

**The Law of Evidence in the Islamic Criminal Justice System:
A Critical Appraisal in the Light of Modern Technology**

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ABSTRACT

Sharia has continuously developed since Islam's inception in the seventh century CE. This thesis focuses on hudud criminal law evidentiary requirements, particularly adultery, and critically assesses the impact of modern technology on these laws. Many modern Muslim states implementing sharia or a part of it are struggling to incorporate technological advancements into their criminal evidence rules. In assessing the desirability of updating sharia proofs, this thesis establishes modern technology can be comfortably incorporated as circumstantial proof in sharia under the legal concept of *ijtihad*. Such proof, however, means it cannot be used to prove hudud crimes, such as adultery, which would contravene *maqasid* of sharia and hudud, including contravening sharia privacy principles.

Instead, modern technology, such as DNA testing, should be used as paternity verification at a wife's request to establish her innocence in *li'an* cases or to prove paternity under family laws to provide welfare rights to children. In a similar vein, CCTV footage may beneficially be treated as admissible evidence in establishing truth and justice in Islamic criminal law. This thesis concludes by (a) finding that, while modern technology can be incorporated within sharia evidence laws, there are restrictions on its use due to the unique aspects of hudud and its sharia objectives; and (b) offering pragmatic recommendations to integrate modern technology in the sharia criminal law of evidence.

STATEMENT OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

(Signed)

Date: 10 November 2019

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I INTRODUCTION

A Problem Statement

This thesis assesses the possibility and desirability of updating sharia criminal evidence laws by incorporating modern technology, specifically CCTV surveillance and DNA testing, to prove adultery. Islamic law (sharia) has developed since Islam's inception some 1400 years ago in seventh century CE. While sharia encompasses all aspects of Islamic law, including personal worship, state governance, business and civil transactions, this thesis focuses purely on criminal law and evidentiary requirements, particularly those relating to hudud¹ laws or crimes. The reintroduction of sharia in many modern Muslim states² has seen the implementation of many traditional sharia criminal laws along with their evidentiary bases. This has created anachronism in the modern world, as these states ignore technological advancements that are standard use for ascertaining evidence in modern legal jurisdictions.

This thesis critically assesses the impact of modern technology on traditional sharia criminal proofs of evidence, by focusing upon DNA paternity testing and CCTV surveillance, and their impact upon hudud crimes, particularly the *hadd* of adultery. After establishing the legitimacy of sharia reform through the source method of *ijtihad*³ and underpinned by *maqasid* principles, an assessment of evidentiary proofs in sharia will occur focusing on the *hadd* of adultery (*zina*). Based on traditional and modern scholarship, this thesis establishes that modern technology can be comfortably incorporated as circumstantial proof in sharia. However, as circumstantial evidence, it cannot be used to prove hudud crimes, including adultery and *qadhif* (slander)⁴. This is because expanding proof using modern technology, such as CCTV surveillance and DNA testing, for such crimes would contravene hudud's objectives, which are deterrence. In such cases, traditional

¹ Hudud crimes (plural form of *hadd*) are the most serious in Islam and carry mandatory punishments, as they are considered crimes against God. This will be defined further in Chapter III.

² Modern Muslim states are defined as those with a majority Muslim population that incorporate some aspects of sharia law in their jurisdiction. As of 2010, Muslims comprise more than 50% of the population in 49 countries (Pew Research Center, *Muslim-Majority Countries* (Web Page) <<https://www.pewforum.org/2011/01/27/future-of-the-global-muslim-population-muslim-majority/>>). The constitutions of the UAE, the State of Qatar, the Kingdom of Bahrain and the Kingdom of Saudi Arabia, as well as many other Muslim countries, declare Islamic canon (sharia) is the basis of all legislation and law (Aziza Cloud, 'Are any Muslim Countries Governed by Sharia Law?', *Quora* (Forum Post, 25 July 2015) <<https://www.quora.com/Are-any-Muslim-countries-governed-by-Sharia-law>>). Most Muslim majority nations incorporate some form of sharia law in their legislation or constitution.

³ *Ijtihad* is defined as juristic reasoning or endeavour and will be discussed further in Chapter II.

⁴ *Qadhif* (slander) is a *hadd* crime and refers to a person who makes an accusation of adultery against a woman and fails to produce four witnesses. This is referred to in Qur'an 24:4: 'Those who make accusations against chaste women and then do not produce four witnesses: flog them with eighty lashes..' References to the Qur'an in this paper are indicated by chapter followed by verse number. Qur'anic translations are from Abdalhaqq and Aisha Bewley, *The Noble Qur'an: A New Rendering of its Meaning in English* (Bookwork, 2005).

evidence forms should resist updating to maintain difficulty in proving and punishing such severe crimes. Outside establishing hudud crimes, modern technology can be used legitimately and appropriately within the sharia penal system under *taazir*.⁵ Where modern forms of technology breach sharia privacy or *satr* (covering up) principles, their use is restricted unless necessary for public interest or to avert harm. DNA testing is an appropriate proof for paternity and should be used at the request of an allegedly adulterous wife to establish her innocence in a case of *li'an* (mutual repudiation)⁶ or by a child to prove paternity, and positively impact family laws that may provide maintenance and inheritance rights. Incorporation of modern technology into sharia requires the input of myriad professionals over mere scholarly, juristic and parliamentary consideration. This thesis concludes by stating, while modern technology can be incorporated within sharia evidence laws, restrictions should be placed on its use due to the unique aspects of hudud and its sharia objectives.

B Research Question

The main research question is: Should modern technology be incorporated in sharia criminal evidence laws and how?

Several associated questions will be addressed to answer the main question, including:

1. Can sharia be reformed through the methodological framework of *ijtihad*?
2. Can traditional sharia laws of evidence legitimately and desirably incorporate modern technology, such as CCTV and DNA testing?
3. What is the best way to categorise modern technology under sharia based on *maqasid* principles that emphasise deterrence of hudud?
4. What other sharia principles need to be considered when implementing these modern technologies, such as privacy principles?
5. What are the limitations and implications of using DNA paternity testing within sharia?

⁵ *Taazir* are discretionary crimes. See Chapter IIIA.

⁶ *Li'an*, which is a mutual oath of condemnation between husband and wife regarding adultery, is the only method of marital paternity negation in Islam, otherwise a child born within wedlock is automatically attached to a husband. See further, Chapter VB(3) n95.

C Research Objectives

The research objective of this paper is to look at how modern technology can be incorporated into sharia criminal evidence laws without violating them. Hence, this thesis has a reformist agenda and will offer pragmatic recommendations worthy of consideration for law reform. This is how the thesis will contribute to the progressive development of sharia law evidence. This will have broader implications in allowing reform or review of Islamic criminal law codes applied in modern majority Muslim states, such as the Maldives, Brunei, Nigeria Indonesia and others.

Traditionally and currently in Muslim majority countries and states that impose Islamic law or a version of it, evidence for hudud is based on eyewitness testimony, confession and oath giving,⁷ which traditionally were the surest evidence forms. There is abundant literature on these traditional rules, but the issue under analysis in this research is whether modern technology, such as CCTV and DNA testing, can be incorporated into sharia law without violating it. This is a new and developing area that has been little researched and inconsistently implemented in the modern Muslim world. This thesis makes suggestions for future uses of this technology in current Muslim societies by using traditional Islamic principles such as *ijtihad* underpinned by *maqasid*.⁸ There is no consensus among scholars, jurists and legislators about implementation, who are struggling to incorporate these technologies in a way that does not breach traditional sharia principles nor individual protections established by sharia. This is evidenced by the impact DNA testing has on *li'an*. However, the flexibility inherent within sharia means modern laws can be seamlessly incorporated while maintaining its principles.

This research focuses on hudud, particularly the crime of adultery, and the impact of modern technology in proving this crime. It is important to establish that new forms of evidence, used over traditional proofs, do not contravene *maqasid* as hudud objectives are not punishment but deterrence. Employing CCTV surveillance and DNA testing in exposing the private sin of adultery potentially breaches individual privacy rights. However, there are advantages of such technology in verifying paternity for the benefit of children. It is significant this research is presented in the current political climate as modern Muslim states are seeking to increase hudud punishments and crimes punished by methods other than originally ordained through sharia sources. As such, this research addresses these issues in a bid to uphold the sharia principles of mercy and justice.

⁷ Oaths are not addressed in this thesis, being outside the scope of the topic.

⁸ Defined as the objectives or aims of sharia. See Chapter II.

D *Scope*

This thesis examines traditional sharia criminal evidence laws, the background to these laws in the form of objectives, and methods used to reform these laws. In establishing that reform is within sharia principles, the study assesses traditional and modern comments on using modern technology in proving crimes. Once established as a legitimate form of evidence, the limitations on such use are canvassed by focusing on two examples, CCTV surveillance, which looks at privacy concerns very briefly, and DNA paternity testing, which impacts illegitimate children and women's protection in the process of *li'an*. This narrow scope is articulated to comply with the thesis word limit.

The main limitation of this research is the scant literature and scholarship on the impact and influence of modern technological developments on Islamic evidence laws. Very few authoritative texts on Islamic law exist in English. As Arabic has been the medium of communication and scholarly output in the Muslim world since its inception, the English-speaking world is grappling with few translations and, where they exist, are often abridged or poor quality. Nonetheless, this scarcity of scholarly attention renders this research as ground-breaking and pioneering, reflecting its originality and fundamental contribution to the existing literature. The reformist venture of this research will seek to take scholarship in this area to a new height.

E *Literature Review*

While there was dynamic development of sharia laws throughout Islamic history as it spread through the Middle East, Africa, Asia and parts of Europe, consistent with time and circumstance, there has been little development in the modern age. This is particularly so under sharia evidence laws. Indeed, literature and scholarship around the impact and influence of modern technological developments on evidence laws in Islam is scant. This review will provide a brief overview of some of the literature used in this thesis. More literature will be considered in the following relevant chapters.

The present study uses traditional and limited modern scholarship that looks at sharia reform and concisely tracks its development to establish such a process has been present in the Muslim world from the outset. This is used as a basis to assess the integration of modern technology into traditional sharia evidence laws. Using *ijtihad*, sharia maintains its dynamism and operates under vastly different circumstances and societies than its origins in the Arabian desert.

Qaradawi, a modern Muslim scholar, regularly uses *ijtihad*, which is a necessary juristic method to adapt classical legal principles to the modern Muslim world.⁹ Using this methodology, evidence laws can be updated and refined. This approach will be used in this thesis to assess how traditional evidence laws in Islam can be updated without compromise to the spirit of the law. When it comes to reform in the Muslim world, it is hard to look beyond the insights and arguments made by Ramadan, who fuses traditional scholarship with modern societal advancements to keep sharia current.¹⁰ *Maqasid* principles are inherent in any analysis of sharia, particularly those with potential to impact individuals negatively, such as criminal laws and punishments. As such, analysis of these principles will be made in this thesis and referred to when discussing modifications to evidentiary requirements.

Bassiouni is the editor of a book on the Islamic criminal justice system and this has excellent scholarly information and juristic opinion on criminal laws in Islam.¹¹ Bassiouni and the other contributors believe Islamic criminal law is compatible with the modern age and international notions of human rights. Hallaq¹² speaks in detail about Islamic legal principles and the call for its application in the modern world using traditional scholarly theory to fill the gaps that exist under sharia evidentiary requirements due to modern developments, the subject of this thesis.

Modern authors, such as ‘Alwani,¹³ have looked at Islamic privacy laws and found it is impermissible under sharia to implement modern technology infringing upon personal privacy. This impacts CCTV surveillance as well as forced DNA paternity tests, which could be used to prove adultery. However, the notion of privacy has not been investigated at length in this thesis due to word constraints.

There is ample literature and source evidence to establish technology was used to determine legal questions from the time of the Prophet and his Companions. Shaham¹⁴ gives a detailed background of technology use in traditional and modern Muslim worlds. The question modern scholarship seeks to answer is whether such evidence can be used as definitive evidence to prove serious

⁹ Yasmin Hanani Mohd Safian, ‘The Contribution of Yusuf Qaradawi to the Development of Fiqh’ (2016) 4 *Electronic Journal of Islamic and Middle Eastern Law* 45.

¹⁰ Tariq Ramadan, *Radical Reform: Islamic Ethics and Liberation* (Oxford University Press, 2009).

¹¹ M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications, Inc, 1982).

¹² Wael B Hallaq, *Shari’a: Theory, Practice, Transformations* (Cambridge University Press, 2009).

¹³ Taha J al ‘Alwani, ‘The Rights of the Accused in Islam’ (1995) 10 *Arab Law Quarterly* 3, 16.

¹⁴ Ron Shaham, *The Expert Witness in Islamic Courts: Medicine and Crafts in the Service of Law* (University of Chicago Press, 2010).

crimes such as adultery, or circumstantial proof that restricts its use under hudud.¹⁵ Definitions of evidence have been discussed by early scholars such as Ibn Taymiyya (d. 1328) and form the basis upon which modern scholars base their arguments to integrate modern technology into traditional sharia evidence laws. This is a central question explored in this thesis. Haneef¹⁶ looks at the admissibility of forensic evidence, including DNA testing, and the potential for its inclusion under sharia evidence. He gives definitions of forensic evidence, its function and discusses potential for its abuse, which is a concern by legislators and judiciary under Islamic law. Haneef uses Qur'anic verses, Hadith and early Islamic history, such as accounts from the first caliphs, to establish the principle that scientific developments are essential as forms of proof.

The issue specific to DNA testing is whether it can be treated as reliable and definitive proof under sharia. Shabana¹⁷ looks at the potential for DNA testing to verify paternity as opposed to the traditional juristic view that *li'an* is the only method for paternity negation. Kreutzberger¹⁸ further discusses DNA testing laws in Morocco under the Family Code, where it is a judge's discretion to accept paternity tests.¹⁹ This promotes further issues, as DNA may prove paternity, but cannot remove the doubt that a wife may still have committed adultery, meaning a husband may still insist on *li'an* to bring an adulterous accusation, raising the question of a child's legal paternity.²⁰ In essence, the question is to what extent DNA testing can be used to alter or advance traditional aspects of sharia for the community's benefit, not its detriment. Qaradawi argues DNA testing should be undertaken on the request of a wife accused of *li'an*, for she would not request it unless innocent and it would establish the child's paternity and remove the husband's doubt.²¹ This seems the best approach because it is a principle in Islam accepted by the majority of scholars that pregnancy does not prove adultery nor fornication. This is due to respect for a woman's privacy. Hence, while DNA testing may seem desirable, its use should be left to the woman. This would

¹⁵ Under Islamic jurisprudence, circumstantial evidence is not accepted as sufficient proof for the more serious hudud crimes. However, an accused may still be charged under the lesser criminal category known as *taazir* or discretionary crimes. See Chapters III and IV.

¹⁶ Sayed Sikander Shah Haneef, 'Modern Means of Proof: Legal Basis for its Accommodation in Islamic Law' (2006) 20(4) *Arab Law Quarterly* 334.

¹⁷ Ayman Shabana, 'Negation of Paternity in Islamic Law between Li'an and DNA Fingerprinting' (2013) 20(3) *Islamic Law and Society* 157, 179 ('Negation of Paternity').

¹⁸ Kai Kreutzberger, 'Single Mothers and Children Born out of Wedlock in the Kingdom of Morocco' (2008-2009) 14 *Year Book Islamic and Middle Eastern Law* 49.

¹⁹ *Ibid* 71.

²⁰ Shabana, 'Negation of Paternity' (n 17) 190. According to many scholars, in *li'an* cases any resultant child from a pregnant wife will not be attached to the husband, which has implications for guardianship and inheritance among other legal areas for the child. See Chapter VB(3).

²¹ *Ibid* 198.

limit serious punishments, which is in line with the sharia principles of compassion and forgiveness.²²

F Methodology and Theoretical Framework

Ijtihad, as a methodology to research the thesis question, will be used as a traditional source of sharia reform in Islam. *Ijtihad* is the basis for the central argument in this thesis, which seeks to establish that reform and update are integral to sharia as an organic and continuous form of law for the entire Muslim community regardless of time or place. The fusion of classical legal principles and judgments while simultaneously assessing the modern landscape to establish new Islamic rules is a method adopted by many modern scholars such as Qaradawi. This is a necessary approach in the Muslim world today, as a rational way to adapt classical legal principles to modern society. By using this methodology, sharia evidence laws can be updated and refined to take on modern technological and societal developments. Otherwise, sharia will become outdated and irrelevant. This approach will be used in this thesis to assess how traditional evidence laws in Islam can be updated without compromising the spirit of the law. Accordingly, incorporating modern technology is acceptable under Islam based on traditional methods of *ijtihad*, which is accepted as one of the four sources of sharia and acknowledged as the method by which to integrate novel societal advancement.

Apart from *ijtihad*, this paper's research methodology takes a blended approach based mainly on doctrinal research as it focuses on the 'privileged voices'²³ of scholars and jurists, and those authors who critically analyse these experts. Primary sources, where accessible in English, are examined plus scholarly commentaries and writings based upon these sources. Doctrinal research is used to understand the underlying theory of sharia evidentiary rules and their impact on punishment and other aspects of modern penal codes to better critique subsequent scholarly comments in this field. This research uses translated books of authoritative Muslim jurists, some of which have additional scholarly commentary, as well as books and journal articles that provide meaningful extrapolations of traditional principles to the modern age of technology and scientific advancement. Doctrinal methodology is particularly significant in assessing the evidentiary form that modern technology takes under sharia. Defining it as definitive or circumstantial is an assessment based on the earliest sharia sources of the Qur'an and Hadith, and later scholarly

²² These objectives are well-established in the literature but due to word constraints will not be explored in this thesis.

²³ William Storey, *Writing History: A Guide for Students* (Oxford University Press, 5th ed, 2016), cited in Terry Hutchinson, *Researching and Writing in Law* (Lawbook Co., 4th ed, 2018) 51.

assessment. Modern sharia scholarly committees have used these sources to formulate judgments on the appropriate evidentiary category of modern technology.

Doctrinal methodology further provides a systematic review of literature relating to theories and ethics under sharia criminal evidence law, particularly focussing on more serious crimes under sharia, namely adultery and its related crime of *qadhaf*. Doctrinal research facilitates locating, reading and critically analysing background and secondary commentary of sharia, as well as primary Islamic materials.²⁴ Critical analysis of various secondary sources, including criminal law and punishment textbooks and articles written by Orientalists and Muslim scholars from the early age of Islam until the modern period will also be assessed. This is significant for an assessment of reform methods under sharia, and in defending and arguing the integrals of sharia evidentiary standards and legitimacy of modern technology as an accepted form of evidence.

This research involves linking new information by modern commentators to established Islamic doctrines by each scholar building on their predecessors' work, adding to or arguing for a new perspective. Through this analysis it is possible to synthesise or reject the modern technologies of CCTV surveillance and DNA testing into current applications of Islamic law. In this respect, the methodology incorporates theoretical research.²⁵

There is also an element of comparative research²⁶ techniques in the methodology, which identifies solutions to problems encountered in other jurisdictions, seeking ideas for change. This involves looking at the spirit of the law in sharia to understand its difference from modern liberal democratic jurisdictions, culminating in possible reform suggestions.²⁷ This is fundamental in understanding the impact and significance modern technologies such as CCTV and DNA testing provide to modern society. However, the issue is that it is often difficult to compare Islamic and other jurisdictions due to inherent differences in laws and social ethics that underpin theocratical legislation, as well as the fact many Muslim majority countries continue to be 'in a state of flux', impeding useful comparisons.²⁸

The research at this stage focuses on critical analysis of the law; hence, quantitative analysis in comparing modern Muslim jurisdictions' criminal sharia laws is not appropriate. Further research will likely lend itself to accessible quantitative data. Otherwise, as a purely legal research task

²⁴ Terry Hutchinson, *Researching and Writing in Law* (Lawbook Co., 4th ed, 2018) 52.

²⁵ Ibid 68.

²⁶ Ibid 147-8.

²⁷ Ibid 150. Due to thesis word constraints, assessment of the differences between sharia laws and those of modern liberal democratic jurisdictions will be limited.

²⁸ Ibid 153.

focused on the law, its development and update, rather than practical application, methodologies used under disciplines such as social science or psychology are currently ineffective. While law reform or policy research would be useful to assess and use as a methodology, this is yet to fully develop in this field, particularly given the underdevelopment of many countries currently implementing sharia, though some signs of its emergence are apparent.

G Chapter Outline

To analyse modern technology's impact upon sharia evidence, Chapter II will set the background for this research by defining sharia sources, sharia's objectives known as *maqasid*, and reforms that allow the introduction of novel areas, such as modern technology via *ijtihad*. Chapter III gives a background to sharia criminal law by describing the various categories in the sharia penal system and discusses the fundamental aspects of punishment objectives under sharia criminal law. This has serious implications for the use and introduction into sharia of proofs that impact hudud crimes. Analysis of the main forms of hudud proofs relevant to the introduction of modern technology are made in this chapter. Chapter IV begins the analysis of modern technology and its history in Islam and use by the Prophet, Righteous Caliphs²⁹ and earliest generations. Analysis of modern scholarly opinion on technology is also given, which highlights the adoption of modern technology into sharia. Chapter V looks specifically at two examples of modern technology: CCTV surveillance and DNA testing. It gives evidentiary classifications under sharia, issues pertaining to DNA testing and the implications on *li'an*. Privacy issues are briefly canvassed. Finally, Chapter VI provides a conclusion to summarise the thesis findings and make recommendations to implement modern technology into sharia using established Islamic methodology and guidelines to account for the circumstances of time and place.

²⁹ The title 'Righteous Caliphs' is given to the first four caliphs in Islam after the death of Prophet Muhammad – Abu Bakr, Umar, Uthman and Ali – who collectively ruled the Muslim community for approximately 29 years.

II SHARIA LAW: SOURCES, OBJECTIVES AND REFORM

Before looking at the impact of modern technology on sharia criminal evidence laws, it is essential to discuss the potential for reform of these laws from an Islamic background. It would be irrelevant to question whether these laws could be updated if the mechanisms within sharia and Islamic jurisprudence precluded such a change. This section therefore begins with a brief background of sharia and its sources followed by a look at its underlying principles and objectives, known as *maqasid al-sharia*. This is followed by an assessment of *ijtihad*, the process of reform in sharia and the integration of *maqasid* to assist reform measures.

A Sources of Sharia

Sharia is often seen by the West as barbaric, brutal, regressive and discriminatory.¹ Western literature has consistently used terminology that equates sharia with its own concepts and philosophies,² but sharia goes beyond modern concepts of law, legislation and social ethics, which is why it is often skewed and misunderstood. However, sharia is, in reality, far from this. Its linguistic definition is a path that leads to water and its technical definition includes all rules God has legislated for His worshippers, including those from His prophets, regarding actions or worship.³ In fact, sharia has been called the ‘the epitome of Islamic thought...the core and kernel of Islam itself’,⁴ its primary objective to enjoin good and prevent evil.⁵ The famous Orientalist Coulson (d. 1986) states law in classical Islamic theory is the revealed will of God, not preceded by the state nor controlled by society.⁶ Practically, sharia is a set of religious principles regulating

¹ For more on this accusation of sharia, see generally: Mohamed Al Awabdeh, ‘History and Prospect of Islamic Criminal Law with respect to the Human Rights’ (PhD Thesis, Humboldt-Universität, 2005); Mohamed S. El-Awa, *Punishment in Islamic Law: A Comparative Study* (American Trust Publications, 1982) 236. However, some Western scholars do not see Islam in this light, such as Professor John Esposito. See for example, John Esposito and Dalia Mogahed, *Who Speaks for Islam?: What a Billion Muslims Really Think?* (Simon and Schuster, 2007); John L. Esposito, *The Islamic Threat: Myth or Reality?* (Oxford University Press, 1999).

² M. Cherif Bassiouni, ‘Sources of Islamic Law, and the Protection of Human Rights in the Islamic Criminal Justice System’ in M. Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 3, 12.

³ Y. Qassem, *Mabade’ al-Fiqh al-Islami* [Principles of Islamic Jurisprudence] (Dar al-Nahda al-‘Arabia, 2000) 23, cited in Tarek Badawy, ‘Towards a Contemporary View of Islamic Criminal Procedures: A Focus on the Testimony of Witnesses’ (2009) 23 *Arab L.Q.* 269, 271.

⁴ Joseph Schacht, *An Introduction to Islamic Law* (Oxford University Press, 1982) 1.

⁵ Cliff Roberson and Dilip K. Das, *An Introduction to Comparative Legal Models of Criminal Justice* (CRC Press, 2016) 23. See also Qur’an, eg, 3:110: ‘You enjoin the right, forbid the wrong and believe in Allah’.

⁶ NJ Coulson, *A History of Islamic Law* (Edinburgh University Press, 1964) 1-2 (‘A History’). Coulson sees this as the reason sharia was ‘static and immutable’. However, Muslim scholars from the classical period until the modern age see the matter quite differently. See Chapter IIC.

every aspect of human life⁷ and rules by which the Muslim world is governed⁸ – socially, commercially, politically, criminally and domestically – as well as specific devotional practices.⁹ Sharia forms the basis for relations between humans and God, between all of humanity, Muslim or otherwise, and all aspects of creation,¹⁰ with the goal of divine favour in the world to come.¹¹ Hence, sharia is the overriding governing force in an Islamic state and its requirements are the basis for the community, its laws and its government.

There are four sources of law in Islam. There is no dispute among Muslims that the Qur'an is the primary source of Islamic law to which all other sources are subject.¹² Believed to be derived directly from God as His authentic words, the Qur'an maintains the highest position in the hierarchy of legal norms, which cannot be contradicted or modified by any other sharia source.¹³ While the Qur'an's general principles are immutable, its provisions may be modified so long as they remain subordinate to the community's spiritual interests.¹⁴

⁷ Jonathan Brown, 'Stoning and Hand Cutting - Understanding the Hudud and the Shariah in Islam' Yaqeen Institute (Web Article) <https://yaqeeninstitute.org/jonathan-brown/stoning-and-hand-cutting-understanding-the-hudud-and-the-shariah-in-islam/#.XaGFVeczY_U>, accessed 12 October 2019; Joseph Schacht, *The Theory of Crime and Criminal Responsibility in Islamic Law: Shari'a* (University of Illinois, 1964) 1 cited in Roberson and Das (n 5) 15.

⁸ M Cherif Bassiouni, 'Introduction' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) xiii-xiv ('Introduction').

⁹ Adel Omar Sherif, 'Generalities on Criminal Procedure under Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 4.

¹⁰ M Cherif Bassiouni, 'Sources of Islamic Law, and the Protection of Human Rights in the Islamic Criminal Justice System' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 8-10 ('Sources of Islamic Law').

¹¹ Roberson and Das (n 5) 22.

¹² Ma'moun M Salama, 'General Principles of Criminal Evidence in Islamic Jurisprudence' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 128.

¹³ M Cherif Bassiouni and Gamal M Badr, 'The Shari'ah: Sources, Interpretation, and Rule-Making' (2002) 1 *UCLA Journal of Islamic and Near Eastern Law* 135, 149-150.

¹⁴ Taymor Kamel, 'The Principle of Legality and its Application in Islamic Criminal Justice' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 157. As a book of spiritual guidance, only 500 verses (with some opinions stating only 150 verses) deal with legal content among the 6,239 verses of the Qur'an and include in its breakdown: 70 verses on family and inheritance law, 70 verses on obligations and contract, 30 verses on criminal law, and 20 verses on procedure, 10 for constitutional law, 25 for international relations and law, 70 for civil law and 10 for economic and financial relations (Bassiouni and Badr (n 13) 149-50. Matthew Lippman, Sean McConville and Mordechai Yerushalmi, *Islamic Criminal Law and Procedure: An Introduction* (Greenwood Press, 1988) 29 cited in Badawy (n 3) 274; S Ramadan, *La Shari'a Le Droit Islamique, Son Envergure et son Equité* (Al-Qalam, 1997) 48 cited in Badawy (n 3) 274.

The second source is prophetic statements or actions, known as Sunna or Hadith.¹⁵ The importance of following the Prophet's (pbuh)¹⁶ decisions and examples is confirmed by several Qur'anic verses.¹⁷ Sunna 'plays a primordial role in the interpretation of the Qur'an'¹⁸ and aids in its 'practical implementation and enforcement',¹⁹ by clarifying ambiguous verses, qualifying what the Qur'an leaves unqualified and covering issues not mentioned in the Qur'an.²⁰ Yet, Sunna cannot be interpreted in a way to contradict or be inconsistent with the meaning of any specific Qur'anic provision.²¹ Qur'an and Sunna thus constitute the very substance of sharia.²²

The third source is *ijma'* (consensus of jurists). According to Hadith,²³ when consensus develops it is correct and forms a reliable source of law. And when 'combined with the democratic notion of political consensus', *ijma'*, is considered by some as the most authentic basis for developing Islamic criminal justice.²⁴

The fourth and final source of law is *qiyas* (analogical reasoning or juridical analogy). *Qiyas* may be used to broaden the application of an existing legal rule by projecting it beyond its immediate application, so a solution may be found by analogy to a similar case in the Qur'an or Sunna, or it may be proposed by looking to the general spirit of the law, thereby deriving analogy.²⁵ *Qiyas* can include *ijtihad*,²⁶ which involves 'individual judgment in a legal dilemma or question based on the

¹⁵ Sunna or Hadith are defined as sayings of Prophet Muhammad (pbuh), including his actions and tacit approvals/implicit acquiescence.

¹⁶ 'pbuh' stands for 'peace be upon him' and is used when referring to any prophet of God. It is usually placed after the prophet's name, particularly the final prophet of Islam, Muhammad (pbuh). It will not be repeated after this first occurrence but is implied throughout this thesis.

¹⁷ Many verses in the Qur'an exhort adherents to follow the Prophet as a Messenger and example. For eg, 24:54 'Say: "Obey Allah and obey the Messenger"'.
¹⁸ Badawy (n 3) 275.

¹⁹ Farhad Malekian, *The Concept of Islamic International Criminal Law: A Comparative Study* (Brill, 1994) 156.

²⁰ Discover Islam Project, 'The Discover Islam Project', *IslamicLaw*, <http://www.islamtoday.com/discover_islam.cfm?cat_id=6&sub_catid=45>, accessed 15 April 2006 cited in Badawy (n 3) 275-6.

²¹ Bassiouni, 'Introduction' (n 8) xiii-xiv.

²² Ibid.

