rulings also operate in zones of probability. He argues that brain-death must not be treated as a certain state because the clinical criteria have inherent false error rates. Similarly, no single juridical ruling about whether brain-death is legitimate in Islam should be treated as definitive given that the matter requires juridical exertion to extend the scriptural sources to a new phenomenon. Rather both are tentative, probabilistic conclusions (Qazi et al. 2013). Hence, he calls for embracing epistemic humility and plurality in Islamic bioethical deliberations over brain-death.

Considering again that death constructs connect purposes, criteria and behaviours, Muslim clinician discourses appear to address all three components. Rady's numerous writings certainly critique the biomedical purposes that led to the construction of brain-death, take aim at the criteria for assessing human death, and object to the clinician, family, religious professional and healthcare policymakers' behaviours that treat an individual who has met neurological criteria for death as dead. Perhaps the intimate knowledge these stakeholders have of the biomedical context, given that they are healthcare providers, generates a better conceptualization of death in healthcare as a human construct, and brain-death as one such construct. Yet this discourse requires modest intervention as well.

Like the philosophers, Rady and others who cite scriptural evidence to oppose brain-death, fail to recognize that the religious sources they quote are not addressing the same death purpose that brain-death serves. Because the purposes are different, hermetical exercises are undertaken to glean how they may be relevant to the issue of brain-death. Said another way, these texts do not univocally address discussions about the lifesaving or life-sustaining technologies, nor the morality of donating organs at or near the end of one's life. Hermetical and ethico-legal reasoning must be employed to ascertain where the tradition lies on these issues, and, at least theoretically, a plurality of views may be legitimate. Rady's reading does not

preclude other equally legitimate reading of the scriptural sources *vis-à-vis* brain-death.

Additionally, using scripture to destabilize brain-death criteria is somewhat misguided. Verses and traditions describing the moment of death as departure of the soul from the body offer multiple different indicators. It is not clear which are primary and which are secondary, and whether they are determinative or adjunctive. As such a critique of brain-death criteria would have greater foundations if it was grounded in biomedical evidence not religious manuals. Rady and others take up this tactic. They point out, as noted above, that biological definitions of death may not be sufficed by brain-death, and that clinical criteria can be faulty due to inherent limitations including what aspects of the brain are tested, variations in test procedures, and the inherent false positive rate of the diagnostic test. In their view, these deficiencies render brain-death incompatible with Islamic law because the diagnosis of death should be certain, and they contend that had Islamic scholars critically appraised the biomedical and clinical evidence related to brain-death criteria, they would have reached the same conclusion. My own reading of juridical deliberations points to several other shortcomings as some jurists fail to recognize brain-death as a prognostic rather than a diagnostic entity, and others mistakenly consider brain-death to represent total brain failure (Padela and Basser 2012).

Relatedly, suggesting that brain-death criteria do not suffice as indicants for human death in Islamic law because they do not meet the epistemic level required is appropriate. But simply critiquing these criteria because they do not square up with those mentioned in legal manuals is not an adequate criticism. Legal indicants of death within Islamic manuals are tied to religious/social purposes for death such as when burial can commence, when the estate can be divided and when the waiting period for a widow can commence. The question to ask is how these indicants came to sanctioned by Islamic law. If customary practice or biomedical expertise were the basis upon which these standards came to be legitimated within Islamic law, then there is no reason that Islamic legal manuals cannot expand to include other indicants for death as custom and biomedical practice changes and/or if "new" purposes are identified that require different indicants. In my view, purposes and criteria should always be aligned when any death construct is developed or evaluated.

4. The Moral Assessment of Death Constructs: Foregrounding Purposes and Stakeholders, and Embracing Plurality

Bioethical issues are multidimensional because the questions addressed interface with social, legal, political, and healthcare systems. Consequently, bioethical deliberations must involve multiple disciplines coming together to map out, and address, the ethical problem-space to the fullest extent possible. Illustratively, leading academic bioethics institutions such as the Hastings Center convene experts from law, medicine and policy to develop ethical policy reports and positions statements, and bioethics consultancies such as the Presidential Commission on Bioethics engage with social scientists, religious leaders, as well as experts in medicine, law and policy. In Muslim circles, premier Islamic bioethics deliberations[6] whether they be at the local, national, or transnational level largely involve dialogue between two disciplinary experts, Islamic jurists and Muslim physicians, and it is not clear which discipline has the upper hand in determining which actions and policies accord with Islamic morality (Ghaly 2015; Stodolsky and Kholwadia 2021; Padela 2021). As a result, various aspects of the ethical problem-space are neglected or left unaddressed. For example, juridical academies convened to address whether porcine-based medications are permissible to use for Muslims did not appreciate how their rulings would impact global pharmaceutical manufacturing and polices governing religious pilgrimages (Padela 2013b). Worse yet is when biomedical aspects of the ethical issue are inaccurately understood because key disciplinary expertise is missing. In my view, Islamic bioethical discussions over brain-death, illustrate these phenomena. As I have demonstrated elsewhere, jurists and clinicians at premier academies have not fully conceptualized the ethical problem-space and incompletely addressed the policy and practical dimensions of end-of-life healthcare surrounding brain-death (Padela, Arozullah and Moosa 2013; Padela and Basser 2012; Padela, Shanawani and Arozullah 2011).

