Islam and Biomedical Ethics

with Mohammed Ghaly, "Islamic Bioethics in the Twenty-first Century"; Henk ten Have, "Global Bioethics: Transnational Experiences and Islamic Bioethics"; Amel Alghrani, "Womb Transplantation and the Interplay of Islam and the West"; Shoaib A. Rasheed and Aasim I. Padela, "The Interplay between Religious Leaders and Organ Donation among Muslims"; Aasim I. Padela, "Islamic Verdicts in Health Policy Discourse: Porcine-Based Vaccines as a Case Study"; Mohammed Ghaly, "Collective Religio-Scientific Discussions on Islam and HIV/AIDS: I. Biomedical Scientists"; Ayman Shabana, "Law and Ethics in Islamic Bioethics: Nonmaleficence in Islamic Paternity Regulations"; and Willem B. Drees, "Islam and Bioethics in the Context of 'Religion and Science'."

LAW AND ETHICS IN ISLAMIC BIOETHICS: NONMALEFICENCE IN ISLAMIC PATERNITY REGULATIONS

by Ayman Shabana

Abstract. In Islamic law paternity is treated as a consequence of a licit sexual relationship. Since DNA testing makes a clear distinction between legal and biological paternity possible, it challenges the continued correlation between paternity and marriage. This article explores the foundations of paternity regulations in the Islamic ethico-legal tradition, with a particular focus on what is termed here "the licit sex principle," and investigates the extent to which a harmbased argument can be made either by appeal to or against Islamic paternity regulations. It argues that in Islamic bioethics the definition of harm and its boundaries is a function of both: (1) identification of legal and religious rights and the extent to which these rights are violated; and (2) balancing and reconciling perceived harm against both specific principles in relation to a given issue and also the overarching objectives of Islamic law. The article is divided into three main sections addressing the Islamic legal, ethical, and bioethical dimensions of paternity.

Keywords: bioethical principles; DNA testing; Islam; Islamic bioethics; Islamic ethics; Islamic law; nonmaleficence; paternity

The increasing role of modern genetic technology in the determination of genealogical relationships has revolutionized established legal rules on genealogy, both religious and secular, and has shifted the relevance of related discussions beyond specialized legal circles into the wider domain of

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bioethics. Bioethics is a broad term that is used not only to cover medical ethics in the traditional sense but also ethics in the life sciences in general and the impact of modern biomedical technology on moral decision-making in particular. It is also used broadly to refer to ethical questioning involving the human body, the environment, and issues related to sustainability (Reich 1994; 1995). Islamic bioethics would, therefore, denote systematic analysis of bioethical problems in light of Islamic normative values and principles. Given the large scope of Islamic law, which ranges from ritual purity to different types of civil and criminal regulations, Islamic (bio)ethical reasoning would often involve an element of Islamic legal prescription. This, in turn, reveals the limitation of any analysis of Islamic law as a purely legal system in the strict positivist sense (Hallaq 2009, 256).

Bioethical problems signify some of the important challenges in applied ethics that confront the inherited Islamic ethico-legal tradition and test the efficacy of its methodological tools in the wake of new scientific knowledge and advanced biomedical technology (Moosa and Mian 2012, 2:773–74). This article illustrates this point by exploring the impact of DNA testing on Islamic paternity regulations and the extent to which these regulations can remain intact in the wake of this technology. Prior to the discovery of blood group tests and DNA technology, a clear distinction between biological and legal paternity was not possible. In settling paternity disputes, legal systems had to rely on traditional methods such as resemblance of physical features and duration of pregnancy in the absence of a decisive extralegal method. Marriage was the most important factor in paternity disputes and it was given priority over any other competing factor. With modern medical testing this is no longer the case and in order to ensure accuracy, legal systems seek to incorporate these new scientific methods (Albrecht and Schultheiss 2004, 31–37).

Islamic regulations for paternity establishment and negation are rooted in religiously binding textual foundations. The legal definition of paternity under Islamic law is anchored in formal rules governing and regulating licit sexual relationship. Islamic law, therefore, treats paternity as a consequence of such relationship, not as a separate or an independent issue. Paternity in Islam, however, is not exclusively a legal issue but it is also an ethical one because it is linked to a certain moral vision of family, sexual conduct, and social order. But if, in the modern period, DNA testing enables verification of genetic connections, can the legal rules governing the definition of paternity change accordingly? And, can Islamic legal rules that regulate paternity be separated from the other ethical dimensions of paternity?

This article investigates the extent to which the implications of the biomedical and genetic technology on Islamic paternity regulations can be evaluated in light of the bioethical principle of nonmaleficence and the Islamic principle of no harm. More particularly, it examines the extent

to which Islamic reservations on the use of DNA testing for paternity verification can be explained in light of the harm-prevention principles, and the extent to which application of these two principles can yield similar results. Several recent studies have pointed out the similarities between the bioethical principle of nonmaleficence and the Islamic principle of no harm. These studies, however, recognize that determination of what constitutes harm and also ways of resolving conflicts between competing principles require a degree of specificity that can only be had in the context of concrete examples (Sachedina 2006, 266; Sajoo 2009, 13). They deplore *ad hoc*, vague, and intuitive employment or invocation of concepts such as beneficence or maleficence in the investigation of modern bioethical issues (Moosa 2012, 463).

I argue that the outcome of the application of these principles depends on the moral presuppositions undergirding each of them. While the principle of nonmaleficence aims to achieve the maximum balance of benefit for all concerned, the principle of no harm is subject to several qualifications that stem from Islamic legal and moral instructions. I illustrate this point by two examples: paternity of children born outside of marriage and the right of a putative biological father to challenge the presumed paternity of a legal father. In general, Islamic law does not recognize paternity in these two cases. The article investigates the legal and ethical justification behind denial of legal paternity in these two cases and compares these examples with the paternity of the foundling and children of unknown paternity. These examples reveal the importance of the paternity-specific principles in Islamic law, which give priority to licit sexual relation over any other consideration, including certainty of biological connection, which DNA technology can achieve. Due to the strong textual foundations that support the principle of licit sexual relation, it has been counted among the fundamental objectives of shari'ah that aim to safeguard religion, life, intellect, wealth, progeny, and honor. Moreover, its religious underpinnings place it within the category of divine rights, which gives it higher priority within the Islamic typology and hierarchy of rights. The principle of licit sexual relation has two dimensions: right-granting and right-denying. Although it preserves sanctity of marriage and confirms de facto marital paternity, it bars recognition of extramarital paternity and denies third parties any rights to make paternity claims that undermine or diminish the claim of the rightful owner of the *firāsh* (conjugal bed) in a licit sexual relationship. One main question that the article investigates is the extent to which the right-denying dimension of the licit sexual relation principle constitutes ethical or legal harm.

These examples show that in the Islamic ethico-legal tradition the definition of harm and its boundaries is a function of both: (1) identification of legal and religious rights and the extent to which these rights are violated; and (2) balancing and reconciling perceived harm against both specific principles in relation to a given issue and also the overarching objectives of sharī'ah. Balancing stands for "the process of finding reasons to support beliefs about which moral norms should prevail" (Beauchamp and Childress 2009, 20). In the Islamic ethico-legal tradition the process of balancing adheres to the hierarchy of legal and moral principles inherent in the Islamic normative system, which places it within what Beauchamp and Childress call particular morality (Beauchamp and Childress 2009, 5). Although the Islamic particular morality is mostly in agreement with what they call *common morality*, the process of specification and particularization of common ethical principles according to Islamic moral commitments can bring the distinction into sharper focus. Highlighting the ethical particularities of the Islamic law of paternity is not meant to advocate a view of cultural relativity but rather meant to emphasize the need for deeper appreciation of the rooted foundations of paternity regulations in the Islamic tradition. Moreover, these particularities should not undermine the common elements that Islamic bioethical discussions share with other religious and secular systems (Sing 2008).

The article is divided into three main sections. The first focuses on the legal dimensions of paternity by providing an overview of paternity regulations under Islamic law, with a special focus on the relationship between marriage and paternity. This section focuses particularly on the juristic foundations of what I refer to here as the "licit sex principle" rather than on the rules and regulations that govern paternity *per se* (Shabana 2012; 2013). This is meant to highlight the importance of this principle and to explain how paternity became dependent on it. The second section focuses on the ethical dimension of paternity by discussing its relationship to both the Islamic typology of rights and the objectives of sharī'ah. The third section focuses on the bioethical dimension of paternity by exploring the extent to which the licit sex principle and its right-denying dimensions involve harm, especially after the discovery of DNA technology.