²³ Relying on the Prophetic statement narrated by Ibn Umar, 'Indeed Allah will not gather my ummah [community] upon deviation, and Allah's Hand is over the Jama'ah [majority], and whoever deviates, he deviates to the Fire'. *Jami' al Tirmidhi* 5: Chapter 32, Hadith 2167. <<https://www.islamicfinder.org/hadith/tirmidhi/al-fitan/?page=2>>, accessed 13 October 2019. The question regarding this source of law is whether it means a majority of opinions, unanimous agreement or overwhelming majority (Malekian (n 19) 76). Other theories dispute the authority and definition of *ijma'* as a source.

²⁴ Bassiouni, 'Introduction' (n 8) xvi.

²⁵ Kamel (n 14) 156.

²⁶ *Ijtihad* is defined as juristic reasoning (Bassiouni and Badr (n 13) 141). An early illustration of the ranking of sharia sources and recognition of *ijtihad* is in a dialogue between the Prophet and Muadh ibn Jabal, whom he appointed as a judge in Yemen. The Hadith is essentially: How will you judge when the occasion of deciding a case arises? He replied: I shall judge in accordance with Allah's Book. He asked: (What will you do) if you do not find any guidance in Allah's Book? He replied: (I shall act) in accordance with the Sunna of the Messenger

interpretation and application of the principles of Islamic law'.²⁷ However, if a rule is explicit in the Qur'an or Sunna a jurist cannot use their own reasoning.²⁸ *Ijtihad*, says Ramadan, remains jurists' most important tool to make Islam relevant by dynamically adapting rules to time and context.²⁹ This fourth source of law will be discussed as the basis by which sharia evidence laws can develop to accommodate technological advancements.

B Aims and Objectives of Sharia (Maqasid al-Sharia)

Apart from the sources, the underlying objectives (*maqasid*) are necessary when analysing, understanding and formulating sharia. Sharia's five main aims or objectives have long been established as the rights to life, lineage, property, religion and intellect. Al-Shatibi (d. 1388), the Andalusian scholar and chief proponent of *maqasid*,³⁰ stated that acting in accordance with sharia means its purposes must be served, because, apart from ritual duties (such as prayer or fasting) that are beyond human reasoning, all other sharia norms are not contrary to reason and it is a prerequisite to their binding status that they be understood by reason.³¹ *Maqasid* give the background to sharia and its purpose, and every sharia rule must consider these rights.

The significance and place of *maqasid* is not a forgotten nor textbook ideal in Islam. Modern day jurisprudential scholar Kamali sees rejuvenation of the search for *maqasid* as essential in overcoming time-based sharia interpretations,³² and further states there has been greater interest recently in *maqasid*, which is seen as a dynamic tool in the update and renewal of sharia.³³ Other scholars, such as Ibn Taymiyya, suggest *maqasid* were not finite but may include other values

of Allah. He asked: (What will you do) if you do not find any guidance in the Sunna of the Messenger of Allah and in Allah's Book? He replied: I shall do my best to form an opinion and I shall spare no effort. The Messenger of Allah then patted him on the breast and said: Praise be to Allah Who has helped the messenger of the Messenger of Allah to find something which pleases the Messenger of Allah. (*Sunan Abu Dawood* 3: Chapter 25, Hadith 3592, <<https://www.islamicfinder.org/hadith/abu-dawud/office-of-the-judge-kitab-al-aqdiyah/?page=3>>, accessed 13 October 2019). This final method is used by scholars to indicate the legitimate and recommended use of *ijtihad* (Kamel (n 14) 153).

²⁷ Malekian (n 19) 79.

²⁸ Tariq Ramadan, *Western Muslims and the Future of Islam* (Oxford University Press, 2004) 43 ('*Western Muslims*').

²⁹ Ibid 49.

³⁰ Mohammad Hashim Kamali, 'Maqasid al Shariah: The Objectives of Islamic Law' (*Islam 101*, 30 May 2015) <<https://islam101.net/index.php/shariah/141-maqasidalshariah>>, accessed 26 September 2019 ('Maqasid').

³¹ Abu Ishaq al-Shatibi, *Al-muwafaqat fi usul al-shari'a*, vol 2, 285, 294 and passim; vol 3, 291, Saida etc, 1421/2000, ed Muhammad 'Abd al-Qadir al-Fadili cited in Mathias Rohe, *Islamic Law in the Past and Present*, tr Gwendolin Goldbloom (Brill, 2015) 19.

³² Mohammad Hashim Kamali, 'Law and ethics in Islam – The role of maqasid' in Vogt, Kari/Larsen, Lena/Moe, Christian (eds), *New Directions in Islamic Thought* (London 2009) 23-46 cited in Rohe (n 31) 231.

³³ Mohammad Hashim Kamali, 'Legal Maxims and Other Genres of Literature in Islamic Jurisprudence' (2006) 20(1) *Arab Law Quarterly* 77, 79 ('Legal Maxims').

such as human dignity and freedom, and in modern times the idea of a welfare state and research and development may be added.³⁴

Kamali suggests *maqasid al-sharia* has greater flexibility than the traditional methodology of *ijtihad* in contributing to a more progressive *fiqh* (Islamic jurisprudence),³⁵ unbounded by technical methodology and literalist textual readings.³⁶ By using *maqasid* and secondary jurisprudence principles,³⁷ sharia can legitimately develop to operate under vastly different circumstances and societies than its seventh century origins. It will be discussed throughout this thesis how Muslim jurists and scholars have consistently used a combination of these methods to ensure sharia remains dynamic, adaptive and current for its society, and through these opinions and rulings modern technology can be facilitated within the realm of sharia evidence.

C Reform, Update and Advancement of Sharia

Islam is like water. It adopts the colour of the vessel which it enters.³⁸

The main sources of law in Islam provide only around ten percent of all sharia laws; the rest are human-made, fluid and dynamic. Sharia does not specify a detailed legal system;³⁹ rather, it establishes general principles to enforce laws and establish justice.⁴⁰ So, while ‘Islam does not change in concept and spirit’, the power of the ummah (community) to develop and change its ‘laws, customs and practices is inherent’⁴¹ as sharia has the internal system to transform and respond to modern-day issues and complexities from its rich, pluralistic traditions.⁴² The ability to adapt to changes while remaining faithful to its fundamental principles is one of sharia’s most

³⁴ Mohammad Hashim Kamali, ‘Shari’ah and Civil Law: Towards a Methodology of Harmonization’ (2007) *Islamic Law and Society* 391, 417.

³⁵ Ibid 415.

³⁶ Kamali, ‘Maqasid’ (n 30).

³⁷ The secondary principles of sharia jurisprudence aim to ensure the relevance and application of sharia to each age and community. They include principles such as *urf* (custom), *istishab* (presumption of continuity), and *maslaha mursala* (public interest). These principles have long been developed in the Muslim world to provide flexibility within sharia and are used extensively in jurisprudence to assist its development. Discussion of these sources is outside the scope of this thesis.

³⁸ Muhammad El-Shaarawy cited in Ahmed Abdo, ‘Islam Should Be Restored, Mr Abbott, Not Reformed’, ABC News (Opinion, 11 December 2015) <<https://www.abc.net.au/news/2015-12-10/abdo-islam-should-be-restored,-mr-abbott,-not-reformed/7017906>>, accessed 13 October 2019. This quote, by one of the most influential Muslim scholars of the modern age, symbolises sharia’s inherent nature to reform, advance and update.

³⁹ Taha J al ‘Alwani, ‘The Rights of the Accused in Islam’ (1995) 10 *Arab Law Quarterly* 3, 8.

⁴⁰ Ibn Khaldun, *Al-Muqaddimah* 740 as cited in ‘Alwani (n 39) 8.

⁴¹ Bassiouni, ‘Sources of Islamic Law’ (n 10) 17.

⁴² Shaheen Sardar Ali, ‘Exploring New Directions in the Islamic Legal Traditions: Re-Interpreting Shari’a from within’ (2013) 9 *Journal of Islamic State Practices in International Law* 9, 10.

distinguishing features.⁴³ Consequently, Muslim jurists and scholars have consistently used dynamic methods to ensure sharia adapts and remains current for its society. This is the process of *ijtihad*.

Weiss states Muslim juristic thought understands sharia was not delivered in finality, but necessitates humans to expound upon it.⁴⁴ Premodern Muslim jurists used source texts and established rules as a starting point for the analysis in their decision-making,⁴⁵ and included naturalistic reasoning in developing legal regulations.⁴⁶ Contemporary jurisprudential development does not require a return to medieval legal institutions nor does it reject its classical and rich canon of law; rather, it seeks to continue the work begun in the past, remaining faithful to Islam by developing rulings for an altered and complex modern society,⁴⁷ while meeting modern-day demands of justice.⁴⁸

This theory goes against the view of sharia by renowned Orientalists Coulson and Schacht (d. 1969), who ignore debates within traditional Islamic scholarship and reduce sharia to textual statements,⁴⁹ viewing it as ‘static and immutable’.⁵⁰ Coulson sees sharia has ‘eternally valid standards that society must conform to’, unlike modern law that responds to society’s needs.⁵¹ However, to view Islam in such terms denies its ‘timeless[ness] and universality’,⁵² which Emon labels as ‘reductive and simplistic’, ignoring sharia development.⁵³ While God alone is the lawgiver, sharia interpretations change, because it is not possible to apply a rule in Islam without

⁴³ Awad M Awad, ‘The Rights of the Accused Under Islamic Criminal Procedure’ in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 91, 9.

⁴⁴ Bernard G Weiss, *The Spirit of Islamic Law* (The University of Georgia Press, 1998) 22.

⁴⁵ Anver Emon, ‘Techniques and Limits of Legal Reasoning in Shari’a Today’ (2009) 2 *Berkeley Journal of Middle Eastern and Islamic Law* 1, 25 (‘Techniques’).

⁴⁶ Anver M. Emon, ‘Huquq Allah and Huquq Al-Ibad: A Legal Heuristic for a Natural Rights Regime’ (2006) 13(3) *Islamic Law and Society* 325 (‘Huquq Allah’).

⁴⁷ Oussama Arabi, *Studies in Modern Islamic law and Jurisprudence* (Kluwer Law International, 2001) 18; Bassiouni, ‘Introduction’ (n 8) xvi.

⁴⁸ Bassiouni, ‘Introduction’ (n 8) xvi.

⁴⁹ Anver M. Emon, ‘Toward a Natural Law Theory in Islamic Law: Muslim Juristic Debates on Reason as a Source of Obligation’ (2003) 3 *UCLA Journal of Islamic and Near Eastern Law* 1, 1-2 (‘Natural Law’) comments on the opinion of Joseph Schacht, *An Introduction to Islamic Law* (Oxford University Press, 1964) 2-3.

⁵⁰ Coulson, *A History* (n 6) 2.

⁵¹ Ibid 6.

⁵² Bassiouni, ‘Sources of Islamic Law’ (n 10) 42.

⁵³ Emon, ‘Natural Law’ (n 49) 2-3.

regard to time, place and person.⁵⁴ In fact, context has always played a role in the administration of Muslim governance, which impacts its legislative framework, procedures and executive arms.

Muslim modernisers look to sharia's historical development as evidence of its flexible and organic nature, which is essential particularly regarding scientific and technological advancements. These modernisers advocate Islam should modernise in an Islamic sense, not by becoming secular but under sharia's general principles.⁵⁵ In line with this argument, Peters suggests the solution to applying Islamic law in the modern world must be sought within the Islamic framework by reinterpreting textual sources or seeking opinion in classical works on jurisprudence and selecting those that most conform with the modern world.⁵⁶ These developments will occur through *ijtihad*, in their application to the needs of an evolving society.⁵⁷

This sense of reform or constant re-evaluation of laws based on underlying principles⁵⁸ is evidenced in the famous hadith of Muadh.⁵⁹ The exchange between the Prophet and Muadh establishes that, from the beginning of Islam, there have been issues requiring judges to use individual judgment, to reflect, extrapolate, reason and make *ijtihad* with a need to account for the culture and context of new environments while remaining faithful to the sources.⁶⁰ Hallaq argues sharia is *ijtihadic* in that it is a continuously renewed exercise in interpretation to do what is right at that moment of human existence.⁶¹ *Ijtihad* is therefore essential to reform sharia as it responds to societal changes and 'the influx of various cultures and material conditions' that necessarily occur through time and circumstance.⁶²

⁵⁴ Rohe (n 31) 19-20.

⁵⁵ See the works of some 20th century and modern Islamic modernisers, such as A Maududi, *Islamic Law and Constitution* (Islamic Publications, 1967) 198, S Ramadan, *Islamic Law, its Scope and Equity* 42 (PR Macmillan, 1961) 42 cited in Awad (n 43) 91. Other Islamic modernisers such as Muhammad Abdu advocated that returning to original sources will give greater flexibility and strength, rather than weakness to the development of Islamic law (Awad n 43) 91.)

⁵⁶ Rudolph Peters, *Crime and Punishment in Islamic Law* (Cambridge University Press, 2005) 190.

⁵⁷ Osman Abd-el-Malek al-Saleh, 'The Right of the Individual to Personal Security in Islam' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 88.

⁵⁸ Mohammad Hashim Kamali, *Principles of Islamic Jurisprudence* (Ilmiah Publishers, 1991) xvii-xviii ('*Principles of Islamic Jurisprudence*').

⁵⁹ Hadith of Muadh bin Jabal. See n 26.

⁶⁰ Tariq Ramadan, *Radical Reform: Islamic Ethics and Liberation* (Oxford University Press, 2009) 25 ('*Radical Reform*').

⁶¹ Wael B Hallaq, *An Introduction to Islamic Law* (Cambridge University Press, 2009) 166.

⁶² Ann Black, Hossein Esmacili and Nadirsyah Hosen, *Modern Perspectives on Islamic Law* (Edward Elgar, 2013) xiii.

One of the foremost scholars of recent times, Buti (d. 2013), calls for emancipation of *ijtihad* from the schools so there can be thought solely on the principles of the Qur'an and Sunna,⁶³ rather than *taqlid* (imitation or obeying without question), which stifles new thought in the Muslim world and Islam generally.⁶⁴ Buti admits traditional sharia must adjust due to modernity not on 'Western modernity's terms' but in accordance with immutable sharia principles.⁶⁵ This argument is significant to this thesis given the novelty of technology and its ability to potentially outweigh traditional aspects of evidentiary laws.

Qaradawi, constantly seeking to advance *sharia* and its rules for the benefit of modern society, promotes using *ijtihad* to arrive at new legal rulings that keep abreast of worldwide societal developments. He has also called for renewal in *ijtihad* and a move away from religious extremism and blind imitation (*taqlid*) in legal rulings.⁶⁶ Through the intersection of traditional and modern Islamic methodology sharia remains current for its time and circumstance, allowing scholars like Qaradawi to ensure modern technology can integrate with traditional sharia principles.

While flexibility to deal with societal change and development has been ever-present in Islam, the method it takes is a hotly debated topic in the modern Muslim world. Two modern scholars who speak about this are Yusuf and Ramadan. Yusuf believes Islam's internal structure has the necessary tools to deal with update.⁶⁷ Ramadan argues Islam must look outside to reform within the boundaries of established principles and 'the awakening of Islamic thought' needs 'reconciliation with its spiritual dimension' and 'renewed commitment and...critical reading (*ijtihad*) of the scriptural sources in the fields of law and jurisprudence'.⁶⁸ His ideas on reform are integral when looking at evidence laws in Islam as they give direction to modern Muslim scholars and jurists that permit and encourage reconciliation between traditional sharia principles and modern evidence techniques such as DNA and other scientific developments.

⁶³ Said Ramadan, *Islamic Law: Its Scope and Equity* (PR Macmillan, 1961) 64-73 cited in David F Forte, *Studies in Islamic Law: Classical and Contemporary Application* (Austin and Winfield Publishers, 1999) 68.

⁶⁴ Kamali, *Principles of Islamic Jurisprudence* (n 58) 68.

⁶⁵ Wael B Hallaq, *Shari'a: Theory, Practice, Transformations* (Cambridge University Press, 2009) 541-2.

⁶⁶ Yasmin Hanani Mohd Safian, 'The Contribution of Yusuf Qaradawi to the Development of Fiqh' (2016) 4 *Electronic Journal of Islamic and Middle Eastern Law* 45, 53.

⁶⁷ Tariq Ramadan and Hamza Yusuf, 'Rethinking Islamic Reform' (YouTube, 26 May 2010) <<https://www.youtube.com/watch?v=qY17d4ZhY8M>>, accessed 13 October 2019.

⁶⁸ Ramadan, *Radical Reform* (n 60) 1.

D Conclusion

Sharia regulates few criminal laws, leaving the remainder to be determined by current society using established methods of *ijtihad*. This keeps an Islamic state modern and up-to-date. The *ijtihad* process in the modern world should look at a wider framework by incorporating sharia's goals (*maqasid*) – hence, traditional legal maxims relating to evidence laws may call for adjustment due to the reliability of modern proofs such as photographs, sound recordings, CCTV and DNA testing, which did not exist in earlier times.⁶⁹ Traditionally and currently in Muslim majority states that impose Islamic law or a version of it, the evidence they use for hudud is based on eyewitness testimony, confession and oath giving, which traditionally were the surest forms of evidence. There is abundant literature available on these traditional rules, but the issue under analysis in this research is whether modern technology can be incorporated into evidentiary proofs without violating sharia. Within the background of reform and *ijtihad*, this thesis seeks to identify where evidence laws in Islam can legitimately develop.

Modern scholars must redress issues within the schools of jurisprudence and update them to reflect modernity and modern investigation means. Qaradawi also believes no jurisprudential school is superior over another.⁷⁰ As such, all four Sunni schools⁷¹ are within sharia's general framework and considered acceptable interpretations. They are diverse yet compatible with sharia doctrine. Their existence and variety of viewpoints exemplify sharia's inherent 'flexibility and adaptability'.⁷² Other practices that existed in the early period of Islam, but not specifically mandated by the Qur'an, must change to reflect modern society's needs, as there is nothing to compel the preservation of sharia rules developed by the schools if they no longer serve the intended purpose of Islamic justice.⁷³ Hence, scholars and jurists should review traditional laws and rulings with the aim of potentially merging different aspects of each school or using reasoning to come to a consistent, updated conclusion to fit modern society. Apart from the few specific rules prescribed in the Qur'an and Sunna, *ijtihad* is capable of establishing appropriate procedures for the modern world and accommodate technological developments.⁷⁴ This is significant given the topic of this thesis in seeking to update sharia by including modern investigation methods.

⁶⁹ Kamali, 'Legal Maxims' (n 33) 100.

⁷⁰ Safian (n 66) 47.

⁷¹ The four Sunni legal schools are: Maliki (founded by Anas ibn Malik, d. 712), Hanafi (founded by Abu Hanifa, d. 767), Shafei (founded by Muhammad ibn Idris As-Shafei, d. 820), and Hanbali (founded by Ahmad ibn Hanbal, d. approx. 855). Future reference to schools in this thesis relate to this concept.

⁷² Bassiouni, 'Introduction' (n 8) xvi.

⁷³ Awad (n 43) 92.

⁷⁴ Salama (n 12) 139.

III SHARIA CRIMINAL LAW AND PROCEDURES: CRIMES, PUNISHMENT AND EVIDENCE

The principles which govern proof in any legal system reflect, to a great degree, the intellectual achievement and cultural values of the society.¹

To bring meaningful analysis to the impact of modern technology on sharia criminal evidence laws, it is necessary to look at the sharia penal system as it differs from other modern penal systems in its categorisation and aims. A review of hudud's aims will elucidate that measures used to expand hudud proofs and convictions transgress *maqasid*. Rather, deterrence is the underlying objective of hudud crimes, particularly adultery. This is followed by analysis of traditional sharia evidence forms as a starting point to assess where modern technological proofs fit under these categories. Modern technology, despite its high level of accuracy, is classified as circumstantial proof to distinguish it from definitive proofs that can be used as evidence in hudud crimes. This ensures modern technology does not add to traditional hudud crimes' evidentiary categories.

A Categories of Crime

Sharia tends to distinguish between acts seen as the rights of God and those of humans, or both, and crimes are similarly distinguished based on these categories.² Crimes against God are called hudud and involve actions that threaten the harmonious co-existence of society and its members.³ Hudud are those crimes prescribed in the Qur'an along with their punishments; as such, their penalties cannot be negotiated, suspended, stayed, pardoned, reduced or commuted.⁴ In focussing on hudud, this thesis centres on evidence laws that seek to prove these serious crimes, particularly adultery.

¹ Ma'moun M Salama, 'General Principles of Criminal Evidence in Islamic Jurisprudence' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 109.

² Adel Omar Sherif, 'Generalities on Criminal Procedure under Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 5.

³ The linguistic definition of hudud is limits or boundaries (Hans Wehr, *Hans Wehr Dictionary of Arabic* <<https://giftsofknowledge.files.wordpress.com/2016/01/hans-wehr-searchable-pdf.pdf>>, accessed 14 October 2019). Medieval jurists struggled to establish accurate definitions and applications of criminal laws because of the 'indeterminate nature of Islamic legal texts', hence they had different lists of what crimes constituted hudud (Intisar A Rabb, 'Doubt's Benefit: Legal Maxims in Islamic Law, 7th-16th centuries' (PhD Thesis, Princeton University, 2009) 23). There are six or seven crimes, depending on different opinions, under the category called hudud: adultery (*zina*), slanderous accusation of adultery (*qadhif*), theft (*sariqa*), highway robbery (*hiraba*), attempts to overthrow the government (*baghi*), consumption of alcoholic drinks (*shrub al-khamr*) and apostasy (*ridda*).

⁴ Gaafer M Abd-Elrahim, 'The Concept of Punishment in Islamic Law in Relation to Contemporary Legal Trends' (PhD Thesis, Union Graduate School, 1987) 200; Mohamed S. El-Awa, *Punishment in Islamic Law: A Comparative Study* (American Trust Publications, 1982) ('*Punishment in Islamic Law*').

The next category of crimes is those affecting humans, impacting their life and safety, such as murder, manslaughter, beating and wounding, and are punished by *qisas*.⁵ Finally, there are *taazir* crimes, which encompass those crimes outside the hudud and *qisas* categories. In its legal sense, *taazir* means criminal punishment which is not legally fixed.⁶ These are crimes established by the state to protect the community's public interests and promote public order,⁷ seeking to respond to 'the evolving needs of society' where the punishment is likewise determined by the state.⁸ *Taazir* aim to protect *maqasid*,⁹ and range from judicial reprimand to capital punishment.¹⁰ Most significantly, *taazir* invoke the 'two penological principles of intimidation and social retribution',¹¹ and account for time and place, allowing judges to consider mitigating circumstances, offenders' individuality, social conditions and the crime's societal impact.¹² The importance of *taazir* is further evidenced by its relationship with hudud crimes. Since hudud crimes have strict rules of evidence for imposing punishment,¹³ if they are not properly proven, an accused may be liable for punishment under *taazir* if there is sufficient evidence under this lesser crime category.¹⁴

Through the *taazir* category, reform measures within the sharia criminal justice system are possible. *Taazir* jurisdiction gives flexibility, allowing evidentiary procedures to be more relaxed and fluid. This allows traditional methods of court procedure to develop in response to changing

⁵ M Cherif Bassiouni, 'Qisas Crimes' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 203. *Qisas* is 'equality' or 'equivalence', so sanctions seek to redress the wrong by equalising harm in the form of equivalent infliction of physical or bodily harm against the perpetrator, or alternatively the payment of financial compensation (*diya*). *Qisas* crimes are considered a violation of the individual's rights, which provides basis for the need to satisfy and compensate the victim or their family. See further on *qisas* and *diya*, Qur'an 2:178; 4:92; 17: 33.

⁶ Ghaouti Benmelha, 'Ta'azir Crimes' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 212.

⁷ Ibid.

⁸ Sherif (n 2) 6.

⁹ Saeed Hasan Ibrahim and Nasir bin Ibrahim Mehemeed, 'Basic Principles of Criminal Procedure under Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 20.

¹⁰ Ibid 21.

¹¹ Benmelha (n 6) 224.

¹² Ibrahim and Mehemeed (n 9) 21.

¹³ Mark Cammack, 'Islamic Law and Crime in Contemporary Courts' (2011) 4 *Berkeley Journal of Middle Eastern and Islamic Law* 1, 3. Hudud penalties include flogging, amputation of the limbs, stoning and death (Tarek Badawy, 'Towards a Contemporary View of Islamic Criminal Procedures: A Focus on the Testimony of Witnesses' (2009) 23 *Arab L.Q.* 269, 277).

¹⁴ Ahmad Abd al-Aziz al-Alfi, 'Punishment in Islamic Criminal Law' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 228; Badawy (n 13) 278. Therefore, any doubt concerning the material elements of a crime or if the circumstances of a crime provide mitigating circumstances, such as necessity or compulsion, then a *hadd* punishment may not be imposed but a *taazir* punishment may be implemented instead.

time and circumstance, allowing scientific and technological innovations in the evidentiary process to assist in the curtailment of crime. This was the process when the Ottomans created the *mazalim* (injustice) jurisdiction that represented the ruler's law, opposed to the *qadi* (judge) courts representing God's law, which gave greater flexibility to administration of justice.¹⁵ The fact a Muslim government created these systems does not mean they had to alter sharia; rather, they added to the framework to work for the current society. The development of a body of criminal laws was thus necessary and occurred under *taazir*. Sharia regulates only a few criminal laws, leaving the rest up to its current society to determine. This keeps an Islamic state modern and responsive.

B Aims of Criminal Law and Punishment in Islam

The Islamic criminal justice system is based on religious sources, which distinguishes it from modern civil and common law jurisdictions.¹⁶ Criminal law is integral to the relationship between religion and morality in Islam, indicated by the hudud of adultery and defamation¹⁷ being purely moral acts that entail criminal liability under sharia for their breach, unlike any current moral penal code.¹⁸ This is reflected in the aims of sharia criminal law and perhaps why the associated punishments differ from those under secular codes.

Islamic criminal law seeks to deter and encourage God-given morality. In fact, two of the greatest Muslim jurists, Abu Yusuf (d. 798)¹⁹ and Imam Shafei (d. 820), regard the aim of criminal laws as deterrence,²⁰ illustrated by the restrictions that limit punishment such as rigorous evidentiary rules,²¹ recommendations of forgiveness and possibility of repentance.²² The difficulty, if not

¹⁵ NJ Coulson, *A History of Islamic Law* (Edinburgh University Press, 1964) 129-31 ('*A History*').

¹⁶ Badawy (n 13) 276.

¹⁷ Qur'an 17:32 'And do not go near to fornication. It is an indecent act, an evil way'; 24:4 'And those who make accusations against chaste women and then do not produce four witnesses: flog them with eighty lashes...'

¹⁸ Salama (n 1) 132.

¹⁹ His real name was Yaqub ibn Ibrahim al-Ansari and he was one of the most famous students of Abu Hanifa (d.767), the founder of the Hanafi school of thought.

²⁰ Intisar A Rabb, *Doubt in Islamic Law: A History of Legal Maxims, Interpretation, and, Islamic Criminal Law* (Cambridge University Press, 2015) 71 ('*Doubt in Islamic Law*').

²¹ Rudolph Peters, *Crime and Punishment in Islamic Law* (Cambridge University Press, 2005) 54; Sadakat Kadri, *Forced to Kill: The Mandatory Death Penalty and its Incompatibility with Fair Trial Standards* (A Report to the International Bar Association's Human Rights Institute, May 2016) 19.

²² El-Awa, *Punishment in Islamic Law* (n 4) 134. While the verse condemning fornication provides its punishment, the next verses provide the punishment of false accusation (Qur'an 24: 2, 4) (Jonathan Brown, 'Stoning and Hand Cutting - Understanding the Hudud and the Shariah in Islam' Yaqeen Institute (Web Article) 8 <https://yaqeeninstitute.org/jonathan-brown/stoning-and-hand-cutting-understanding-the-hudud-and-the-shariah-in-islam/#.XaGFVeczY_U>, accessed 12 October 2019), which in effect sets a high benchmark for proof of the crime. Sharia punishment is also based on retribution, and under *taazir*, reformative measures are facilitated (El-Awa, *Punishment in Islamic Law* (n 4) 134), but these aspects of punishment will not be dealt with in this thesis.

impossibility, of achieving hudud evidentiary standards, particularly for adultery, make punishment highly unlikely and more a warning, such that some scholars believe the Qur'an contains 'a nearly unreachable standard of proof'²³ where the deterrent effect is demonstrated by the fact these punishments are prescribed yet not actually imposed.²⁴

Bassiouni argues the proof establishes its purpose, which is to deter the public act of adultery or fornication.²⁵ Quraishi argues

[L]imiting conviction to only those cases where four individuals actually saw sexual penetration take place, the crime will realistically only be punishable if the two parties are committing the act in public, in the nude. The crime is therefore really one of public indecency rather than private sexual conduct.²⁶... Thus, while the Qur'an condemns extramarital sex as an evil, it authorizes the Muslim legal system to prosecute someone for committing this crime *only* when the act is performed so openly that four people see them without invading their privacy.²⁷

Islamic scholar Shalabi (d. 1997) also comments that its proof makes the punishment applicable only to those who committed adultery without any concern for public morality 'and in a manner that is almost impossible and intolerable in any civilized society'.²⁸ *Zina's* standard of proof would certainly constitute a public indecency crime under Western laws.²⁹

Despite the view by many Muslim governments and individuals that a sharia society is the ideal standard to which Muslim societies should aspire, the reality of the modern world leads many scholars to believe simply imposing a penal system in isolation from the rest of sharia would not lead to its desired ends, being justice.³⁰ While in an ideal Muslim state these severe punishments

²³ Brown (n 22) 8.

²⁴ El-Awa, *Punishment in Islamic Law* (n 4) 126.

²⁵ M. Cherif Bassiouni, 'Sources of Islamic Law, and the Protection of Human Rights in the Islamic Criminal Justice System' in M. Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 3, 5-6.

²⁶ Salama (n 1) 109.

²⁷ Asifa Quraishi, 'Her Honor: An Islamic Critique of the Rape Laws of Pakistan From a Woman-Sensitive Perspective' (1997) 18 *Michigan Journal of International Law* 287, 296.

²⁸ M M Shalabi, *al-Fiqh al-Islamiyy Bayn al-Mithaliyyah al-Waq'iyyah* (Arabic) (1960) 201 cited in Mashood A Baderin, *International Human Rights and Islamic Law* (Oxford University Press, 2005) 80.

²⁹ Noel J Coulson, *Conflicts and Tensions in Islamic Jurisprudence* (The University of Chicago Press, 1969) 78.

