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Souha Korbatiéh

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EVIDENCE RULES IN SHARIA AND THE IMPACT OF MODERN TECHNOLOGY AND DNA TESTING

Souha Korbatiéh*

Abstract: Sharia has continuously developed since Islam's inception in the 7th century CE. This article 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, it is established that 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 the objectives of Sharia, *hudud* and Sharia privacy principles. Consequently, 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.

Modern technology, such as DNA testing, may be used as paternity verification at a wife's request to establish her innocence in *li'an* cases or to prove paternity under family and civil laws to provide maternal and child welfare rights. Several modern Muslim jurisdictions are currently grappling with these issues, using creative approaches in combining modern legislation with Sharia principles.

This article argues there is no discrepancy between retaining immutable Sharia laws while simultaneously updating other laws and procedures, including the integration of modern technology.

Keywords:

Hudud, adultery, Sharia evidence laws, modern technology, DNA testing, *li'an*.

INTRODUCTION

This article assesses the possibility and desirability of updating Sharia criminal evidence rules by incorporating modern technology, specifically DNA testing, to prove adultery. The

* Souha Korbatiéh has a B.Juris/LLB and completed her Master of Islamic Studies in 2018 at Charles Sturt University. She is currently undertaking her PhD at Monash University in Islamic criminal law.

reintroduction of Sharia in many modern Muslim states¹ has seen the implementation of many traditional Sharia criminal rules 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.

The impact of modern technology on traditional Sharia criminal proofs of evidence is investigated by focusing on DNA paternity testing and its impact upon *hudud* (penal law) crimes, particularly the *hadd* (unalterable punishment prescribed by divine law) of adultery. After establishing the legitimacy of Sharia reform, evidentiary proofs in Sharia focusing on adultery (*zina*) will be evaluated. Based on traditional and modern scholarship, this article 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).² This is because expanding proof using modern technology, such as DNA testing, for such crimes would contravene *hudud*'s objectives, which are deterrence. So, while such technologies may fit the definition of evidentiary acceptability under Sharia, due to their invasiveness their utility has restrictions. In such cases, traditional evidence forms should resist updating to maintain the 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* (discretionary punishments). Where modern forms of technology breach Sharia privacy principles, their use is restricted unless necessary for public interest or to avert harm. DNA testing is assessed as proof for paternity verification, analogised with physiognomy, and its impact under civil or family legislation regarding maternal and child welfare issues. The practice of *li'an* (mutual repudiation) as a form of marital termination is critically analysed followed by a synopsis of some modern *fatwas* on these issues.

REVIVAL AND ADVANCEMENT OF SHARIA

The main sources of law in Islam provide for less than 10 per cent of all Sharia rules; the rest are human-made, fluid and dynamic. Sharia does not specify a detailed legal system;³ rather, it establishes general principles with a small, defined set of immutable rules, leaving the detail to individual states to enforce laws and establish justice,⁴ and evolving to the changing needs of society.⁵ So, while "Islam does not change in concept and spirit," the

¹ Modern Muslim states are defined as those with a majority Muslim population that incorporate some aspects of Sharia in their jurisdiction. As of 2010, Muslims comprise more than 50% of the population in 49 countries ("Muslim-Majority Countries," Pew Research Center, January 27, 2011, <https://www.pewforum.org/2011/01/27/future-of-the-global-muslim-population-muslim-majority/>).

² 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."

³ Taha J. al 'Alwani, "The Rights of the Accused in Islam," *Arab Law Quarterly* 10, no. 1 (1995): 8.

⁴ 'Alwani, "The Rights of the Accused in Islam," 8.

⁵ Adel Omar Sherif, "Generalities on Criminal Procedure under Islamic Shari'a," in *Criminal Justice in Islam: Judicial Procedure in the Shari'a*, ed. Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (London: IB Tauris, 2003), 12.

power of the *umma* (community) to develop and change its “laws, customs and practices is inherent”⁶ as Sharia has the internal system to transform and respond to modern-day issues and complexities from its rich, pluralistic traditions.⁷ The ability to adapt to changes while remaining faithful to its fundamental principles is one of Sharia’s most distinguishing features.⁸ 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* (juristic reasoning).

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’ān and *sunna*,⁹ rather than *taqlid* (blind imitation), which stifles new thought in the Muslim world and Islam generally.¹⁰ Buti admits traditional Sharia must adjust to modernity not on ‘Western modernity’s terms’ but in accordance with immutable Sharia principles.¹¹ This argument is significant to this article given the novelty of technology and its ability to potentially outweigh traditional aspects of evidentiary laws.

Yusuf Al-Qaradawi, a modern Muslim scholar, 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 in legal rulings.¹² Through the intersection of traditional and modern Islamic methodology Sharia remains current for its time and circumstance, allowing scholars 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 Hamza Yusuf and Tariq Ramadan. Yusuf believes Islam’s internal structure has the necessary tools to deal with update.¹³ 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

⁶ M. Cherif Bassiouni, “Sources of Islamic Law, and the Protection of Human Rights in the Islamic Criminal Justice System,” in *The Islamic Criminal Justice System*, ed. M. Cherif Bassiouni (London, New York: Oceana Publications Inc, 1982), 17.