PATERNITY REGULATIONS UNDER ISLAMIC LAW

The main reference concerning paternity in the Qur'ān is in 33:5: "Call them after their fathers." Most of the commentators link this verse to the story of Zayd ibn (son of) Ḥārithah (d. 8/629). Zayd was the Prophet's adopted son, who used to be called Zayd ibn Muḥammad. The Prophet is instructed to change the name of Zayd to bear the name of his original father, Ḥārithah (Ṭabarī 2001, 19:12; Ibn al-Athīr n.d., 2:350–53). The word in the verse is ābā'ihim (their fathers) but the verse does not specify the type of father: biological or legal. Drawing this distinction in a premodern setting might seem anachronistic but the context clearly makes the distinction between an adoptive father and a natural one, where the latter is understood as the recognized blood father. Several Prophetic traditions

make it clear that the term father in Islamic law refers to the legal father not the biological one. This does not necessarily mean that the distinction between legal and biological paternity has always been drawn. In most cases the legal father is also the biological father but such a distinction is made only in cases of disputed or contested paternity (Ibrāhīm and Ibrāhīm 2003, 629). The most important prophetic reference on this issue is a report that recounts an actual paternity dispute in which the Prophet confirmed the precedence of legal paternity over biological paternity. In this report the Prophet laid down the principle that would govern paternity issues and that would define accepted paternity as legal paternity, *al-walad lil-firāsh* (the child belongs to the [owner of the conjugal] bed) (Ibn Anas n.d., 2:181; Ibn Ḥajar 2000, 12:38; Ibn al-Mundhir 2010, 9:449; Nawawī 2003, 10:30).

Paternity and Licit Sexual Relationship. Linguistically, the term firāsh refers to any type of cover, especially one that is used for bedding. In this report it signifies the owner of the matrimonial bed (Ibn Manzūr 2008, 11:155–56). It is used metaphorically for either the man or the woman in a licit sexual relationship (Q 2:187) (Ṭabarī 2001, 3:231). In the juristic idiom, it is also used to refer to the exclusive licit sexual relationship between a woman and her husband, by means of which any child that she gives birth to is automatically considered the offspring of this man and is therefore attributed to him (Mawsū'ah 2009, 32:80).

The legal construction of the licit sex principle is rooted in the identification of the firāsh-relationship as the ratio legis of paternity in this Prophetic report (Abū Zahrah 2004, 217). In the process of searching for and reaching a legal rule (hukm) for an issue, a jurist has to identify and verify its ratio legis or operative cause ('illah), which is considered the raison d'être (manāt) of legal prescription. Juristic treatment of the operative causes of legal rules is usually located within relevant discussions concerning juristic analogy (qiyās) throughout the extended legal tradition (Shalabī 1947). Eventually, the jurists developed an elaborate list of methods for the identification and verification of legal operative causes. For example, al-Zarkashī (d. 794/1392) listed up to fifteen different criteria for the verification of a valid operative cause, which include among others: consensus; explicit statement (nass); Prophetic practice; and concomitance (dawarān) (Zarkashī 2000, 4:165-77). In the case of al-walad lil-firāsh, the four criteria apply. The relationship between paternity and licit sexual relation is supported by a continuous juristic consensus that is grounded in Prophetic practice, which is supported by explicit textual references. The particle *lām* in *lil-firāsh* in the text is listed as one of the particles that denote justification (Zarkashī 2000, 4:170). Moreover, concomitance means that a given juristic rule (e.g., establishment of paternity) depends on the existence of a given operative cause (e.g., firāsh) both positively and negatively. In

other words, if *firāsh* is established, paternity follows and vice versa. This has been the established rule regarding paternity in Islamic jurisprudence: it is established by *firāsh* and negated by mutual oaths of condemnation or *liʿān*.

The contrast in the verification of paternity between legal methods on the one hand and biological, medical or scientific methods on the other is heightened when the former are grounded in religious norms, as is the case in Islamic law. In light of modern medical and genetic developments and their implications on paternity verification, several questions are raised concerning the continued subsumption of paternity under marriage and the extent to which the former can be viewed independently of the latter. The paternity-marriage connection is upheld and supported by the consensus of modern Muslim jurists as illustrated by numerous fatwas, legislations, court decisions, and recommendations of legal councils and academies. Closer analysis of scholarly discussions on this issue reveals a broad distinction between marital disputes and extramarital disputes. In marital disputes, the longstanding authority and primacy of marriage is upheld. In extramarital disputes, classical minority opinions on the possibility of recognizing biological paternity, in case the mother of an illegitimate child is not married, are reintroduced and reemphasized ('Uthman 2009, 293–94) (Hilālī 2001, 352–62). In both cases, modern medical and genetic methods are incorporated, but in marital disputes such incorporation is meant to support effective implementation of a marital paternity presumption, not to replace it. Moreover, in the resolution of paternity disputes in questionable marital arrangements, legal efforts tend to focus on the establishment of the marital relationship, which would automatically translate into acknowledgement of paternity, rather than on the establishment of paternity on its own. Ultimately, the challenge that DNA testing poses to the classical Islamic law of paternity demonstrates an important tension that arises within any functional legal system due to its pursuit of two main objectives: demand for compliance with formal rules, values, and principles; and need to accommodate ever changing and challenging social reality (Watson 2001).

This tension is clearly illustrated by two important examples: illegitimate paternity (paternity of children born outside of marriage); and the ability of a biological father to challenge the presumed paternity of a legal father. Illegitimate paternity, however, is distinguished from unknown paternity, for while the former is not legally recognized, the latter is regulated under the category of the foundling or *laqīṭ*. Although many of the cases of unknown paternity may be the result of illegitimate paternity, from the legal perspective they are treated as the result of *prima facie* legitimate paternity, which can be confirmed through acknowledgement procedures (*istilḥāq*) (Sujimon 2002; 2003). Islamic law, therefore, makes a distinction between the two categories, which allows it to condemn illegitimate paternity but

recognize and regulate unknown paternity that does not, explicitly, violate the marital paternity stipulation.

With regard to biological paternity and the extent to which a biological father can challenge the de facto paternity claim of a legal father, parallels are usually drawn with the normative precedent in the above-mentioned Prophetic tradition in which the Prophet ruled in favor of legal paternity. The distinction with modern DNA technology, however, is the certainty of results that such technology can achieve and the main question, therefore, becomes: Does certainty of genetic ties trump or take precedence over emphasis on the licit sex principle? This is clearly a test case for the dependence of paternity on the marital relationship under Islamic law, which has so far been the consensus of the contemporary Islamic legal opinion (Abū Zayd 1996).² Understanding the contemporary legal consensus on this issue requires examination of the juristic foundations of the licit sex principle, and particularly the grounds given for its justification.

Justification of legal rules stands for the Justification of Legal Rules. process of exploring the ultimate purpose behind a legal rule, which involves investigating the benefits to be achieved or the harms to be avoided by means of a given legal prescription (Shalabī 1947, 12-3). It is meant primarily to ensure that legal rules are not only grounded in textual foundations but also correspond with the rationale and higher objectives of these foundations. Justification in this sense can be traced, again, back to the emergence of juristic analogy, which was initially perceived as the main medium of ijtihād (independent legal reasoning) in case direct indication cannot be found in the textual sources or in juristic consensus, as al-Shāfi'ī (d. 204/820) strongly argued (Shāfi'ī n.d., 39, 476-77). With the development of the legal tradition, *ijtihād* was gradually pursued separately and independently of juristic analogy. In juristic analogy, a jurist extracts the operative cause ('illah) of an already known question and extends it to a new unknown one. The operative cause may be expressly stated (as is the case in al-walad lil-firāsh), in which case no further effort would be needed, or it may be implied, in which case an effort would be required to deduce it. The jurists distinguish between two types of justification: extended justification, which is meant to extend the operative cause of one stated rule to another (unstated) one; and limited justification, which does not aim to extend the operative cause but just to explain its wisdom. In the case of al-walad lil-firāsh, the most important justification given for the stated operative cause (i.e., firāsh) is guarding against mixing of genealogies (ikhtilāt al-ansāb), which is also part of the justification given for the stipulated punishment for illicit sex (Shalabī 1947, 12, 131). Investigating the (implied) operative cause of a given legal prescription necessitates searching for the reasons behind such prescription and why, for example, certain actions are prohibited, reprehended, permitted, recommended, or