³⁰ El-Awa, *Punishment in Islamic Law* (n 4) 136; Moeen H Cheema and Abdul-Rahman Mustafa, 'From the Hudood Ordinances to the Protection of Women Act: Islamic Critiques of the Hudood Laws of Pakistan' (2008-09) 8 *UCLA Journal of Islamic and Near Eastern Law* 1, 23. Also Mawdudi (d. 1979), one of the great Islamic radical thinkers of the twentieth century, adopted the view that Islamic punishments could not be implemented in modern societies unless the country's law system was fundamentally altered because sharia 'is an organic whole' (Sayyid Abul A'la Mawdudi, *The Islamic Law and Constitution*, tr Khurshid Ahmad (Islamic Publications Ltd, 1980) 55). Tariq Ramadan, a modern European Islamic thinker, issued a similar call for hudud punishments to be suspended as the conditions under which they should be applied do not exist anywhere in the world today (Tariq Ramadan, 'An International Call for Moratorium on Corporal Punishment, Stoning and the Death Penalty

have meaning and uphold legal and social boundaries, in the modern world where arguably no state functions as a properly run sharia state, these punishments do not uphold *maqasid* nor serve their intended purpose.

C Evidence Laws in Sharia

The severity of punishment of sharia hudud crimes is greatly tempered by the high evidentiary standards required to prove their elements. Hence, Islamic criminal standards require solid proof beyond doubt, likely the most difficult standards of any jurisdiction.³¹ This will be illustrated in the description of evidentiary categories. But there are differences of opinion regarding sharia evidence laws. Some commentators and scholars see the law's harshness as providing unworkable and unrealistic standards. Coulson observed sharia evidence laws are aimed at establishing 'truth of claims with a high degree of certainty',³² but injustice could occur due to the exacting requirements,³³ creating an impractical burden of proof on a plaintiff, such that a defendant may avoid criminal liability.³⁴ Others see these standards as essential to limit convictions to the most heinous crimes and those of indisputable culpability of guilt, providing protection from false conviction.³⁵

Both arguments have merit, specifically because sharia does not provide an exact framework for criminal procedures; rather, it sets principles and objectives, with a small, defined set of immutable laws, leaving detail to individual states and evolving to the changing needs of society,³⁶ without

in the Muslim World', *Tariqramadan.com* (Web Page, 5 April 2005) <<http://www.tariqramadan.com/spip.php?article264>>, accessed 10 September 2019). Al-Qaradawi's statements on the temptations of modern society plus the high cost of marriage led Mustafa al-Zarqa to conclude the 'prevailing environment is unsuitable for the enforcement of hudud' and suggests it may be substituted with temporary measures and alternative punishments until it is appropriate to re-enforce them (Mustafa Ahmad al-Zarqa, *Al-Madkhal al-Fiqhi al-'Am I* (Dar al-Fikr, 1387/1968) 51 cited in Mohammad Hashim Kamali, 'Punishment in Islamic Law: A Critique of the Hudud Bill of Kelantan, Malaysia' (1998) 13 *Arab Law Quarterly* 203, 231 ('Hudud Bill of Kelantan')).

³¹ Mamman Lawan, Ibrahim N. Sada and Shaheen Sardar Ali, 'An Introduction to Islamic Criminal Justice: A Teaching and Learning Manual' (UK Centre for Legal Education, 2011) 26, <https://www.heacademy.ac.uk/system/files/introduction_to_islamic_criminal_justice.pdf>, accessed 14 October 2019.

³² Coulson, *A History* (n 15) 126. Also Lippman, McConville and Yerushalmi (Matthew Lippman, Sean McConville and Mordechai Yerushalmi, *Islamic Criminal Law and Procedure: An Introduction* (Greenwood Press, 1988) 29 as cited in Badawy (n 13) 68) state sharia only permits evidence considered to possess a 'high degree of direct reliability' in contrast to common law tradition, where a judge or jury is exposed to copious evidence to assess and determine the truth.

³³ Norman Anderson, *Law Reform in the Muslim World* (The Athlone Press, 1976) 16. In hudud matters, the court has little discretion regarding procedural rules that are established by sharia source documents such as the number of witnesses required.

³⁴ Coulson, *A History* (n 15) 127.

³⁵ Badawy (n 13) 287-8.

³⁶ Sherif (n 2) 12.

which sharia would become archaic, unusable and purely theoretical.³⁷ In providing a blueprint, flexibility and reform are within sharia's boundaries and its logical development. This is not a failing but a strength, allowing Islamic states to modernise.³⁸

1 Witness Testimony (*Shahada*)

As the main evidence form, there has been considerable detailed discussion in sharia regarding witness testimony, including its function, application and responsibility.³⁹ Since the crime of adultery imposes the most severe punishment, it possesses the highest benchmark for evidence of any crime, requiring the oral testimony of four adult male Muslims, who are reliable,⁴⁰ saw the actual act of sexual intercourse simultaneously⁴¹ and agree on the time, place and identity of the parties,⁴² meaning hearsay and '[d]ocuments have no independent evidentiary value'.⁴³ Eyewitness in hudud cases means physical unaided viewing of the crime.

The issue with modern technology is that it surpasses the need for eyewitnesses, which is unacceptable under sharia. It is argued the inclusion of non-eyewitness technology, such as photographs or CCTV, to evidence adultery is unacceptable, because they can be manipulated.⁴⁴ Immediately, this results in a bar to using modern technology for proof. However, proof via modern technology may render the crime punishable under *taazir*. Proving adultery by eyewitness

³⁷ For example, the established secondary sources of law facilitate this flexibility. See Chapter IIB n 37.

³⁸ A small number of criminal and civil rules are immutable, being prescribed by the Qur'an and Sunna, such as hudud laws, inheritance and some family laws. The remainder are within the legislative power of individual governments, giving free reign to each society to mould laws to time and place such as *taazir* rules. See Chapter IIA n 14.

³⁹ Mohamed Selim El-Awa, 'Confession and Other Methods of Evidence in Islamic Procedural Jurisprudence' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 117 ('Confession').

⁴⁰ The issue of reliability or '*adl*' is interesting (see Qur'an 65:2; 5:106). '*Adala* represents the witness' character, which most schools (Hanafi, Maliki and Shafei) take to mean the witness usually does what is required and avoids what is forbidden by God, and Hanbalis add a sense of honour to this (El-Awa '*Punishment in Islamic Law*' (n 4) 125). Another definition of '*adala*' is avoiding 'grave and venial sins' (Salama (n 1) 117).

⁴¹ Hadith describe what eyewitnesses must see in some detail, stating they must testify to seeing the penis enter the vagina 'like an eyeliner applicator entering its container' (Sunan Abu Dawud, *Kitab Al-hudud*, 4428, Book 39, Hadith 4414, <<https://sunnah.com/abudawud/40>>, accessed 14 October 2019). Hence, sharia requires this crime be proven only when the act is performed so openly that four people see them without invading their privacy (Quraishi (n 27) 296), meaning the act is nothing less than public sexual intercourse (Lawan, Sada and Ali (n 31) 40).

⁴² El-Awa, *Punishment in Islamic Law* (n 4) 126.

⁴³ M. Siddiqi, *The Penal Law of Islam* (1959) 46 as cited in Matthew Lippman, 'Islamic Criminal Law and Procedure: Religious Fundamentalism v. Modern Law' (1989) 12 *Boston College International and Comparative Law Review* 29, 53. Hearsay is inadmissible due to doubt, according to Hanafis and Shafeis, who say witness testimony must be authentic, and Hanbalis reject any form of indirect testimony in hudud but accept it in *qisas*, homicide and defamation (Salama (n 1) 111).

⁴⁴ Badawy (n 13) 298. For further discussion see Chapter VA

testimony is burdensome making it more difficult to prove and meeting the traditional criteria of a public rather than private act of indecency.

The question is whether this insistence on retaining traditional sharia laws is appropriate, given modern society's advancement and commonplace use of cameras and similar technology. If the punishment's aim is deterrence, then increasing methods to prove the crime would go against *maqasid*. Commentators state the Qur'anic verses on adultery must be read in conjunction with the verses on *qadhif* (slander)⁴⁵ and not as separate laws because the main purpose of *zina* verses and their punishment is to protect people's privacy, public morality and women's honour.⁴⁶ Hence, the crime would 'constitute an affront to moral and social values' not only in Islamic law but other legal systems.⁴⁷

Hudud should remain difficult to prove, as has been the case for centuries under traditional evidence forms. While it may appear 'backward' to deny its use, modern technology should not be supported to prove adultery. Despite the crime's seriousness and potential breach of one of the five objectives of *maqasid*, being lineage, the evidentiary requirements in classical sources are specific, making it difficult to prove, which is necessary to ensure the objective of deterrence is maintained. Increasing the likelihood of proving this crime would not fulfil sharia's objectives, which is more significant in Islam than using modern technology to its full potential.

2 Confession

Due to their high evidentiary rules, short of confession, hudud are nearly impossible to establish.⁴⁸ Confession is the alternative proof to witness testimony for a crime under sharia and is the most authoritative evidence form, because a confession is proof of the crime.⁴⁹ A *hadd* offender must

⁴⁵ Najati Sayyid Ahmad Sanad and Office International de Justice Criminelle, *The Theory of Crime and Criminal Responsibility in Islamic Law: Shari'a* (Office of International Criminal Justice, 1991) 53, as cited in Cliff Roberson and Dilip K. Das, *An Introduction to Comparative Legal Models of Criminal Justice* (CRC Press, 2016) 155. See nn 23-9 and accompanying text. The punishment deterrence factor is further proven by the *hadd* crime of slander (*qadhif*), which in the absence of four witnesses corroborating each other on the specifics renders a punishment of 80 lashes (see Chapter I n 4), which has the practical effect of limiting those bringing charges of adultery, slanderous or real (El-Awa, *Punishment in Islamic Law* (n 4) 126).

⁴⁶ Quraishi (n 27).

⁴⁷ El-Awa, 'Confession' (n 39) 121. There has never been a single case of adultery proven by the testimony of four eyewitnesses, only confession (Gamil Muhammed Hussein, 'Basic Guarantees in the Islamic Criminal Justice System' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 38; Taymor Kamel, 'The Principle of Legality and its Application in Islamic Criminal Justice' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 157, 126). See further Quraishi's argument above Chapter IIIB.

⁴⁸ Wael B Hallaq, *Shari'a: Theory, Practice, Transformations* (Cambridge University Press, 2009) 312 ('*Shari'a*').

⁴⁹ El-Awa, 'Confession' (n 39) 112. Confession is made when a Muslim seeks to repent for their sins and meet God without burden in the hereafter (at 122). However, certain conditions must be fulfilled before a confession is accepted (Ahmed Akgunduz, *Islamic Public Law: Documents on Practice from the Ottoman Archives* (IUR Press, 2011) 558).

have the opportunity to repent and retract their confession, which is a unique feature of sharia criminal law absent in other systems, such that a retraction any time prior to sentence execution serves to halt punishment.⁵⁰ The ruler and judge must suggest to the accused to abandon their confession.⁵¹ After a confession's retraction, a *hadd* punishment is prohibited, but *taazir* may be imposed because a retraction signifies doubt, which nullifies hudud, but this rule does not apply to *taazir* punishments.⁵² Retraction is allowed in criminal cases as Islam promotes repentance, which is seen as more important than exposing the offences a person has committed and punishing them.⁵³ This concession is significant when looking at the impact of modern technology on evidence in sharia, as it illustrates sharia seeks to limit proving hudud crimes, not expand convictions. This impacts how scholars and jurists accommodate modern technology as a form of proof and for what crimes or under what circumstances it will be acceptable.

3 Circumstantial and Other Forms of Evidence

While some jurists argue for restricting all evidence to testimony and confession⁵⁴ the founding fathers of three Sunni schools accepted circumstantial evidence as valid, provided it is obvious and credible.⁵⁵ Consequently, most jurists accept circumstantial evidence as valid proof in all criminal cases other than hudud.⁵⁶ Therefore, unless a woman voluntarily confesses, pregnancy is

⁵⁰ El-Awa, 'Punishment in Islamic Law' (n 4) 128; David F Forte, *Studies in Islamic Law: Classical and Contemporary Application* (Austin and Winfield Publishers, 1999) 82. Some scholars say the effect of retraction depends on the crime, so if it has a hudud punishment, the retraction prevents the sentence, and if retracted during punishment halts its administration, especially where the punishment is stoning or lashing for adultery and fornication (El-Awa, 'Confession' (n 39) 114). A *taazir* punishment may be imposed after a confession is retracted, according to some (El-Awa, *Punishment in Islamic Law* (n 4) 128). Confession is irrevocable in all crimes other than hudud (excepting *qadhaf*) (Hallaq, 'Shari'a' (n 48) 311).

⁵¹ Islamic law sees concealing offences as more virtuous than exposure and punishment, so a judge is required to persuade a person from confessing, evidenced in the famous case of Maez, when the Prophet ignored Maez's confession and suggested he had not really committed *zina*, rather only kissed or thought his acts constituted *zina*, thereby giving the accused opportunity to withdraw the confession ('Awdah cited in Osman Abd-el-Malek al-Saleh, 'The Right of the Individual to Personal Security in Islam' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 73). Further, when the Ghamidi woman confessed her adultery to the Prophet, he told her to seek God's forgiveness and repent (El-Awa, 'Confession' (n 39) 122). This concept is dealt with further under *satr*. See Chapter V n 1.

⁵² 'Ala al-Din Abu Bakr b. Mas'ud Kasani, *Badai' al-Sanai'* (Cairo, 1910) vol 3, 52; Zayn al-'Abidin Ibrahim Ibn Nujaym, *Al-Ashbah wal-Nazai'r* (Cairo, 1290 AH) vol 2, 164; Abu al-Diya' b. Ishaq Khalil, *Mukhtasar*, with the commentary of Zurqani (Cairo), 100; Mughni, vol 9, 68-9 as cited in El-Awa, 'Punishment in Islamic Law' (n 4) 128.

⁵³ El-Awa, 'Confession' (n 39) 114-15.

⁵⁴ Cliff Roberson and Dilip K. Das, *An Introduction to Comparative Legal Models of Criminal Justice* (CRC Press, 2016) 154.

⁵⁵ Wahba al-Zuhayli, *Al-Fiqh al-ilami wa-adillatahu* (Dar al-fikr, 1996) vol 6, 782 as cited in Muhammad Khalid Masud, Rudolph Peters and David S Powers, 'Qadis and their Courts: An Historical Survey' in Muhammad Khalid Masud, Rudolph Peters and David S Powers (eds), *Dispensing Justice in Islam: Qadis and their Judgements* (Brill, 2006) 28. El-Awa, *Punishment in Islamic Law* (n 4) 130, credits Malikis and Ibn Qayyim as the main representatives of those who accept circumstantial evidence as proof under sharia.

⁵⁶ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-Hukmiya fil-Siyasat al-Shari'ya* (Cairo, 1960) 7, Ibrahim Shams al-Din Muhammad, *Tabsirat al-Hukkam* (Cairo, 1301 AH) vol 2, 97 as cited in El-Awa, *Punishment in Islamic Law* (n 4) 130; Rudolph Peters, *Islamic Criminal Law in Nigeria* (Spectrum, 2003) 3

not considered valid evidence of adultery or fornication in all schools apart from the Malikis,⁵⁷ who treat pregnancy as circumstantial evidence of illicit sexual intercourse.⁵⁸

Arguing for the validity of circumstantial evidence, Ibn Qayyim (d. 1350) cites the story of Prophet Yusuf,⁵⁹ where circumstantial evidence of his torn shirt was used to exonerate him.⁶⁰ However, there are early sharia examples when circumstantial evidence was found to be misleading and dangerous, such as a man who was sentenced for rape by the Prophet due to having been at the crime scene, until the perpetrator owned up.⁶¹ Possibly due to examples such as these, many scholars restrict circumstantial evidence to non-hudud crimes as many hudud punishments impose the death penalty.

These differences of opinion have seen Islamic jurists disagree over what evidence a judge may use to reach a decision and two views developed,⁶² based on the Qur'anic term for proof, '*bayyina*'.⁶³ Shafei, Hanafi and Hanbali jurists agree *bayyina* refers to witness testimony, citing

(*'Criminal Law in Nigeria'*). Circumstantial evidence is rejected by all schools except Malikis in hudud cases, based on the Prophetic Hadith, 'If I were to stone anyone without proof, I would have stoned so-and-so, for there is obviously doubt concerning her speech, her appearance and those who enter upon her' (Sunan Ibn Majah, Vol 3, Book 20, Hadith 2559 <<https://sunnah.com/urn/1268760>>, accessed 15 October 2019). This hadith leads to the rule that evidence to convict an accused of a *hadd* offence in Islam must be direct, not circumstantial.

⁵⁷ This is because pregnancy can be due to rape and the woman may not want to confess to that or actions that fall short of full intercourse, which creates doubt (Badawy (n 13) 299), such as pregnancy without penetration if semen is placed by artificial means by the woman or someone else (Kamali, 'Hudud Bill of Kelantan' (n 30) 213). Further, if intercourse has occurred under duress, by mistake or without knowledge such as in a woman's sleep and she did not know it was occurring, *hadd* punishment will be suspended – mistake could occur via modern medicine and artificial insemination, which could keep a hymen intact or be done without a woman's knowledge or impaired capacity if say under anaesthetic – based on these possibilities, Kamali says it is 'presumptuous' of Maliki law to take pregnancy as conclusive proof of adultery or fornication (Kamali, 'Hudud Bill of Kelantan' (n 30) 213). Some commentators state defences such as being impregnated during her sleep or petting without penetration are accepted without corroboration (Lawan, Sada and Ali (n 31) 42).

⁵⁸ Malikis accept circumstantial evidence of pregnancy to prove adultery in cases of unmarried women, but not in their waiting period after a divorce or death of a husband. However, Malikis give five years as a maximum gestation period (Brown (n 22) 9). This is based on the doctrine of the 'sleeping foetus', where a woman married before becoming pregnant can claim the child was her former husband's, based on idea that pregnancy can last four to seven years (Peters, '*Criminal Law in Nigeria*' (n 56) 4). Brown points out normally sharia would not allow such miraculous or fantastic claims to carry weight in law, but to create an ambiguity and prevent hudud, this doctrine is accepted (Sulaymān al-Bujayramī, *Hāshiyat al-Bujayrimī 'alā al-Minhāj* (Maṭba'at Muḥammad Shāhīn, 1380/1960) 345; Mullā 'Alī al-Qāri', *Sharḥ Musnad Abī Ḥanīfa*, ed. Khalīl Muḥyī al-Dīn al-Mīṣ (Dār al-Kutub al-'Ilmiyya, n.d.) 487; Muḥyī al-Dīn al-Nawawī, *al-Majmū'*, ed. Muḥammad Najīb al-Muṭī'ī (Maktabat al-Irshād, n.d.) vol 5, 211 as cited in Brown (n 22) 9).

⁵⁹ Qur'an 12:26-28 'If his shirt is torn in front, she speaks the truth...If his shirt is torn at the back, then she has lied...He saw the shirt torn at the back...'

⁶⁰ Ibn Qayyim as cited in El-Awa, 'Confession' (n 39) 123.

⁶¹ Story cited in El-Awa, 'Confession' (n 39) 124.

⁶² Salama (n 1) 109.

⁶³ *Bayyina* in its simplest definition is defined as proof, and is used many times in the Qur'an, such as: 5:32 – 'Our Messengers came to them with Clear Signs [*bayyināt*]' (also translated as evidence); 98:4 – 'Those who were given the Book did not divide into sects until after the Clear Signs [*bayyina*] came to them'.

verse 24:4,⁶⁴ which specifically calls for witnesses.⁶⁵ Hence, in classical *fiqh* procedural law, *bayyina* means witness testimony, but Ibn Qayyim argues it

is a name for everything that renders the truth clear and demonstrates it. ...When [the term] ‘*bayyina*’ is used in the Qur’an, it never has the meaning of two witnesses; rather, it always signifies the argument, the indicator, or the proof...This also holds true for the saying of the Prophet, ‘It is obligatory for the plaintiff to bring the proof that renders things clear’.⁶⁶

According to this definition, proof or evidence means a plaintiff must corroborate their claim, which may involve eyewitnesses or other evidentiary forms, and judges should rely more on proof than verbal testimony and oaths.⁶⁷ Ibn Taymiyya agreed that *bayyina* in the Qur’an is general and not limited to witness testimony, referring to anything that manifests proof.⁶⁸ Accepting circumstantial evidence as proof, Ibn Taymiyya and Ibn Qayyim said since justice is the aim of God’s law whatever means used to achieve this must be taken.⁶⁹ In fact, modern scholars credit these Hanbali jurists with providing jurisprudential support for the legitimacy of circumstantial evidence, which they determine as full and sufficient proof.⁷⁰ Ibn Qayyim asserts that relying only on witness testimony fails to recognise that circumstantial proof is another legitimate method of ascertaining truth,⁷¹ in existence from the days of the Prophet and his Companions.⁷²

The question remains: Can a judge use evidence other than testimony and confession when making a ruling?⁷³ El-Awa argues the search for truth and justice is motivation to accept all evidence types

⁶⁴ Qur’an 24:4 See n 17.

⁶⁵ Salama (n 1) 109.

⁶⁶ Baber Johansen, ‘Signs as Evidence: The Doctrine of Ibn Taymiyya (1293-1328) and Ibn Qayyim Al-Jawziyya (d. 1351) on Proof’ (2002) 9 *Islamic Law and Society* 168, 187. Many verses of Qur’an use the term ‘*bayyina*’ such as 5:32. See n 63. Ibn Taymiyya states every means of establishing the truth is acceptable; there should be no limitations, meaning a judge has the freedom to use any method to make a pronouncement and the parties can use any argument to establish their rights because the Qur’an does not state two witnesses are necessary to reach a verdict, but two kinds of proof, so the judgment methods are wider than two witnesses (Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-Hukmiyya fi’l-Siyasa al-Shar’iyya* (Cairo, 1953) 28, 97 cited in Ibrahim and Mehemed (n 9) 23-4).

⁶⁷ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-hukmiyya fi al-siyasa al-shar’iyya aw al-firasa al-mardiyya fi ahkam al-siyasa al-shar’iyya* (Dar al-Kutub al-‘Ilmiyya, n.d.) 12, 24, 126, 227 cited in Johansen (n 66) 187-8.

⁶⁸ Salama (n 1) 109.

⁶⁹ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-Hukmiyya fil-Siyasat al-Shari’iya* (Cairo, 1960) 15 as cited in El-Awa, ‘*Punishment in Islamic Law*’ (n 4) 131. Ibn Qayyim was a Hanbali jurist and student of the famous theologian and jurisconsult Ibn Taymiyya.

⁷⁰ Johansen (n 66), 180. Ibn Qayyim and Ibn Taymiyya believed jurists who do not admit circumstantial evidence do so based on their own interpretation not on revealed law (Amr A Shalakany, ‘Islamic Legal Histories’ (2008) 1 *Berkeley Journal of Middle Eastern and Islamic Law* 1, 70).

⁷¹ El-Awa, ‘Confession’ (n 39) 124-5).

⁷² Johansen (n 66) 187. See below Chapter IVA with the example of Ali and his testing of semen on a dress.

⁷³ El-Awa, ‘Confession’ (n 39) 126.

in sharia,⁷⁴ whose goal is to give judges room to consider a range of arguments to help an accused and fulfil people's rights.⁷⁵ In fact, Ibn Qayyim warns against jurists who neglect signs and circumstantial evidence, leaving claimants 'without any legal consequences...[causing] many legal claims to perish'.⁷⁶ This is significant for implementing new evidentiary forms into sharia that would constitute irrefutable proof, and fulfil the standard of *bayyina*, such as modern technology. Nevertheless, most scholars classify modern technology, such as forensic evidence, as circumstantial.⁷⁷ Agreeing with this classification, Kamali argues, so long as there is no full confession, adultery, along with all other hudud, should only be prosecuted by witness testimony or confession.⁷⁸ This restricts hudud to limited, traditional evidentiary forms to avoid increasing proofs for these severe crimes, which this thesis supports.

4 Doubt

Conviction of an accused must be without reasonable doubt,⁷⁹ it must be founded on assurance and certainty not mere probability, and any doubt is resolved in favour of the accused.⁸⁰ The underlying maxim when prosecuting sharia crimes is the Hadith that has come to establish the principle there is no penalty in the case of doubt:⁸¹ 'Avert the legal penalties [hudud] from the Muslim as much as possible, if he has a way out then leave him to his way, for if the Imam [ruler] makes a mistake in forgiving [finding innocence] it would be better than making mistake in punishment [finding guilt]'.⁸² This doubt maxim was developed to enforce hudud only when

⁷⁴ Ibid 127.

⁷⁵ Ibrahim and Mehemeed (n 9) 29.

⁷⁶ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-hukmiyya fi al-siyasa al-shar'iyya aw al-firasa al-mardiyya fi ahkam al-siyasa al-shar'iyya* (Dar al-Kutub al-'Ilmiyya, n.d.) 100 cited in Johansen (n 70) 188.

⁷⁷ See Chapters IV and VB(1).

⁷⁸ Muwaffaq al-Din ibn Qudamah, *Al-Mughni* (Dar al-Kita al-'Arabi, 1403/1983) X, 192; Abd al-Qadir 'Awdah, *Al-Tashri al-Jina'i al-Islami* (Dar al-Kitab al-Arabi) as cited in Kamali, 'Hudud Bill of Kelantan' (n 30) 212.

⁷⁹ Farhad Malekian, *The Concept of Islamic International Criminal Law: A Comparative Study* (Brill, 1994) 363.

⁸⁰ al-Saleh (n 51) 67.

⁸¹ Roberson and Das (n 54) 151.

⁸² *Jami' al-Tirmidhi* 5: Chapter 16, Hadith 1424, <https://www.islamicfinder.org/hadith/tirmidhi/legal-punishments-al-hudud/>, accessed 12 October 2019. The doubt canon was not always well-known to Islamic law, and not at all known to the earliest Muslim jurists as a Prophetic statement (Intisar A Rabb, "Reasonable Doubt" in Islamic Law' (2015) 40 *Yale Journal of International Law* 41, 46). Rabb argues Muslim jurists developed this doubt doctrine to repress excessive state violence particularly over criminal law, and it went from a practice-based maxim into a textual legal rule (Rabb 'Doubt in Islamic Law' (n 20) 93). Doubt has become a legal maxim that has developed as an established principle to assist legal decision making (Rabb, *Doubt in Islamic Law* (n 20) 12-13). Even though the Hadith regarding doubt is weak, Imam Shawkani cites other hadith and statements of Companions evidencing this position is well-known despite its weakness and it is a valid ground for arguing the legality of repealing hudud (Ibrahim and Mehemeed (n 9) 25).

crimes were public, proved with certainty and without mitigating factors, the absence of which avoided punishment.⁸³

The doubt maxim has traditionally played a significant role in proving paternity under sharia. Paternity's significance in pre and post-Islamic society meant the assertion of illegitimacy and illicit relations could have disastrous effects on children unclaimed by their fathers or tribes; hence, jurists established the maxim that 'the child belongs to the marital bed',⁸⁴ to avoid the criminal and social consequences of illegitimacy, and avoid punishment based on doubt.⁸⁵ That scholars created maxims chiefly to avoid punishment and fulfil sharia objectives of deterrence over punishment, serves further to likewise limit the use of modern technology as a new proof for hudud crimes.

D Conclusion

Incorporation of modern technology in hudud evidentiary proofs entails assessing the categories of evidence a judge may consider in such cases. Many modern states that impose Islamic law or a version of it continue to favour eyewitness testimony, confession and oaths to prove hudud crimes.⁸⁶ The issue of how to apply, reinterpret or reject as anachronistic traditional sharia criminal evidence laws in light of technological advancements is the main question of this thesis. Should a judge be strictly confined to witness testimony and confession or can they venture from these traditional proofs and incorporate modern technology forms, and what category of proof should technology take? This thesis argues the traditional doctrine of sharia evidence allows all forms of proof (*bayyina*) that elicit truth. This indicates on face value that modern technology, as an accurate method of eliciting evidence, can be included within the sharia framework. However, there are restrictions to using modern technology given the uniqueness of hudud crimes in Islam that differ from other penal codes, particularly those of modern nations.

Hudud crimes accept only those traditional forms of evidence having a high degree of reliability, which limit conviction and punishment to cases where there is certainty of the defendant's guilt, and which consequently do not admit circumstantial evidence. It is not sharia's aim to expand

⁸³ Rabb, *Doubt in Islamic Law* (n 20) 132.

⁸⁴ Hereinafter called the 'marital bed maxim'. This is the legal principle that the child is affiliated to the conjugal bed: '*Al-walad lil-farash*' (Sahih Muslim, *Kitab Al-Rida* Book 8, Hadith 3436-7; Jami' at-Tirmidhi, *Kitab Al-Rida* Vol 1, Book 7, Hadith 1157; Sunan an-Nasa'i, *Kitab Al-Talaq* Vol 4, Book 27, Hadith 3512; Sunan Ibn Majah, *Kitab Al-Nikah* Book 9, Hadith 2083 <https://sunnah.com/>, accessed 15 October 2019).

⁸⁵ Rabb, *Doubt in Islamic Law* (n 20) 119. An example of this is when Umar did not convict a pregnant woman who claimed to have been raped; jurists cited doubt as there were no witnesses nor a confession (Rabb, *Doubt in Islamic Law* (n 20) 117).

⁸⁶ The analysis of modern Muslim jurisdictions' hudud laws and penal codes is outside the scope of this thesis.

proof to increase hudud convictions. *Maqasid* and evidentiary standards, such as the doubt maxim and rules regarding confession retractions, illustrate an overarching theme to limit hudud punishment, its main objective being deterrence from committing crimes against God. For adultery, the severe punishment is a constant reminder of its heinous act no matter how much society may accept, ignore or decriminalise it. The high evidentiary requirements of four eyewitnesses to the act of penetration, coupled with the *qadhif* penalty for failure to meet this burden of proof, indicate the law's real purpose is to prevent public displays of indecency.⁸⁷ As such, it would not be in the interests of sharia and Islamic justice to increase the likelihood of proving adultery or any *hadd* crime using modern technology.

This thesis argues, in light of such considerations, it is appropriate to narrowly define and limit hudud proof to traditional methods, effectively denying modern technology as definitive evidence for these crimes. Specifically, sharia evidence rules for hudud crimes should remain exacting and restricted, resisting the impact and benefit of modern technology because their severe punishments necessitate such limitations in line with *maqasid*. Modern technology as a new evidentiary form may be seen as circumstantial and even fall under the category of doubtful evidence (due to potential corruption of data and other technical failings) rendering it insufficient for hudud crimes. Rather, technology may be better used as proof for crimes falling under *taazir*, which are more liberal in admitting evidence.⁸⁸ It is therefore necessary for sharia to update evidentiary standards and proofs for non-hudud crimes, not for easier convictions, but to allow modern proofs that elicit accurate information and fulfil the conditions of evidence defined in the sources.

⁸⁷ Cheema and Mustafa (n 30) 20.