In the preceding section I have offered a snapshot of Muslim discussions in the academic bioethics literature to illustrate further discursive challenges. Whether Muslim stakeholders are critiquing, or alternatively advocating for, brain-death critical biomedical aspects of brain-death are overlooked, and at times muddled analyses is observed. Occasionally theological critiques are leveled at the concept of brain-death as human death at the expense of evaluating the purpose for which brain-death was constructed and whether that purpose is legitimate. At other times, scriptural texts and legal manuals are used to claim that neurological criteria for death cannot be

[6] I recognize this statement is too wide-ranging. Yet, the developing field of Islamic bioethics heavily relies on juridical academics, such as the Islamic Fiqh Academy of the Muslim World League, as the "best evidence" or "highest level" of ethical opinions. My statement concerns these academies.

legitimated by the Islamic tradition. Yet the purposes that undergird indicants of death within these scripture and legal manuals are not lifted up as part of the analytic. Islamic bioethical discussions thus appear to be incomplete discourses yielding partial answers (Padela, Shanawani and Arozullah 2011; Krawietz 2003a; Arbour, AlGhamdi and Peters 2012; Padela, Arozullah and Moosa 2013; Padela and Qureshi 2017). As such the tradition's moral standpoints on various death purposes, criteria, and behaviours as it relates to end-of-life healthcare, is far from clear.

In my view, death purposes, criteria, and behaviours must be connected together in order to enable a fuller evaluation of the overarching death construct. Additionally, the roots of a specific death construct within a particular discipline (e.g. biomedicine or theology) should be made explicit in order to maintain logical coherence when evidence for, or against, the related death purposes, criteria, or behaviours construct is marshalled.[7]

The present state of affairs emerges, at least partially, from discussants desiring a singular concept of death, and a single set of universally accepted criteria by which it is adjudicated. There is also a desire to subordinate various societal purposes for death underneath a single unifying purpose. These desires, however strong, are illusory. There have always been different constructs for death operative in society because of different underlying purposes. For example, a person lost at sea is considered *for all intents and purposes* by various legal systems, Islam included, to have died, although no one ever certified or verified that cardiopulmonary or neurological criteria for death were present in that stated individual. On the other hand, patients undergoing cardiopulmonary resuscitation can be declared dead by physicians provided a pulse is not palpated, even if the heart has not ceased to beat and even if such a state is not physiologically irreversible as demanded by the Uniform Determination of Death Act (Uniform Law Commission 1981). Relatedly, in some cultures, an individual is not truly dead despite having fulfilled biomedical and legal criteria until mourning rituals are completed (Selin and Rakoff 2019; Gire 2014; Uniform Law Commission 1981). Its ultimate reality notwithstanding, human death has many different social configurations.

---

[7] That is not to say that cross-disciplinary or transdisciplinary ethical analysis and deliberation is not warranted. However, I caution against jumbled analysis where the evidence that is used to craft an argument is misaligned with the issue that is being critiqued. A stronger argument can be fashioned when truth claims based on deliverables of a particular science are critiqued from within the epistemic frameworks of that science. For example, when a clinical diagnosis is critiqued based on clinical and biological evidence that there are flaws in such a diagnosis.

Given this diversity, I suggest that Islamic bioethical discussions related to end-of-life healthcare analyse death as a sociological construct that emerges from the need to suffice the specific purpose(s) of particular stakeholder(s). Once this linkage between needs and stakeholder group is made, appropriate death criteria can be advanced. I further suggest that perceived conflicts between religious and biomedical perspectives may be lessened by legitimating a plurality of death constructs. To be clear I am not suggesting that every death construct aligns with Islamic morality, rather I hold that several death constructs can be legitimated by, and operate cohesively within, the tradition. To illustrate this approach, let us consider the perspectives of three stakeholder audiences (physicians, family members, and religious professionals) and how the death of a patient impacts each of them.

For practicing physicians, death is a biological occurrence marked by physiological and anatomical changes in the human body. As part of their professional and societal duties, this change is certified/verified using clinical practice guidelines by physicians. To clinicians, death also represents a moral endpoint to patient care. Hence for clinicians, death is tied to biomedical understandings and moral duties.

With respect to the family members of a dying patient, death represents the point at which their caretaker role diminishes and ultimately absolves. Death also marks the transition point from concern about the patient to concern about the mourning family. For families, while death might be perceived as a biological and/or metaphysical event, the declaration of death changes their social and ethical responsibilities.

For religious professionals serving the patient in a pastoral capacity or in a community setting, death marks the point at which religious duties commence. These leaders may be charged with arranging and performing the funeral and burial, and with providing religious counsel and support to family members. While religious professionals may understand death as a metaphysical occurrence, a patient's death initiates professional, social and moral duties.

Given the varied roles each of these stakeholders have with respect to the dying patient, and the different social and moral significance the declaration of death has to each of these groups, we can say that the patient's death serves different purposes for each. We can also assert that the onset of death behaviours is marked by a different act.