obligated (Zarkashī 2000, 1:137). These five qualifications are known in Islamic jurisprudence as the five prescriptions (*al-ahkām al-khamsah*). The jurists, however, distinguish between the operative cause ('illah) of a legal prescription and its wisdom (hikmah). The majority of jurists argued that a valid juristic analogy has to be based on a clearly identified operative cause, which is defined as an explicit and accurate qualification relevant to the ruling in question (al-wasf al-zāhir al-mundabit almunāsib lil-hukm). The most famous example is intoxication, which is deemed to be the operative cause for the prohibition of wine. This operative cause can be extended to cover any other substance that shares this operative cause with wine (Abū Zahrah 2004, 216). Wisdom (hikmah), on the other hand, refers to the significance of a particular legal rule in terms of potential benefits or harms (Bukhārī 1997, 4:284; Khudarī 2005, 265; Shalabī 1947, 131).³ The concern behind the distinction between the operative cause and the wisdom is to ensure that in the process of legal construction, the jurist is not driven by a desire to concentrate on mere utility, which may be conjectural or unreal. Some jurists, mainly Mālikī and Hanbalī, argued that wisdom can be used as a valid foundation for juristic analogy on the basis of the argument that most legal rulings in the Qur'an and the Sunnah of the Prophet are justified. According to this view the term 'illah and hikmah are treated as synonyms (Abū Zahrah 2004, 227).4

In principle, the divine command is considered the ultimate justification for religiously grounded legal regulations (Attar 2010). Occasionally, legal regulations in the foundational sources are justified but this is not always the case. For example, the Qur'an indicates that the objective of retaliation $(q\bar{\imath}s\bar{a}s)$ is to achieve deterrence, which should safeguard and preserve life (Q 2:179) (Tabarī 2001, 3:120–21). Given stated rationales in (some) textual prescriptions and also many other direct and indirect references denoting negation of harm and hardship in shari'ah, it has been argued, especially in the classical period by supporters of the concept of maslahah or istislah (public interest), that the ultimate objective behind legal regulations is the achievement of the benefits and interests of mankind, both in this life and in the afterlife (Zarkashī 2000, 187). Oftentimes reference to the achievement of benefits is coupled with removal of harm (*darar*), hardship (haraj), and causes of corruption (mafsadah) (Ibn 'Abd al-Salām 2000, 1:8-10, 39). The central question, however, has been: how are/can these interests and harms (be) known? Are they known solely through revelation? Or, can they also be known through reason?

This epistemological question about the sources of legal prescriptions in jurisprudence was somehow conflated with the question of human knowledge and moral reasoning in theology in general (Shalabī 1947, 94–95). Muslim theologians had for long debated the sources of human knowledge and moral reasoning along the continuum of reason and revelation

(Sachedina 2009, 3–23). In general, the theologian-jurists were divided on moral epistemology into three main opinions. The Mu'tazilī and Imāmī Shī'ites were of the opinion that moral reasoning is mainly rational and depends on the intrinsic nature of things, which in themselves are either good or bad. The Māturīdī and Hanafī jurists were of the opinion that things in themselves have intrinsic natures but unaided reason does not institute legal rulings, which should be grounded in revelation. The Ash'arī and majority of Sunnī jurists were of the opinion that things in themselves do not have intrinsic nature and that legal prescriptions are based solely on divine legislation (Abū Zahrah 2004, 70–73; Bābartī 2005, 1:507–12; Bukhārī 1997, 1:269–71; Zarkashī 2000, 1:113). The majority of jurists, therefore, attach legal rulings to textual foundations and scriptural authority is considered central for the normative structure of jurisprudential rules (Johansen 1999, 25). Such scriptural authority may be constructed either directly, when there is explicit reference, or indirectly through the application of legal methodology. This, therefore, explains the centrality of the report of al-walad lil-firāsh for the development of the licit sex principle.

Legal Principles Governing Paternity Regulations. Like general legal maxims and principles that transcend the scope of a single issue, legal principles that are specific to one topic or issue (dābit) are based on both deduction from textual sources and induction from numerous relevant cases reflecting a cumulative juristic practice, which reinforces the legal logic that governs these cases. In the area of paternity, the main deductive principle is al-walad lil-firāsh, which comes from the Prophetic report cited above. In addition to this main principle, there are also several important principles such as verification of truth, which is derived from the ban on adoption; preservation of honor and good social standing, which is derived from allowing probable means of proof in favor of paternity establishment; interest of the child, which is derived from giving priority to establishment over negation of paternity (Ahmad 2010, 95; Maydānī 2011, 1:631). In addition to these deductive principles, several inductive rules can be derived on the basis of numerous cases in different places at different times. The incorporation of these inductive rules can be facilitated through the employment of the concept of custom ('urf) in Islamic legal theory to account for how, when, and to what extent changing social circumstances, or new scientific knowledge can impact the implementation of these deductive principles. This could, for example, inform guidelines to regulate the incorporation of DNA testing within the structure of Islamic paternity regulations (Qarārāt 2004, 345; Ru'yah 2002, 261-62).6

ETHICAL DIMENSION OF PATERNITY

In this section, I explore the ethical dimensions of paternity through its connection with the two notions of legal rights and objectives of sharī'ah. It is in the juristic discussions over these two concepts that one can trace the nexus between the ideal law of sharī'ah (as embodied in the textual foundations) and the actual constructed law of fiqh (as developed by the jurists in legal manuals or in the form of fatwas). Both these notions bespeak of the moral elements that inspire the legal process in the Islamic tradition and that highlight the ethical underpinnings of Islamic law.

The juristic classification of legal rights depends on several considerations such as their nature, consequences, or implications (Mawsū'ah 2009, 18:13). In general, legal rights are divided into four main categories: pure rights of God; pure rights of man; mixed rights of God and man with a greater share for God; and mixed rights of God and man with a greater share for man. Pure rights of God denote the right of obedience that humans owe to God. They include explicit divine commands, devotional deeds, and rules pertaining to public affairs. They are attributed to God due to their important significance and also because no one can nullify or obliterate them. Pure rights of man refer to private entitlements especially those involving financial rights over which one has full legal discretion. The mixed rights with a greater share for God refer to rules governing legal institutions such as false accusation (qadhf) for which a guilty individual deserves the stipulated punishment (hadd). While the victim has the right to redress harm inflicted on him/her, the punishment is meant also to preserve public morality. The last type, mixed rights with a greater share for man, refers to the example of retaliation (qīsās), where the next of kin have the right to either implement the punishment or forgive the perpetrator (Bukhārī 1997, 4:194; Ibn 'Abd al-Salām 2000, 1:219-20; Mawsū'ah 2009, 18:15–19; Qarāfī 2001, 1:269–70; Shātibī 2003, 2:271–73).

Paternity claims involve different types of rights: rights of God, which refer to the sharī'ah-based regulations stipulating, among other things, who one can and cannot marry within the immediate and extended family, which is decided on the basis of one's lineage (Shalabī 1947, 131–32);⁷ rights of the mother, which refer to confirmation of innocence and removal of any doubt concerning integrity and moral character; rights of the father, which refer to exercise of authority over his child and development of parental connection between both parents and the child; and finally rights of the child to enjoy full legal status in society and to be entitled to all types of legal and financial rights (Abū Zayd 1996, 302–03; Hilālī 2001, 297; Mawsū'ah 2009, 40:233–34; 'Uthmān 2009, 314–16). The multiplicity of rights that paternity involves in Islam stems from its association with the various ethico-legal rules governing issues such as marriage, child custody and support, and inheritance.