⁸⁸ Al-Saleh (n 51) 75. See Chapters IV and V for further discussion on this point.

IV THE PROBATIVE VALUE OF MODERN TECHNOLOGY IN SHARIA CRIMINAL LAW

In its entirety, Qur'an aims to prohibit all acts detrimental to society.¹

This chapter examines the historical and modern commentary over the use of modern technology as a form of evidence, over and above its evidentiary categorisation. The early days of Islam are investigated to discover how the Prophet and his Companions used modern scientific means as proof. Modern scholars have pursued this course, asserting Islamic sources under *ijtihad* acknowledge and prescribe using available and reliable means to establish evidence. Consequently, all forms of technology and scientific advancement are legitimate and desirable proofs. Although majority scholars do not accept such proofs as hudud evidence, modern technology can, at minimum, be used legitimately and appropriately within the sharia penal system under *taazir*.² To this end, suggestions are made by modern scholars to establish multi-disciplinary committees facilitating the incorporation of modern proofs into sharia.

A *The Use of Technology in Sharia*

The way sharia criminal law was executed in former days 'may be totally irrelevant to the contemporary framework'.³ For example, in the Prophet's day, there was no formal police force nor professional lawyers, but that does not mean none should exist in the modern world. The fact evidence in the seventh century was based almost entirely on eyewitness testimony does not preclude using modern technical and scientific means.⁴ In fact, the Prophet urged the search for science and knowledge,⁵ and the Qur'an gives scientific approaches to problems of the creation and the universe.⁶ Hence, using contemporary scientific developments, including modern

¹ Taymor Kamel, 'The Principle of Legality and its Application in Islamic Criminal Justice' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 157, 152.

² See Chapter IIID.

³ M Cherif Bassiouni, 'Introduction' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) xvii ('Introduction').

⁴ Awad M Awad, 'The Rights of the Accused Under Islamic Criminal Procedure' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 91, 92. Notwithstanding the limitations of circumstantial evidence to prove hudud crimes.

⁵ 'Seeking knowledge is a duty upon every Muslim...' Sunan Ibn Majah, Book 1, Hadith 29 (<https://sunnah.com/urn/1252230>, accessed 15 October 2019; 'whoever goes out seeking knowledge, then he is in Allah's cause until he returns' Jami' Al-Tirmidhi, *Kitab Al-'Ilm*, Vol 5, Book 39, Hadith 2647, <<https://sunnah.com/tirmidhi/41/3>>, accessed 15 October 2019.

⁶ Many verses in the Qur'an have been found to represent scientific truths only discovered in the last century. This discussion is outside this thesis' scope, but brief examples include: 21:30 '...that the heavens and the earth were sewn together and then We unstitched them and that We made from water every living thing' – this verse represents earth's former single land mass and that water is the basis for every living organism ; 22:5 'We

technology, to aid the administration of criminal justice is within the spirit and duty of fulfilling sharia laws' objectives.⁷ Further, modern forensic evidence is a form of expert opinion supported in sharia by the Sunna, Companion consensus and *ijtihad*,⁸ and evidenced by Islamic legal literature instructing *qadis* to use experts when professional advice was necessary.⁹ It appears sharia has always used whatever means is available to accurately determine guilt or innocence. The Prophet, by his decisions, established precedents regarding forensic sciences long before they came into existence.¹⁰ In fact, there are many examples where physical indicators in sharia have traditionally been regarded as stronger evidence than witness testimony, because they do not lie,¹¹ such as the Prophet using experts on lineage (physiognomists) to determine paternity.¹² This example was followed by the Companions, Righteous Caliphs and Sunni schools.¹³

The Companions also recognised the legitimacy of expert testimony and extent of forensic sciences. For example, a woman who claimed rape produced a cloth with what she claimed was semen, so Ali soaked traces of the stain in boiling water, turning them to solid white, and upon smelling it was found to be egg-white not semen.¹⁴ This example gives sharia a legal framework to modernise the judicial system by incorporating forensic sciences.¹⁵

created you from a drop of sperm then from a clot of blood then from a lump of flesh' – Dr Keith Moore, embryologist, has affirmed the scientific accuracy of human development as described in the Qur'an.

⁷ Awad (n 4) 92.

⁸ The Prophet stated human technical knowledge and expertise, not revelation, are to constitute the foundations of evidence and proof, evidenced in the Hadith, 'I am only a human being, and you bring your disputes to me, some perhaps being more eloquent in their plea than others, so that I give judgement on their behalf according to what I hear from them...' (Sunan Abu Dawud, *Kitab Al-Aqdiyah*, Book 24, Hadith 3576 <<https://sunnah.com/abudawud/25/13>>, accessed 15 October 2019) – From this hadith we understand that evidence and proof are part of 'human affairs', and 'its simplicity, or complexity' depends on advances in the field of technical knowledge to administer justice (Sayed Sikander Shah Haneef, 'Modern Means of Proof: Legal Basis for its Accommodation in Islamic Law' (2006) 20(4) *Arab Law Quarterly* 339 ('Modern Means')).

⁹ Ron Shaham, *The Expert Witness in Islamic Courts: Medicine and Crafts in the Service of Law* (University of Chicago Press, 2010) 58.

¹⁰ Haneef, 'Modern Means' (n 8) 340.

¹¹ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-hukmiyya fi al-siyasa al-shar'iyya aw al-firasa al-mardiyya fi ahkam al-siyasa al-shar'iyya* (Dar al-Kutub al-'Ilmiyya, n.d.) 211-12, cp 7, 12 cited in Baber Johansen, 'Signs as Evidence: The Doctrine of Ibn Taymiyya (1293-1328) and Ibn Qayyim Al-Jawziyya (d. 1351) on Proof' (2002) 9 *Islamic Law and Society* 168, 189.

¹² Haneef, 'Modern Means' (n 8) 339; The Prophet used such evidence as sufficient to establish the paternity of Zayd b. Harith over Usama b. Zayd This will be further discussed under DNA and physiognomy (Shaham (n 9) 58).

¹³ All except the Hanafis accept this as a form of evidence (Muhammad b. Abi Bakr Ibn Qayyim Al-Jawziyya, *Al-Turuq al-Hukmiyya fi'l-Siyasa al-Shar'iyya* (Dar Ihya' al-'Ulum, n. d.) 226-8 cited in Shaham (n 9) 46. Ibn Qayyim criticises the Hanafi position, querying how they can deny physiognomy yet establish paternity merely on marriage even if a husband and wife are separated (Shaham (n 9) 157).

¹⁴ Anwar Mahmud Dabur, *Al-Qara'in wa Dawruha fi al-Fiqh al-Jina'i al-Islami* (Dar al-Thaqafah, al-Arabiyyah, 1985) 214; Isam Ghanem, *Islamic Medical Jurisprudence: Comparative Forensic Medicine* (Yemen Publishing, 1987) 51 as cited in Haneef, 'Modern Means' (n 8) 340.

¹⁵ Haneef, 'Modern Means' (n 8) 341.

Succeeding generations of scholars used forensic science, calling it expert opinion (*al-ra'y al-khabir*).¹⁶ Their *ijtihad* was based on using expert opinion in revealed texts, such as the Qur'anic story of Prophet Yusuf, used by many scholars to evidence the use of an expert, where a wise man instructed the location of the shirt's tear would validate or deny Yusuf's claim.¹⁷ This story is seen to constitute authority in favour of the admissibility of expert opinion in conformity with forensic evidence.¹⁸ The wise man has been analogised to a forensic sociologist of today.¹⁹ Ibn Taymiyya and Ibn Qayyim give examples involving technology and science in their legal pronouncements, where they suggest a married woman's claim that her husband is impotent should be checked by telling him to ejaculate on a piece of cloth, after which fire is set to the liquid to establish whether it is sperm or merely a white substance; if the liquid boils and leaves a dry residue, it is sperm and the marriage is validated.²⁰ Hence, forensic evidence has a basis in the Qur'an, Sunna and *ijtihad*, the main sources of sharia.

The introduction of modern technology into sharia evidence laws can be analogised with the emergence of documentary evidence. Traditionally, Muslim jurists distrusted documents and they had no independent evidentiary value, as they could be tampered or forged, even though this conflicts with the Qur'an, which enjoins that contracts be written.²¹ However, by the 19th century, Muslim jurists accepted documentary evidence, and they became indispensable in sharia.²² Modern technology, though accepted carefully and slowly, has impacted the Muslim world through areas such as DNA testing and measures are being taken to fit such technologies within traditional sharia rules and procedures.²³

¹⁶ Ibid. Experts such as doctors were used to decide on compensation for injuries.

¹⁷ Shaham (n 9) 29.

¹⁸ Haneef, 'Modern Means' (n 8) 341. Qur'an 12:26-28 (see Chapter III n 59).

¹⁹ Haneef, 'Modern Means' (n 8) 342.

²⁰ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-hukmiyya fi al-siyasa al-shar'iyya aw al-firasa al-mardiyya fi ahkam al-siyasa al-shar'iyya* (Dar al-Kutub al-'Ilmiyya, n.d.) 48-49 cited in Johansen (n 11) 188.

²¹ Ahmed Akgunduz, *Islamic Public Law: Documents on Practice from the Ottoman Archives* (IUR Press, 2011) 557. Qur'an 2:282 'When you take on a debt for a specified period, write it down'.

²² Émile Tyan, 'Le Notariat et le Régime de la Preuve par Écrit dans la Pratique du Droit Musulman', Université de Lyon, *Annales de l'Ecole Française de Droit de Beyrouth* (St Paul Publishers 1945) vol 2, 91 as cited in Stefan Knost, 'The *Waqf* in Court: Lawsuits over Religious Endowments in Ottoman Aleppo' in Muhammad Khalid Masud, Rudolph Peters and David S Powers (eds), *Dispensing Justice in Islam: Qadis and their Judgements* (Brill, 2006) 433; Muhammad Khalid Masud, Rudolph Peters and David S Powers, 'Qadis and their Courts: An Historical Survey' in Muhammad Khalid Masud, Rudolph Peters and David S Powers (eds), *Dispensing Justice in Islam: Qadis and their Judgements* (Brill, 2006) 28; Akgunduz (n 21) 547; Mathias Rohe, *Islamic Law in the Past and Present*, tr Gwendolin Goldbloom (Brill, 2015) 51.

²³ See Chapter V.

B Modern Scholars' Views on Technology

This thesis argues there is no discrepancy between retaining immutable sharia laws while simultaneously updating other laws and procedures, including the integration of modern technology. Inherent within this update, the challenge for modern jurists and scholars is maintaining *maqasid*. Qaradawi tries to reconcile between classical fatwas (Islamic legal rulings) and current research, particularly in areas unfamiliar to Muslim scholars, such as medicine and other science fields.²⁴ He cites, for example, the classical *fiqh* Maliki rule that allows up to five or seven years for pregnancy, which he argues is now unsuitable due to medical research.²⁵ Past *ijtihad* was naturally based on custom and public interest, which Qaradawi believes can legitimately be reviewed under a modern light.²⁶ Bassiouni further argues scientific and technological developments of modern penal systems are not incompatible with the basics of the sharia criminal justice system.²⁷ However, given the intricacies and divine aspects of sharia penal laws, modern developments must be introduced thoughtfully with a view to the ramifications on traditional laws such as hudud. Combining these views brings the conclusion that update and integration based on modern scientific development and technology are acceptable and necessary within sharia.

This attitude of integration agrees with recommendations made by Kamali. Specifically looking at evidence laws, Kamali states *ijtihad* is necessary to implement new technologies in the modern world, as it looks at a wider framework by incorporating sharia's goals; hence, traditional legal maxims relating to evidence may call for adjustment due to the reliability of modern proofs, such as photographs, sound recordings and DNA, that did not exist in earlier times.²⁸ For example, modern technology in proving non-hudud crimes, such as rape,²⁹ provides reliability as an evidentiary source that certainly fulfils the Qur'anic criteria of *bayyina*. In recognising classical *fiqh* refuses scientific proofs in hudud crimes, Haneef nevertheless lends support to its introduction with other corroborative evidence.³⁰ However, this thesis argues such introduction into hudud

²⁴ Yasmin Hanani Mohd Safian, 'The Contribution of Yusuf Qaradawi to the Development of Fiqh' (2016) 4 *Electronic Journal of Islamic and Middle Eastern Law* 45, 50.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Bassiouni, 'Introduction' (n 3) xvii.

²⁸ Mohammad Hashim Kamali, 'Legal Maxims and Other Genres of Literature in Islamic Jurisprudence' (2006) 20(1) *Arab Law Quarterly* 77, 100.

²⁹ Moeen H Cheema and Abdul-Rahman Mustafa, 'From the Hudood Ordinances to the Protection of Women Act: Islamic Critiques of the Hudood Laws of Pakistan' (2008-09) 8 *UCLA Journal of Islamic and Near Eastern Law* 1, 33-34.

³⁰ Sayed Sikander Shah Haneef, 'Discourse on *Hudud* in Malaysia: Addressing the Missing Dimension' (2010) 12(2) *Journal of Islamic Law and Culture* 131, 143 ('Discourse on Hudud').

proofs would only increase guilty findings in crimes that are mainly of deterrent value and not designed for routine punishment. As discussed,³¹ the use of such evidence for non-hudud criminal cases and as corroborative evidence to lessen a hudud charge to *taazir* is desirable, otherwise its use to prove strict hudud crimes would not serve sharia's objectives.

In their recommendations for sharia reform within the Muslim world modern scholars have suggested combining knowledge from various disciplines. Haneef suggests developing an Islamic criminal procedure code based on sharia principles that incorporates modern scientific proofs, findings by psychiatrists on an accused's mental state and other modern technological prosecution techniques.³² Ramadan argues that Islamic scholars and scientists are not consulting enough and combining skills in Islamic legal councils to produce innovative sharia rules.³³ Traditional *usul al-fiqh* (jurisprudential methodology) needs reconsideration and a combination of knowledge based on the universe and nature with the *maqasid* of Islam's general message must be implemented within this transformation by scholars from different fields working together.³⁴ Ramadan suggests fatwa committees, involving Islamic science scholars working with specialists in fields of medicine, economics and so on, to answer the complex needs of societies and assist in this reform will enable contemporary Islamic thought to reconcile itself to the essence of its message.³⁵ This is in line with Kamali's suggestion to update sharia via *ijtihad* using a council to seek harmonisation between sharia and civil law that would seek advice from academics, jurists, practicing lawyers, research bodies and institutions, as deemed necessary, to adopt decisions and legislative proposals that contemplate public welfare and partake in sharia-based fatwa and *ijtihad*.³⁶ These suggestions are most appropriate given the myriad modern technologies, such as DNA testing, and their potential impact on traditional sharia crimes and other laws.

C Conclusion

Having established that modern technology is an acceptable form of proof under sharia hailing from the days of the Prophet at least for non-hudud crimes, the question then becomes not the legitimacy but the desirability of implementing modern technological evidence. Such considerations produce varied opinions between scholars and Muslim states, yet this does not

³¹ See above Chapter IIID.

³² Haneef, 'Discourse on Hudud' (n 30) 143.

³³ Tariq Ramadan, *Radical Reform: Islamic Ethics and Liberation* (Oxford University Press, 2009) 5.

³⁴ Ibid 3-4.

³⁵ Ibid 132.

³⁶ Mohammad Hashim Kamali, 'Shari'ah and Civil Law: Towards a Methodology of Harmonization' (2007) *Islamic Law and Society* 391, 413.

necessarily mean one position is more correct or closer to accurate sharia interpretation. If opinions are based on sharia principles and follow established jurisprudential methodology different positions can legitimately result. Sharia must develop procedures in harmony with its goals and objectives to protect public interest and allow development and reform regardless of the community or era. This may mean only certain technology proofs are accepted and integrated into hudud evidence based on their individual characteristics. CCTV surveillance and its ability to prove crimes such as adultery, and DNA testing and its impact upon paternity verification have been chosen as examples for examination of the impact modern technological advancements have upon sharia evidence laws.

V REFORMING SHARIA CRIMINAL LAW TO USE MODERN TECHNOLOGICAL EVIDENCE

This chapter analyses two examples of modern technology – CCTV and DNA testing – and their capacity to fulfil sharia rules of evidence. These two examples are useful in evaluating the tension modern technology poses to sharia evidence laws. While these technologies may fit the definitions of evidentiary acceptability under sharia, due to their invasiveness their utility has restrictions. As established in previous chapters, it is not in sharia's interests to use modern technology or any other method to increase hudud proof, whose main objective is deterrence. Hence, CCTV surveillance is briefly examined and balanced against the sharia principles of privacy and *satr*. DNA testing is assessed as proof providing scope for paternity verification, analogised with physiognomy, and its impact under civil or family legislation regarding maternal and child welfare issues is considered. The practice of *li'an* as a form of marital termination is critically analysed followed by a synopsis of some modern fatwas on these issues.

A CCTV Surveillance and Sharia Restrictions

In the same way documentary evidence came to be relied upon and accepted into evidence laws as society moved toward a written culture, modern technology will likely gain authority and become acceptable within sharia when Muslim communities and governments see its significance and prevalence. This is the case with CCTV, which is appropriate and essential in the modern age as evidence for crimes that traditionally needed eyewitness accounts. However, this technology should be rejected under hudud evidence to limit the imposition of harsh punishments and fulfil the *maqasid* of deterrence that informs the Islamic penal code.

There are several verses in the Qur'an and Hadith addressing privacy, which affect the use of modern technology as a form of proof, particularly CCTV surveillance and DNA testing.¹ Under

¹ Privacy principles are necessary to investigate when looking at modern technology's impact on sharia evidence laws. However, a justified analysis is outside the scope of this thesis. Privacy principles are based on the most authoritative Islamic sources, the Qur'an and Sunna. Qu'ran 49:12 exhorts people to avoid suspicion because it is wrong in some cases, and prohibits spying and backbiting, equating it with eating the flesh of one's dead brother; and 24:27-29 discusses the sanctity of homes and entering only with permission, greeting the inhabitants, and leaving if asked to leave. Sunna has further warned, 'Beware of suspicion, for suspicion is the worst of false tales...and do not spy' (Sahih al-Bukhari, Vol. 8, Book 73, Hadith 90 <<https://sunnah.com/bukhari/78/94>>, accessed 14 October 2019). But Sunna goes further, exhorting believers not to reveal acts to dishonour a Muslim, per the Hadith, "The servant (whose fault) Allah conceals in this world, Allah would also conceal (his faults) on the Day of Resurrection" (Sahih Muslim, *Kitab al-Birr wal-Silah wal-Aadab*, 2590, Book 32, Hadith 6267, <<https://sunnah.com/muslim/45/92>>, accessed 14 October 2019). Interestingly, the Prophet advised against confessing personal sins to keep misconduct private, 'Avoid these impurities which God has prohibited. Whoever commits any sin should conceal his act with the shelter of God and repent to Him. Verily, if he divulges his act to us, the law of God will, certainly, be applied to him'. When Maez came to the Prophet to confess adultery, the Prophet told the friend who brought him, 'If you had covered him with your garment it would have been better for you' (Sunan Abu Dawud, *Kitab al-Hudud*, 4377, Book 39, Hadith 4364, <<https://sunnah.com/abudawud/40/27>>, accessed 14 October 2019). This is known as the principle of *satr* and

sharia, the theory is that immoral behaviour does not pose a threat to society if it remains private; hence, the public punishments.² Privacy is a central tenet in Islam, where Islamic theological interpretations based on the Qur'an and Sunna recognise the right to 'freedom from unauthorized and unannounced intrusion into private spaces', protecting one's home and private life,³ and views suspicion, spreading rumours and surveillance as sinful conduct.⁴ This means individual rights and freedoms must not be sacrificed even to prove an offence, as the benefits do not justify the breach of these basic human rights.⁵ This is exemplified by the story of Umar breaching an individual's privacy by climbing the wall of their home and then leaving, even though they were engaged in sin.⁶ Al-Qurtubi (d. 1273) interprets the Qur'anic spying verses as saying an individual may not be subject to searches, surveillance, invasion of privacy in any manner or disclosure of confidences on the basis of dubious suspicion that they may have committed a crime.⁷

Modern authors agreeing with Al-Qurtubi have further circumscribed privacy rules and found it would also be impermissible under sharia to bug an accused person's room, spy through a window,⁸ open their mail, have surveillance or a conversation recorded over the phone or otherwise eavesdrop, or do anything else to infringe upon these rights unless there is sufficient and

seems a higher principle than reporting to the state (Michael Cook, *Commanding Right and Forbidding Wrong in Islamic Thought* (Cambridge University Press, 2000) 481.

- ² The Qur'anic spying verses have been traditionally interpreted as not only forbidding innocent inquisitiveness but to prevent scrutinising people's sinful behaviour inside their homes as society holds a person accountable only for their public behaviour and judged by God alone for private sin (Eli Alshech, 'Do Not Enter Houses Other Than Your Own: The Evolution of the Notion of a Private Domestic Sphere in Early Sunni Islamic Thought' (2004) 11(3) *Islamic Law and Society* 291, 324).
- ³ Lara Aryani, 'Privacy Rights in Shari'a and Shari'a-Based States' (2007) 3(2) *Journal of Islamic State Practices in International Law* 3; Awad M Awad, 'The Rights of the Accused Under Islamic Criminal Procedure' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 91, 105.
- ⁴ Ibrahim Bechrouri, 'The Informant, Islam, and Muslims in New York City' (2018) 16(4) *Surveillance and Society* 459, 460.
- ⁵ Adel Omar Sherif, 'Generalities on Criminal Procedure under Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 8.
- ⁶ By far one of the most famous narrations regarding privacy concerns the actions of Umar the second Caliph, who one evening on his nightly patrol climbed the wall of a house upon hearing suspicious sounds and found people inside drinking wine. As drinking alcohol is considered a serious crime in Islam, he reproached them, but they said, 'If we have committed a single error then you have committed three. You erred when you spied, and God says, "Do not spy." You erred when you climbed into the house for God says, "and approach the houses by their doors." And you erred when you did not give a greeting as God says, "until you ask permission and greet their occupants."' Umar agreed with them and walked away. (Story related in Taha J al 'Alwani, 'The Rights of the Accused in Islam' (1995) 10 *Arab Law Quarterly* 3, 14-15; Imam Muhammad Shirazi, *The New Order for the World of Faith, Freedom, Welfare and Peace*, <http://w-ww.shirazi.org.uk/freedom.htm#-ftn1>, cited in Aryani (n 3) 4-5.)
- ⁷ 'Alwani (n 6) 15.
- ⁸ Matthew Lippman, Sean McConville and Mordechai Yerushalmi, *Islamic Criminal Law and Procedure: An Introduction* (Greenwood Press, 1988) 29 as cited in Tarek Badawy, 'Towards a Contemporary View of Islamic Criminal Procedures: A Focus on the Testimony of Witnesses' (2009) 23 *Arab L.Q.* 269, 66.

legally valid evidence to show involvement of a crime.⁹ Scholars have used Umar's Hadith as the basis to prevent government interference in one's home so that evidence gathered through unlawful searches or spying is inadmissible proof of criminality.¹⁰ These principles mean privacy may override the duty to report crime.¹¹ Muslim scholars see privacy as a means to foster social and community harmony, but once in the public domain, scholars no longer protect the individual against state invasion:¹² 'Privacy thus ends where the threat to society begins'.¹³

This discussion leads to analysis of CCTV and its impact on proofs for adultery. As discussed above,¹⁴ Islamic evidence laws and the consequences of evidentiary transgression (namely *qadhf*) act as a restriction to initiating adultery prosecutions. Combined with Islamic privacy-related regulations, the 'evidentiary requirements create a zone of [individual] privacy that protects private consensual sex from State regulation'.¹⁵ Given these strict evidentiary requirements, the *hadd* crime of adultery is one of public indecency infringing the community's rights,¹⁶ requiring the act to be 'performed so openly that four people see them without invading their privacy'.¹⁷ This accords with the Hadith on *satr*¹⁸ that states, if an action affects none other than the culprit, it is

⁹ 'Alwani (n 6) 16; Awad (n 3) 105. See further n 10 on what evidence is necessary to warrant state interference.

¹⁰ If the state unlawfully searches, enters or spies into one's home, most scholars agree the evidence obtained through this privacy violation is inadmissible as proof of criminal misconduct (Seema Saifee, 'Penumbra, Privacy, and the Death of Morals-Based Legislation: Comparing U.S. Constitutional Law with the Inherent Right of Privacy in Islamic Jurisprudence' (2003) 27(1) *Fordham International Law Journal* 370, 418); Osman Abd-el-Malek al-Saleh, 'The Right of the Individual to Personal Security in Islam' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 69-70; Matthew Lippman, Sean McConville and Mordechai Yerushalmi, *Islamic Criminal Law and Procedure: An Introduction* (Greenwood Press, 1988) 29 as cited in Badawy (n 8) 66.) There is however discrepancy, where some scholars advocate breaching privacy to stop wrongdoing, and others state not to invade privacy under any circumstances. Among those who allow privacy breaches to prevent wrong, there is discrepancy over the extent the state may interfere with private acts. Some scholars require a good reason to enter a home believing a wrong is being committed, while others require actual knowledge (see the discussion in Cook (n 1) 480-2) or independent corroboration (Awad (n 3) 105).

¹¹ Cook (n 1) 99. On this point, Uqba ibn 'Amir quotes the Prophet, 'He who sees something which should be kept hidden and conceals it will be like one who has brought to life a girl buried alive' (Sunan Abu Dawud, *Kitab Al-Adab* 4890, Book 42, Hadith 4872 <<https://sunnah.com/abudawud/43>>, accessed 16 October 2019). See n 1 on *satr*.

¹² Alshech (n 2) 329.

¹³ Ibid 326.

¹⁴ See Chapter IIIB.

¹⁵ Saifee (n 10) 372.

¹⁶ Saifee (n 10) 415; Mohamed Al Awabdeh, 'History and Prospect of Islamic Criminal Law with respect to the Human Rights' (PhD Thesis, Humboldt-Universität, 2005) 24-5; Ann Black, Hossein Esmaeili and Nadirsyah Hosen, *Modern Perspectives on Islamic Law* (Edward Elgar, 2013) 236-7. Punishment of these breaches is not the main objective; rather, it is used as a deterrent to not transgress God's boundaries. See Chapter IIIB.

¹⁷ Asifa Quraishi, 'Her Honor: An Islamic Critique of the Rape Laws of Pakistan From a Woman-Sensitive Perspective' (1997) 18 *Michigan Journal of International Law* 287, 296.

¹⁸ See n 1 on the principle of *satr*.

best to leave the behaviour in the private sphere without bringing it to public knowledge.¹⁹ Private sin has repentance as its rectification, but public sin must be addressed by the state mechanism. In line with these principles, scholars traditionally encourage people to keep illicit sexual encounters private, while creating detailed privacy laws ‘designed to prevent the political authorities from prosecuting anything but brazen, public criminal acts’.²⁰

Therefore, the state cannot break into a person’s room and punish for adultery nor plant a camera in a hotel room and record breaches of a sexual nature or drinking alcohol for example,²¹ let alone peek into another’s residence, where consensual sex would typically occur.²² In Islam, the privacy of the individual and all other types of privacy must be respected and preserved, unless something occurs that requires otherwise.²³ How this concept interacts with modern technology is interesting as technology can be used to elicit strong evidence or provide cause to spy or begin surveillance on a suspect, thus breaching their privacy. This is an area where Muslim scholars and jurists must tread lightly to not breach sharia. Modern technology could surpass the need for eyewitnesses and prove adultery by computerised eyes. However, questions over photographic evidence pose issues as photographs and videos can be manipulated or falsified.²⁴ Other issues regarding modern surveillance, such as covertly tracking a person by mobile phone, collecting personal information,²⁵ or searching a computer without being invited to do so²⁶ remain unanswered in sharia. Such forms of modern surveillance pose enough issues to create doubt and nullify hudud punishment; moreover, using technology to increase hudud convictions runs counter to *maqasid*, particularly as such crimes seek deterrence over punishment. Under such circumstances, using CCTV or other modern technologies to catch adulterers in the absence of eyewitnesses would not serve sharia’s purpose of deterrence, and would not be admitted as evidence.²⁷ However, the

¹⁹ Lawrence Rosen, *The Justice of Islam: Comparative Perspectives on Islamic Law and Society* (Oxford University Press, 2000) 192.

²⁰ Intisar A Rabb, ‘Doubt’s Benefit: Legal Maxims in Islamic Law, 7th-16th centuries’ (PhD Thesis, Princeton University, 2009) 169.

²¹ Al Awabdeh (n 16) 24-5.

²² Saifee (n 10) 448-9; see nn 1, 2, 10, 17 and accompanying texts.

²³ ‘Alwani (n 6) 15.

²⁴ Badawy (n 8) 298. While there is discussion indicating that reliability of such images may be identified by other sources of modern technology the issue remains that such potential for tampering reduces its reliability for the most serious hudud crimes. Details of this discussion are outside the scope of this thesis.

²⁵ Alex Emmons, ‘New York Police Have Used Stingrays Widely, New Documents Show’ (11 February 2016) *The Intercept*, <<https://theintercept.com/2016/02/11/new-york-police-have-used-stingrays-widely-new-documents-show/>>, accessed 11 October 2019.

²⁶ Bechrouri (n 4) 461.

²⁷ See n 10.

desirability of retaining modern technology to assist with evidence for non-hudud (*taazir*) crimes is appropriate, and in keeping with modernity and international standards of crime proof.

Under sharia, privacy of the individual appears more important than the crime. The legal maxims that promote erring on the side of caution, hadith regarding *satr*, severe punishment and consequences of *qadhaf*, lead to the conclusion that adultery, as a private consensual act, is not a crime intended to be punished. The aim is not to let crime go unpunished but to only mete out harsh punishments if overwhelming public evidence can be produced. It is not in society's interests to reduce evidentiary standards for hudud punishments. Rather, traditional evidentiary requirements that are difficult to prove are necessary for these traditional punishments.

B DNA Testing as a Modern Technology

The discovery of DNA fingerprinting has been hailed as one of the most important achievements of modern biomedical technology.²⁸

Naturally, some proofs are not mentioned in the Qur'an or Sunna simply because they did not exist 14 centuries ago.²⁹ Forensic science (which includes DNA testing) as a modern technology has developed and sometimes effectively replaced traditional evidence, such as eyewitness testimony, as a more accurate and reliable proof.³⁰ Significantly, for this research, DNA testing, among its other uses,³¹ can be used as separate proof to verify paternity, which impacts traditional and religious methods for establishing or negating paternity, such as physiognomy and *li'an*.³²

In these final sections, the intersection of sharia evidence rules and modern technology will be critically analysed through the example of DNA paternity testing. DNA testing is discussed against the backdrop of adultery evidence laws by looking at the traditional law of *li'an*,³³ the traditional proof of physiognomy³⁴ and the impact DNA testing has upon these forms of evidence, regarding the implications of paternity testing and *li'an* laws. Finally, an assessment of modern jurisdictions and their use of DNA testing will be made. This analysis exemplifies the issues involved in incorporating any new technology into traditional areas of sharia, particularly under marriage,

²⁸ Ayman Shabana, 'Negation of Paternity in Islamic Law between Li'an and DNA Fingerprinting' (2013) 20(3) *Islamic Law and Society* 157, 158 ('Negation of Paternity').