Illustratively, the patient's death has at least two different purposes for the physician, it serves to bring biological and clinical closure. By biological closure I mean human death marks

the cessation of the type of biological activity that can be termed life, and as such it can be correlated with physiological and organismal changes. At the same time, another purpose of human death, from the vantage-point of a clinician, is to herald the futility of further clinical intervention in restoring the patient's health. For the clinician, the absence of physiological and biological correlates for life marks death, and clinical data foretell the point at which continued interventions lack the efficacy to restore patient health. The many death behaviours that are enacted by the clinician, for example certifying patient death, removing clinical therapeutics, conveying this news to the rest of the clinical care team, supporting the patient's family whilst sharing news of the passage of their loved one, counseling, are all triggered when biomedical thresholds are met.

Closely tied to the idea of clinical closure, death can also serve as a moral end of the clinician's duty to treat. However moral duties to restore health or to treat a patient need not correlate with patient death. According to some bioethicists these obligations fall away when biomedicine offers no further beneficial treatment to a patient, others assert they are obviated when the patient can no longer be considered a person. Ethical theories, professional codes, and social contracts setup this moral endpoint not biology, and hence the biomedical determination of death does not need to be the exact point at which the clinicians' duty to restore health, or to treat a patient, ends.

Moving outside the domain of biomedicine, metaphysical frameworks for human death can only offer insight to the clinician should metaphysical occurrences have physical signs. Said another way, the religious idea that human death is the departure of soul from a body is only relevant to conversations over the criteria for death should there be a way to observe this occurrence, or to mark the difference between a souled and an unsouled human body. While many theories may abound, Islamic scholastic theology does not offer a definitive view on whether the soul resides within the world of matter, nor whether the moment of death where it disconnects from the body has definitive physical indicants (Gianotti 2001; Maghnisawi et al. 2007; Brown 2013). Thus, for the physician practice, death criteria must be biologically grounded.

For families, as noted above, the patient's death triggers changes in social and ethical responsibilities, the purpose of declaring death is to effect these changes. The biomedical sciences, by themselves, provide no deliverables on which to assess when mourning rituals should commence, or when the decedent's estate should be distributed, or when a family's ethical duties towards the newly dead person mitigate. Rather religious, cultural, and secular frameworks opine

on these matters. It may be that these frameworks defer to biomedical criteria for death to trigger changes in duties and responsibilities, but it is not necessarily so.

Moreover, families mourn when someone is close to death and also after. It is certainly true that these behaviours change when death is declared, but that transition occurs when death is pronounced/communicated not when the biological and physiological correlates for death were verified by a clinician. Some clinicians declare death when there is no palpable pulse regardless of whether the heart still beats, others may use ultrasound to assess the cessation of heartbeat before declaring death. Either approach is accepted in medical practice, but neither mean anything to the family until death is vocalized. The biological occurrence of death and the sociological instantiation of death almost always stand apart in time. Thus, the criterion by which the death behaviours of a family commence is socially determined. It is linked to biology, but that biology/physiology may vary across patients.

Relatedly, law dictates when contracts can be initiated, and contracts signed close to one's death are subject to critical scrutiny in both secular and religious law. For example, in order to avoid coercion or confusion impacting contracts near the end-of-life, Islamic law recognizes the concept of death illness (*maraḍ al-mawt*) and allows for family members or others to become financial caretakers of an individual with a terminal illness (Yanagihashi 1998). Notably a death illness can be declared based on an individual's perception of terminality, even if the medical prognosis is not dire. These cases illustrate how legal thresholds, ethical duties, and biology/physiology surrounding death stand somewhat apart. From the perspective of families, the enactment of death behaviours does not wholly depend on whether specific biological or religious criteria for death have been met.

Finally, for religious leaders working in a healthcare-related capacity or in a community setting, death serves ethical and professional purposes. Yet, just like for families, a religious leader's pastoral and religious duties are triggered when death is pronounced by the clinician. Certainly, Islamic law and scriptural evidence inform the timing and types of procedures a religious leader must undertake when death is declared, but they do unequivocally identify physical markers of human death. Hence religious leaders depend on customary self-evident signs of death, or on the pronouncement of medical scientists. Certainly, religious leaders may hold that death occurs when the soul departs, but biomedicine has little to say about the relationship between the body and the soul. This religious belief; however, should not stand in the way of using

biological criteria to ascertain the loss of homeostasis and organising capacity of the human body, or determining that the body is no longer able to interact with the world around it. It is these sorts of concepts that buttress criteria used by clinicians to pronounce death, which in turn initiates the professional and ethical death behaviours of religious leaders.

For Islamic bioethics stakeholders, be they clinicians, patients and their families, or religious leaders, metaphysics and ontology do not have to stand in the way of assessing moral duties in end-of-life care if we understand death at the bedside to be a construct that joins specific purposes with criteria so that certain behaviours can be enacted.

5. Conclusion

At the Islamic Fiqh Academy of the Organization of Islamic Conference (now Cooperation) (OIC-IFA) meeting dedicated to discussing brain-death in 1986, Muḥammad Sulaymān al-Ashqar (d. 2008), a pre-eminent Jordanian jurist, proposed that a brain-dead individual should be considered dead for some purposes, and living for others. He offered that for the biomedical purposes of removing life support and thus ending the clinical staff's moral duty to treat, the brain-dead person was to be treated as a dead human. Similarly, for the purpose of organ procurement to save the life of another, the brain-dead patient was to be considered dead. However, he noted that the brain-dead patient was to be considered alive when it came to financial and contractual matters such that the estate was not to be distributed among heirs, and if the patient was a husband, his wife could not yet be declared a widow (Moosa 1999; Krawietz 2003a). For these latter purposes, death had to be ascertained by cardiopulmonary criteria. This stance was also approved by the Senior Council of Scholars in Saudi Arabia, among other juridical academies (al-Bar and Chamsi-Pasha 2015a). The fact that preeminent Islamic legists recognize different purposes for death declaration, acknowledge multiple biomedical criteria for verifying death, and specify which death behaviours are permitted when one or the other biomedical threshold is met, elucidates that multiple different death constructs can operate within the Islamic ethico-legal tradition.