Apart from its strong connection to the notion of rights in Islam, paternity also occupies a central position within the structure of the higher objectives of sharī'ah. The foregoing discussion on the justification of legal rules (ta'līl al-ahkām) underscores the teleological aspect of the Islamic legal process. Law should not be arbitrary and the pursuit of the rational and ethical underpinnings of textual evidence is meant to protect the law against arbitrariness. In his investigation of the relationship between Islamic law and ethics, Fazlur Rahman notes that the search for and verification of the operative cause ('illah) in legal analogy is meant to ensure the realization of the ethical values that the law aims to achieve (Rahman 1985, 9). The idea of the higher objectives of shari'ah (maqāsid) seeks to uncover the ultimate ends of sharī'ah and therefore can be seen as an extension of the search for operative causes for individual legal rules to the entire legal system. In other words, it seeks to approximate and fulfill the ideal law (sharī'ah) that actual law (figh) should emulate and embody. Investigating the roots and history of magāsid as a separate legal genre falls beyond the scope of the present study but what is of main concern here is to point out the prominent attention that paternity received in the various treatments of magāsid throughout the course of the Islamic legal tradition. This attention is again due to the fact that paternity has always been connected with marriage (and the licit sex principle), which has always been considered the ideal channel for family formation and social structure. According to al-Ghazālī, for example, one of the primary objectives of marriage is preservation of progeny (ibqā' al-nasl) (Ghazālī n.d., 2:32; Ghazālī 2003, 270). The standard juristic classification of the sharī'ah objectives comprises three main levels: necessities, needs, and embellishments. By the time magāsid developed into a distinct legal genre, which is usually traced back to the celebrated work of Abū Ishāq al-Shāṭibī (d. 790/1388), protection of paternity was articulated as one of the five necessary values that the law aims to preserve after the other four values of religion, life, intellect, and wealth (Shāṭibī 2003, 2:150-51). Various terms have been associated with paternity as one of the necessary values of sharī'ah such as nasl (progeny), nasab (paternity), and 'ird (honor). In effect, this reflects the various connotations that the term paternity holds in the Islamic ethico-legal tradition. The association between paternity and these multilayered concepts may reflect the place and status of different right/claim-holders in a paternity relationship: nasl refers to the rights of the child; nasab refers to the child-parent relationship; and 'ird refers to the rights of the mother.

From the time of Shāṭibī onwards, juristic engagements of *maqāsid* have always emphasized the nexus between marriage and paternity. For example, in one of the important contemporary treatments of *maqāsid*, the famous Tunisian jurist Muḥammad al-Ṭāhir Bin 'Āshūr singled out family regulations and their objectives as one of the most important domains that

distinguish the sharī'ah-based interpersonal transactions (mu'āmalāt) system. According to Bin 'Āshūr, the Islamic family structure consists of three main bonds: marriage (*nikāh*), kinship (*qarābah*), and affinity (*musāharah*). The Islamic legal system governs and regulates both the formation and, when necessary, the dissolution of these three bonds (Bin 'Āshūr 2005, 151). As far as paternity is concerned, one of the main objectives of these regulations is to ensure certainty of lineage through the institution of marriage as the main, if not the only, legitimate method for procreation. Apart from being a basic human pursuit, Bin 'Āshūr notes that certainty of lineage is more conducive to healthy and intimate relationships within the nucleus and extended family structures. It promotes instinctive affection and dutifulness among family members and adds an air of sanctity that distinguishes the closest and most intimate types of human relationships (Bin 'Āshūr 2005, 155–59). Bin 'Āshūr, however, distinguishes between preservation of progeny as a necessary objective of sharī'ah to ensure continuity of the human species and existence on earth on the one hand, and protection of paternity and certainty of lineage on the other. He notes that the classical jurists condensed these two distinct objectives into one value and placed it within the necessary values under the rubrics of preservation of progeny or paternity. He argues that while protection of progeny can be justified as a necessary value since it aims to preserve the existence of the human species, protection of paternity, although extremely important, should be classified among the needs but not the necessities. Bin 'Āshūr's distinction between progeny and paternity does not suggest that the latter is not important, but rather that in the larger scheme of the ultimate objectives the former should occupy a higher order since it deals with the continued existence of the human species (Bin 'Āshūr 2005, 79–80).8

BIOETHICAL DIMENSIONS OF PATERNITY: DNA TESTING AND HARM EVALUATION

Certain or near certain knowledge of genetic ties can create competing or conflicting paternity claims between legal and biological paternity. If we exclude purely religious or specific arguments, a harm-based argument can be made by a legal father against a biological father in support of sanctity of marriage. In return, an argument by a biological father can be made in support of true genetic connection. In this section, I explore the extent to which denial of paternity constitutes legal or ethical harm. More particularly, I explore the extent to which a harm-based argument can be made by appeal to or against the Islamic paternity regulations. Since the determination of paternity has become mostly dependent on modern genetic testing, I refer to bioethical discussions over the concepts of harm and nonmaleficence and examine how much these discussions are relevant to paternity issues. In general, bioethics is concerned with harm-related

questions and criteria for the assessment of harm-based judgments. Such harm may be immediate or direct, as experienced or suffered by patients; indirect or potential, as experienced by unborn children; or it may include long-term social harm that results from certain biomedical practices or procedures such as prenatal selection or genetic testing (Beauchamp and Childress 2009, 152; Schoene-Seifert 2004, 2:1033. In bioethics literature the concept of nonmaleficence is often conjoined with the concept of beneficence. The term *utility* is sometimes used to refer to this composite principle, which in essence signifies maximization of benefit over harm or the choice of "the most favorable balance of good over bad for all concerned" (Vaughn 2010, 11). According to William Frankena, the duties of beneficence include four elements: not to inflict harm; to prevent harm; to remove harm; and to promote good. Beauchamp and Childress single out the first element under nonmaleficence and keep the other three under beneficence on the basis of a distinction between negative duties of omission and positive duties of commission (Schoene-Seifert 2004, 2:1035). The principle of nonmaleficence, which is particularly common in biomedical ethics, is explained and measured by the notions of harm and injury. Harm may involve violation of someone's rights (the equivalent of wronging) or simply defeating someone's interests (Beauchamp and Childress 2009, 152). Conceptual questions about the definition and scope of harm include the eligibility of a right or interest holder and whether this includes unborn children and incompetent persons. They also include whether harm is defined subjectively or whether there are objective criteria to determine what constitutes harm. One of the clear examples that illustrate different attitudes toward the conceptualization of harm is assisted suicide. While it can be construed as an expression of respect for personal autonomy regarding one's own sense of what a good life should be, it can be scrutinized through a set of professional and communitarian standards.

Despite the central role that the notion of harm plays in biomedical ethics, it has been noted that it remains "a vague and contested concept that in and of itself does not provide much moral guidance. What counts as harm varies greatly, as do the scope and relative importance of the prescriptions not to inflict, to prevent, or to prove harm" (Schoene-Seifert 2004, 2:1033). In biomedical ethics, the determination of harm is governed by the standard of due care in the sense of "taking sufficient and appropriate care to avoid causing harm, as the circumstances demand of a reasonable and prudent person" (Beauchamp and Childress 2009, 153). Failure to uphold this standard constitutes negligence, which defines legal and professional liability.

The Arabic term for harm is *darr* or *darar*, which covers any act that results in loss, diminution, or aggression against someone's protected rights or interests. It is the opposite of beneficence or *naf* (Ibn Manzūr 2008, 9:32). In legal terms, protected rights or interests exclude legal sanctions

or punishments (Mawsū'ah 2009, 28:179). In the Islamic tradition, the principle of no harm is rooted in several textual foundations in the Qur'an and the Sunnah of the Prophet, which contain many references to terms denoting the concept of harm and their derivatives ('Abd al-Bāgī 2001, 515–16). The most famous textual foundation for the principle of no harm as it developed in the Islamic legal and ethical discourses is traced to this Prophetic report: "No harm shall be inflicted or reciprocated (*lā darara* wa-lā dirār)" (Ibn Anas n.d., 2:184). The principle of no harm is counted among what Muslim jurists call the five cardinal or universal maxims that arguably govern most of the substantive rules in Islamic jurisprudence (Heinrichs 2002; Shabana 2010, 111–24). The other four are: deeds are judged by the agent's intent; certainty cannot be trumped by uncertainty; difficulty necessitates ease; and common custom is to be consulted in the construction of legal rulings. The exact number of these legal maxims is subject to debate. While some jurists tend to limit the number to five, others condense them into a single maxim—according to al-Suyūtī (d. 911/1505), this would be the principle of no harm (Ibn Nujaym n.d., 93; Suyūtī 2004, 62)—while others list up to two hundred legal maxims. Legal maxims are divided into general maxims, such as the five cardinal ones, and specific maxims, which address certain topics or issues. The latter are also sometimes called *dābit* (pl. *dawābit*) (Nadwī 2004, 46). The interpretation of the no harm principle is governed and regulated by several other legal maxims that determine its definition, range, scope, and applicability in different cases and contexts (Shaykh 2007; Mahmūd 2008, 621–25). 10