²⁹ Badawy (n 8) 305.

³⁰ Ibid.

³¹ Ibid. For instance, DNA testing is a certain method to prove rape or at least sexual intercourse between two people.

³² Shabana, 'Negation of Paternity' (n 28) 158.

³³ See Chapter I n **Error! Bookmark not defined.**; Chapter VB(3); Shabana, 'Negation of Paternity' (n 28) 179.

³⁴ Physiognomy is the traditional method used by pre-Islamic Arabs and the Prophet, Companions and later generations as a way to establish paternity by looking at the physical characteristics of a man and child.

divorce and inheritance laws, which the issue of paternity falls under. The questions this discussion seeks to answer are whether DNA testing should be used to establish paternity in Islam, taking priority over traditional proofs of marriage and *li'an* such that *li'an* is made redundant or outdated, and what are the implications for hudud punishments from such paternity verification. Before looking at specific examples, an examination of the categorisation of forensic evidence, which includes DNA testing, under sharia is necessary.

1 *Classifying DNA Testing Under Sharia*

Adultery, as one of the most serious crimes in Islam, is enforced with its traditional punishment of stoning in some Muslim states today. On face value, DNA testing could positively alter this area. For instance, in the Saffiyatu Hussaini adultery case in Nigeria,³⁵ DNA evidence could have conclusively proved the child's paternity, but it could have also worked against the accused and led to the stoning punishment. The issue is whether DNA testing can be treated as reliable, definitive proof under sharia to establish or deny paternity on par with other traditional proofs of paternity, being marriage or *li'an*; or is DNA merely corroborative, such as circumstantial evidence,³⁶ which would mean it is insufficient to prove hudud crimes or establish paternity. Classifying forensic and DNA testing is essential to determine their use under sharia.

Evidence must be totally reliable in sharia, which is why eyewitness testimony has traditionally been the most authoritative as it is assumed to be free of suspicion and based on factual material.³⁷ A minority of scholars regard forensic evidence as analogous to witness testimony or confession, due to the sharia definition by classical and post-classical scholars, such as Ibn Qayyim, who stated evidence (*bayyina*) is 'an umbrella term...for all that...manifests the truth' because the term *bayyina* in Qur'an means clear proof.³⁸ As such, he regards any type of legal evidence, including

³⁵ The Saffiyatu Hussaini case was resolved on appeal in 2002 when her death penalty was overturned on a legal error as the court found she was convicted under a law that did not exist when the alleged adultery took place. On appeal, the mother, Hussaini, claimed her ex-husband was the father of her baby after she retracted her confession of adultery. See Rudolph Peters, 'The Re-Islamization of Criminal Law in Northern Nigeria and the Judiciary: The Saffiyatu Hussain Case' in Muhammad Khalid Masud, Rudolph Peters and David S Powers (eds), *Dispensing Justice in Islam: Qadis and their Judgements* (Brill, 2006) 219-41.

³⁶ Shabana, 'Negation of Paternity' (n 28) 188.

³⁷ Ibn Taymiyya reports a hadith to prove this point, (see Chapter IIIC(3) n 57), 'If I were to stone anyone without evidence, I would have stoned this woman' (Taqi al-Din ibn Taymiyya, *al-Siyasa al-Shar'iyya fi Islah al-Ra'y wa'l-Ra'ya* (Cairo, 2nd ed, 1951) 153) and he also quoted Umar saying one may not be punished on the basis of suspicion and mistrust (Mohammad Hashim Kamali, 'The Right to Personal Safety (*Haqq al-Amn*) and the Principle of Legality in Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 66 ('Personal Safety').

³⁸ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-Hukmjiyyah fi al-Siyasah al-Shar'iyyah*, ed Muhammad Jamal Ghazai (Dar al-Madani, n. d.) 13 as cited in Sayed Sikander Shah Haneef, 'Modern Means of Proof: Legal Basis for its Accommodation in Islamic Law' (2006) 20(4) *Arab Law Quarterly* 346 ('Modern Means'). See Chapter IIIC(3) for further discussion on *bayyina* and modern technology as circumstantial evidence.

circumstantial evidence, as fulfilling the role of *bayyina*.³⁹ DNA testing as a new form of evidence has no precedents in the sources, so we must look to the word *bayyina* to provide scope that admits new methods of proof.⁴⁰ Accordingly, Haneef categorises forensic evidence as more than circumstantial, stating the argument of ‘doubt’ put by the majority can be overcome by the ‘cumulative force of other supporting circumstances’ found by forensic experts.⁴¹ Haneef further suggests forensic evidence, consistent with Ali’s egg-white case, has a unique ability to prove or disprove a case, and is an improved method of establishing truth, ignoring of which would be tantamount to injustice.⁴² Haneef argues, while Western jurisprudence recognises the relevance of forensic opinion and sees it as stronger than eyewitness testimony in many cases, Muslim scholars see it only as circumstantial evidentiary truth against the accused, thereby limiting forensic evidence as an important tool for modernising legal procedure.⁴³ Forensic evidence, he contends, fulfils the standard of *bayyina* as a means of ascertaining truth.⁴⁴

Despite this compelling argument by the minority, the majority of contemporary scholars, jurists and authors have determined forensic evidence under sharia is circumstantial,⁴⁵ or even very

³⁹ Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *I’lam al-muwaqqin*, ed Isam al-Din Sayyid al-Sababit (Dar al-Hadith, 2002) i. 77; Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-Hukmjiyyah fi l-siyasah al-shar’iyyah* (Dar d-Hadith, 2002) 16; Ibrahim b. Muhammad Ibn Farhun, *Tabsirat al-hukkam fi usul al-aqdiya wa-manahij al-ahkam* (Dar al-Kutub al-‘Ilmiyya, 1995) i 172; Ali b. Khalil al-Tarabulsi, *Mu’in al-hukkam fi-ma yataradad bayna l-khismayn min al-ahkam* (Dar al-Fikr, n. d. [repr. Cairo edn, 1979]) 68 as cited in Ayman Shabana, ‘Islamic Law of Paternity Between Classical Legal Texts and Modern Contexts: From Physiognomy to DNA Analysis’ (2014) 25(1) *Journal of Islamic Studies* 1, 13 (‘Physiognomy to DNA Analysis’). This is agreed by Al-Qarafi and Ibn Farhun, who stated proof ‘is evidence that is sound and free of doubt and loopholes, has met all proper conditions and is focused on a definite result’ (Shihab al-Din al-Qarafi, *Kitab al-Furuq*, (Cairo, 1346 AH) vol 4, 54; Ibn Farhun, *Tabsirat al-Hukkam* vol 1, 131 as cited in Kamali, ‘Personal Safety’ (n 37) 66). The Prophet, his Companions and Ibn Qayyim al-Jawziyya accepted signs as ‘clear proofs’ (Muhammad b. Abi Bakr Ibn al-Qayyim al-Jawziyya, *al-Turuq al-hukmiyya fi al-siyasa al-shar’iyya aw al-firasa al-mardiyya fi ahkam al-siyasa al-shar’iyya* (Dar al-Kutub al-‘Ilmiyya, n.d.) 98-99 cited in Baber Johansen, ‘Signs as Evidence: The Doctrine of Ibn Taymiyya (1293-1328) and Ibn Qayyim Al-Jawziyya (d. 1351) on Proof’ (2002) 9 *Islamic Law and Society* 168, 188).

⁴⁰ Haneef, ‘Modern Means’ (n 38) 360.

⁴¹ Ibid 347.

⁴² Ibid 349-350.

⁴³ Ibid 344, 347. Categorising forensic evidence as circumstantial has, according to Haneef, led to unjust court decisions, such as setting rapists free when women have claimed rape and been convicted of adultery. In such situations, forensic evidence could be used, such as in the Saffiyatu Hussain (see n 35) and Bariya Ibrahim cases in Nigeria where both women were found guilty of adultery despite claiming rape. The alleged rapists were set free, yet forensic evidence could have at least confirmed paternity and given evidence for or against the alleged rapists. Many other reported cases of this nature have occurred in Pakistan, with similar judgments. In the above cases, forensic opinion could have salvaged justice, according to Haneef (Ibid 347-8).

⁴⁴ Ibid 350.

⁴⁵ Professor Anwarullah, a contemporary Muslim thinker, classifies a number of forensic processes as circumstantial evidence, which includes DNA testing (Haneef, ‘Modern Means’ (n 38) 343); and Dabur, another expert in the field, terms forensic evidence, such as blood tests for purpose of identification (DNA testing), modern forms of circumstantial evidences, as tools to ascertain the authenticity and reliability of evidence making them admissible in Islam (Dabur calls it *al-Tibb al-Shar’i*, see Anwar Mahmud Dabur, *al-Qara’in wa Dawruha fi al-Fiqh al-Jina’i al-Islami* (Dar al-Thaqafah, al-Arabiyyah, 1985) 201-223 as cited in Haneef, ‘Modern Means’ (n 38) 343); Shabana, ‘Physiognomy to DNA Analysis’ (n 39) 15.

strong/conclusive circumstantial evidence,⁴⁶ but not decisive evidence, due to the fear of error or tampering.⁴⁷ According to the majority of jurists,⁴⁸ once evidence is classified as circumstantial, its evidentiary weight is doubted and cannot give positive knowledge to convict, no matter how strong the circumstantial evidence, because ‘it still rests on probabilities...tainted with doubts and obscurity’, which cannot prove hudud as these are nullified by doubt.⁴⁹ Al-Sheikh agrees DNA is strong circumstantial evidence rather than decisive proof, meaning it cannot be the sole basis for punishment, but if strong circumstantial evidence supports the results of DNA testing, the combined evidence is stronger than oral testimony.⁵⁰

As a form of circumstantial evidence, this means DNA testing falls outside the parameters of definitive proof for hudud crimes. Even though Ibn Qayyim defined evidence to include any means of establishing proof, this thesis agrees with the majority, who argue it is in society’s interests to limit evidence for hudud crimes and restrict DNA testing from interfering with traditional evidentiary requirements for hudud crimes⁵¹ as these warrant severe punishments. There is no need to dispense with the whole field of forensic evidence simply because it is not considered decisive proof for hudud crimes; rather, it is appropriate for proving *taazir* crimes where courts have more discretion. Forensic science is a means of proof not an end, so is open to renewal, re-creation and reinventing, but its non-use creates injustice in not fulfilling people’s rights.⁵² Using DNA testing as a legitimate form of sharia evidence is part of modern *ijtihad*, having a basis in scriptural passages and earlier legal precedents.⁵³ Thus, a two-level approach is suggested, where DNA

⁴⁶ 'Uzayzah, another scholar, gives greater weight to some forensic tests on identification, classifying such as evidence because forensic sciences established that finger impressions of different individuals are not identical, a fact stated in the Qur'an centuries ago ('Uzayzah, *Hujjiyyah al-Qarain fi al-Shari'ah al-Islami*, 177-8 cited in Haneef, 'Modern Means' (n 38) 344).

⁴⁷ Muhammad Al-Zuhayli, *Al-Ithbat fi al-Shari'ah al-Islamiyyah* (Dar al-Maktabi, 1998) 11 cited in Haneef, 'Modern Means' (n 38) 343.

⁴⁸ Muhammad Ibn Ma'juz, *Wasa'il al-Ithbat fi al-Fiqh al-Islami* (Al-Dar al-Bayda, 1984) 13-14 cited in Haneef, 'Modern Means' (n 38) 344.

⁴⁹ Haneef, 'Modern Means' (n 38) 345.

⁵⁰ Dr Sheikh Salih Al Al-Sheikh, president of the Courts of Summary Justice in Riyadh, Saudi Arabia, <<http://www.asharqalawsat.com/details.asp?section=43&article=337484&issue=9873>> cited in Ron Shaham, *The Expert Witness in Islamic Courts: Medicine and Crafts in the Service of Law* (University of Chicago Press, 2010) 171.

⁵¹ *Qisas* crimes have not been discussed in this thesis due to word constraints. The use of forensic evidence to prove cases such as murder in lieu of eyewitness testimony is outside the scope of this thesis.

⁵² Ibn Qayyim stated, if a judge does not account for all supporting evidence in a case from empirical indications to testimony and his own legal knowledge, then people’s rights will be wasted due to the inability to prove them (Shams al-Din Abu Abd Allah Muhammad Ibn Qayyim al-Jawziyyah, *Al-Turuq al-Hukmiyyah fi al-Siyasah as-Shar'iyyah*, ed Muhammad Jamil Ghazai (Dar al-Madani, n. d.) 4 as cited in Haneef, 'Modern Means' (n 38) 350-1).

⁵³ Shabana, 'Negation of Paternity' (n 28) 187. See the discussion on physiognomy in Chapter VB(2).

testing under hudud is considered circumstantial, but for the purposes of *taazir*, it may be considered definitive by the courts.

2 DNA Testing to Establish Paternity

Decisions on paternity impact many legal areas, including guardianship, maintenance and inheritance, inducing scholars to prove paternity by a default position that will always favour the child. A child's legitimacy in Islam is significant to the fulfilment of their kinship rights, which entails having a legal father and ensures care, guardianship, maintenance, education and inheritance for which mere biological paternity is not enough.⁵⁴ This means an Islamically valid and legal union is essential to establish lineage, which can never originate from adultery, considered one of greatest sins because it is a mixing of lineage,⁵⁵ and could potentially lead to incestuous relationships, personal and social immorality, and even financial and economic ruin.⁵⁶ The stigma in society regarding unwed mothers or children born out of wedlock has meant traditional *fiqh* principles go to extremes to establish a child belongs to legitimately married parents. As such, a valid marriage is the most important criterion for establishing paternity, based on the marital bed maxim in *fiqh* meaning a husband's paternity to a child born to his wife during their valid marriage is automatically established.⁵⁷ *Fiqh* sees these rules as a way to maintain the integrity of the marital family, protect children from bastardisation and resultant negative consequences of this in sharia, aiding child welfare and protecting their legal rights and society, to prevent exposure of the parents' immoral conduct and minimise situations where Muslim women are accused of adultery.⁵⁸

⁵⁴ Jamal J Nasir, *The Islamic Law of Personal Status* (Graham and Trotman, 2nd ed, 1990) 156, 167; Jamal J A Nasir, *The Status of Women under Islamic Law and Modern Islamic Legislation* (Brill, 2009) 169; Lynn Welchmann, *Women and Muslim Family Laws in Arab States: A Comparative Overview of Textual Development and Advocacy* (Amsterdam University Press, 2007) 143-4. Avoiding illegitimacy of a child and establishing paternity is crucial to provide legal rights to a child (Eva Schlumpf, 'The Legal Status of Children Born out of Wedlock in Morocco' (2016) 4 *Electronic Journal of Islamic and Middle Eastern Law* 1, 7).

⁵⁵ Jamila Bargach, *Orphans of Islam: Family, Abandonment, and Secret Adoption in Morocco* (Rowman and Littlefield Publishers, 2002) 58.

⁵⁶ Abdal-Hamid Mahmud Tahmaz, *Al-Nasab wa'l-Awlad* (Dar al-Qalam, 1987) 16 cited in Amira al-Azhary Sonbol, 'Adoption in Islamic Society: A Historical Survey' in Elizabeth Warnock Fernea (ed), *Children in the Middle East* (University of Texas Press, 1995) 49.

⁵⁷ Shaham (n 50) 155. Hanafis use this principle to ascribe paternity even if no physical contact between spouses during marriage; or paternity in irregular marriages and denial of paternity restricted to *li'an*. Another aspect of leniency in *fiqh* is the legal duration of pregnancy – minimum is six months and maximum under Hanafi school is two years, Shafei and Hanbali is four years and Malikis is five, and if these time limitations cannot establish paternity, the father's acknowledgment is enough (Ron Shaham, *Family and the Courts in Modern Egypt: A Study Based on Decisions by the Shari'a Courts, 1900-1955* (Brill, 1997), 155-6 as cited in Shaham (n 50) 156). Rashid Rida, intellectual modernist of the 20th century, stated these principles are not divine so need reassessment in light of modern medicine (Muhammad Rashid Rida, *Fatawi al-Imam Muhammad Rashi Rida* (Dar al-Kitab al-Jadid, 1970) vol 3, 836-41 as cited in Shaham (n 50) 168).

⁵⁸ Shaham (n 50) 186.

Altering traditional definitions of *fiqh* and established legal principles to determine paternity through DNA testing would impact modern Muslim states and established sharia paternity norms on many levels. Most significantly, it would allow unwed mothers the chance to seek legal rights and recognition for their children, but similarly, DNA testing could have devastating ramifications for wedded women, by losing inherent protections under *li'an*.⁵⁹ Other aspects of sharia are also impacted by this technology. Forcing men, for example, to have DNA tests to admit evidence of sexual relationships is a way to establish paternity but invades privacy. However, it is an established concept that sharia privacy laws can be breached to avoid harm, and it may be argued that children having evidence of biological parentage would avoid the greater harm of ignorance.⁶⁰

The use of DNA testing to establish paternity is a current issue in the Muslim world. In Egypt, for example, while blood tests are used routinely in criminal cases, they are rarely used to establish paternity; rather, traditional Hanafi *fiqh* rules such as the marital bed maxim take precedence.⁶¹ In one case where a husband was away from the wife for three years before the birth of the baby, the courts still ruled, as the mother's husband, he was the father.⁶² The court's overriding aim is first to establish paternity, even if doubtful, in the interests of the child, and second to maintain adultery be established only by testimony or acknowledgment, not by a physical test that 'violates the privacy of a woman's body and her honor'.⁶³ As early as 1941, the courts stated the use of paternity tests is a subject for the legislature to introduce to sharia courts.⁶⁴ The same argument continues to be used by scholars in the modern age. This decision evidences the many stakeholders involved in changing established rules, which courts and scholars must consider when admitting this form of modern technology.

⁵⁹ Delfina Serrano-Ruano, 'Redefining Paternal Filiation through DNA Testing: Law and the Children of Unmarried Mothers in the Maghreb' (2018) 14 (3) *Journal of Middle East Women's Studies* 292, 294.

⁶⁰ A detailed discussion of privacy and exemptions is outside the scope of this thesis. Suffice to say, there are established rules that allow breach of privacy. First, the notion of public space – in Islam, once an act is performed in the public space, it is not protected by the prohibition against surveillance; and second, private space and information are not protected from surveillance if they shelter something that causes harm to others (Muhammad Aslam Hayat, 'Privacy and Islam: From the Quran to Data Protection in Pakistan' (2007) 16(2) *Information and Communications Technology Law* 137, 141-4).

⁶¹ This is the rule according to some *qadis*, that, in contradiction between DNA testing and witness testimony, Hanafi paternity rules take priority over expert medical examinations (Shaham (n 50) 169-70).

⁶² Al-Muhamat al-Shar'iyya, vol 9, 348, case 70 Sharia Court, Misr (Court of First Instance), Al-Muhamat al-Shar'iyya, vol 15, 61, case 7 Shari'a Court, Bani Suwayf (Court of First Instance) cited in Shaham (n 50) 154-55, 169-70.

⁶³ Al-Muhama, vol 22, 755, case 256 Alexandria Indigenous Court (Court of First Instance) cited in Shaham (n 50) 168-170.

⁶⁴ Ibid 170.

The majority opinion of scholars maintains paternity verification exclusively as established via marriage or *li'an*,⁶⁵ and DNA testing cannot be used to create paternity outside wedlock. In the famous 2005 *Hinawi v. Fishawi* case in Cairo,⁶⁶ the Chief Mufti at the time stated there is no issue demanding DNA testing when there is a marriage claim but it is not for unmarried people because adultery does not create paternity, and he also recommended a mother can be forced to undergo DNA testing.⁶⁷ Other members of the judiciary expressed opinions that DNA testing could ruin households and bring secrets into the open, as well as encourage unofficial marriage and children born out of wedlock.⁶⁸ Most scholars support the Mufti that DNA testing should be used only in paternity cases involving married couples and not adultery cases,⁶⁹ preserving the traditional proof of four eyewitnesses.⁷⁰ The Islamic Fiqh Council and other councils⁷¹ likewise stated DNA paternity testing should be used with extreme caution, as sharia texts take precedence over such testing.⁷²

Some scholars have further argued establishing paternity for out-of-wedlock births not only undervalues legal relationships but ignores social repercussions attached to progeny and

⁶⁵ Shabana, 'Physiognomy to DNA Analysis' (n 39) 16. The Islamic Fiqh Council in 2002 suggest DNA testing should be used for establishing paternity in three cases only: unknown paternity; confusion about identity of babies in hospitals; and ascertaining identity of children after accidents or disasters – this position has been adopted by all sharia courts in Islamic countries (some scholars seek to include DNA testing if a husband is sterile or a widow needs to establish paternity of a child if disputed by a late husband's relatives) (*Majallat Majma' al-Fiqh al-Islami*, 13/15 (2002), 480 cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 16; Shaham (n 50) 173).

⁶⁶ *Hind al-Hinnawi v. Ahmad al-Fishawi* case 2005, Family Court of al-Khalifa, Cairo. Though it was not decided on forced DNA paternity testing, this case discussed DNA testing and paternity from a sharia perspective (Shaham (n 50) 175-181). Following the case, feminist organisations sought courts to make DNA testing a requirement in similar cases where refusal by a father would be used as circumstantial evidence against him (Shaham (n 50) 178).

⁶⁷ Shaham (n 50) 178-9. This is in contrast to Qaradawi's recommendation, and sees a mother losing her protection under *li'an* (see Chapter VB(3)). The Chief Mufti further stated in Islam encouraging scientific material that leads to the truth, there is no issue in a man or woman demanding DNA testing when there is a claim of marriage, be it irregular or quasi, because sharia is concerned for the child. If DNA testing proves the father after he denied paternity, he should be subject to *qadhaf*, and refusal to undergo the test is strong circumstantial evidence against him. In contrast, three Azhar scholars argued DNA testing should not be used as a probative means to establish *qadhaf*; rather, testing should be used to prevent prejudice towards the mother and child (Shaham (n 50) 244).

⁶⁸ Shaham (n 50) 179.

⁶⁹ Ibid 180.

⁷⁰ Shaham (n 50) 172, citing Dr Zayd, see n 76.

⁷¹ This is evidenced by the International Islamic Fiqh Academy, Islamic Fiqh Council and IOMS, which represent this majority opinion on paternal filiation and consider legal paternity to be determined socially by marriage rather than by biology and refuse the idea of DNA testing to determine paternity for children born out of wedlock. See Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (*The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation*) (Dar al-huda, 2010) 90-95, cited in Serrano-Ruano (n 59) 294; Bjorn Bentlage, 'Legislating for the Benefit of Children Born Out of Wedlock' (2015) 55 (3-4) *Die Welt Des Islams* 378, 382; Shabana, 'Negation of Paternity' (n 28) 199-200.

⁷² According to *Majma' al-Fiqhi al-Islami*, in 2002, reliance on DNA for denial of established sharia paternity or to establish correct paternity is prohibited, as is the preference of DNA to *li'an* (see Chapter VB(3)).

diminishes the marital bed maxim, which was developed to maintain legal lineage and spare society from moral degeneration.⁷³ Mufti Zakariya agrees, saying DNA testing can cause ethical, moral and social issues, and Islam prohibits exposing one's sins, which DNA testing undermines.⁷⁴ Since there may still be errors with DNA testing based not on technique but human action, then in maintaining precaution and privacy, sharia principles overrule genetic tests for paternity cases.⁷⁵ Protecting people's honour and saving children from being harmed by paternity disputes is a further rationale behind such decisions.⁷⁶ These *fiqh* and sharia principles evidence that, in Islam, unique notions of modesty and licit sexual relations must be consistently accounted for in judicial rulings. While opinions state DNA testing can be used for public welfare issues, such as criminal cases or personal identification,⁷⁷ many confine its use in paternity cases to supporting evidence only.⁷⁸

While most scholars hold that paternity depends on marriage, meaning a child will not be attached to their biological father outside these circumstances, a minority of scholars argue for paternal filiation using varied sources. The minority opinion in the *Hinawi v. Fishawi* case is represented by modern followers of Ibn Qayyim, whose opinion was to establish filiation for children born out of wedlock, and treat men and women equally.⁷⁹ Salih argues in accordance with Qur'an 33:5⁸⁰ that associating children to fathers not only applies to married couples, which is the majority opinion in the Sunni school, but also to unmarried fathers.⁸¹ Opinions are cited from first

⁷³ This is the opinion of Badis Dhiyabi, Algerian law professor, who further states legal paternity of children born out of wedlock cannot be established, because they are conceived from 'forbidden fluids'. A child born to a man's wife can be repudiated only *li'an* and DNA tests cannot be used to challenge marital paternity (Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010) 90-5, 122-3 cited in Serrano-Ruano (n 59) 302).

⁷⁴ Muhammad Zakariya, Paternity Testing and Islam (Blog, 27 July 2007) <http://www.childsupportanalysis.co.uk/analysis_and_opinion/choices_and_behaviours/islam_paternity_test.htm>, accessed 18 October 2019. See n 1 on *satr*.

⁷⁵ Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010) 90-5, 122-3 cited in Serrano-Ruano (n 59) 302.

⁷⁶ Dr Zayd, director of the High Judicial Institute in Saudi Arabia, said DNA testing is used for public welfare cases such as punishing criminals and should not be used in cases that cause corruption, such as paternity cases. (cited in Shaham (n 50) 172).

⁷⁷ Shaham (n 50) 172, citing Dr Zayd, see n 76.

⁷⁸ Shaham (n 50) 173. This is the position taken by legal commentators 'Abd al-Majid Subh from the Azhar; Muhammad Iqbal Nadvi, imam of Calgary Mosque, Canada; and 'Abd al-Khaliq Hasan al-Sharif, former professor at King Sa'ud University in Saudi Arabia.

⁷⁹ Shabana, 'Negation of Paternity' (n 28) 193; Serrano-Ruano (n 59) 294.

⁸⁰ Qur'an 33:5 – 'Call them after their fathers...And if you do not know who their fathers were then they are your brothers in the deen'.

⁸¹ Shaham (n 50) 180. According to Dr Su'ad Salih, Dean of Islamic and Arabic Studies Faculty at al-Azhar women's section and Dr Abd al-Ma'ti Bayyumi, member of the the Majma' al-Buhuth al-Islamiyya at al-Azhar, DNA testing should be allowed for children born out of wedlock and state, if a male fornicator claims paternity

generation scholars that, if a male fornicator claims paternity of a child born to a married woman, his claim is denied on grounds the child belongs to the marriage bed, but if a mother is unmarried and paternity is evidenced by something such as DNA testing, then paternity is legally established, which is the minority opinion,⁸² also evidenced under Maliki tradition.⁸³ Those in favour of testing to establish paternity out of wedlock seek to resolve social stigmas and legal discrimination faced by unmarried mothers and their children.⁸⁴

Nasir, an expert on theology and philosophy, argues *fiqh* scholars should use *ijtihad* to find a way for using DNA testing as evidence to spare children from carrying a burden and rejects the notion that such testing will encourage adultery; rather, it will mean every fornicator must bear full responsibility for their actions.⁸⁵ An Azhar civil law expert argues on the same line that, if there is affiliation of a child to an adulterous mother, there should likewise be affiliation with a fornicating biological father as both parties were responsible for the act.⁸⁶ Both scholars account for modern technology, principles of sharia proofs as well as *maqasid* principles in using *ijtihad* to come to a ruling. Privacy principles are also considered in these opinions where there appears an understanding by some scholars that, although significant, there exist underlying *fiqh* principles that establish when to breach privacy. These opinions look at the development of DNA testing as a means of furthering sharia principles rather than blindly rejecting or accepting technology and

to a child born to a married woman, his claim is denied on grounds of the marital bed maxim, but if the mother is unmarried or it is evidenced by probative means such as DNA testing (Dr Ahmad ‘Umar Hashim, ex-director of al-Azhar University, supports this minority opinion (cited in Shaham (n 50) 244 n 110), then paternity is legally established. They cite opinions of first generation scholars such as Ibn Sirin (d. 729), ‘Urwa b al-Zubayr (d. circa 712), Hasan al-Basri (d. 728) to support their opinions (Shaham (n 50) 180). However, the majority as mentioned above accept DNA testing in paternity cases between married couples and not in adultery cases.

⁸² Ibid.

⁸³ According to Fadel, professor of Islamic law at the University of Toronto, Maliki tradition stipulates ‘gender egalitarianism’ by assigning paternal filiation to illegitimate children when claimed by their biological fathers, especially if genetic testing establishes paternity beyond doubt. The argument that Islam assigns illegitimate children only to their mothers is inaccurate, and since genetic testing can ascertain a father’s identity, then to prevent filiation in these circumstances denies the Qur’an 33:5 (see n 80). Fadel further argues, while denial of paternal filiation under such circumstances is a majority opinion, famous Maliki jurist and physician Ibn Rushd (Averroes) was open to the minority opinion and there is no evidence the Prophet or his Companions denied filiation to children born from adultery nor exempted male fornicators from responsibility. Fadel cites art 400 of the *Mudawwana* (see Chapter VB(4)(a)) which states: ‘For all issues not addressed by a text in the present code, reference may be made to the Maliki School of Jurisprudence and to *ijtihad* (juridical reasoning) which strive to fulfil and enhance Islamic values, notably justice, equality and amicable social relations that allows judges to use *ijtihad* of Maliki doctrine to promote Islamic values of justice, equity and welfare, to find a solution to the problem of fatherless children’. Mohammad Fadel, “Ta’qim al-taghyirat al-haliya fi l-Mudawwana fi daw’ al-madhab al-Maliki” (“Assessment of the Last Changes Made to the Mudawwana in Light of Maliki School Doctrine”) in Hamza al-Kattani, ‘Abd Allah ben Nasr al-‘Alawi, and Muhammad al-‘Alami (eds) *Al-Madhab al-Maliki fi Siyaqati-hi al-Mu’asira (The Maliki School in Its Contemporary Context)* (Al-Mu’assasa al-‘ilmiyya al-kattaniyya. 2012) vol 2, 527–39 cited in Serrano-Ruano (n 59) 300-1.

⁸⁴ Welchmann (n 54) 148-50; Serrano-Ruano (n 59) 294.

⁸⁵ Shaham (n 50) 174.