In this chapter I have provocatively argued that death should be evaluated as a sociological construct, that multiple such constructs operate within society, and that death purposes, criteria and behaviours must be logically and ethically connected. I have suggested that extant Islamic bioethical discussions over brain-death have misfired, in part, because they do not analyse death constructs, i.e. death purposes, criteria, and behaviours, as a unit nor seek logical connections

between criteria and purposes. This critical failure, in my view, is related to the lack of multidisciplinary engagement over end-of-life care ethics in Muslim circles.

As a provisional remedy, I advocate Islamic bioethicists legitimate a plurality of death constructs based on different death purposes because allowing for different constructs to "live" alongside each other may help resolve ethical tensions in end-of-life healthcare. Obviously, the utility of such an approach must deserve further attention and must be tested through application. Some may wonder if I deny that death has a singular, knowable reality. My response to such interlocuters would be that I do not. Rather I assert that death serves functions in society and cogent bioethical analysis must begin by acknowledging these functions which are at the root of pressing ethical issues at the bedside and in society.

Finally, this chapter also highlights the need for social scientific engagement in Islamic bioethics. Thus far the field has centered around medical scientists and Islamic jurists, both vying for dominance in framing the ethical questions and delivering Islamic responses. However ethical questions arise in social contexts and emerge against the backdrop of social history. Without social scientists alongside, doctors and jurists may not fully appreciate the origin of the ethical question and the implications of their responses to them. Moreover, social scientific perspectives may indicate how to negotiate between different versions of the ethical. It is past time for the field of Islamic bioethics to fully embrace social scientific approaches. Indeed, the phenomenon of "twice dead" is here to stay (Lock 2002). Since brain-death is a fusion of biomedical facts with ethical and social values, Islamic bioethical deliberations must involve those who can speak to the biomedical, the ethical, and the social dimensions of the issues.

References

Ahaddour, Chaïma, Bert Broeckaert and Stef Van den Branden. 2019. "'Every Soul Shall Taste Death.' Attitudes and Beliefs of Moroccan Muslim Women Living in Antwerp (Belgium) toward Dying, Death, and the Afterlife." *Death Studies* 43(1): 41-55.

Ahaddour, Chaïma, Stef Van den Branden and Bert Broeckaert. 2018. "Between Quality of Life and Hope. Attitudes and Beliefs of Muslim Women toward Withholding and Withdrawing Life-Sustaining Treatments." *Medicine, Health Care and Philosophy* 21(3): 347-361.

Andrews, Tom. 2012. "What is Social Constructionism?" Grounded Theory Review 11(1).

Arbour, Richard, Hanan M. AlGhamdi, and Linda Peters. 2012. "Islam, Brain Death, and

Transplantation: Culture, Faith, and Jurisprudence." *AACN Adv Crit Care* 23(4): 381-394. DOI: 10.1097/NCI.0b013e3182683b1e.

al-Awadhi, Abd El-Rahman Abdulla. 1985. *Human Life: Its Inception and End as Viewed by Islam*. Kuwait: Islamic Organization for Medical Sciences.

al-Bar, Mohammed Ali and Hassan Chamsi-Pasha. 2015a. "Contemporary bioethics." *Islamic Perspective*.

---. 2015b. *Contemporary Bioethics: Islamic Perspective*. Cham: Springer.

Bedir, Ahmet and Şahin Aksoy. 2011. "Brain Death Revisited: It Is Not 'Complete Death' according to Islamic Sources." *Journal of Medical Ethics* 37(5): 290-294. DOI: 10.1136/jme.2010.040238.

Bellingham, Janet M., Chandrasekar Santhanakrishnan, Nikole Neidlinger, Philip Wai, Jim Kim, Silke Niederhaus, Glen E. Leverson, Luis A. Fernandez, David P. Foley, and Joshua D. Mezrich. 2011. "Donation after Cardiac Death: A 29-year Experience." *Surgery* 150(4): 692-702.

Berger, Peter L. and Thomas Luckmann. 1991. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. London: Penguin.

Bernat, James L. 2010. "How the Distinction between “Irreversible” and “Permanent” Illuminates Circulatory–Respiratory Death Determination." *Journal of Medicine and Philosophy* 35(3): 242-255.

Blain-Moraes, Stefanie, Eric Racine and George A. Mashour. 2018. "Consciousness and Personhood in Medical Care." *Frontiers in Human Neuroscience* 12: 306.

Borhani, Fariba, Seyed H. Hosseini and Abbas Abbaszadeh. 2014. "Commitment to Care: A Qualitative Study of Intensive Care Nurses' Perspectives of End-of-Life Care in an Islamic Context." *International Nursing Review* 61(1): 140-147.