In paternity cases, the definition of harm can be determined by the violation of relevant rights especially God's rights, which are connected with what I referred to here as the licit sex principle. As shown above, this principle is rooted in several textual references governing a wide range of important institutions such as marriage, stipulated punishment for illicit sex, and inheritance. Given the centrality of this principle for paternity regulations, its violation would amount to irremediable harm, which would translate into denial of legal paternity. This includes claims that challenge or conflict with established marital paternity. Infringement of any other principle may constitute remediable harm, which may create at least a rebuttable paternity claim. The general principle in paternity cases then becomes: any paternity claim that does not conflict with the licit sex principle is, prima facie, admissible. The licit sex principle is not limited to fully valid marital relationships but, as far as paternity is concerned, it also includes imperfect or questionable types of marriage such as: irregular or deficient marriage (nikāh fāsīd); paternity of children born as a result of doubtful intercourse (wat'al-shubhah) (Mawsū'ah 2009, 25:340);¹¹ children of unknown paternity; and also, according to some jurists, biological paternity that does not conflict with the licit sex principle (i.e., if the mother is unmarried). This lenient attitude reflects a tendency in the juristic tradition to give priority

to establishment of paternity as much as possible so long as the licit sex principle is not violated, at least entirely (*Mawsū'ah* 2009, 40:246). 12

This emphasis in Islamic law on marriage for the establishment of legal paternity can also be found in other legal systems. For example, in the common law system, paternity disputes used to be settled in accordance with an irrebuttable marital presumption, which dates back to the early 1700s (Glennon 2000, 17). The presumption provides that: "If a husband, not physically incapable, was within the four seas of England during the period of gestation, the court would not listen to evidence casting doubt on his paternity" (Anderlik and Rothstein 2002, 222). The marital presumption was further strengthened by some procedural methods prohibiting spouses from testifying to nonaccess, known as the Lord Mansfield Rule (Martin et al. 2011, 8). These tight legal regulations in favor of the marital foundation of paternity were meant to ensure social stability and certainty in family relationships. However, over the past few decades several social, economic and scientific factors have contributed to the erosion of the marital presumption. Chief among these factors are: rapid increase in nonmarital births; 13 antipoverty regulations targeting biological fathers to provide financial support for their biological children; increased media interest in family disputes; and the discovery of DNA testing (Anderlik and Rothstein 2002, 216; Singer 2006, 249).

Although DNA testing was meant to facilitate paternity establishment, it has also been used increasingly to disestablish legal paternity and consequently has resulted in the disruption of many existing paternity relationships (Singer 2006, 253). To counter the inadvertent consequences of the weakening of the marital presumption, some researchers argue for reinvigorating it on the grounds that parenthood involves social and psychological dimensions that transcend mere parent-child biological connection. Parenthood is held to be "a legal and social construct, not a biological fact" (Singer 2006, 266). For example, the term "rearing parent" is suggested to underscore the importance of interaction, companionship, and shared experience beyond mere biological relationship (Kaebnick 2004, 53-54). Similarly the term "dual parent" is suggested to incorporate multiple and competing parentage claims arising from either adoption arrangements, assisted reproduction, or concurrent legal and biological paternity claims (Singer 2006, 269). The social construction of paternity is also precipitated by modern reproductive technologies, which, in turn, have challenged the long-established model of traditional family and forced researchers to revisit classical definitions of parentage. Ironically, modern genetic and reproductive technologies seem to be moving in two different directions (Anderlik and Rothstein 2002, 232). While DNA testing emphasizes true genetic connections, reproductive technologies such as IVF and surrogacy arrangements emphasize multiple parenting.

ISLAMIC BIOETHICS BETWEEN ISLAMIC LAW AND ETHICS

Islamic bioethics is a type of applied ethics, which denotes the implementation of ethical reasoning for the resolution of real or practical problems (Moosa and Mian 2012, 2:769). Throughout the Islamic intellectual tradition, applied ethics was pursued under different rubrics ranging from figh (substantive law) on the one hand to akhlāq (ethics) or ādāb (rules of proper conduct) on the other (Jābirī 2006; Sajoo 2009, 7). 14 Although one can trace the development of the distinct discourses that these different domains of applied ethics generated (ethico-legal and ethico-moral), there has often been a great deal of overlap between these two discourses especially when akhlāg or ādāb are qualified as distinctly Islamic. The term figh literally means "understanding" and technically it means the proper understanding of the divine norms embodied in sharī'ah. As the science of Islamic substantive law, it denotes knowledge of the sharī'ah-based practical rules that are derived from the Islamic foundational sources, the Qur'an and the Sunnah of the Prophet (al-'ilm bil-ahkām al-shar'iyyah al-'amaliyyah al-mustamaddah min adillatihā al-tafsīliyyah) (Zarkashī 2000 1:15). The scope of these rules covers a wide range of issues from purely devotional deeds ('ibadāt) to contractual and interpersonal deeds that would fall under different types of modern legal classifications such public and private law (*mu'āmalāt*). Islamic legal theory (*usūl al-fiqh*) stipulates the guiding principles that govern the process of legal construction of real practical questions, especially in light of the five main categories of prohibition, reprehension, neutrality, commendation, and obligation. Accordingly, any action by a legally competent individual (mukallaf) would fall under one of these five qualifications (Shāfi'ī n.d., 20; Zarkashī 2000, 1:129). Figh, therefore, does not simply stand for positive legal rules (in the modern positive sense) but the rules that it generates are infused with Islamic moral values as denoted by these five main qualifications.

Both law and ethics inform, shape, and regulate human obligations and the way they relate to each other has a long history in major philosophical and religious traditions. Delineating the exact relationship between law and morality requires clear definitions of both terms because they are not always considered mutually exclusive (Berman, Greiner, and Saliba 2009, 16; Hallaq 2009; Van Der Burg 2009, 58). In the Islamic intellectual tradition, moral reasoning has significantly influenced legal theory and practice as is clearly illustrated by the extensive discussions on the definition of good and evil in juristic discussions. One important concept that helps illustrate the relationship between law and morality is the concept of harm. Both ethics and law purport to prevent, eliminate, and redress harm. While the former achieves this mostly at the internal level through intentions and motives, the latter at the external level through actual procedures and power of enforcement. But the relationship between law and ethics is

neither linear nor straightforward. The very notion of harm is antithetical to both ethics and law but arguably an ethical or legal action may result, at least inadvertently, in harmful consequences. Ideally, the notion of law by definition presupposes a moral element that ensures that legal construction and practice does not become unethical. This was the main concern that many jurists had against the legal stratagems (*hiyal*) genre, which focuses on formal compliance with legal rules regardless of their underlying ethical objectives. On the other hand, rigid application of law, can lead to injustice and that is why the jurists distinguish between the letter and spirit of law through notions such as equity (*istiḥsān*) and higher objectives of the law (*maqāsid*) to ensure that law does not involve injustice or harm (*darar*).

From a modern perspective, and bearing in mind the difference between voluntary moral precepts and enforceable positive legal rules, one notices that the Islamic ethico-legal rules of figh share many of the features of these two distinct domains, which explains the difficulty of mapping the ethicolegal rules of figh in the modern period. For example, there are several important distinctions between positive legal rules and moral precepts (Amīn 2012, 129). The first has to deal with the nature of these two distinct domains. While legal rules are not immutable (they can change depending on socioeconomic or political circumstances), moral precepts, on the other hand, are generally considered fixed and immutable. The ethico-legal rules of figh fall somewhere in between these two endpoints. While Muslim jurists often emphasize that the legal rules of *figh* may change, they reason that such change is meant to serve the ethical dimensions of these rules. So, while the legal component of *figh* rules may not be immutable, the ethical component, usually tied to the ultimate objectives of sharī'ah, remains immutable.