⁸⁶ Dr ‘Abd Allah al-Najjar as cited in Shaham (n 50) 180.

ignoring the ramifications unique to sharia and Muslim society. This means traditional sharia principles will only be breached for public benefit and safety.

These arguments evidence both sides of the debate: whether DNA testing can be used to prove paternity or whether such moves should be resisted when a couple is unmarried. The opposition to Muslim scholars and jurists regarding DNA or other paternity tests is not based on opposition to scientific or modern technology, but there remains a desire to maintain traditional marital and paternity structures. In fact, Muslim scholars accepted the reliability of DNA testing in 2002,⁸⁷ stating that apart from hudud and retaliation cases there is no sharia inhibition to relying on DNA testing in criminal and other forensic investigations.⁸⁸ There are three positions scholars and jurists take in this debate. One side seeks to defend traditional values and concepts, fearing the ‘erosion of the marital family’ will result in social chaos,⁸⁹ as opposed to those willing to incorporate updated methods to traditional sharia constructs such as totally supplanting witness testimony with DNA testing. The final, and it is submitted, more balanced approach, is taken by those who look at modern technology and use *ijtihad* principles to introduce its evidence with caution, maintaining sharia objectives and outcomes. This last category of scholars looks to the marital presumption of paternity critically, considering the benefits of establishing biological paternity, while simultaneously separating hudud crimes and their high evidentiary proofs from using DNA testing. The same argument suggests forensic testing be done outside of establishing hudud crimes of adultery or *qadhf* that have higher evidentiary standards of eyewitness testimony, confining DNA testing to the interests of the mother and child.⁹⁰ This thesis argues using technology within these parameters is the most reasonable approach in the modern world as it seeks to improve the plight of society members in conformity with *maqasid*, not increase punishment statistics. Overall, the positive aspect in this issue is that scholars are aware they need to be part of the debate over paternity rather than leave it to be decided by secularists.⁹¹ Such measures comes close to the recommended councils for further sharia development, as suggested by Ramadan and Kamali.⁹²

⁸⁷ Shaham (n 50) 171. At the Majma’ al-Fiqhi al-Islami (Islamic Fiqh Council) in Mecca in 2002, Dr Najm al-Wahid gave the reliability of DNA as 100% for denying paternity and 99.9% for establishing paternity with no principal inhibition to use it as legal evidence (cited in Shaham (n 50) n 71, 241). Former Egyptian Chief Mufti Dr Nasir Farid Wasil pronounced DNA testing as ‘decisive scientific sensory evidence’ based on analysis and inspection, important for establishing truth and rights (cited in Shaham (n 50) 170-1).

⁸⁸ Shabana ‘Physiognomy to DNA Analysis’ (n 39) 15.

⁸⁹ Shaham (n 50) 187.

⁹⁰ Ibid 178.

⁹¹ Shaham (n 50) 188.

⁹² See Chapter IVB.

Lineage is one of the five objectives of sharia, evidenced by the *hadd* for adultery, which seeks to disrupt this right; hence, its determination is significant for the protection of progeny and other legal rights and obligations.⁹³ The most important principle in sharia family law in protecting these rights is establishing paternity by the marital bed maxim,⁹⁴ where children born within wedlock are automatically associated with the mother's husband. Significantly, jurists have traditionally been unanimous that mutual condemnation of *li'an* in 24:6⁹⁵ is the only method of paternity negation and has the added impact of irrevocably ending the marriage.⁹⁶ *Li'an*'s objective is not about truth-revealing; rather, it seeks to end an irreconcilable dispute between married couples in a way that preserves each party's honour.⁹⁷ Using DNA testing as the sole evidence for establishing or negating paternity is consequently looked upon as a 'direct attack' of sharia.⁹⁸ As there are evidentiary aspects that impact *li'an*'s conduct it is an effective example to assess in this thesis looking at modern technology. With its ability to establish truth, DNA testing clearly disrupts the legal construct of Islamic paternity verification, leading some scholars and commentators to question the modern relevance and applicability of *li'an*.⁹⁹ Deciding whether *li'an* continues to be necessary in light of DNA testing is important because, under sharia, paternity denial via *li'an* creates legal consequences in areas such as inheritance and maintenance, not to mention social stigma, neither of which occur with divorce.¹⁰⁰ Answering these questions depends on whether DNA testing is considered substantive legal proof to establish paternity under sharia

⁹³ Shabana 'Physiognomy to DNA Analysis' (n 39) 4.

⁹⁴ Ibid 6.

⁹⁵ 24:6-9 – 'Those who make an accusation against their wives and have no witnesses except themselves such a people should testify four times [*shahada*] by Allah that they are telling the truth and a fifth time that Allah's curse will be upon them if they are lying. And the punishment is removed from her if she testifies four times by Allah that he is lying and a fifth time that Allah's anger will be upon her if he is telling the truth.' *Li'an* is a set of five oaths taken by each spouse whereupon the fifth oath they invoke the curse of God if they have lied. This substitutes for *qadhf*, which would otherwise apply to the husband if he accused his wife of adultery without full legal proof of four witnesses. *Li'an*, according to many scholars dissolves the marriage and denies paternity to a child, who takes only the mother's name, (Shaham (n 50) 174).

⁹⁶ Shabana, 'Negation of Paternity' (n 28) 159. Some scholars disagree that *li'an* irrevocably ends a marriage. Other than *li'an*, there are other exceptional circumstances that allow a husband to deny paternity, such as a wife giving birth less than six months after the marriage or if the husband is impotent (Ibn Qudamah, *Al-Mughni*, vol 11, 167 as cited in Shabana, 'Negation of Paternity' (n 28) 179).

⁹⁷ Shabana, 'Negation of Paternity' (n 28) 159.

⁹⁸ Ibid 187.

⁹⁹ Ibid 182. DNA testing gives a statistical likelihood with a high degree of accuracy to prove un-relatedness but not the opposite (Shabana, 'Negation of Paternity' (n 28) 183).

¹⁰⁰ Shabana, 'Negation of Paternity' (n 28) 177-8.

for the purposes of *li'an*. In looking at the status of DNA testing, its comparison to the traditional proof of physiognomy is useful.¹⁰¹

DNA testing as part of paternity verification evidences sharia's response to modern technological developments, as well as the methods jurists and scholars use to integrate them.¹⁰² As discussed,¹⁰³ while the majority of jurists recognise DNA testing as effective for criminal and other forensic investigations, they disagree on the extent of its use for paternity verification, some limiting and analogising it to traditional physiognomy such that it cannot override licit sexual relationships, acknowledgment or testimony to establish paternity, nor override *li'an* for paternity negation; others are of the opinion that DNA testing can be used to verify paternity beyond traditional physiognomy.¹⁰⁴ While physiognomy is a sharia proof hailing from the days of the Prophet, it is traditionally considered secondary proof, categorised as circumstantial. The majority state it is a secondary method of paternity proof, agreeing with Ibn Qayyim who stated physiognomy is not meant to give priority over licit sexual relationships where a child is considered part of the marriage bed nor over *li'an* in negation of paternity.¹⁰⁵

The question is whether DNA testing can be granted full legal proof, allowing a role beyond traditional physiognomy.¹⁰⁶ However, as argued throughout this thesis, such proof, whether circumstantial or decisive, should not be used to prove adultery or *qadhaf* crimes, which necessitate the four eyewitness requirement due to their significant associated penalties. Despite DNA testing's classification as circumstantial proof according to the majority, legal councils in the Muslim world, including experts in sharia and scientific fields, have looked at issues concerning

¹⁰¹ The Prophet, Righteous Caliphs and Companions considered and used physiognomy, known as *qiyafa*, as an indicator establishing paternity (Muhammad b. Abi Bakr Ibn Qayyim al-Jawziyya, *AL-Turuq al-Hukmiyya fi'l-Siyasa al-Shar'iyya* (Dar Ihya al-'Ulum) 17, 225 cited in Shaham (n 50) 157) and all Sunni schools accept it as valid except Hanafis who say mere blood relatives may have a physical resemblance, which may be absent between father and son, yet they accept paternity on marriage contract even if the parents were separated by large distances because they take the marital bed maxim as the overriding principle, and all schools agree the marital bed maxim supersedes physiognomy (Ibn Qayyim, *ibid*, 17, 212, 215, 217, 224; Ahmad Muhammad Ibrahim, *Turuq al-Ithbat al-Shar'iyya, ma'a Bayyan Ikhtilaf al-Madhahib al-Fiqhiyya wa-Sawq al-Adilla wa'l-Muwazana baynaha thumma Muqarana bi'l-Qanun wa-Mu'allagan 'alayhi bi-Ahkam al-Naqd* (Matba'at al-Qahira al-Haditha lil-Tiba'a, 3rd ed, 1985) 468-9 cited in Shaham (n 50) 157). Explicit acknowledgement of paternity by the parents is still the best way to establish paternity (Shaham (n 50) 159).

¹⁰² Shabana, 'Physiognomy to DNA Analysis' (n 39) 31.

¹⁰³ See Chapter VB (1) and (2).

¹⁰⁴ Shabana, 'Physiognomy to DNA Analysis' (n 39) 32.

¹⁰⁵ Ibn Qayyim, *Zad al-Ma'ad*, vol 5, 368 as cited in Shabana, 'Negation of Paternity' (n 28) 170.

¹⁰⁶ Shabana, 'Physiognomy to DNA Analysis' (n 39) 2-3.

the impact of modern technology specifically upon *li'an* and evidence rules, resulting in two opinions on the issue.¹⁰⁷

In papers presented at the Islamic Organization for Medical Sciences (IOMS) conference in Kuwait in October 1998, these two opinions were well-represented. One group argued DNA testing could replace *li'an*, if it could conclusively prove the child and father were unrelated, because in principle sharia does not reject science, as physiognomy is the classical scientific equivalent of DNA testing.¹⁰⁸ This argument treats DNA testing as a decisive, independent full legal proof, which can be categorised as more than supporting evidence and equivalent to witness testimony and confession. This view assesses evidence (*bayyina*) in sacred texts in accordance with time and place, as established by premodern jurists, and consequently sees DNA evidence as a scientific means that should take preference over at least some traditional evidence forms.¹⁰⁹ DNA testing is seen to 'defy fraud, deceit and manipulation', is reliable and strong circumstantial evidence, a support to the justice system,¹¹⁰ and a necessity because it is more valuable than traditional methods such as physiognomy.¹¹¹

'Uthman agrees DNA testing can be used to verify paternity in disputed cases more effectively than physiognomy or other methods, as well as verify traditional proofs such as witness testimony.¹¹² Likewise, Hilali states DNA testing can verify traditional methods of paternity verification, such as the marital bed maxim,¹¹³ as it is more accurate than any maxim and can supplant *li'an* because it is more than 'overwhelmingly' probable.¹¹⁴ However, Hilali and 'Uthman

¹⁰⁷ Some of these decisions were debated by the IOMS (Kuwait), Islamic Fiqh Council (Muslim world League, Mecca) and International Islamic Fiqh Academy (Organization of Islamic Cooperation, Jeddah), as such organisations provide guidelines for legal discussions, fatwas and court decisions in the Muslim world (Shabana, 'Negation of Paternity' (n 28) 160).

¹⁰⁸ Shabana, 'Negation of Paternity' (n 28) 191-2.

¹⁰⁹ Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (*The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation*) (Dar al-huda, 2010) 90-95, cited in Serrano-Ruano (n 59) 302; Ayman Shabana, 'Paternity Between Law and Biology: The Reconstruction of the Islamic Law of paternity in the Wake of DNA Testing' (2012) 47(1) *Zygon* 214, 225-31 ('Between Law and Biology'); Shabana, 'Negation of Paternity' (n 28) 187-201. See Chapter IIIC(3) for arguments by Ibn Taymiyya and Ibn Qayyim on definitions of *bayyina*.

¹¹⁰ Shabana 'Physiognomy to DNA Analysis' (n 39) 16.

¹¹¹ Shaham (n 50) 181. Dr Sheikh Salih Al al-Sheikh, president of the court of Summary Justice in Riyadh, said in cases of contradiction that DNA testing is stronger circumstantial evidence than physiognomy ('Genetic Fingerprinting: A Scientific Achievement Not Recognized by the Judiciary', *Saudi Society of Family and Community Medicine* (Forum Post, 21 December 2014) (<<http://www.ssfc.org/public/arabic/Content/index/secId/124/cntId/12129/page/2/>>, accessed 20 October 2019).

¹¹² Muhammad Ra'fat 'Uthman, *Al-Madda al-wirathiyya al-jinum*, (Maktabat Wahba, 2009) 351-3 cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 18.

¹¹³ Sa'd al-Din Mus'ad Hilali, *Al-Basma al-wirathiyya wa-'ala'iquha al-shariyya* (Majlis al-Nashr al-'Ilmi, 2001) cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 17-18.

¹¹⁴ Shabana, 'Physiognomy to DNA Analysis' (n 39) 19.

limit the use of DNA and argue it can be used to establish or deny paternity so long as the marital bed maxim is not violated, such as birth outside marriage.¹¹⁵ Former Mufti of Tunisia Mukhtar Al-Salami went further and agreed *li'an* may be replaced by DNA testing as it substantiates the accusation proving a man is not the father.¹¹⁶ Similarly, some scholars in support of the Chief Mufti in the *Hinawi v. Fishawi* case argued DNA testing should replace *li'an* to establish paternity and adultery, as *li'an* has lost its deterrent value in the modern world and DNA testing 'will deter those who disregard honor, contribute to the welfare of children, and promote justice'.¹¹⁷

As-Salami argues the word '*shahada*' in the *li'an* verse should not be limited to witness testimony, but can involve any supporting evidence such as DNA so a husband can use DNA tests to prove a child is not his, effectively eradicating the use for *li'an*.¹¹⁸ However, this argument was criticised when presented at an IOMS meeting.¹¹⁹ These views have seen the former Mufti accused of *ijtihad* that deviates from sharia and its *maqasid*, and contradicts the majority of modern jurists who see *li'an* as overruling DNA testing.¹²⁰ That an *ijtihad* deviates from the majority is no issue, as many of Ibn Taymiyya's views were in the minority during his time, yet are popularly used in the current Muslim world. Circumstance and time force change and this is the rationale behind *ijtihad* as a method for legal advancement. Overall, this first group of scholars, consisting of the minority opinion, argue a father and husband seeking *li'an* who has DNA testing to prove a child is his would seek to render the *li'an* ineffective because the word *shahada* in 24:6 could mean any evidence to support this claim.¹²¹

The alternative opinion on this matter was expressed by a second group of scholars at the 1998 IOMS conference. In comparing DNA testing to physiognomy, scholars restricted it to supporting

¹¹⁵ Ibid 18-19.

¹¹⁶ Muhammad al-Mukhtar al-Salami, 'Ithbat al-Nasab bi'l-Basmah al-Wirathiyyah' in *Ru'yah Islamiyyah* vol 1, 405 cited in Shabana, 'Negation of Paternity' (n 28) 189-190.

¹¹⁷ Shaham (n 50) 179. This was stated by Dr Abd al-Ma'ti Bayyumi, who believes DNA testing should replace *li'an* as the main probative means for establishing paternity and adultery.

¹¹⁸ See n 95. As-Salami analogised DNA evidence to evidence of Yusuf's tear in his shirt, which absolved him of blame (see Chapter III n 59). *Ru'ya islamiyya li-ba'd al-mushkilat al-tibbiyya al-mu'asira* (2000) vol 1, 405; Muhammad al-Mukhtar Al-Salami, 'Ithbat al-nasab bi'l-basma al-wirathiyya' ('Paternity Establishment by Means of DNA Printing') in Muhammad al-Mukhtar Al-Salami (ed), *Al-Tibb fi daw' al-iman (Medicine in Light of Faith)* (Dar al-Gharb al-Islami, 2001) 173-185 cited in Shabana, 'Physiognomy to DNA Analysis' (n 39) 19; Serrano-Ruano (n 59) 301. This reasoning follows Ibn Qayyim's definition of evidence to include any proof to achieve justice and verify truth, see Chapter IIIC(3).

¹¹⁹ See *Ru'ya islamiyya li-ba'd al-mushkilat al-tibbiyya al-mu'asira* i. 504-29 cited Shabana 'Physiognomy to DNA Analysis' (n 39) 19-20.

¹²⁰ Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) 178-89 cited in Serrano-Ruano (n 59) 301.

¹²¹ Shabana, 'Negation of Paternity' (n 28) 191-2.

evidence.¹²² This group sees DNA testing as complementary or corroborative only, so *li'an* continues to be preferenced and is still useful for a husband.¹²³ DNA testing, as circumstantial evidence, can be used with the same restrictions given to physiognomy and should be used only if it does not conflict with established sharia methods of proof,¹²⁴ such as the marital bed maxim, witness testimony or acknowledgement,¹²⁵ or if *li'an* is absent, or if there is contradictory evidence.¹²⁶ Some scholars agree DNA testing should become the modern equivalent of physiognomy as supporting evidence, which assumes the same position of hierarchy that classical jurists created for establishing paternity.¹²⁷ DNA testing is thus secondary to established proofs. This means DNA testing cannot substitute *li'an* for paternity negation, one reason being that doubt and uncertainty cannot be entirely eradicated with DNA testing due to potential contamination of samples or lab errors,¹²⁸ and imperfect scientific theories, as time often evidences.¹²⁹ This group from the IOMS conference as well as other Muslim scholars argue against replacing *li'an*, because it is based on scriptural text and has religious implications; hence, DNA testing can be used as circumstantial evidence assisting a husband to decide before pronouncing *li'an*, but *li'an* would take priority over conflicting DNA evidence.¹³⁰ This opinion gives *li'an* priority regardless of DNA results¹³¹ because they limit *shahada* in the *li'an* verses to eyewitness testimony only, seeking to prevent disputes relying on DNA testing in any paternity dispute.¹³² Sharia's role is seen as a safeguard to individual privacy, promoting *satr*¹³³ even if it means such claims will

¹²² Ibid.

¹²³ Sa'd al-'Anzi, 'Al-Basmah al-Wirathiyyah wa-mada Hujjiyyatiha fi Ithbar wa-Nafy al-Nasab' in *Ru'yah Islamiyyah* 1, 1:411-38 as cited in Shabana, 'Negation of Paternity' (n 28) 190.

¹²⁴ Shabana, 'Negation of Paternity' (n 28) 20. As established at the IOMS meeting, see *Ru'ya islamiyya li-ba'd al-mushkilat al-tibbiyya al-mu'asira* (2000), 261 cited Shabana, 'Physiognomy to DNA Analysis' (n 39) 20.

¹²⁵ Ali Muhyi al-Din al-Qaradaghi, Al-Basma al-wirathiyya min manzur al-fiqh al-islami, *Majallat al-Majma' al-Fiqhi al-Islami* 14/16 (2003) cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 21.

¹²⁶ Shaham (n 50) 181.

¹²⁷ Ali Muhyi al-Din al-Qaradaghi, Al-Basma al-wirathiyya min manzur al-fiqh al-islami, *Majallat al-Majma' al-Fiqhi al-Islami* 14/16 (2003) 51 cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 21; Hasan Ali Al-Shadhili, 'Al-Basmah al-Jiniyyah wa-Atharuha fi Ithbit al-Nasab' in *Ru'yah Islamiyyah* 1, 1:463-99 as cited in Shabana, 'Negation of Paternity' (n 28) 191.

¹²⁸ Shabana, 'Negation of Paternity' (n 28) 192.

¹²⁹ Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010), 90-95; Shabana, 'Between Law and Biology' (n 109) 229; Shabana 'Negation of Paternity' (n 28) 198; Serrano-Ruano (n 59) 302.

¹³⁰ Umar ibn Muhammad Al-Subayl, 'al-Basma al-wirathiyya wa-mada mashru'iiyyat istikhdamih fi l-nasab wa-l-jinaya', *Majallat al-Majma' al-Fiqhi al-Islami* 13/15 (2002) 58 cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 21.

¹³¹ Sa'd Al-'Anzi, 'Al-Basmah al-Wirathiyyah wa-Mada Hujjiyyatiha fi Ithbat wa-Nafy al-Nasab' in *Ru'yah Islamiyyah* 1, 1:411-38 as cited in Shabana, 'Negation of Paternity' (n 28) 190.

¹³² Shabana, 'Negation of Paternity' (n 28) 192-3.

¹³³ See n 1 for further information on *satr*.

remain unverified.¹³⁴ A 2000 IOMS meeting similarly found most participants reluctant to suggest total replacement of *li'an* by DNA testing, with the majority favouring DNA testing in paternity disputes as corroborative evidence to support sharia-based methods or settle disputes in the absence of sharia methods, with a similar final agreement that *li'an* cannot be abrogated by DNA testing.¹³⁵ The 2002 Islamic Fiqh Council similarly stated DNA testing cannot be used to negate paternity nor can it take priority over *li'an*.¹³⁶ This second view, which constitutes the majority of Muslim scholars, attaches paternity to marriage and otherwise gives priority to *li'an* in conflict.¹³⁷ This accords with the tendency in hudud cases to relegate the truth to the parties' conscience.¹³⁸

The difference of opinions between these groups centres on the methodology of applying principles of paternity rules. Those who support DNA testing to prove paternity argue for greater incorporation of DNA testing to prove certainty of lineage because logic is part of sharia principles, and in the past paternity could not be determined without doubt, whereas it can now and should be used for definitive paternity purposes. Those who do not accept DNA testing as a main proof believe paternity remains a legal question based on sharia regardless of the state of scientific development, referring to the marital bed maxim and hadith that the adulterer receives the stone,¹³⁹ as well as arguing that sharia evidence has a hierarchy involving religious and devotional elements, which seek to preserve privacy, which is the aim of *li'an*, and avoid social ruin.¹⁴⁰ This latter opinion believes DNA testing should supplant physiognomy but not override the marital bed maxim nor *li'an*.¹⁴¹

A sensible and reasonable approach to reconciling these opinions comes from Qaradawi, who combines *li'an* and DNA testing. Qaradawi argues DNA testing should be undertaken only if the accused wife (in a case of *li'an*) requests it, as she would only do so if innocent and this would be better for all parties, collectively proving her innocence, establishing the child's paternity and

¹³⁴ Shabana, 'Negation of Paternity' (n 28) 192-3.

¹³⁵ Ibid 196-7.

¹³⁶ *Qararat al-Majma' al-Fiqhi*, 344 as cited in Shabana 'Negation of Paternity' (n 28) 198.

¹³⁷ Khalifah Ali al-Ka'bi, *Al-Basmah al-Wirathiyyah wa-Atharuha ala al-Ahkam al-Fiqhiyyah* (Dar al-Nafa'is, 2006) 442-60 as cited in Shabana, 'Negation of Paternity' (n 28) 193.

¹³⁸ Khalifah Ali al-Ka'bi, *Al-Basmah al-Wirathiyyah wa-Atharuha ala al-Ahkam al-Fiqhiyyah* (Dar al-Nafa'is, 2006) 448 as cited in Shabana, 'Negation of Paternity' (n 28) 193.

¹³⁹ Sahih Muslim, Kitab Al-Rida' 1458, Book 8, Hadith 3437 <https://sunnah.com/muslim/17/48>, accessed 16 October 2019. The phrase 'and the adulterer receives the stone' has been interpreted literally (to mean an adulterer/fornicator deserves stoning to death) and metaphorically (to mean loss or disappointment) as cited in Shabana, 'Negation of Paternity' (n 28) 193-4.

¹⁴⁰ Shabana, 'Physiognomy to DNA Analysis' (n 39) 23-4.

¹⁴¹ Khalifa Ali A-Ka'bi, *Al-Basma al-wirathiyya wa-atharuha 'ala l-ahkam al-fiqhiyya* (Dar al-Nafa'is li-l-Nashr wa-l-Tawzi'), 301; Nasir Ibn Abdullah Al-Mayman, *Al-Nawazil al-tibbiyya* (Dar Ibn al-Jawzi, 1430/2009) 108 cited in Shabana, 'Physiognomy to DNA Analysis' (n 39) 24.

removing the husband's doubt.¹⁴² To perform a DNA test upon a father's request sees the mother lose the protection of *li'an* and the majority of Muslim scholars therefore deny this request even if it comes from the wife because they see *li'an* as sufficient.¹⁴³ This opinion emphasises the use of *li'an* to end a paternity dispute without DNA testing to avoid disgracing a wife and child.¹⁴⁴ However, in Qaradawi's opinion, sharia would not refuse a wife's request for DNA testing, because such a measure does not contradict a religious principle and would bring great benefit.¹⁴⁵ Hence, while DNA testing may seem desirable, it should be left to the woman whether to use it. One scholar went further to suggest DNA testing before *li'an* can help a husband decide whether to continue with the pronouncement or abstain.¹⁴⁶ These opinions maintain adultery is limited to the traditional proof of eyewitnesses.

Legal writer Jilali has contributed to this discussion posing meaningful suggestions and matters for consideration.¹⁴⁷ In agreeing with the majority and favouring *li'an*'s superiority over medical evidence for married women, Jilali argues *li'an*'s proofs are stronger than medical testing and conform with the position of the transnational collective fatwa councils; however, he concedes there is no unanimous view on this issue.¹⁴⁸ Rather, the view that argues for granting children paternal affiliation based on DNA evidence is strong enough to warrant review of the matter and gives a view that paternity assignment falls under *maqasid* of preserving life for children as women cannot be expected to provide maintenance if they do not earn money.¹⁴⁹ In this opinion, Jilali follows Ibn Qayyim (the minority use him as support) and argues 'men and women have equal footing in procreation and that this is in harmony with sharia as just, compassionate, wise, and beneficial in its rewards and punishments' because preserving lineage is one of sharia's objectives.¹⁵⁰ Jilali sees DNA as a blessing making those guilty of an act take responsibility, and

¹⁴² Yusuf Al-Qaradawi, *Min Hady al-Islam Fatawa Mu'asirah* (Dar al-Qalam, 2009) 4:901-2 as cited in Shabana n 28; Shaham (n 50) 174.

¹⁴³ Shaham (n 50) 174. *Li'an* protects a woman from the punishment for adultery as her oath is just as strong as her husband's.

¹⁴⁴ This point was highlighted during an IOMS meeting, cited Shabana, 'Physiognomy to DNA Analysis' (n 39) 22.

¹⁴⁵ Shaham (n 50) 174.

¹⁴⁶ Ibid 242 n 83 citing Dr 'Umar b. Muhammad al-Sabil, Dean of the sharia faculty, Umm al-Qura, Mecca.

¹⁴⁷ Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) cited in Serrano-Ruano (n 59) 303.

¹⁴⁸ Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) 87-88, 91, 188-9 cited in Serrano-Ruano (n 59) 303.

¹⁴⁹ Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) 116-22, 175 cited in Serrano-Ruano (n 59) 303. In sharia mothers are not required to provide financial maintenance for their children. This is the role of the father.

¹⁵⁰ Ibid. See also n 81.

he further advocates legislators address this issue so men realise they cannot get away with indiscretions.¹⁵¹ This opinion maintains *li'an*'s pre-eminence as sharia law but accounts for modern testing to fulfil roles of paternity for the protection of children.

Another aspect to consider in arguing DNA testing replace *li'an*, is that *li'an* is not simply about denial of paternity, it is also an accusation of adultery, which the wife may have committed even if her child belongs to the husband. Irrespective of the definition of *shahada* in the *li'an* verse, if DNA testing is considered definitive proof, it can only prove the husband is or is not the father, yet it cannot remove the doubt a wife may have committed adultery. This means a husband may still insist on *li'an* to bring an adulterous accusation against his wife.¹⁵² This raises the legal question of whether a child will continue to be attached to the legal father if he is proven the biological father yet continues to invoke *li'an*.¹⁵³

Despite a lack of uniformity among councils, their principles have been used in fatwas and court decisions, with the majority of scholars viewing DNA testing as corroborative evidence so long as it does not conflict with sharia methods for establishing and negating paternity.¹⁵⁴ Interestingly, Egypt's *Dar Al-Ifta* (Institute of Fatwa rulings) in 2004 gave a fatwa allowing a *li'an* pronouncement to stand, but admitting paternity of the child to the ex-husband proven by DNA; hence, modifying the classical legal ruling on paternity in light of modern DNA testing.¹⁵⁵ Yet, in a Kuwaiti Cabinet Memorandum, DNA testing was approved solely for paternity negation not for its establishment.¹⁵⁶ These judicial and legislative decisions evidence the difference of opinions in this area and need to establish effective guidelines for DNA testing's integration with traditional sharia rules. The decision by *Dar Al-Ifta* balances the use of modern technology and sharia principles to establish paternity with a certainty that was unachievable in the past, while ensuring

¹⁵¹ Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) 122-3, 126-7 cited in Serrano-Ruano (n 59) 303.

¹⁵² Shabana, 'Negation of Paternity' (n 28) 190. As mentioned in n 95, normally in *li'an* cases any resultant child from the pregnant wife will not be attached to the father, which has implications for guardianship and inheritance among other legal areas for the child. If DNA testing proves the husband is not the father, it becomes corroborative evidence and strengthens his *li'an* and denial of paternity (Muhammad Sulayman Al-Ashqar, 'Ithbat al-Nasab bi'l-Basmah al-Wirathiyyah' in *Ru'yah Islamiyyah* 1, 1:460 as cited in Shabana, 'Negation of Paternity' (n 28) 190).

¹⁵³ Muhammad Sulaymin al-Ashqar, *Abhath Ijtihadiyyah fi al-Fiqh al-Tibbi* (Dar al-Nafi'is, 2006) 251-69 as cited in Shabana, 'Negation of Paternity' (n 28) 190).

¹⁵⁴ Shabana, 'Negation of Paternity' (n 28) 199-200.

¹⁵⁵ Nasr Farid Wasil, 'Al-Basmah al-Wirathiyyah wa-Majalat al-Istifada minha' *Majallat al-Majma' al-Fiqhi al-Islami* 17 (2004): 82-92 as cited in Shabana, 'Negation of Paternity' (n 28) 199.

¹⁵⁶ Sa'd Al-Anzi, 'Al-Basmah al-Wirathiyyah wa-Mada Hujjiyyatiha' in *Ru'yah Islamiyyah* 1, 1:416-17 as cited in Shabana, 'Negation of Paternity' (n 28) 199. However, this memorandum was criticised by a more senior committee that favoured reliance on sharia-based methods to resolve paternity disputes.

definitive sharia rules of *li'an* are not breached. If sharia requires reliable evidence to prove a claim, as Ibn Qayyim argued, then limiting all forms of evidence to eyewitnesses, and preventing the use of DNA testing as reliable evidence, is not a responsible and honest method of using sharia principles. However, limiting the ambit of DNA testing, as *Dar Al-Ifta* ruled, is laudable because using such tests to prove hudud offences (in this case adultery) transgresses sharia's deterrent objectives. However, the question remains: what would *Dar Al-Ifta* have decided if the DNA test negated the husband's paternity – would it have felt compelled to convict the woman of adultery or used the majority ruling that pregnancy does not prove adultery nor fornication? This outcome is yet to be seen among fatwa councils and other bodies in their decision-making but requires serious consideration.