⁷ Shaheen Sardar Ali, “Exploring New Directions in the Islamic Legal Traditions: Re-Interpreting Shari’a from within,” *Journal of Islamic State Practices in International Law* 9 (2013): 10.

⁸ Awad M. Awad, “The Rights of the Accused Under Islamic Criminal Procedure,” in *The Islamic Criminal Justice System*, ed. M. Cherif Bassiouni (London, New York: Oceana Publications Inc, 1982), 9.

⁹ David F. Forte, *Studies in Islamic Law: Classical and Contemporary Application* (Lanham, MD: Austin and Winfield Publishers, 1999), 68.

¹⁰ Mohammad Hashim Kamali, *Principles of Islamic Jurisprudence* (Malaysia: Ilmiah Publishers, 1991), 68.

¹¹ Wael B. Hallaq, *Shari’a: Theory, Practice, Transformations* (Cambridge: Cambridge University Press, 2009), 541-2.

¹² Yasmin Hanani Mohd Safian, “The Contribution of Yusuf Qaradawi to the Development of Fiqh,” *Electronic Journal of Islamic and Middle Eastern Law* 4 (2016): 53.

¹³ Tariq Ramadan and Hamza Yusuf, “Rethinking Islamic Reform,” YouTube video, 2:51:37, May 26, 2010, accessed October 13, 2019, <https://www.youtube.com/watch?v=qY17d4ZhY8M>.

jurisprudence.”¹⁴ His ideas on reform are critical 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.

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.¹⁵ Crimes against God are called *hudud* and involve actions that threaten the harmonious co-existence of society and its members. *Hudud* are those crimes prescribed in the Qur’ān along with their punishments; as such, their penalties cannot be negotiated, suspended, stayed, pardoned, reduced or commuted.¹⁶ In focussing on *hudud*, this article centres on evidence laws that seek to prove these serious crimes, particularly adultery.

Evidence Rules 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. The main form of evidence is witness testimony. Eyewitness in *hudud* cases means physical unaided viewing of the crime.¹⁷ The other evidentiary forms involve confession as the alternative proof to witness testimony for a crime under Sharia and is the most authoritative evidence form, because a confession is considered proof of the crime.¹⁸ While some jurists argue for restricting all evidence to testimony and confession,¹⁹ the founding fathers of three Sunni schools accepted circumstantial evidence as valid, provided it is obvious and

¹⁴ Tariq Ramadan, *Radical Reform: Islamic Ethics and Liberation* (Oxford: Oxford University Press, 2009), 1.

¹⁵ Sherif, “Generalities on Criminal Procedure under Islamic Shari’a,” 5.

¹⁶ Gaafer M. Abd-Elrahim, “The Concept of Punishment in Islamic Law in Relation to Contemporary Legal Trends” (PhD diss., Union Graduate School, 1987), 200; Mohamed S. El-Awa, *Punishment in Islamic Law: A Comparative Study* (Indianapolis: American Trust Publications, 1982).

¹⁷ El-Awa, *Punishment in Islamic Law; A Comparative Study* (Indianapolis: American Trust Publications, 1982), 126; Abu Dawud, *Kitab Al-hudud*, 4428, book 39, *hadīth* 4414, accessed October 14, 2019, <https://sunnah.com/abudawud/40>; Asifa Quraishi, “Her Honor: An Islamic Critique of the Rape Laws of Pakistan from a Woman-Sensitive Perspective,” *Michigan Journal of International Law* 18 (1997): 296; Mamman Lawan, Ibrahim N. Sada and Shaheen Sardar Ali, *An Introduction to Islamic Criminal Justice: A Teaching and Learning Manual* (UK: UK Centre for Legal Education, 2011), accessed October 14, 2019, https://www.heacademy.ac.uk/system/files/introduction_to_islamic_criminal_justice.pdf, 40).

¹⁸ Mohamed S. El-Awa, “Confession and Other Methods of Evidence in Islamic Procedural Jurisprudence,” in *Criminal Justice in Islam: Judicial Procedure in the Shari’a*, ed. Muhammad Abdel Haleem, Adel Omar Sherif and Kate Daniels (London: IB Tauris, 2003), 112; Ahmed Akgunduz, *Islamic Public Law: Documents on Practice from the Ottoman Archives* (Rotterdam: IUR Press, 2011), 558).

¹⁹ Cliff Roberson and Dilip K. Das, *An Introduction to Comparative Legal Models of Criminal Justice* (Boca Raton, FL: CRC Press, 2016), 154.

credible.²⁰ Consequently, most jurists accept circumstantial evidence as valid proof in all criminal cases other than *hudud*.²¹

Conviction of an accused must be without reasonable doubt,²² it must be founded on assurance and certainty not mere probability, and any doubt is resolved in favour of the accused.²³ The underlying maxim when prosecuting Sharia crimes is the *hadīth* that has come to establish the principle there is no penalty in the case of doubt:²⁴

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].²⁵

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,"²⁶ to avoid the criminal and social consequences of illegitimacy, and avoid punishment based on doubt.²⁷ That scholars created maxims chiefly to avoid punishment and fulfil Sharia objectives of deterrence over punishment, serves further to limit the use of modern technology as a new proof for *hudud* crimes.