Another distinction between legal and moral rules is the scope of their applicability, authority and enforcement. While legal rules apply mostly to basic duties and necessities in order to ensure the proper functioning of social life such as preservation of people's life and property, moral rules go beyond the scope of basic duties to include all aspects of life in an effort to achieve ideal or near-ideal existence. As far as the scope of authority, legal rules govern only external concrete actions, but moral rules, additionally, concern and evaluate the motives behind these external actions. Finally, positive legal rules are administered and enforced through the mechanism of the state and its different branches but the enforcement of moral rules is channeled through individual conscience and sense of self-regulation. When we turn to the scope and applicability of the ethico-legal rules of figh, we notice that they are inspired by the multilayered system of sharī'ah objectives that includes in addition to the fundamental necessities (darūriyyāt) also basic needs (hajiyyāt) and embellishments (tahsīniyyāt). Although the legal rules of *figh* deal formally with external actions, similar to positive legal rules, the religious component of these rules addresses the internal processes inspiring these actions, hence the added emphasis on the role of intentions especially in devotional deeds. ¹⁶ The religio-moral dimension of *figh* rules contemplates in addition to worldly rewards and punishments, otherworldly ones as well. The metaphysical dimension of the afterlife provides justification for a major component of the ethico-legal rules of *figh*, especially those addressing devotional deeds and stipulated punishments (*ḥudūd*). In the premodern Islamic legal universe these ethico-legal rules used to serve primarily as legal but also as religio-moral rules. In the modern period and following the displacement of sharī a from the domain of public life, most of the ethico-legal rules of *figh* were relegated to the private domain of personal faith, with the exception of personal status and family law in most Muslim-majority nation states.

This confluence of legal and ethical dimensions, which is a major feature of the Islamic legal system, is clearly illustrated in the Islamic law of paternity and is further heightened after the introduction of DNA testing. Paternity regulations fall under the domain of family law, which remains the only foothold of shari'ah in most Muslim-majority nation states. This means that the adjudication of paternity disputes has to contend with both the legal and ethical concerns of Islamic law. The fundamental question that the DNA technology poses to the Islamic legal system is whether paternity will continue to be treated as an ethico-legal issue (tied to certain family and social values) or will become a purely legal one (detached from such values). Review of contemporary Muslim legal thinking and practice reveals that in the presence of an established marital relationship, legal paternity is attributed to the husband and legal father unless he formally initiates paternity negation procedures through li'an. If the woman is not married, modern scholars are divided, following a similar disagreement among premodern jurists on the possibility of recognizing biological paternity outside marriage. Ultimately the definition of legal or ethical harm in paternity cases under Islamic law remains tied to the licit sex principle and the extent to which it is upheld or violated.

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NOTES

- 1. The terms "applied ethics" and "practical ethics" imply the effort to understand and address moral problems in particular professional fields or in everyday life. The terms can be traced back to the early 1970s when moral philosophers began to address problems of professional ethics and other social problems such as abortion, capital punishment, and environmental ethics (Beachaump 2006, 1:235).
- 2. Most of the arguments for the incorporation of DNA testing within paternity verification methods focus on the use of DNA evidence to verify paternity within the framework of either established or contested marital relationships, which again confirms the marriage-paternity connection. Supporters of the incorporation of DNA evidence argue that it would enhance and strengthen the licit sex principle since it will help establish contested marital paternity on firmer grounds.
- 3. For example, the right of preemption (*shufah*) gives a partner or a co-owner priority or precedence to purchase a shared property before a stranger. The jurists differentiate between joint ownership which they deem as the operative cause for this right and circumventing potential harm that may result from selling a joint property to a stranger which is deemed to be the wisdom behind it. Another example is shortening of prayer in travel. The operative cause is identified as travel itself while the wisdom is alleviation of the difficulty and hardship that the person undergoes while traveling. While hardship is a relative consideration, which varies depending on different circumstances, travel itself is considered the proper *raison d'être* behind the shortening of prayer due to the difficulty of evaluating hardship, which differs from one person or situation to another, the license/dispensation to shorten prayer is attached to travel (which is likely to involve hardship) rather than to its effect.
- 4. In addition to the report of *al-walad lil-firāsh*, the licit sex principle is also rooted in the stipulated punishment (*ḥadd*) for illicit sex (*zinā*), whether justification is made by the identification of an explicit operative cause, in which case the operative cause for the stipulated punishment would be illicit sex itself, or by wisdom, in which case the operative cause would be mixing of genealogies (*ikhtilāṭ al-ansāb*) that illicit sex would most likely result in. The expression "guarding against mixing of genealogies" is used frequently by the jurists in paternity-related discussions either in the context of *al-walad lil-firāsh* or the stipulated punishment for illicit sex. As we will see below, with the development of the *maqāsid* genre, it was incorporated among the necessary objectives of sharī'ah under "preservation of progeny."
- 5. Although this is the standard view of the major opinions on the determination of good and evil, careful review of theological debates reveals that divisions among these groups were not as sharp as is often depicted, see for more on this (Makdisi 1985, 59–61).
- 6. For example, in the various discussions over the possibility of integrating DNA evidence within the Islamic paternity regulations, several guidelines were proposed both by individual scholars and also by consultative bodies and institutions such as the Islamic Organization for Medical Sciences and the Islamic Fiqh Council of the Muslim World League. These recommendations include: testing should be undertaken only by judicial decree and under tight government oversight; results should be verified by a special national committee authorized to review and verify results; and testing should be repeated at least twice to ensure accuracy and precision.
- 7. Rights of God also include stipulated punishments (*ḥudūd*). As noted above, the justification given for the stipulated punishment for illicit sex is guarding against mixing of genealogies (see Shalabī 1947, 131–2).
- 8. There are also several other contemporary treatments of *maqāṣid* that seek to develop novel classifications. For example, Jamāl al-Dīn 'Aṭiyyah classifies the sharī ah objectives into four main domains: the individual, the family, the nation, and humanity. Under this classification both preservation of progeny and protection of paternity fall under the domain of the family ('Aṭiyyah 2008, 141–47).
- 9. Various interpretations have been given to the two terms of *darar* and *dirār*. According to one interpretation, *darar* denotes infliction of harm on someone else and *dirār* denotes

reciprocation of harm. So, while *darar* is done by one person against another, *dirār* is the exchange of harm by two individuals. According to another interpretation, *darar* is what one does to harm another in order to secure a benefit and *dirār* is the act of harming that does not involve any benefit. According to yet another interpretation, they are synonyms and they are both used here for added emphasis (Ibn Manzūr 2008, 9:32).

10. They include, for example: harm should be removed; harm should not be removed by a greater harm; a lesser harm should be chosen over a greater one; and use of rights is dependent

on potential harm (see Mawsū'ah 2009, 28:180-82).

- 11. A deficient marriage contract lacks one of the conditions of a valid contract such as absence of witnesses. Doubtful intercourse refers to intercourse that is mistakenly done on the basis of doubt. The jurists distinguish between two types of doubtful intercourse: one that results from uncertainty regarding the status of the partner (shubhat al-maḥall), such as intercourse with a woman other than one's wife, thinking that she was his wife; and one that results from uncertainty regarding the status of the act (shubhat al-fi'l), such as the case of intercourse with a divorcee during the waiting period following an irrevocable divorce. For paternity purposes, paternity can be established on the basis of a valid marriage, a deficient marriage, or doubtful intercourse (Mawsū'ah 2009, 25:340).
- 12. According to a famous legal maxim, paternity is to be established as far as conceivably possible "al-nasab yuḥtāṭ li-ithbātih" (Mawsū'ah 2009, 40:246).
- 13. According to the Centers for Disease Control and Prevention, 41% of all births in the United States in 2009 were to unmarried women. The proportion of birth to unmarried women increased significantly from 1997 to 2009. This percentage compares with 33.2% in 2000 and 18.4% in 1980 (Martin et al. 2011, 8) available at http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_01.pdf (accessed May 2012).
- 14. Although the two terms of *akhlāq* and *ādāb* are often used interchangeably, some researchers distinguish between them in terms of historical origins and development (Jābirī 2006). This is similar to the distinction that is made between "ethics" and "morality" in the Western context (Sajoo 2009, 7).
- 15. For example, Berman, Greiner, and Saliba identify three different meanings for the term *law*. The first emphasizes the relationship between law and moral justice. The second emphasizes the relationship between law and political power. The third emphasizes the relationship between law and the historical experience of the community (Berman, Greiner, and Saliba 2009, 16). They also emphasize the pedagogical function of law as a means to "teach people right belief, right feeling, and right action—that is, to mold the moral and legal conceptions and attitudes of a society" (Ibid., 31; Van Der Burg 2009, 58). Wael Hallaq argues that insistence on a sharp distinction between law and morality reflects modern sensibilities that are projected on premodern traditions, which is particularly relevant to the Islamic ethico-legal tradition (Hallaq 2009, 256).
- 16. Baber Johansen points out this feature in Islamic law by noting that "the jurists clearly distinguish two types of norms: legal norms which concern the *forum externum*, i.e., the judiciary's judgment on observable acts and enunciations, and ethical norms which concern the *forum internum* only." (Johansen 1999, 33, 36)

REFERENCES

'Abd al-Bāqī, Muḥammad Fu'ād. 2001. *al-Mu'jam al-Mufahras li-Alfāz al-Qur'ān al-Karim*. Cairo: Dār al-Hadīth.