Braksick, Sherri A., Christopher P. Robinson, Gary S. Gronseth, Sara Hocker, Eelco F. M. Wijdicks and Alejandro A. Rabinstein. 2019. "Variability in Reported Physician Practices for Brain Death Determination." *Neurology* 92(9): e888-e894. DOI: 10.1212/WNL.0000000000007009.

Brockopp, Jonathan E. 2003. *Islamic Ethics of Life: Abortion, War, and Euthanasia*. Columbia, SC: University of South Carolina Press.

Brown, Jihad. 2013. *The Problem of Reductionism in Philosophy of Mind and its Implications for*

Theism and the Principle of Soul: Framing the Issue for Further Islamic Inquiry. Abu Dhabi: Tabah Foundation.

al-Bukhārī. n.d. *Ṣaḥīḥ al-Bukhārī*, edited by M. Muhsin Khan, *ḥadīth* #6548. www.sunnah.com.

Burr, Vivien. 1998. "Overview: Realism, Relativism, Social Constructionism and Discourse." In *Social Constructionism, Discourse and Realism*, edited by Ian Parker, 13-26. Manchester: Manchester Metropolitan University.

Campbell, Courtney S. 2018. "Imposing Death: Religious Witness on Brain Death." *The Hastings Centre Report* 48(S4): S56-S59. DOI: 10.1002/hast.957.

Capron, Alexander Morgan. 1995. "Legal Issues in Pronoucing Death." *Encyclopedia of Bioethics, Revised Version*, edited by Stephen G. Post, 534-540. New York: Macmillan

Chen, Guodong, Chang Wang, Dicken Shiu-Chung Ko, Jiang Qiu, Xiaopeng Yuan, Ming Han, Changxi Wang, Xiaoshun He and Lizhong Chen. 2017. "Comparison of Outcomes of Kidney Transplantation from Donation after Brain Death, Donation after Circulatory Death, and Donation after Brain Death Followed by Circulatory Death Donors." *Clinical Transplantation* 31(11): e13110.

De Vleeschauwer, Stéphanie I., Shana Wauters, Lieven J. Dupont, Stijn E. Verleden, Anna Willems-Widyastuti, Bart M. Vanaudenaerde, Geert M. Verleden and Dirk E. M. Van Raemdonck. 2011. "Medium-Term Outcome after Lung Transplantation is Comparable between Brain-Dead and Cardiac-Dead Donors." *The Journal of Heart and Lung Transplantation* 30(9): 975-981.

Demiselle, Julien, Jean-François Augusto, Michel Videcoq, Estelle Legeard, Laurent Dubé, François Templier, Karine Renaudin, Johnny Sayegh, Georges Karam and Gilles Blancho. 2016. "Transplantation of Kidneys from Uncontrolled Donation after Circulatory Determination of Death: Comparison with Brain Death Donors with or without Extended Criteria and Impact of Normothermic Regional Perfusion." *Transplant International* 29(4): 432-442.

Duivenbode, Rosie and Aasim I. Padela. 2019. "Contextualizing the Role of Religion in the Global Bioethics Discourse: A Response to the New Publication Policy of Developing World Bioethics." Developing World Bioethics 19(4): 189-191. DOI: 10.1111/dewb.12242.

Duivenbode, Rosie, Stephen Hall and Aasim I. Padela. 2019. "Assessing Relationships Between Muslim Physicians' Religiosity and End-of-Life Health-Care Attitudes and Treatment

Recommendations: An Exploratory National Survey." *American Journal of Hospice and Palliative Medicine* 36(9):780-788.

Ebrahim, Abul Fadl Mohsin. 1998. "Islamic jurisprudence and the end of human life." *Medicine and Law* 17: 189-196.

Farah, Samir and Ashraf Al-Kurdi. 2006. "Brain Death: Definition, Medical, Ethical and Islamic Jurisprudence Implications." In *FIMA Year Book 2005-2006*, edited by Hossam E. Fadel, Muhammed A. A. Khan and Aly A. Mishal, 33-48. Amman: Jordan Society For Islamic Medical Sciences.

Gavriilidis, Paschalis and Nicholas G. Inston. 2020. "Recipient and Allograft Survival Following Donation after Circulatory Death versus Donation after Brain Death for Renal Transplantation: A Systematic Review and Meta-Analysis." *Transplantation Reviews* 34(4):100563.

Gervais, Karen G. 2014. "The Social Construction of Death, Biological Pausibility, and the Brain Death Criterion." *The American Journal of Bioethics* 14(8): 33-34.

Ghaly, Mohammed. 2015. "Biomedical Scientists as Co-Muftis: Their Contribution to Contemporary Islamic Bioethics." *Die Welt des Islams* 55(3-4): 286-311. DOI: 10.1163/15700607-05534p03.

Gianotti, Timothy J. 2001. *Al-Ghazālī's Unspeakable Doctrine of the Soul: Unveiling the Esoteric Psychology and Eschatology of the Iḥyā'*. Leiden: Brill.

Gire, James. 2014. "How Death Imitates Life: Cultural Influences on Conceptions of Death and Dying." *Online Readings in Psychology and Culture* 6(2): 3. DOI: 10.9707/2307-0919.1120.