The two main opinions discussed above differ mainly because they focus on different questions: first, whether *li'an* is meant to reveal the true paternity of the child for which DNA testing is integral or whether *li'an* is meant solely to end a marital dispute for which DNA testing is irrelevant;¹⁵⁷ and second, whether DNA testing may be conclusive evidence compared to the sharia-based method of *li'an*, hence surpassing the need for *li'an*.¹⁵⁸ Sharia must determine how to engage with and include modern technology so it does not breach sharia principles. *Ijtihad* is needed in this area to answer whether DNA testing is the modern equivalent of physiognomy and considered corroborative evidence that supports established proofs, or whether it can be treated as definitive proof (like marriage for paternity establishment and *li'an* for paternity negation).¹⁵⁹ This thesis submits, first, *li'an* continues to play a significant role in protecting a woman in adultery issues, and has relevance to end a marriage and deny paternity; and, second, DNA testing at the request of the woman has a role to play in resolving paternity issues. Further, such a novel method of paternity testing should be used primarily to protect children, which should underpin any form of *ijtihad* or alteration to *fiqh* principles. Finally, irrespective of adultery being criminalised, the *hadd* of adultery and *qadhaf* should retain their high evidentiary basis as the idea is not to punish but deter. The *hadd* and possibly even the *taazir* punishment for adultery should be separated from DNA paternity cases to give latitude to test for paternity without fear of punishment for adultery or *qadhaf*.¹⁶⁰

¹⁵⁷ Shabana, 'Negation of Paternity' (n 28) 201.

¹⁵⁸ Ibid 194.

¹⁵⁹ Ibid 200-201. The 1998 IOMS meeting did not make a specific recommendation but suggested a further meeting to discuss the issues in detail. The meeting stated DNA could reach the level of strong circumstantial evidence in cases other than hudud, and the majority of schools would use such evidence for contested paternity provided DNA testing is conducted in several laboratories (*Ru'yah Islamiyyah* 1, 2:1050 as cited in Shabana, 'Negation of Paternity' (n 28) 195).

¹⁶⁰ Whether adultery should be punished under *taazir* using DNA proof is a complex question that Muslim states must individually assess, keeping in mind sharia's objectives and principles of justice and compassion.

In a 2008 conference on genetic testing in Algeria, the president of the Personal Status Chamber of the Supreme Court stated *ijtihad* was necessary regarding paternal affiliation of children born to unwed parents because the search for precedents in classical Islamic jurisprudence has proved insufficient.¹⁶² DNA testing as a modern technology is complex and beyond what jurists could have imagined; hence, a new situation needs new rulings.

Majority *fiqh* opinions and modern state laws are struggling to deal with the increase of illegitimacy in society.¹⁶³ In adopting legal codes based on secular sources, post-colonial Muslim states lost their history of dynamically developing context-based laws¹⁶⁴ that allowed *fiqh* to adapt to time and circumstance. In the absence of legislative guidelines, courts in most Muslim majority jurisdictions that enforce sharia or a form of it have been reluctant to approve DNA testing to verify paternity as they have seen this scientific development have far-reaching impacts on society regarding potential legal implications.¹⁶⁵ Hence, most Muslim majority countries continue to uphold paternity on traditional proofs of testimony, acknowledgement, secondary proofs such as physiognomy, and using the marital bed maxim or *li'an* as the ultimate method for paternity negation.¹⁶⁶ Courts give precedence to these methods, however DNA testing is nevertheless recognised and used to varying degrees based on judicial discretion, legislation and other sharia evidentiary standards.¹⁶⁷ Many jurisdictions consider the child's 'best interest' before allowing DNA testing rather than allow parents to use the test to undermine their spouse.¹⁶⁸ The courts

Punishing adultery using DNA testing is outside sharia proofs and will result in criminalising only women. Naturally, this creates injustice. This thesis argues punishment for adultery should not be established by DNA testing, and be restricted to traditional proofs of eyewitness testimony or confession.

¹⁶¹ The current assessment of modern Muslim jurisdictions is merely providing an example of what some jurisdictions have implemented to deal with the technological change of DNA testing. It is not a comprehensive analysis of all modern Muslim jurisdictions.

¹⁶² Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) 122, 134 n 6 quoting Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation)* (Dar al-huda, 2010) 103-4 cited in Serrano-Ruano (n 59) 306.

¹⁶³ Serrano-Ruano (n 59) 307.

¹⁶⁴ Frances S Hasso "'Bargaining with the Devil' States and Intimate Life' (2014) 10(2) *Journal of Middle East Women's Studies* 107, 110-12.

¹⁶⁵ Shaheen Sardar Ali, 'Exploring New Directions in the Islamic Legal Traditions: Re-Interpreting Shari'a from within' (2013) 9 *Journal of Islamic State Practices in International Law* 9, 18.

¹⁶⁶ Shabana, 'Physiognomy to DNA Analysis' (n 39) 31.

¹⁶⁷ Ahmad Ibrahim and Wasil 'Ala al-Din Ahmad Ibrahim, *Ahkam al-ahwal al-shakhsiyya fi l-sharia al-islamiyya wa-l-qanun* (Al-Maktaba al-Azhariyya li-l-Turath, 5th ed, 2003) 92-102 cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 31.

¹⁶⁸ Ibid.

consider the impact on a child, such as finding out the person they know as their father is not their biological parent; hence, much of the case law from Pakistan and the Middle East evidences the debate between rights of the child and parents, and has resulted in refusal to force parents to undergo DNA testing.¹⁶⁹ Sardar cites a member of the Pakistani judiciary who stated ‘this was a settled issue’ in that Pakistani courts would reject DNA test requests to ascertain paternity due to the myriad complicating issues, including sharia, morality, ethics and modern technological developments.¹⁷⁰ However, commentators argue preventing filiation and labelling illegitimate children deprives them of the right to carry their father’s name and receive maintenance and inheritance from him, as well as restricting citizenship rights such as preventing access to public schools and the health system.¹⁷¹

Some jurisdictions have sought to redress this issue by legislative injunction. One example is Tunisia, which was the first among Arab countries to admit DNA tests to establish paternity for children born out of wedlock.¹⁷² These laws include right of a child to bear the father’s name but not to inherit, and the mother may claim financial support for upbringing.¹⁷³ Despite ongoing social denunciation, the rate of unmarried mothers who abandon children in Tunisia decreased by a third since these laws were introduced.¹⁷⁴ Other Muslim states see ‘creative interpretations’ by judges who use different legal sources to give meaning to otherwise vague codes to provide some form of filiation to illegitimate children,¹⁷⁵ and interpret legal codes to assist women and society

¹⁶⁹ Ibid.

¹⁷⁰ Ibid 18-19.

¹⁷¹ Betsy Fisher, ‘Why Non-Marital Children in the MENA Region Face a Risk of Statelessness’ (2015) *Harvard Human Rights Journal Online* 1, 1-8; Frances S Hasso, *Consuming Desires: Family Crisis and the State in the Middle East* (Stanford University Press, 2011) 1, 11, 152–53 cited in Serrano-Ruano (n 59) 294.

¹⁷² Tunisian Law no. 75 (October 1998, the Patronymic Name Law) gives the right to demand genetic testing (Loi no. 1998-0075 du 28 Octobre 1998, relative à l’attribution d’un nom patronymique aux enfants abandonnés ou de filiation inconnue, modifiée par la loi no. 2003-0051 du 7 juillet 2003 [Law of 28 October 1998 on the Attribution of a Patronymic Name to the Abandoned Children of Unknown Filiation] <www.jurisitetunisie.com/tunisie/codes/csp/L1998-0075.htm>, accessed 22 October 2019. The main arguments for this law in parliament were that it granted legal protections to children and did not allow fathers to go free of liability for their actions (Mayinu Jilali, ‘Al-Ithbat bi’l-basma al-wirathiyya: Dirasa muqarana’ (‘The Probative Status of DNA Printing: A Comparative Study’) (PhD Thesis, Abu Bakr Bilqa’id University, 2014-15) 122, 134, 142-3, cited in Serrano-Ruano (n 59) 297).

¹⁷³ Tunisian Law no. 75 (October 1998, the Patronymic Name Law) Loi no. 1998-0075 du 28 Octobre 1998, relative à l’attribution d’un nom patronymique aux enfants abandonnés ou de filiation inconnue, modifiée par la loi no. 2003-0051 du 7 juillet 2003 [Law of 28 October 1998 on the Attribution of a Patronymic Name to the Abandoned Children of Unknown Filiation] <www.jurisitetunisie.com/tunisie/codes/csp/L1998-0075.htm>, accessed 22 October 2019 art 3, 3a.

¹⁷⁴ Perrine Massy, ‘Tunisia’s Single Mothers Still Struggle to Overcome Stigma’, *Women Living under Muslim Laws* (2 February 2016), <www.wluml.org/news/tunisias-single-mothers-still-struggle-overcome-stigma>, cited in Serrano-Ruano (n 59) 297; Sarah Souli, “‘They’re Not Seen as Human Beings’: Life for Unmarried Mothers in Tunisia”, *The Guardian* (9 May 2017) <<https://www.theguardian.com/lifeandstyle/2017/may/08/theyre-not-seen-as-human-beings-life-for-unmarried-mothers-in-tunisia>>, accessed 22 October 2019.

¹⁷⁵ Serrano-Ruano (n 59) 307.

as a whole.¹⁷⁶ While this is a positive change, it continues to be a fine balancing act for the judiciary and legislators to maintain traditional Islamic values amid societal reality, as evidenced by various fatwas on paternity establishment and DNA testing. The conflicting fatwas signify each case's individuality and the growing need for direction and reform in this area of sharia that impacts Muslims all over the modern world.

Redress of traditional *fiqh* rules using *ijtihad* principles is necessary to decide on appropriate methods to incorporate DNA testing based on past scholarship and new methods of proof to account for societal and legal changes necessary in all Muslim states that incorporate sharia or a version of it in their family laws. Importantly, as a new issue requiring debate and enquiry, DNA testing involves many stakeholders and should involve all in making decisions on its use or otherwise, including scholars, laypersons, religious scholars, jurists, parliamentarians and opinion makers.¹⁷⁷ This is in line with Kamali's¹⁷⁸ opinion regarding *ijtihad* and the way forward with new sharia decisions in the modern world.

(a) Morocco

In Morocco, as in many Muslim and traditional societies, children are defined by their ancestors, so a child born out of wedlock, with an unidentifiable father, suffers¹⁷⁹ resulting in no legal relationship between the father and child.¹⁸⁰ DNA testing is seen in Morocco as the solution to establish paternal filiation for children born outside marriage, and there has been a call to sharia to support such measures, where advocates of DNA testing state it is essential to protect children and maintain equality of both parents.¹⁸¹ Many believe discrimination of these illegitimate children is more a threat to social order than potential encouragement of adultery and fornication,¹⁸² which some commentators and jurists assume would occur if DNA testing became the legal method for determining paternity and holding men accountable to fatherhood.

¹⁷⁶ Ibid 308. While Serrano-Ruano (n 59) sees that judicial decisions often have 'negative consequences' to women and children, there is evidence of change albeit slow, regarding fatwas and judgments on paternal filiation.

¹⁷⁷ Ali (n 165) 19.

¹⁷⁸ See Chapter IVB.

¹⁷⁹ Kai Kreutzberger, 'Single Mothers and Children Born out of Wedlock in the Kingdom of Morocco' (2008-2009) *14 Year Book Islamic and Middle Eastern Law* 49.

¹⁸⁰ Schlumpf (n 54) 14.

¹⁸¹ Serrano-Ruano (n 59) 293.

¹⁸² Ibid.

In 2004, Morocco reformed its Personal Status Law establishing the *Moudawana*, a family code that deals with paternity issues.¹⁸³ Article 152 establishes three ways to establish paternity in line with traditional Islamic laws: the marriage bed, acknowledgment (by the father) or sexual intercourse by error; and art 148 clearly states illegitimate filiation to a father does not produce the same effects as legitimate filiation.¹⁸⁴ The *Moudawana* sees Morocco as the first Arab country to include DNA testing when it added ‘all other means’ under art 158 to prove paternity (including and taken to mean DNA testing, which can only occur at a judge’s discretion),¹⁸⁵ despite traditional methods of paternity filiation remaining more common.

Although pregnancy outside marriage will not grant paternity, even if proven by DNA, the judges and *Moudawana* have created legal rules in line with sharia to extend situations allowing for filiation. For example, a child will be defined as part of the marriage bed if born at least six months after a marriage contract or within one year after a couple’s separation.¹⁸⁶ DNA testing under art 156 can be imposed on a man to determine paternity in circumstances when an offer and acceptance of marriage have been made but the contract has not been completed.¹⁸⁷ Even an

¹⁸³ The Moroccan Family Code (*Moudawana*), 5 February 2004 (*‘Moudawana’*). This Code is considered one of the most advanced in the Arab world (Schlumpf (n 54) 1-5).

¹⁸⁴ *Moudawana*, art 152: ‘Paternity is established by: 1- the conjugal bed; 2- acknowledgement; 3- sexual relations by error’. Art 148, ‘Illegitimate filiation to the father does not produce any of the effects of legitimate filiation’.

¹⁸⁵ Kreutzberger (n 179) 71. *Moudawana*, art 158: ‘Paternity is proven by the conjugal bed, the father’s acknowledgement, the testimony of two public notaries (*adouls*), oral testimony, and by all other legal means, including judicial expertise’.

Moroccan judges, including those on the Supreme Court, interpret ‘all other legal means’ to include DNA tests (Nadia Sonneveld, ‘Seeking Portia and the Duke: Male and Female Judges Dispensing Justice in Paternity Cases in Morocco’ in Nadia Sonneveld and Monika Lindbekk (eds), *Women Judges in the Muslim World: A Comparative Study of Discourse and Practice* (Brill, 2017) 136–40 cited in Serrano-Ruano (n 59) 298).

¹⁸⁶ *Moudawana*, art 154 paras 1 and 2: ‘The paternity of a child is proven by the conjugal bed: 1- If the child is born six months after the marriage contract was concluded and the opportunity for sexual intercourse has existed, whether the marriage contract is valid or defective; 2- When the child is born during the year that follows the date of separation’. Art 135, ‘The maximum duration of pregnancy is one year from the date of the divorce or death of the husband’.

The *Moudawana* states paternity is proven by the marital bed, per the marital bed maxim, and has set the maximum pregnancy as one year, overturning the five-year Maliki doctrine of the ‘sleeping foetus’.

¹⁸⁷ *Moudawana*, art 156: ‘If an engagement takes place by an offer and acceptance but for reasons of force majeure the marriage contract was not officially concluded, and during the engagement period the engaged woman shows signs of pregnancy, the child is affiliated to the engaged man on the grounds of sexual relations by error when the following conditions are met: a- If the two engaged person’s families are aware of the engagement, and if the woman’s legal tutor, if required, has approved the engagement; b- If it appears that the engaged woman became pregnant during the engagement period; c- If the two engaged persons mutually acknowledge that they are responsible for the pregnancy. These conditions are established by a judicial decision not open to appeal. If the engaged man denies responsibility for the pregnancy, all legal means may be used to prove paternity’.

Art 156 responds to the frequency of informal or customary marriages (*fatiha* or *‘urfi*) concluded without formal written contract or official registration (Welchmann (n 54)). This law is regarded as directly in conflict with sharia as it legitimises sexual relations outside marriage according to some commentators, but judges see the protection of children and engaged women as outweighing these beliefs, and El Hajjami states this conflict between custom, religion and social reality creates conflict with judges, who nevertheless declare that establishing paternity is in the best interest of children (Aicha El Hajjami, *Le Coe de la famille à l’épreuve de la pratique judiciaire: Enquête de terrain* (Marrakech, 2009) 39 as cited in Schlumpf (n 54) 24).

irregular marriage contract or otherwise invalid marriage is granted validity¹⁸⁸ to allow for a legitimate birth (arts 58 and 157),¹⁸⁹ allowing the child to be considered part of the marital bed, where paternity can only be refuted by a husband invoking *li'an* or expertise as ordered by the court, such as DNA testing.¹⁹⁰ These legal presumptions are significant because, as discussed, a child needs to be legally affiliated to their father to gain legal entitlements. The risk for women with court ordered DNA testing, however, is being sent to jail if DNA provides evidence of an unlawful sexual relationship.¹⁹¹ This is why Qaradawi's suggestion, in Chapter VB(3), works best to entrust the choice of DNA testing to the woman.

Though the father still has the power to decide if he will establish lineage,¹⁹² the *Moudawana* has made steps to redress legal discrimination of illegitimate children.¹⁹³ Specifically, this has seen the introduction of possibly using medical evidence such as DNA testing to prove paternity, making it more difficult for a father to deny paternity.¹⁹⁴ However, these tests are only allowed to establish paternity if the couple were at minimum engaged, not to prove paternity in rape or extra-marital relations.¹⁹⁵ Hence, there are limitations on modern technology's use. Nevertheless, civil

¹⁸⁸ Legislative reform endorses local judicial custom, and judges, have tended to validate informal unions, assuming the existence of marriage by keeping a flexible approach to evidentiary demands (Nadia Sonneveld, 'Seeking Portia and the Duke: Male and Female Judges Dispensing Justice in Paternity Cases in Morocco' in Nadia Sonneveld and Monika Lindbekk (eds), *Women Judges in the Muslim World: A Comparative Study of Discourse and Practice* (Brill, 2017) 134, 136–38, 145–47 cited in Serrano-Ruano (n 59) 298).

¹⁸⁹ *Moudawana* art 58: 'The court shall declare such a marriage invalid in accordance with the provisions of preceding art 57 the moment it gains knowledge of it, or upon the request of the concerned party. After consummation, this marriage results in payment of the dowry, and when good intentions are present it also results in the acknowledgement of paternity as well as the impediments that result from the marriage'.

Art 157 'When paternity is proven, even if the marriage is defective, if it results from sexual relations by error, or by acknowledgement, it produces all of the effects of kinship, including the prohibition of marriage within degrees of kinship and breastfeeding relations, and creates kinship maintenance and inheritance rights'.

¹⁹⁰ Schlumpf (n 54) 9.

¹⁹¹ Dana Louise Goodlett, 'Resilience in Uncertainty: An Examination of a Moroccan Centre Serving Unwed Mothers' (PhD Thesis, University of South Florida, 2016) 29.

¹⁹² Marie-Claire Foblets and Jean-Yves Carlier, *Le Code Marocain de la Famille, Incidences au regard du droit international privé en Europe* (Brussels, 2005) 80 cited in Schlumpf (n 54) 25.

¹⁹³ The legal status of illegitimate children in Islam is a separate issue under sharia that is outside the scope of this thesis.

¹⁹⁴ Schlumpf (n 54) 22. Evidenced in arts 153 and 159 of the *Moudawana*:

Art 153: 'The conjugal bed is proven by the same means used to prove the marital relationship. The conjugal bed that meets the required conditions is irrefutable proof of paternity, only subject to disavowal by the husband through a sworn allegation of adultery committed by his spouse, or by means of an irrefutable expertise, upon two conditions: - The husband must present solid proof of his allegations; - Issuance of a judicial decision ordering the expertise'.

Art 159: 'The husband's paternity of the child and the pregnancy of his wife may only be refuted by judicial decision, in accordance with preceding Article 153'.

¹⁹⁵ Aicha El Hajjami, *Le Coe de la famille à l'épreuve de la pratique judiciaire: Enquête de terrain* (Marrakech, 2009) 149; Stephanie William Bordat and Saida Kouzzi, 'Legal Empowerment of Unwed Mothers: Experiences of Moroccan NGOs' (Legal Empowerment Working Papers, Paper No 14, Rome 2010) https://www.files.ethz.ch/isn/138103/LEWP_BordatKouzzi.pdf, accessed 17 October 2019, 4 cited in Schlumpf (n 54) 25.

organisations promote DNA testing and assist single mothers who want it, and non-government organisations also negotiate with alleged fathers, using the test as a threat to accept paternity.¹⁹⁶

DNA paternity cases in Morocco represent the issues courts experience in this area of paternity filiation and the inconsistencies of judgments due to legislative gaps among other things. In one case, a woman obtained filiation of her child with her rapist¹⁹⁷ but was unable to register the child under the father's name because, while DNA established rape, there is no filiation of children born out of wedlock per art 152 of the *Moudawana*.¹⁹⁸

Current judicial practice in Morocco sees DNA tests (art 153) as establishing paternity denial, making *li'an* unnecessary when a husband's claims are supported, resulting in loss of women's protections via *li'an*.¹⁹⁹ However, judges assume a husband's refusal to attend court over a paternity denial commensurate with admitting paternity.²⁰⁰ In 2017, a woman sued the father of her child for maintenance after a DNA test established his paternity, but while her claim was rejected because the parents were not married, the court applied section 77 of the Code of Obligations and Contracts and ordered the father to pay money to the mother as he was criminally responsible for engaging in a non-marital relationship, which violated art 409 of the Moroccan Penal Code.²⁰¹ Another judge citing the law on obligations and contracts ordered a man to pay financial compensation for fathering a child outside wedlock, and while this stirred debates in media and legal professions,²⁰² it shows judges are seeing the impact of illegitimacy in their community and seeking creative ways to address issues in the absence of appropriate legislation. While these judgments are not reflective of traditional sharia, there is sufficient sharia evidence²⁰³

¹⁹⁶ Kreutzberger (n 179) 71.

¹⁹⁷ Sana' Karim, 'Hukm isti'nafi yuthbit nasab al-tifl li-l-mughtasib wa-mahkamat al-usra taqdi bi-khilafi-hi' (An Appeals Judgment Establishes Filiation of a Child with the Mother's Rapist but the Family Court Rules Otherwise) (2008) *Magress* (18 April 2008) <www.maghress.com/attajdid/41020> cited in Serrano-Ruano (n 59) 303-4.

¹⁹⁸ Ya'qub Balbashir, 'Haqq al-tifl ghayr al-shar'i fi ma'rifat waliday-hi 'an tariq al-basma al-wirathiyya' (Right of the Out-of-Wedlock Chld to Know the Identity of Its Parents by Means of DNA Printing) (Magister Thesis, University of Oran, 2012-13) 13, 183-4, 188 <www.univ-oran2.dz/images/these_memoires/FDSP/Magister/THA3190.pdf>, cited in Serrano-Ruano (n 59) 304.

¹⁹⁹ Serrano-Ruano (n 59) 303.

²⁰⁰ Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) 194-99; Women Living under Muslim Laws (2006) Knowing Our Rights: Women, Family, Laws and Customs in the Muslim World (Russell, 3rd ed, 2006) 232 cited in Serrano-Ruano (n 59) 303); Schlumpf (n 54) 9.

²⁰¹ Serrano-Ruano (n 59) 304.

²⁰² Nadia Sonneveld, 'Seeking Portia and the Duke: Male and Female Judges Dispensing Justice in Paternity Cases in Morocco' in Nadia Sonneveld and Monika Lindbekk (eds), *Women Judges in the Muslim World: A Comparative Study of Discourse and Practice* (Brill, 2017) 140-49 cited in Serrano-Ruano (n 59) 304-5.

²⁰³ See nn 81, 150 and accompanying text.

allowing paternal filiation of children of unwed parents, and it is suggested that countries such as Morocco would do better to incorporate these *fiqh* opinions into their laws.

Moroccan scholar Al-Raysuni stated there was no sharia issue in assigning paternity to a man who admitted he had an unlawful sexual relationship with the mother based on opinions by Hasan al-Basri, Ibn Rahwayh, and Ibn Qayyim, and he further states the majority of medieval Muslim jurists established filiation of a child born from adultery with the mother because this is known, and today with the advancement of science this can conclusively establish paternal filiation.²⁰⁴ This is a progressive argument that scholars, jurists, authors and legislators should consider when seeking to reform sharia for their community's betterment. It is in the Muslim world's interests to look into all Sunni schools and minority scholarly opinions to establish a legal basis and use *ijtihad* to redress societal injustice and update laws pertaining to filiation. The 2004 *Moudawana* reforms show concerted effort from Moroccan legislators to include modern technology in sharia evidence. There is no discussion in the texts that measures such as DNA testing will be used to prove adultery. Hence, these reforms incorporate technology usage without creating increased hudud punishments, which this thesis suggests is a positive step forward for sharia evidence laws.

(b) Egypt

Fatwas given by *Dar Al-Ifta* in Egypt evidence the difference of opinions in this area of paternity recognition, proof of adultery and DNA testing. Judges are advised to make efforts to confirm paternity as much as possible for those in valid marital relationships and those in imperfect marital contracts according to fatwas in 2005.²⁰⁵ Most fatwas state DNA testing cannot override *li'an*. A 2004 fatwa by Ali Jum'a Muhammad, former Mufti, states every precaution should be taken to confirm paternity, such as marital bed, testimony, confession/acknowledgment and physiognomy, noting formal marriage as grounds for paternity is in the child's best interests.²⁰⁶ DNA evidence is only used in disputed or contested cases where a marital relationship exists or is in doubt, not in extramarital relationships.²⁰⁷

A 2006 fatwa that is more liberal states paternity is not dependant on establishment of a marital relationship; refusal to submit to DNA testing is strong circumstantial evidence against a defendant

²⁰⁴ Ahmad Al-Raysuni, 'Ahmad al-Raysuni yaktub: Nazilat Tanja fi ithbat al-nasab min al-zina' ('Ahmad al-Raysuni Writes on the Tangiers Judgment Granting Paternity for a Child Born from Zina'), *Al3umq AlMaghribi* (February 25 2017) <www.al3omk.com/2017/02/25/>, cited in Serrano-Ruano (n 59) 305.

²⁰⁵ <<http://www.dar-alifta.org/ViewFatwa.aspx?ID=124&LangID=1&MuftiTy pe=2>>, accessed April 2012 cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 28.

²⁰⁶ A photocopy of the fatwa is included in the appendix of Muhammad Al-Shinnawi, *Al-Basma al-wirathiyya wa-hujjiyyatuha fi l-ithbat al-jina'i* (Cairo: n.p., 2010), 34 cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 29.

²⁰⁷ Ibid.

in disputed paternity; and, if testing is negative, then an applicant is liable for *qadhaf*.²⁰⁸ Similarly, a fatwa by former Egyptian Mufti Nasr Farid Wasil states DNA testing used after *li'an* in support of the husband should negate paternity, but if not, paternity should not be negated and the husband punished for *qadhaf*.²⁰⁹ This fatwa does not uphold *li'an* as the ultimate procedure for paternity negation, as it allows DNA to establish paternity after *li'an*.²¹⁰ Further, this fatwa sees *li'an* and paternity as separate and distinct, so *li'an* is not a form of paternity negation to the court. These fatwas in pronouncing different rulings from each other, yet within the same country, evidence the need for consistent and authoritative juristic and scholarly direction in this area.

(c) *Pakistan*

In Pakistan, a divorce and maintenance petition for a minor son was brought before the Lahore High Court where the husband disputed paternity, because his wife had been absent for a month and he had not spent more than a few days with her since her return.²¹¹ The submissions stated a DNA test would resolve the question of the husband's true paternity, yet the court determined the matter on the basis of the sharia presumption that lawful marriage favours paternity under the marital bed maxim that cannot be removed by simple denial, so the father's application was dismissed.²¹²

More specifically, the Council of Islamic Ideology in Pakistan considered the question whether DNA tests in rape cases could be used as evidence and stated, despite being a useful and modern technique, DNA testing could not be used as primary evidence alone but was supporting evidence.²¹³ This evidences that some courts in modern Muslim jurisdictions that follow some form of sharia, particularly for family law, do not have confidence in DNA testing and find it difficult to shift traditional sharia forms of evidence, despite comments and rulings by traditional scholars such as Ibn Qayyim and his interpretation of *bayyina* as requiring evidence that elicits truth. Yet other jurisdictions use these traditional, liberal rulings, exemplified in Algerian cases.

²⁰⁸ Ibid 30.

²⁰⁹ Nasir Farid Wasil, 'Al-Basma al-wirathiyya wa-majalat al-istifada minha', *Majallat al-Majma' al-Fiqhi al-Islami* 288–96, arguing that performance of *li'an* should not necessarily result in negation of paternity, cited in Shabana 'Physiognomy to DNA Analysis' (n 39) 30-1.

²¹⁰ Ibid.

²¹¹ Martin Lau, 'Pakistan' (2007) 13 *Yearbook of Islamic and Middle Eastern Law* 275, 288.

²¹² *Muhammad Arsha v Sughran Bibi* (2008) PLD 302, 304 cited in *ibid*.

²¹³ Ali (n 165) 19. This was referenced in a news item carried by the national press on 24 September 2013, the Chairman of the Council of Islamic Ideology, Maulana Sherani.

(d) *Algeria*

In Algeria in 2000, a woman sued a man she claimed was her baby's father, which was established by DNA testing.²¹⁴ The final result, which granted paternal affiliation of the child to the father by the Supreme Court, evidenced Ibn Qayyim's opinion to assign paternal filiation.²¹⁵ The DNA test was considered *bayyina* (apparent evidence), as defined by Ibn Qayyim, which has a wide definition of not just witnesses, and as Jilali observes, sometimes these alternative forms of evidence are stronger proofs than two eyewitnesses.²¹⁶

Before the 2005 reform of the Algerian Family Code, judges disregarded genetic testing; however, arts 40 and 46 of the Code refer to 'valid means' for establishing paternal filiation, including using 'scientific means' in paternity claims.²¹⁷ Similar to the *Moudawana*, the revised Algerian Family Code considers legitimate those children from defective or erroneously assumed marriages.²¹⁸ One commentator on the Algerian Code observed court ordered paternity tests may breach art 34 of the Algerian Constitution that protects the human body because being forced to submit to a paternity test breaches freedoms including the right to privacy, physical and mental integrity, as well as breaching the legal principle that a person cannot be forced to submit to self-incriminating evidence.²¹⁹ This argument is essential to address under sharia irrespective of legislative enactments as it touches upon issues of privacy and procedural safeguards to individuals such as the right to silence. Clearly, this area of law intersects with many aspects of sharia that must be considered before enacting modern codes or granting decision-making powers to the judiciary.

²¹⁴ Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010) 98–103, cited in Serrano-Ruano (n 59) 306.

²¹⁵ Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010) 132–35 cited in Serrano-Ruano (n 59) 306. See nn 81, 150, 203 and accompanying text.