Abū Zahrah, Muḥammad. 2004. Usūl al-Fiqh. Cairo: Dār al-Fikr al-ʿArabī.

Abū Zayd, Muḥammad Muḥammad. 1996. "Dawr al-Taqaddum *al-Bayulūjī fī Ithbāt* al-Nasab." *Majallat al-Ḥuqūq* 20:223–317.

Ahmad, Sah Rakūl Muṣṭafā. 2010. *al-Baṣmah al-Wirāthiyyah wa-Hujjiyyatuhā fi Ithbāt al-Nasab*. Cairo: Dār al-Qānūniyyah.

Albrecht, K., and D. Schultheiss. 2004. "Proof of Paternity: Historical Reflections on an Andrological-Forensic Challenge." Andrologia 36:31–37.

Amīn, Aḥmad. 2012. Kitāb al-Akhlāq. Cairo: Dār al-'Alam al-'Arabī.

Anderlik, Mary R., and Mark A. Rothstein. 2002. "DNA-Based Identity Testing and the Future of the Family: A Research Agenda." American Journal of Law and Medicine 28: 215–32. 'Ațiyyah, Jamāl al-Dīn. 2008. *Naḥwa Taf'il Maqāṣid al-Sharī'ah*. Herndon, VA: al-Ma'had al-'Alamī lil-Fikr al-Islāmī.

Attar, Mariam al-. 2010. Islamic Ethics, Divine Command Theory in Arabo-Islamic Thought. New York: Routledge.

Bābartī, Muḥammad İbn Maḥmūd. 2005. *al-Taqrīr li-Uṣūl Fakhr al-Islām al-Bazdawī*, ed. 'Abd al-Salām Ṣubḥī Ḥāmid. Kuwait: Wizārat al-Awqāf wa-al-Shu'ūn al-Islāmiyyah. 8 vols.

Beachaump, Tom. 2006. "Applied Ethics." In Encyclopedia of Philosophy, ed. Donald M. Borchert, Vol. 1, 235-40. Detroit, MI: Macmillan Reference USA. 10 vols.

Beauchamp, Tom, and James F. Childress. 2009. *Principles of Bioethics*. Oxford: Oxford University Press.

Berman, Harold J., Wiliam R. Greiner, and Samir N. Saliba. 2009. *The Nature and Function of Law*. New York: Foundation Press.

Bin 'Ashūr, Muḥammad al-Tāhir. 2005. *Maqāṣid al-Sharī'ah al-Islāmiyyah*. Cairo: Dār al-Salām. Bukhārī, 'Alā' al-Dīn 'Abd al-'Azīz. 1997. *Kashf al-Asrār 'an Uṣūl Fakhr al-Islām al-Bazdawī*, ed. 'Abd Allāh Muḥmūd Muḥammad 'Umar. Beirut: Dār al-Kutub al-'Ilmiyyah. 4 vols.

Ghazālī, Abū Ḥāmid. 2003. *Mizān al-ʿAmal*, ed. Sulaymān Dunyā, 2nd ed. Cairo: Dār al-Maʿārif.
——. N.d. Iḥyaʾ ʿUlūm al-Dīn, ed. ʿAbd al-Muʿṭī Amīn Qalʿajī. Beirut: Dār Ṣādir. 5 vols.

Glennon, Theresa. 2000. "Somebody's Child: Evaluating the Erosion of the Marital Presumption of Paternity." West Virginia Law Review 102:547–605.

Hallaq, Wael. 2009. "Groundwork of the Moral Laws: A New Look at the Qur'an and the Genesis of Shari'a." *Islamic Law and Society* 16 (2009):239–79.

Heinrichs, Wolfhart. 2002. "Qawā'id as a Genre of Legal Literature." In *Studies in Islamic Legal Theory*, ed. Bernard Weiss, 365-384. Leiden, The Netherlands: Brill.

Hilālī, Saʿd al-Dīn Musʿad. 2001. *al-Baṣmah al-Wirāthiyyah wa-ʿAlāʾiquhā al-Sharʿiyyah, Dirāsah Fiqhiyyah Muqāranah.* Kuwait: Majlis al-ʿIlmī.

Ibn al-Athīr. n.d. *Usd al-Ghābah fī Maʻrifat al-Ṣaḥābah*, ed. 'Alī Muḥammad Muʻawwaḍ and 'Ādil Aḥmad 'Abd al-Mawjūd. Beirut: Dār al-Kutub al-'Ilmiyyah. 8 vols.

Ibn al-Mundhir, Abū Bakr Muḥammad ibn Ibrāhīm. 2010. *al-Ausat min al-Sunan wa'l-Ijmā wa'l-Ikhtilāf*, ed. Muḥammad Sa'd 'Abd al-Salām. Doha: Wizārat al-Awqāf wa'l-Shu'ūn al-Dīniyyah. 15 vols.

Ibn ʿAbd al-Salam, ʿizz al-Dīn ʿAbd al-ʿAzīz. 2000. *al-Qawāʿid al-Kubrā al-Mawsūm bi-Qawāʿid al-Aḥkām fī Iṣlāh al-Anām*, ed. Nazīh Kamāl Ḥammād and ʿUthmān Jumʿah Ḍumayriyyah. Damascus: Dār al-Qalam. 2 vols

Ibn Anas, Mālik. N.d. *al-Muwaṭṭa*, ed. Hānī al-Ḥājj. Cairo: al-Maktabah al-Tawfiqiyyah. 2 vols. Ibn Ḥajar al-ʿAsqualānī, Aḥmad ibn ʿAli. 2000. *Fatḥ al-Bārī bi Sharḥ Ṣaḥīḥ al-Bukhārī*. Cairo, Maktabat al-ʿIlm. 13 vols.

Ibn Manzūr. 2008. Lisān al-'Arab. Beirut: Dār Ṣādir. 18 vols.

Ibn Nujaym, Zayn al-ʿĀbidīn ibn Ibrahīm. N.d. *al-Ashbāh wa-al-Nazāʾir*. Cairo: al-Maktabah al-Tawfiqiyyah.

Ibrāhīm, Aḥmad, and Wāṣil 'Alā' al-Dīn Aḥmad Ibrāhīm. 2003. *Aḥkām al-Ahwāl al-Shakhṣiyyah fī al-Sharī'ah al-Islāmiyyah wa-al-Qānūn*. Cairo: al-Maktabah al-Azhariyyah lil-Turāth.

Jābirī, Muḥammad ʿĀbid, al-. 2006. '*Aql al-Akhlāgī al-Arabī*. Beirut: Markaz Dirāsāt al-Waḥdah al-Arabiyyah.

Johansen, Baber. 1999. Contingency in a Sacred Law: Legal and Ethical Norms in the Muslim Figh. Leiden, The Netherlands: Brill.

Kaebnick, Gregory E. 2004. "The Natural Father: Genetic Paternity Testing, Marriage, and Fatherhood." Cambridge Quarterly for Healthcare Ethics 13:49–60.

Khudarī, Muḥammad. 2005. *Uṣūl al-Fiqh*. Beirut: Dār Ṣādir.