Greer, David M., Panayiotis N. Varelas, Shamael Haque and Eelco F. M. Wijdicks. 2008. "Variability of Brain Death Determination Guidelines in Leading US Neurologic Institutions." *Neurology* 70(4): 284-289. DOI: 10.1212/01.wnl.0000296278.59487.c2

Grodin, Michael A. 1994. "Religious Exemptions: Brain Death and Jewish Law." *Journal of Church and State* 36(2): 357-372.

Hamdy, Sherine. 2012. *Our Bodies Belong to God: Organ Transplants, Islam, and the Struggle for Human Dignity in Egypt*. Berkely, CA: Univiversity of California Press.

Haque, Omar S. 2008. "Brain Death and Its Entanglements: A Redefinition of Personhood for Islamic Ethics." *Journal of Religious Ethics* 36(1): 13-36. DOI: 10.1111/j.1467-

9795.2008.00334.x.

Hornby, Karen, Sam D. Shemie, Jeanni Teitelbaum and Christopher Doig. 2006. "Variability in Hospital-Based Brain Death Guidelines in Canada." *Neuroanesthesia and Intensive Care* 53(6): 613-619.

Kassim, Puteri Nemie Jahn and Omipidan Bashiru Adeniyi. 2010. "Withdrawing and Withholding Medical Treatment: A Comparative Study between the Malaysian, English and Islamic Law." *Medicine and Law* 29(3): 443-461. www.ncbi.nlm.nih.gov/pubmed/22145563.

Khalid, Imran, Wasfy J. Hamad, Tabindeh J. Khalid, Mazen Kadri and Ismael Qushmaq. 2013. "End-of-Life Care in Muslim Brain-Dead Patients: A 10-year Experience." American *Journal of Hospice and Palliative Care* 30(5): 413-8. DOI: 10.1177/1049909112452625.

Khan, Abrar. 2009. *Brain death legislation and organ transplantation in the Islamic world*.

Khater, Wejdan Abdelkareem. 2005. "United States Muslim Physicians' Attitudes toward Withholding and Withdrawing Life-Sustaining Treatment: A Qualitative Study." PhD diss., The University of Kansas, http://search.proquest.com.proxy.uchicago.edu/docview/304990688/abstract.

Kleinman, Arthur. 1980. *Patients and Healers in the Context of Culture: An Exploration of the Borderland between Anthropology, Medicine, and Psychiatry*. Berkeley, CA: University of California Press.

Kleinman, Arthur, Leon Eisenberg and Byron Good. 1978. "Culture, Illness and Care: Clinical Lessons from Anthropologic and Cross-Cultural Research." *Annals of Internal Medicine* 88(2): 251-258. www.ncbi.nlm.nih.gov/pubmed/626456.

Krawietz, Birgit. 2003a. "Brain Death and Islamic Traditions." In *Islamic Ethics of Life: Abortion, War, and Euthanasia*, edited by Jonathan E. Brockopp, 194-213. Columbia, SC: University of South Carolina Press.

Krawietz, Birgit. 2003b. "Brain Death and Islamic Traditions: Shifting Borders of Life?" *In Islamic Ethics of Life: Abortion, War, and Euthanasia*, edited by Jonathan E. Brockopp, 194-213. Columbia, SC: University of South Carolina Press.

Lewis, Ariane, Elizabeth Kitamura and Aasim I. Padela. 2020. "Allied Muslim Healthcare Professional Perspectives on Death by Neurologic Criteria." *Neurocritical Care* 33(2):347-357.

Lizza, John P. 2005. "Potentiality, Irreversibility, and Death." *The Journal of Medicine and*

Philosophy 30(1): 45-64.

Lock, Margaret M. 2002. *Twice Dead: Organ Transplants and the Reinvention of Death*. Berkeley, CA: University of California Press.

Maghnisawi, Ahmad ibn Muhammad, Abdur-Rahman Ibn Yusuf, Abu Hanifah, and Ali ibn Sultan Muhammad Qari al-Harawi. 2007. *Imam Abu Hanifa's Al-Fiqh Al-Akbar Explained*. London: White Thread Press.

McCarthy, Michael, Mary Homan, and Michael Rozier. 2020. "There's No Harm in Talking: Re-Establishing the Relationship between Theological and Secular Bioethics." *The American Journal of Bioethics* 20(12): 5-13. DOI: 10.1080/15265161.2020.1832611.

McMahan, Jeff. 1995. "The Metaphysics of Brain Death." *Bioethics* 9(2): 91-126.

Miller, Andrew C, Amna Ziad-Miller and Elamin M. Elamin. 2014. "Brain Death and Islam: The Interface of Religion, Culture, History, Law, and Modern Medicine." *Chest* 146(4): 1092-1101.

Miller, Kris Allen. 2013. "Participating in the Knowledge of God: An Engagement with the Trinitarian Epistemology of TF Torrance." PhD diss., Durham University. http://etheses.dur.ac.uk/7369/.

Mohiuddin, Afshan, Mehrunisha Suleman, Shoaib Rasheed and Aasim I. Padela. 2020. "When Can Muslims Withdraw or Withhold Life Support? A Narrative Review of Islamic Juridical Rulings." *Global Bioethics* 31(1): 29-46.