²¹⁶ Mayinu Jilali, 'Al-Ithbat bi'l-basma al-wirathiyya: Dirasa muqarana' ('The Probative Status of DNA Printing: A Comparative Study') (PhD Thesis, Abu Bakr Bilqa'id University, 2014-15) 130–32 in Serrano-Ruano (n 59) 306. Jilali at 134, n 6 discusses the connection of similar judgments with Ibn Qayyim's opinion, cited in Serrano-Ruano (n 59) 309.

²¹⁷ Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010) 229–33, cited in Serrano-Ruano (n 59) 299.

²¹⁸ Serrano-Ruano (n 59) 299.

²¹⁹ Badis Dhiyabi, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010) 110–11 cited in Serrano-Ruano (n 59) 299–300.

C Conclusion

While the majority of scholars and jurists have established DNA testing falls under the category of circumstantial evidence and cannot be used as proof for hudud crimes, with which this thesis agrees, it is less clear how this technology can be used for paternity verification. Serrano-Ruano points out the most serious risk of DNA testing is that ‘courts treat paternity claims as implicit confessions of *zina*’ and punish unmarried women.²²⁰ Accommodating DNA testing as a modern proof poses such issues under sharia. Redress of traditional *fiqh* rules using *ijtihad* principles is necessary in all Muslim states that incorporate sharia or a version of it to decide on appropriate methods to incorporate DNA testing based on past scholarship and modern technological proofs in a manner that accounts for societal and legal changes. The use of DNA testing as evidenced by these fatwas will no doubt slowly establish itself as part of the sharia landscape to promote justice between society members while endeavouring to preserve the immutable aspects of sharia and updating those areas capable of reform and *ijtihad*. The cases discussed above illustrate courts being creative in their interpretations and use of classical *fiqh*, accounting for and addressing the pressing social and legal needs of their communities in their judgments., but also indicate the divergent opinions that require conformity for the sake of consistency and predictability, essential in any legal system.

²²⁰ Serrano-Ruano (n 59) 308.

VI CONCLUSION & RECOMMENDATIONS

A Conclusion

Whether it is interpreting words such as *bayyina* or *shahada*, any attempt to update or clarify sharia begins with close analysis of the sources. Based on these sources, sharia principles are developed and formulated to underpin laws and procedures inherent to any developing society. *Ijtihad* is the process under sharia that allows this renewal and incorporation of *maqasid* ensures dynamism capable of operating under any system beyond the Arabian Peninsula. Through these principles, the objectives of hudud laws can be ascertained and developed to encompass change. Modern technology is one change acceptable under sharia concepts of reform. By understanding and analysing sharia sources, scholarly opinions and subsequent practice, modern technology of the 21st century can harmonise with sharia and its finely developed criminal evidence laws, posing no violation to immutable sources, seeking only to update rules and procedures capable of alteration.

Analysing traditional scholarly statements and Prophetic examples indicates modern technology has always been part of sharia laws and procedure. However, its use is uncertain and erratic in modern practice. In assessing past and present sources, this thesis has found modern technology fits neatly within evidence rules as circumstantial, not definitive, proof. Consequently, this evidence falls outside the exacting evidentiary standards required to prove hudud crimes, such as adultery or *qadhif*, whose difficulty of proof is inherent to their act and punishment. The nearly impossible standard of proving hudud crimes such as adultery is a significant consideration if the introduction into sharia of a modern development seeks to make a crime easier to prove. While it may appear backward, anachronistic or hypocritical to maintain traditional sharia evidence for hudud crimes, while allowing modern technology to prove other crimes (under *taazir*), the severity of hudud punishments explain this seeming incongruity. Sharia's objective is not to prove these crimes but to deter and force the state to uphold moral values by protecting its citizens, which is not met by inflating guilty verdicts of hudud crimes and meting out harsh punishments. Further, it is necessary that the public element of these crimes be prevented and criminalised, not the privacy of their wrong. It is not up to the state to punish private acts against God. If private acts become uncontrollable, the answer is not to increase guilty verdicts and impose capital punishment, but to create methods of deterrence and education to rectify individuals' beliefs and desire to live in accordance with Islamic principles. Accordingly, this technology can be comfortably incorporated as evidence under the category of *taazir* laws.

Scholars as far back as Ibn Qayyim agree judges need to use all available proofs to establish justice when making a decision. Modern technology fits this description. However, the implications of

using invasive forms of proof must be balanced against other considerations. CCTV surveillance is an example of modern technology that, despite its common use worldwide, breaches fundamental sharia principles of privacy and *satr* established in the highest sources, the Qur'an and Hadith. This breach naturally curtails use of such technology in proving hudud offences, where the strictest principles are maintained. However, its use under the *taazir* category may be relevant and appropriate in the modern world.

DNA testing is another modern technology whose accuracy is rarely disputed and has the potential to evidence crimes once impossible to prove. In shying away from determining DNA testing as definitive proof, the majority opinion seeks to ensure technology is prevented from expanding hudud proofs and breaching sharia privacy standards, as well as maintaining the religious elements of *li'an* and marriage as paternity verifications. While this is a desirable position, it ignores the reality of DNA testing as a revolutionary science. It appears a balanced approach is necessary to using DNA testing that combines the majority and minority positions without breaching sharia sources. This thesis submits it is imperative modern technology such as DNA testing be restricted from impacting the high evidentiary standards for hudud requiring eyewitness testimony, while acknowledging the usefulness of DNA testing as a source of proof for *taazir* and other legal areas.

Traditionally, paternity in Islam is established by marriage or *li'an*, but the new technology of DNA testing has expanded such proofs and consequently impacted the most important segment of society: the family. While its ability to provide evidence is clear, its desirability is another question sharia scholars and jurists are debating. The majority scholars to date have restricted DNA testing from establishing paternity in cases outside legally valid marriages. The minority opinion has looked beyond standard sharia constructs of privacy and hudud crimes to *maqasid* principles and found paternity significance is a social justice issue impacting children without legal title to a father; as such, its establishment overrides other considerations, having importance for the protection of children's interests and unwed mothers. In making these findings, the minority have reinvigorated minority opinions by granting paternity to fathers outside marriage, such as those given by Ibn Qayyim and other early scholars. This thesis further submits using DNA testing and *ijtihad* principles to fulfil the *maqasid* of sharia by considering the overall benefit to separate members of society in establishing biological paternity, while restricting its use in hudud crimes, is appropriate in the modern day and effectively balances sharia, *maqasid* and modernity under the banner of *ijtihad*. Qaradawi's opinion, it is submitted, provides even greater scope for the effective use and incorporation of DNA testing into traditional *li'an* laws by allowing these laws to continue protecting women and giving her the option to request DNA testing. While this will not necessarily prevent a husband from accusing a wife of adultery, it will provide proof of paternity and maintain a child's legal rights. This is a clear benefit of modern technology. Traditional sharia principles

are fulfilled under these decisions, seeking the ultimate objectives of God's laws. Since this issue impacts a child's life-long welfare and maintenance, it is within the bounds of *ijtihad* to enforce testing despite privacy considerations. Limiting the use of testing solely for the purposes of family laws ensures this modern technology would be unavailable to prove hudud offences.

Adultery is a criminal matter and it is therefore submitted DNA testing be enforced as part of civil legislation, separate to any enforcement of the crime of adultery or *qadhaf*. This suggestion is not made to dispense with clear sharia crimes for which adultery clearly falls under, but to accept the reality that most societies are not functioning as sharia-run states, yet there are pressing issues of paternity that require determination. The majority opinion regards DNA testing as circumstantial evidence and continues to see marriage and *li'an* as the sole methods of paternity verification. As these decisions impact various legal areas, including guardianship, maintenance and inheritance, the minority view this modern technology as essential to prove paternity for the social benefit of children and unwed mothers, and as a method to redress the traditional injustice towards mothers while respective fathers face no ramifications for their actions. This minority view appears to be gaining traction manifested in changing legislation that incorporates the modern technology of DNA testing in a bid to address the various intricacies and social issues impacted under this area. It is submitted that such measures are a way forward to balance traditional and sanctified laws with modern demands.

B Recommendations

In view of the conclusions found in this thesis, several recommendations are suggested:

1. Modern technology forms that impact traditional sharia evidence laws should be incorporated into sharia via reform methods under *ijtihad*.
2. Modern technology, including DNA testing and CCTV surveillance, is categorised as circumstantial evidence and deficient to prove hudud crimes. As such, it should not be used to widen the scope of proving any *hadd* crime, including adultery and *qadhaf*, where strict evidentiary procedures have been instituted under sharia as a deterrence rather than seeking punishment. However, under the *taazir* category, such evidence should be accepted as definitive proof. A two-tiered approach is suggested where DNA testing remains unacceptable to prove hudud as circumstantial evidence, but is seen as clear *bayyina* proof under *taazir* categories of crime.
3. Where modern technology, including CCTV surveillance and forced DNA testing, breaches integral sharia principles, such as privacy, then unless serving the public interest

or avoiding harm, its use should be prevented. Public interest includes that of the mother or child who may seek to force DNA testing under civil legislation to impact family laws that may provide maintenance and inheritance rights.

4. DNA testing should be appropriate to use as proof in all other matters of paternity outside establishing adultery or other *hadd* crimes.
5. DNA testing should be appropriate to establish biological paternity outside marriage where there is benefit to the child or mother and be of relevance to paternity without exposing either party to hudud. Sharia marital presumptions should be critically analysed by scholars and jurists where the benefits of paternity verification by DNA testing are considered, particularly regarding children's welfare. This should not transfer into proof for hudud crimes of adultery or fornication as there is no community benefit to increasing hudud punishments that hold deterrent objectives.
6. *Li'an*, as a protection for a wife, should continue to operate to end a marriage and as a form of paternity negation. Only the wife may demand DNA testing to prove her innocence and her child's paternity impacting only family law, not criminal law.
7. Multi-skilled committees should seek the advice and recommendations of scholars, laypersons, doctors, social workers, psychologists, religious scholars, jurists, parliamentarians and opinion makers in making decisions on uses of modern technology, such as DNA testing, as a novel procedure impacting many areas of sharia¹ in order to update and use these scientific endeavours and advancements in keeping with the Islamic ethos of development and justice.

While sharia and hudud rules provide a challenge to incorporating modern technology, it is necessary these recommendations are seriously considered for implementation allowing sharia evidentiary standards to advance with modernity while maintaining maqasid standards. Otherwise individual rights will be compromised, Muslim society will collectively suffer, and sharia will be threatened with being shelved as a theoretical plan without practical implementation.

¹ This was a suggestion given by Ali. See Chapter VB(4) n 165.

BIBLIOGRAPHY

Books

- Akgunduz, Ahmed, *Islamic Public Law: Documents on Practice from the Ottoman Archives* (IUR Press, 2011)
- Anderson, Norman, *Law Reform in the Muslim World* (The Athlone Press, 1976)
- Arabi, Oussama, *Studies in Modern Islamic law and Jurisprudence* (Kluwer Law International, 2001)
- Baderin, Mashood A, *International Human Rights and Islamic Law* (Oxford University Press, 2005)
- Bargach, Jamila, *Orphans of Islam: Family, Abandonment, and Secret Adoption in Morocco* (Rowman and Littlefield Publishers, 2002)
- Black, Ann, Hossein Esmaeili and Nadirsyah Hosen, *Modern Perspectives on Islamic Law* (Edward Elgar, 2013)
- Cook, Michael, *Commanding Right and Forbidding Wrong in Islamic Thought* (Cambridge University Press, 2000)
- Coulson, NJ, *A History of Islamic Law* (Edinburgh University Press, 1964)
- Coulson, Noel J, *Conflicts and Tensions in Islamic Jurisprudence* (The University of Chicago Press, 1969)
- Dhiyabi, Badis, *Hujjiyat al-turuq al-shari'iyya wa'l-'ilmiyya fi da'awi al-nasab 'ala daw' qanun al-usra al-jaza'iriyya* (The Evidentiary Force of Legal and Scientific Means in Paternity Claims and Disputes in Light of Algerian Family Legislation) (Dar al-huda, 2010)
- El-Awa, Mohamed S, *Punishment in Islamic Law: A Comparative Study* (American Trust Publications, 1982)
- Forte, David F, *Studies in Islamic Law: Classical and Contemporary Application* (Austin and Winfield Publishers, 1999)
- Hallaq, Wael B, *An Introduction to Islamic Law* (Cambridge University Press, 2009)
- Hallaq, Wael B, *Shari'a: Theory, Practice, Transformations* (Cambridge University Press, 2009)
- Hutchinson, Terry, *Researching and Writing in Law* (Lawbook Co., 4th ed, 2018)
- Ibn Nujaym, Zayn al-'Abidin Ibrahim, *Al-Ashbah wal-Nazai'r* (Cairo, 1290 AH) vol 2
- ibn Taymiyya, Taqi al-Din, *al-Siyasa al-Shar'iyya fi Islah al-Ra'y wa'l-Ra'ya* (Cairo, 2nd ed, 1951)
- Kamali, Mohammad Hashim, *Principles of Islamic Jurisprudence* (Ilmiyah Publishers, 1991)
- Kasani, 'Ala al-Din Abu Bakr b. Mas'ud, *Badai' al-Sanai'* (Cairo, 1910) vol 3
- Khalil, Abu al-Diya' b. Ishaq, *Mukhtasar*, with the commentary of Zurqani (Cairo)
- Malekian, Farhad, *The Concept of Islamic International Criminal Law: A Comparative Study* (Brill, 1994) Joseph Schact, *An Introduction to Islamic Law* (Oxford University Press, 1982)

- Maududi, Sayyid Abul A'la, *The Islamic Law and Constitution*, tr Khurshid Ahmad (Islamic Publications Ltd, 1980)
- Nasir, Jamal J A, *The Status of Women under Islamic Law and Modern Islamic Legislation* (Brill, 2009)
- Nasir, Jamal J, *The Islamic Law of Personal Status* (Graham and Trotman, 2nd ed, 1990)
- Peters, Rudolph, *Crime and Punishment in Islamic Law* (Cambridge University Press, 2005)
- Peters, Rudolph, *Islamic Criminal Law in Nigeria* (Spectrum, 2003)
- Rabb, Intisar A, *Doubt in Islamic Law: A History of Legal Maxims, Interpretation, and, Islamic Criminal Law* (Cambridge University Press, 2015)
- Ramadan, Tariq, *Radical Reform: Islamic Ethics and Liberation* (Oxford University Press, 2009)
- Ramadan, Tariq, *Western Muslims and the Future of Islam* (Oxford University Press, 2004)
- Roberson, Cliff, and Dilip K. Das, *An Introduction to Comparative Legal Models of Criminal Justice* (CRC Press, 2016)
- Rohe, Mathias, *Islamic Law in the Past and Present*, tr Gwendolin Goldbloom (Brill, 2015)
- Rosen, Lawrence, *The Justice of Islam: Comparative Perspectives on Islamic Law and Society* (Oxford University Press, 2000)
- Shaham, Ron, *The Expert Witness in Islamic Courts: Medicine and Crafts in the Service of Law* (University of Chicago Press, 2010)
- Weiss, Bernard G, *The Spirit of Islamic Law* (The University of Georgia Press, 1998)
- Welchmann, Lynn, *Women and Muslim Family Laws in Arab States: A Comparative Overview of Textual Development and Advocacy* (Amsterdam University Press, 2007)

Edited Books

- Bassiouni, M Cherif (ed), *The Islamic Criminal Justice System* (Oceana Publications, Inc, 1982)

Book Chapters

- al-Alfi, Ahmad Abd al-Aziz, 'Punishment in Islamic Criminal Law' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 227-36
- al-Saleh, Osman Abd-el-Malek, 'The Right of the Individual to Personal Security in Islam' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 55-90
- Awad, Awad M, 'The Rights of the Accused Under Islamic Criminal Procedure' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 91-108
- Bassiouni, M Cherif, 'Qesas Crimes' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 203-10
- Bassiouni, M Cherif, 'Sources of Islamic Law, and the Protection of Human Rights in the Islamic Criminal Justice System' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 3-54

- Benmelha, Ghaouti, 'Ta'azir Crimes' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 211-26
- El-Awa, Mohamed Selim, 'Confession and Other Methods of Evidence in Islamic Procedural Jurisprudence' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 111-29
- Hussein, Gamil Muhammed, 'Basic Guarantees in the Islamic Criminal Justice System' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 35-53
- Ibrahim, Saeed Hasan, and Nasir bin Ibrahim Mehemeed, 'Basic Principles of Criminal Procedure under Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 17-34
- Kamali, Mohammad Hashim, 'Law and ethics in Islam – The role of maqasid' in Vogt, Kari/Larsen, Lena/Moe, Christian (eds), *New Directions in Islamic Thought* (London 2009) 23-46
- Kamali, Mohammad Hashim, 'The Right to Personal Safety (*Haqq al-Amn*) and the Principle of Legality in Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 57-96
- Kamel, Taymor, 'The Principle of Legality and its Application in Islamic Criminal Justice' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 149-70
- Knost, Stefan, 'The *Waqf* in Court: Lawsuits over Religious Endowments in Ottoman Aleppo' in Muhammad Khalid Masud, Rudolph Peters and David S Powers (eds), *Dispensing Justice in Islam: Qadis and their Judgements* (Brill, 2006) 427-50
- Masud, Muhammad Khalid, Rudolph Peters and David S Powers, 'Qadis and their Courts: An Historical Survey' in Muhammad Khalid Masud, Rudolph Peters and David S Powers (eds), *Dispensing Justice in Islam: Qadis and their Judgements* (Brill, 2006) 1-44
- Peters, Rudolph, 'The Re-Islamization of Criminal Law in Northern Nigeria and the Judiciary: The Safiyyatu Hussain Case' in Muhammad Khalid Masud, Rudolph Peters and David S Powers (eds), *Dispensing Justice in Islam: Qadis and their Judgements* (Brill, 2006) 219-41
- Salama, Ma'moun M, 'General Principles of Criminal Evidence in Islamic Jurisprudence' in M Cherif Bassiouni (ed), *The Islamic Criminal Justice System* (Oceana Publications Inc, 1982) 109-48
- Sherif, Adel Omar, 'Generalities on Criminal Procedure under Islamic Shari'a' in Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (eds), *Criminal Justice in Islam: Judicial Procedure in the Shari'a* (IB Tauris, 2003) 3-16
- Sonbol, Amira al-Azhary, 'Adoption in Islamic Society: A Historical Survey' in Elizabeth Warnock Fernea (ed), *Children in the Middle East* (University of Texas Press, 1995) 45-67

Articles

- 'Alwani, Taha J al, 'The Rights of the Accused in Islam' (1995) 10 *Arab Law Quarterly* 3-16
- Ali, Shaheen Sardar, 'Exploring New Directions in the Islamic Legal Traditions: Re-Interpreting Shari'a from within' (2013) 9 *Journal of Islamic State Practices in International Law* 9-21

- Alshech, Eli, 'Do Not Enter Houses Other Than Your Own: The Evolution of the Notion of a Private Domestic Sphere in Early Sunni Islamic Thought' (2004) 11(3) *Islamic Law and Society* 291-332
- Aryani, Lara, 'Privacy Rights in Shari'a and Shari'a-Based States' (2007) 3(2) *Journal of Islamic State Practices in International Law* 3-28
- Badawy, Tarek, 'Towards a Contemporary View of Islamic Criminal Procedures: A Focus on the Testimony of Witnesses' (2009) 23 *Arab L.Q.* 269-305
- Bassiouni, M Cherif, and Gamal M Badr, 'The Shari'ah: Sources, Interpretation, and Rule-Making' (2002) 1 *UCLA Journal of Islamic and Near Eastern Law* 135-81
- Bechrouri, Ibrahim, 'The Informant, Islam, and Muslims in New York City' (2018) 16(4) *Surveillance and Society* 459-72
- Bentlage, Bjorn, 'Legislating for the Benefit of Children Born Out of Wedlock' (2015) 55 (3-4) *Die Welt Des Islams* 378-412
- Cammack, Mark, 'Islamic Law and Crime in Contemporary Courts' (2011) 4 *Berkeley Journal of Middle Eastern and Islamic Law* 1-15
- Cheema, Moeen H, and Abdul-Rahman Mustafa, 'From the Hudood Ordinances to the Protection of Women Act: Islamic Critiques of the Hudood Laws of Pakistan' (2008-09) 8 *UCLA Journal of Islamic and Near Eastern Law* 1-48
- Emon, Anver M, 'Huquq Allah and Huquq Al-Ibad: A Legal Heuristic for a Natural Rights Regime' (2006) 13(3) *Islamic Law and Society* 325-91
- Emon, Anver M, 'Toward a Natural Law Theory in Islamic Law: Muslim Juristic Debates on Reason as a Source of Obligation' (2003) 3 *UCLA Journal of Islamic and Near Eastern Law* 1-51
- Emon, Anver, 'Techniques and Limits of Legal Reasoning in Shari'a Today' (2009) 2 *Berkeley Journal of Middle Eastern and Islamic Law* 1-25
- Fisher, Betsy, 'Why Non-Marital Children in the MENA Region Face a Risk of Statelessness' (2015) *Harvard Human Rights Journal Online* 1-8
- Haneef, Sayed Sikander Shah, 'Discourse on *Hudud* in Malaysia: Addressing the Missing Dimension' (2010) 12(2) *Journal of Islamic Law and Culture* 131-44
- Haneef, Sayed Sikander Shah, 'Modern Means of Proof: Legal Basis for its Accommodation in Islamic Law' (2006) 20(4) *Arab Law Quarterly* 334-64
- Hasso, Frances S, "'Bargaining with the Devil" States and Intimate Life' (2014) 10(2) *Journal of Middle East Women's Studies* 107-33
- Hayat, Muhammad Aslam, 'Privacy and Islam: From the Quran to Data Protection in Pakistan' (2007) 16(2) *Information and Communications Technology Law* 137-48
- Johansen, Baber, 'Signs as Evidence: The Doctrine of Ibn Taymiyya (1293-1328) and Ibn Qayyim Al-Jawziyya (d. 1351) on Proof' (2002) 9 *Islamic Law and Society* 168-93
- Kamali, Mohammad Hashim, 'Legal Maxims and Other Genres of Literature in Islamic Jurisprudence' (2006) 20(1) *Arab Law Quarterly* 77-101
- Kamali, Mohammad Hashim, 'Punishment in Islamic Law: A Critique of the Hudud Bill of Kelantan, Malaysia' (1998) 13 *Arab Law Quarterly* 203-34

- Kamali, Mohammad Hashim, 'Shari'ah and Civil Law: Towards a Methodology of Harmonization' (2007) *Islamic Law and Society* 391-420
- Kreutzberger, Kai, 'Single Mothers and Children Born out of Wedlock in the Kingdom of Morocco' (2008-2009) *14 Year Book Islamic and Middle Eastern Law* 49-82
- Lau, Martin, 'Pakistan' (2007) *13 Yearbook of Islamic and Middle Eastern Law* 275-291
- Lippman, Matthew, 'Islamic Criminal Law and Procedure: Religious Fundamentalism v. Modern Law' (1989) *12 Boston College International and Comparative Law Review* 29-62
- Quraishi, Asifa, 'Her Honor: An Islamic Critique of the Rape Laws of Pakistan From a Woman-Sensitive Perspective' (1997) *18 Michigan Journal of International Law* 287-320
- Rabb, Intisar A, "'Reasonable Doubt" in Islamic Law' (2015) *40 Yale Journal of International Law* 41-94
- Safian, Yasmin Hanani Mohd, 'The Contribution of Yusuf Qaradawi to the Development of Fiqh' (2016) *4 Electronic Journal of Islamic and Middle Eastern Law* 45-53
- Saifee, Seema, 'Penumbra, Privacy, and the Death of Morals-Based Legislation: Comparing U.S. Constitutional Law with the Inherent Right of Privacy in Islamic Jurisprudence' (2003) *27(1) Fordham International Law Journal* 370-454
- Schlumpf, Eva, 'The Legal Status of Children Born out of Wedlock in Morocco' (2016) *4 Electronic Journal of Islamic and Middle Eastern Law* 1-26
- Serrano-Ruano, Delfina, 'Redefining Paternal Filiation through DNA Testing: Law and the Children of Unmarried Mothers in the Maghreb' (2018) *14 (3) Journal of Middle East Women's Studies* 292-313
- Shabana, Ayman, 'Islamic Law of Paternity Between Classical Legal Texts and Modern Contexts: From Physiognomy to DNA Analysis' (2014) *25(1) Journal of Islamic Studies* 1-32
- Shabana, Ayman, 'Negation of Paternity in Islamic Law between Li'an and DNA Fingerprinting' (2013) *20(3) Islamic Law and Society* 157-201
- Shabana, Ayman, 'Paternity Between Law and Biology: The Reconstruction of the Islamic Law of paternity in the Wake of DNA Testing' (2012) *47(1) Zygon* 214-239
- Shalakany, Amr A, 'Islamic Legal Histories' (2008) *1 Berkeley Journal of Middle Eastern and Islamic Law* 1-82

Documents

- The Moroccan Family Code (*Moudawana*) (An unofficial English translation of the original Arabic text), 5 February 2004, https://mrawomen.ma/wp-content/uploads/doc/Moudawana-English_Translation.pdf, accessed 17 October 2019
- Sadakat Kadri, *Forced to Kill: The Mandatory Death Penalty and its Incompatibility with Fair Trial Standards* (A Report to the International Bar Association's Human Rights Institute, May 2016)

Newspaper and Magazine Articles

Souli, Sarah, “‘They’re Not Seen as Human Beings’: Life for Unmarried Mothers in Tunisia”, *The Guardian* (9 May 2017) <<https://www.theguardian.com/lifeandstyle/2017/may/08/theyre-not-seen-as-human-beings-life-for-unmarried-mothers-in-tunisia>>, accessed 22 October 2019

Internet Sources

‘Genetic Fingerprinting: A Scientific Achievement Not Recognized by the Judiciary’, *Saudi Society of Family and Community Medicine* (Forum Post, 21 December 2014) <<http://www.ssfcm.org/public/arabic/Content/index/secId/124/cntId/12129/page/2/>>, accessed 20 October 2019

Abdo, Ahmed, ‘Islam Should Be Restored, Mr Abbott, Not Reformed’, ABC News (Opinion, 11 December 2015) <<https://www.abc.net.au/news/2015-12-10/abdo-islam-should-be-restored,-mr-abbott,-not-reformed/7017906>>, accessed 13 October 2019

Aziza Cloud, ‘Are any Muslim Countries Governed by Sharia Law?’, *Quora* (Forum Post, 25 July 2015) <<https://www.quora.com/Are-any-Muslim-countries-governed-by-Sharia-law>>, accessed 11 October 2019

Brown, Jonathan, ‘Stoning and Hand Cutting - Understanding the Hudud and the Shariah in Islam’ Yaqeen Institute (Web Article) <https://yaqeeninstitute.org/jonathan-brown/stoning-and-hand-cutting-understanding-the-hudud-and-the-shariah-in-islam/#.XaGFVeczY_U>, accessed 12 October 2019

Discover Islam Project, ‘The Discover Islam Project’, *IslamicLaw*, <http://www.islamtoday.com/discoverislam.cfm?cat_id=6&sub_catid=45>, accessed 15 April 2006

Emmons, Alex, ‘New York Police Have Used Stingrays Widely, New Documents Show’ (11 February 2016) *The Intercept*, <<https://theintercept.com/2016/02/11/new-york-police-have-used-stingrays-widely-new-documents-show/>>, accessed 11 October 2019

Jami’ al Tirmidhi (Website) <<https://www.islamicfinder.org/hadith/tirmidhi/al-fitan/?page=2>>, accessed 13 October 2019

Kamali, Mohammad Hashim, ‘Maqasid al Shariah: The Objectives of Islamic Law’ (*Islam 101*, 30 May 2015) <<https://islam101.net/index.php/shariah/141-maqasidalshariah>>, accessed 26 September 2019

Lawan, Mamman, Ibrahim N. Sada and Shaheen Sardar Ali, ‘An Introduction to Islamic Criminal Justice: A Teaching and Learning Manual’ (UK Centre for Legal Education, 2011) <https://www.heacademy.ac.uk/system/files/introduction_to_islamic_criminal_justice.pdf>, accessed 14 October 2019

Pew Research Center, *Muslim-Majority Countries* (Web Page) <<https://www.pewforum.org/2011/01/27/future-of-the-global-muslim-population-muslim-majority/>>, accessed 11 October 2019

Ramadan, Tariq, ‘An International Call for Moratorium on Corporal Punishment, Stoning and the Death Penalty in the Muslim World’, *Tariqramadan.com* (Web Page, 5 April 2005) <<http://www.tariqramadan.com/spip.php?article264>>, accessed 10 September 2019

Ramadan, Tariq, and Hamza Yusuf, ‘Rethinking Islamic Reform’ (YouTube, 26 May 2010) <<https://www.youtube.com/watch?v=qY17d4ZhY8M>>, accessed 13 October 2019

Sahih al-Bukhari, <<https://sunnah.com/bukhari/78/94>>, accessed 14 October 2019

Sahih Muslim, *Kitab al-Birr wal-Silah wal-Aadab*, <<https://sunnah.com/muslim/45/92>>, accessed 14 October 2019

Sunan Abu Dawood (Website) <<https://www.islamicfinder.org/hadith/abu-dawud/office-of-the-judge-kitab-al-aqdiyah/?page=3>>, accessed 13 October 2019

Sunan Abu Dawud, *Kitab Al-hudud*, <<https://sunnah.com/abudawud/40>>, accessed 14 October 2019

Sunan Ibn Majah, <<https://sunnah.com/urn/1268760>>, accessed 15 October 2019

Wehr, Hans, *Hans Wehr Dictionary of Arabic* <<https://giftsofknowledge.files.wordpress.com/2016/01/hans-wehr-searchable-pdf.pdf>>, accessed 14 October 2019

Zakriya, Muhammad, Paternity Testing and Islam (Blog, 27 July 2007) <http://www.childsupportanalysis.co.uk/analysis_and_opinion/choices_and_behaviours/islam_paternity_test.htm>, accessed 18 October 2019

Other

Abd-Elrahim, Gaafer M, 'The Concept of Punishment in Islamic Law in Relation to Contemporary Legal Trends' (PhD Thesis, Union Graduate School, 1987)

Al Awabdeh, Mohamed, 'History and Prospect of Islamic Criminal Law with respect to the Human Rights' (PhD Thesis, Humboldt-Universität, 2005)

Goodlett, Dana Louise, 'Resilience in Uncertainty: An Examination of a Moroccan Centre Serving Unwed Mothers' (PhD Thesis, University of South Florida, 2016)

Rabb, Intisar A, 'Doubt's Benefit: Legal Maxims in Islamic Law, 7th-16th centuries' (PhD Thesis, Princeton University, 2009)