Maḥmūd, Muḥammad 'Abd Rabb al-Nabī. 2008. *Nazariyyat al-Muwāzanah bayna al-Manāfī'* wa-al-Madārr fī Iṭār al-Qānūn al-ʿĀmm. Cairo: Dār al-Salām.

Makdisi, George. 1985. "Ethics in Islamic Traditionalist Doctrine." In *Ethics in Islam*, ed. Richard G. Hovannisian, 47-63. Malibu, CA: Undena Publications.

Martin, Joyce, et al. 2011. National Vital Statistics Reports 60:1 http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_01.pdf.

Mawsūʻah al-Fiqhiyyah. 2009. Kuwait: Wizārat al-Awqāf wa-al-Shu'ūn al-Islāmiyyah. 45 vols. Maydānī, 'Abd al-Raḥmān Ḥasan Ḥabannakah. 2011. al-Akhlāq al-Islāmiyyah wa-Ususuhā. Damascus: Dār al-Qalam. 2 vols.

- Moosa, Ibrahim. 2012. "Muslim Ethics and Biotechnology." In The Routledge Companion to Religion and Science, ed. James W. Haag, Gregory R. Peterson, and Michael L. Spezio, 455–465. New York: Routledge.
- Moosa, Ibrahim, and Ali Altaf Mian. 2012. "Islam." In Encyclopedia of Applied Ethics, ed. R. Chadwick, Vol. 2, 769–776. San Diego, CA: Academic Press. 4 vols.
- Nadwī, 'Alī Ahmad. 2004. al-Qawā'id al-Fighiyyah, Mafhūmuhā, Nash'tuhā, Tatawwuruhā, Dirāsat Mu'allafātuhā, Adillatuhā, Muhimmatuhā, Tatbīgātuhā. Damascus: Dār al-Qalam
- Nawawī, Muḥyī al-Dīn Yaḥyā ibn Sharaf. 2003. Sahīh Muslim bi Sharh al-Nawawī, ed. Salāḥ 'Uwydah and Muhammad Shiḥātah. Cairo: Dār al-Manār. 18 vols.
- Qarāfī, Aḥmad ibn Idrīs. 2001. Kitāb al-Furūq, Anwār al-Burūq fī Anwā' al-Furūq, ed. Muḥammad Aḥmad Sirāj and 'Alī Jum'ah Muḥammad. Cairo: Dār al-Salām. 4 vols.
- Qarārāt al-Majma' al-Fighī al-Íslāmī bi-Makkah al-Mukarramah. 2004. Mecca: al-Majma' al-Fighī al-Islāmī.
- Rahman, Fazlur. 1985. "Law and Ethics in Islam." In Ethics in Islam, ed. Richard G. Hovannisian, 1-15. Malibu, CA: Undena Publications.
- Reich, Warren Thomas. 1994. "The Word 'Bioethics': Its Birth and the Legacies of Those Who Shaped It." Kennedy Institute of Ethics Journal 4:319-35.
- -. 1995. "The Word 'Bioethics': The Struggle over Its Earliest Meaning." Kennedy Institute of Ethics Journal 5:19-34.
- Ru'yah İslāmiyyah li-ba'd al-Mushkilāt al-Tibbiyyah al-Mu'āsirah, Thabt Kāmil l-A'māl al-Halaqah al-Niqāshiyyah hawla Hujjiyyat al-Basmah al-Wirāthiyyah fī Ithbāt al-Nasab. 2002, eds. Sa'd al-Dīn al-Hilālī and Ahmad Rajā'ī al-Jindī. Kuwait: al-Munazzamah al-Islāmiyyah lil-'Ulūm al-Tibbiyyah.
- Sachedina, Abdulaziz. 2006. "'No Harm, No Harassment': Major Principles of Health Care Ethics in Islam." In Handbook of Bioethics and Religion, ed. David E. Guinn, 265-89. Oxford: Oxford University Press.
- 2009. Islmaic Biomedical Ethics. Oxford: Oxford University Press.
- Sajoo, Amyn. 2009. Muslim Ethics Emerging Vistas. London: I.B. Tauris. Schoene-Seifert, Bettina. 2004. "Harm." In Encyclopedia of Bioethics, ed. Stephen G. Post, Vol. 2, 1033-38. New York: Macmillan. 5 vols.
- Shabana, Ayman. 2010. Custom in Islamic Law and Legal Theory: The Development of the Concepts of 'Urf and 'Adah in the Islamic Legal Tradition. New York: Palgrave Macmillan.
- -. 2012. "Paternity between Law and Biology: The Reconstruction of the Islamic Law of Paternity in the wake of DNA Testing." Zygon: Journal of Religion and Science 47:214–39.
- 2013. "Negation of Paternity in Islamic Law between Li'ān and DNA Fingerprinting." Islamic Law and Society 20:157–201.
- Shāfi'i, Muḥammad ibn Idrīs. N.d. al-Risālah, ed. Aḥmad Muḥammad Shākir. Beirut: al-Maktabah al-Ilmiyyah.
- Shalabī, Mustafā. 1947. *Taʻlīl al-Ahkām, 'Ard wa-Tahlīl li-Tarīqat al-Taʻlīl wa-Tatwwurātihā fī* 'Usūr al-Ijtihād wa-al-Taglīd. Cairo: Matba'at al-Azhar.
- Shāṭibī, Abū Isḥāq Ibrāhīm. 2003. al-Muwāfaqāt fī Uṣūl al-Sharī'ah, ed. 'Abd Allāh Darrāz. Cairo: al-Maktabah al-Tawfíqiyyah. 4 vols.
- Shaykh, Usāmah 'Abd al-'Alīm. 2007. *Qā'idat lā Ḍarar wa-lā Ḍirār fī Niṭāq al-Mu'āmalāt* al-Māliyyah wa-al-A'māl al-Ṭibbiyyah al-Mu'āṣirah fī al-Fiqh al-Ìslāmī wa-al-Qānūn al-Wad'ī. Alexandria: Dār al-Jāmi'ah al-Jadīdah.
- Sing, Manfred. 2008. "Sacred Law Reconsidered: The Similarity of Bioethical Debates in Islamic Contexts and Western Societies." Journal of Religious Ethics 36:97–121.
- Singer, Jana. 2006. "Marriage, Biology, and Paternity: The Case for Revitalizing the Marital Presumption." Maryland Law Review 65:246-70.
- Sujimon, M. S. 2002. "The Treatment of the Foundling (al-Laqīt) According to the Ḥanafis." Islamic Law and Society 9:358-85.
- -. 2003. "Istilḥāq and its Role in Islamic Law." Arab Law Quarterly 18:117–43.
- Suyūṭī, Jalāl al-Dīn 'Abd al-Raḥman. 2004. *al-Ashbāh wa-al-Nazā'ir fi Qawā'id wa-Furū' al-*Shāfi iyyah, ed. Muḥammad Muḥammad Tāmir and Ḥāfiz 'Āshūr Ḥāfiz. Cairo: Dār
- Țabarī, Abū Ja'far Muḥammad ibn Jarīr. 2001. Tafsīr al-Ṭabarī, Jāmi' al-Bayān 'an Ta'wil Āy al-Qur'ān, ed. 'Abd Allāh ibn Muḥsin al-Turkī. Cairo: Hajar lil- Ṭibā ah wa-al-Nashr wa-al-Tawzī' wa-al-I lān. 26 vols.

'Uthmān, Muḥammad Ra'fat. 2009. *al-Māddah al-Wirāthiyyah al-Jīnūm*. Cairo: Maktabat Wahbah.

Van Der Burg, Wibren. 2009. "Law and Bioethics." In A Companion to Bioethics, ed. Helga Kuhse and Peter Singer, 56–63. Chichester, UK: Wiley-Blackwell.

Vaughn, Lewis. 2010. *Bioethics Principles, Issues, and Cases*. Oxford: Oxford University Press. Watson, Alan. 2001. *Society and Legal Change*. Philadelphia, PA: Temple University Press. Zarkashī, Badr al-Dīn Muḥammad ibn Bahādir. 2000. *al-Baḥr al-Muḥīṭ*, ed. Muḥammad Muḥammad Tāmir. Beirut: Dār al-Kutub al-'Ilmiyyah. 4 vols.