Molina, María, Félix Guerrero-Ramos, Mario Fernández-Ruiz, Esther González, Jimena Cabrera, Enrique Morales, Eduardo Gutierrez, Eduardo Hernández, Natalia Polanco and Ana Hernández. 2019. "Kidney Transplant from Uncontrolled Donation after Circulatory Death Donors Maintained by nECMO Has Long-Term Outcomes Comparable to Standard Criteria Donation after Brain Death." *American Journal of Transplantation* 19(2): 434-447.

Moosa, Ebrahim. 1999. "Languages of Change in Islamic Law: Redefining Death in Modernity." *Islamic Studies* 38(3): 305-342.

Muishout, George, Hanneke W.M. van Laarhoven, Gerard Wiegers and Ulrike Popp-Baier. 2018. "Muslim Physicians and Palliative Care: Attitudes towards the Use of Palliative Sedation." *Supportive Care in Cancer* 26(11): 3701-3710.

Murphy, Timothy F. 2012. "In Defense of Irreligious Bioethics." *The American Journal of*

Bioethics 12(12): 3-10. DOI: 10.1080/15265161.2012.719262.

Padela, Aasim I. 2013a. "Islamic Bioethics: Between Sacred Law, Lived Experiences, and State Authority." *Theoretical Medicine and Bioethics* 34(2): 65-80. DOI: 10.1007/s11017-013-9249-1.

Padela, Aasim I. 2013b. "Islamic Verdicts in Health Policy Discourse: Porcine-Based Vaccines as a Case Study." *Zygon* 48(3): 655-670.

Padela, Aasim I. 2022. "Integrating Science and Scripture to Produce Moral Knowledge: Assessing Human Interests and Necessities in Islamic Bioethics and the Case of Organ Donation." In *Islam and Biomedicine*, edited by Afifi Al-Akiti and Aasim I. Padela, PAGES. Dordrecht: Springer.

Padela, Aasim I., Ahsan Arozullah and Ebrahim Moosa. 2013. "Brain Death in Islamic Ethico-Legal Deliberation: Challenges for Applied Islamic Bioethics." *Bioethics* 27(3): 132-139. DOI: 10.1111/j.1467-8519.2011.01935.x.

Padela, Aasim I. and Taha A. Basser. 2012. "Brain Death: The Challenges of Translating Medical Science into Islamic Bioethical Discourse." *Medicine and Law* 31(3): 433-450. www.ncbi.nlm.nih.gov/pubmed/23248843.

Padela, Aasim I. ed. 2021. *Medicine and Shariah: A Dialogue in Islamic Bioethics*. Notre Dame, IN: University of Notre Dame Press.

Padela, Aasim I. and Omar Qureshi. 2017. "Islamic Perspectives on Clinical Intervention near the End-of-Life: We Can But Must We?" *Medicine, Health Care and Philosophy* 20(4):545-559. DOI: 10.1007/s11019-016-9729-y.

Padela, Aasim I., Hasan Shanawani and Ahsan Arozullah. 2011. "Medical Experts & Islamic Scholars Deliberating over Brain Death: Gaps in the Applied Islamic Bioethics Discourse." *The Muslim World* 101(1): 53-72. DOI: 10.1111/j.1478-1913.2010.01342.x.

Pandey, Ashutosh, Pradeep Sahota, Premkumar Nattanmai and Christopher R. Newey. 2017. "Variability in Diagnosing Brain Death at an Academic Medical Center." *Neuroscience Journal* 2017: 6017958. DOI: 10.1155/2017/6017958.

Popal, Sadaf, Stephen Hall and Aasim I. Padela. 2021. "Muslim American Physicians' Views on Brain Death: Findings from a National Survey." *Avicenna Journal of Medicine* 11(2): 63. DOI: 10.4103/ajm.ajm_51_20.

Powner, David J., Michael Hernandez and Terry E. Rives. 2004. "Variability among Hospital

Policies for Determining Brain Death in Adults." *Critical Care Medicine* 32(6): 1284-1288.

Qazi, Faisal, Joshua C. Ewell, Ayla Munawar, Usman Asrar and Nadir Khan. 2013. "The Degree of Certainty in Brain Death: Probability in Clinical and Islamic Legal Discourse." Theoretical Medicine and Bioethics 34(2): 117-131. DOI: 10.1007/s11017-013-9250-8.

Rady, Mohamed Y. and Joseph L. Verheijde. 2013. "Brain-Dead Patients Are Not Cadavers: The Need to Revise the Definition of Death in Muslim Communities." *HEC Forum* 25(1): 25-45. DOI: 10.1007/s10730-012-9196-7.

Rady, Mohamed Y. and Joseph L. Verheijde. 2015. "Brain Death and the Moral Code of Islam." *Chest* 147(2): e69.

Rady, Mohamed Y. and Joseph L. Verheijde. 2016. "A Response to the Legitimacy of Brain Death in Islam." Journal of Religion and Health 55(4): 1198-205. DOI: 10.1007/s10943-016-0221-z.

Rady, Mohamed Y. and Joseph L. Verheijde. 2018. "Legislative Enforcement of Nonconsensual Determination of Neurological (Brain) Death in Muslim Patients: A Violation of Religious Rights." *Journal of Religion and Health* 57(2): 649-661. DOI: 10.1007/s10943-017-0512-z.

Rady, Mohamed Y, Joseph L. Verheijde and Joan McGregor. 2006. "Organ Donation after Circulatory Death: The Forgotten Donor?" *Critical Care* 10(5): 1-3.

Rady, Mohamed Y, Joseph L. Verheijde and Greg Yanke. 2017. "Nonconsensual Determination of Neurologic (Brain) Death: Is It a Violation of Constitutional Rights?" *Chest* 152(4): 903-904.

Rich, Ben A. 1997. "Postmodern Personhood: A Matter of Consciousness." *Bioethics* 11(3-4): 206-216. DOI: 10.1111/1467-8519.00059.

Rich, Ben A. 2014. "Structuring Conversations on the Fact and Fiction of Brain Death." *The American Journal of Bioethics* 14(8): 31-33. DOI: 10.1080/15265161.2014.925158.

Saeed, Fahad, Nadia Kousar, Sohaib Aleem, Owais Khawaja, Asad Javaid, Mohammad Fasih Siddiqui and Jean L Holley. 2015. "End-of-Life Care Beliefs among Muslim Physicians." *American Journal of Hospice and Palliative Medicine* 32(4): 388-392. Please review for DOI thoughout the bibliography. DOI: 10.1177/1049909114522687

Sarhill, Nabeel, Susan LeGrand, Ramez Islambouli, Mellar P. Davis and Declan Walsh. 2001.

"The Terminally Ill Muslim: Death and Dying from the Muslim Perspective." *American Journal of Hospice and Palliative Medicine* 18(4): 251-255. DOI: 10.1177/104990910101800610.

Schuklenk, Udo. 2018. "On the Role of Religion in Articles this Journal Seeks to Publish." *Developing World Bioethics* 18(3): 207-207. DOI: 10.1111/dewb.12210.

Selin, Helaine and Robert M. Rakoff. 2019. *Death across Cultures: Death and Dying in Non-Western Cultures*. Dordrecht: Springer.

Shabana, Ayman. 2014. "Bioethics in Islamic Thought." *Religion Compass* 8(11): 337-346. DOI: 10.1111/rec3.12137.

Shahrestani, Sara, Angela C. Webster, Vincent Wai To Lam, Lawrence Yuen, Brendan Ryan, Henry Claud Capron Pleass and Wayne John Hawthorne. 2017. "Outcomes from Pancreatic Transplantation in Donation after Cardiac Death: A Systematic Review and Meta-Analysis." *Transplantation* 101(1): 122-130.

Sheikh, Aziz. 1998. "Death and Dying—a Muslim Perspective." *Journal of the Royal Society of Medicine* 91(3): 138-140.

Shewmon, Daniel Alan. 2001. "The Brain and Somatic Integration: Insights into the Standard Biological Rationale for Equating 'Brain Death' with Death." *The Journal of Medicine and Philosophy* 26(5):457-478. DOI: 10.1076/jmep.26.5.457.3000.

Shweder, Richard A. 2008. "The Cultural Psychology of Suffering: The Many Meanings of Health in Orissa, India (and Elsewhere)." *Ethos* 36(1): 60-77. DOI: 10.1111/j.1548-1352.2008.00004.x.

Sloan, Richard P. and Emilia Bagiella. 2000. "Should Physicians Prescribe Religious Activities?" *New England Journal of Medicine* 342(25): 1913-1916.

Son, Rachel Grace and Susan M. Setta. 2018. "Frequency of Use of the Religious Exemption in New Jersey Cases of Determination of Brain Death." *BMC Medical Ethics* 19(1): 76.

Stodolsky, Muhammed Volkan Yildiran and Mohammed Amin Kholwadia. 2021. "A Jurisprudential (*Uṣūlī*) Framework for Cooperation between Muslim Jurists and Physicians and Its Application to the Determination of Death." In *Medicine and Shariah: A Dialogue in Islamic Bioethics*, edited by Aasim I. Padela and Ebrahim Moosa, 71-86. Notre Dame, IN: University of Notre Dame Press.

Truog, Robert D. and Franklin G. Miller. 2014. "Changing the Conversation about Brain Death."

The American Journal of Bioethics 14(8): 9-14.

Uniform Law Commission. 1981. *Uniform Determination of Death Act*, approved by the American Bar Association 10 February 1981.

Van Loo, Ellen S., Christina Krikke, Hendrik S. Hofker, Stefan P. Berger, Henri G.D. Leuvenink and Robert A. Pol. 2017. "Outcome of Pancreas Transplantation from Donation after Circulatory Death Compared to Donation after Brain Death." *Pancreatology* 17(1): 13-18.

Veatch, Robert M. and Lainie F. Ross. 2016. *Defining Death: The Case for Choice*. Washington, DC: Georgetown University Press.

Xue, Wujun, Puxun Tian, Heli Xiang, Xiaoming Ding, Xiaoming Pan, Hang Yan, Jun Hou, Xinshun Feng, Linjuan Liu and Chenguang Ding. 2017. "Outcomes for Primary Kidney Transplantation from Donation after Citizens' Death in China: A Single Center Experience of 367 Cases." B*MC Health Services Research* 17(1): 250.

Yanagihashi, Hiroyuki. 1998. "The Doctrinal Development of "*Maraḍ Al-Mawt*" in the Formative Period of Islamic Law." *Islamic Law and Society* 5(3): 326-358.