Hudud crimes accept only those traditional forms of evidence having a high degree of reliability, effectively limiting conviction and punishment to cases where there is certainty of the defendant's guilt. This means *hudud* crimes do not admit circumstantial evidence. Kamali, in citing sources based on traditional laws, states all *hudud* should be prosecuted by witness testimony or confession only,²⁸ meaning circumstantial evidence is unacceptable to

²⁰ Muhammad Khalid Masud, Rudolph Peters and David S. Powers, "Qadis and their Courts: An Historical Survey," in *Dispensing Justice in Islam: Qadis and their Judgements*, ed. Muhammad Khalid Masud, Rudolph Peters and David S Powers (Leiden: Brill, 2006), 28.

²¹ El-Awa, *Punishment in Islamic Law*, 130; Rudolph Peters, *Islamic Criminal Law in Nigeria* (Ibadan: Spectrum, 2003), 3; Muhammad bin Yazid Ibn Majah al-Qazvini, *Sunan Ibn Majah*, vol. 3, book 20, *hadīth* 2559, accessed October 15, 2019, <https://sunnah.com/urn/1268760>.

²² Farhad Malekian, *The Concept of Islamic International Criminal Law: A Comparative Study* (Leiden: Brill, 1994) 363.

²³ Osman Abd-el-Malek al-Saleh, "The Right of the Individual to Personal Security in Islam," in *The Islamic Criminal Justice System*, ed. M. Cherif Bassiouni (London, New York: Oceana Publications Inc, 1982), 67.

²⁴ Roberson and Das, *An Introduction to Comparative Legal Models of Criminal Justice*, 151.

²⁵ Jami Al Tirmizi, *The Book on Legal Punishments (Al-Hudud)* 5: chapter 16, *hadīth* 1424, accessed October 12, 2019, <https://www.islamicfinder.org/hadith/tirmidhi/legal-punishments-al-hudud/>.

²⁶ 'Al-walad lil-farash' (Sahih Muslim, *The Book of Suckling*, book 8, *hadīth* 3437, accessed October 16, 2019, <https://sunnah.com/muslim/17/48>; Jami' at-Tirmidhi, *The Book on Suckling* vol. 1, book 7, *hadīth* 1157, accessed October 16, 2019, <https://sunnah.com/tirmidhi/12>; an-Nasa'i, *The Book of Divorce*, vol. 4, book 27, *hadīth* 3512, accessed October 16, 2019, <https://sunnah.com/nasai/27>; Ibn Majah, *Kitab Al-Nikah*, book 9, *hadīth* 2083, accessed October 15, 2019, <https://sunnah.com/>).

²⁷ Rabb, *Doubt in Islamic Law*, 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*, 117).

²⁸ Muwaffaq al-Din ibn Qudamah, *Al-Mughni* (Beirut: Dar al-Kitab al-'Arabi, 1983), X, 192; 'Abd al-Qadir 'Awdah, *Al-Tashri' al-Jina'i al-Islami* (Beirut: Dar al-Kitab al-Arabi, n.d.), II, 441 cited in Mohammad Hashim Kamali, "Punishment in Islamic Law: A Critique of the *Hudud* Bill of Kelantan, Malaysia," *Arab Law Quarterly* 13 (1998): 212.

punish *hudud* crimes. This ensures *hudud* evidences remain limited and strict in their proof, as has been the case for centuries under traditional Sharia evidence forms.

The issue with modern technology is that it surpasses the need for eyewitness testimony. It is argued the inclusion of non-eyewitness technology, such as photographs or CCTV, to evidence the Sharia crime of adultery is unacceptable, because such technology can be manipulated.²⁹ However, even eyewitness testimony can be manipulated, falsified or simply be in error when attributing a crime to a person. Modern technology can assist in overcoming such errors by either corroborating or correcting eyewitness testimony in the process of proving a crime. While this may be desirable and useful to apprehend criminals, the situation differs for capital crimes of *hudud* under examination in this article. As mentioned, the objective of Sharia is not to necessarily catch adulterers in the act and impose capital punishment but for the punishment to act as a form of deterrence. Hence, the use of any medium including modern forms of technology that will increase the chance to prove *hudud* crimes such as adultery would be an undesirable addition to the traditional forms of proof. So, while it may appear ‘backward’ to deny its use, modern technology should not be used to prove the *hadd* of adultery or any other *hudud* crime, as it will increase the likelihood of proving such crimes, which will not fulfil Sharia’s objectives. This does not mean modern technology cannot be incorporated into any Sharia forms of evidence. Rather that its use be limited and used to expand on traditional forms of evidence available for non-*hudud* crimes, such as *taazir*.

THE PROBATIVE VALUE OF MODERN TECHNOLOGY IN ISLAMIC CRIMINAL LAW – THE USE OF TECHNOLOGY IN SHARIA

In its entirety, Qur’ān aims to prohibit all acts detrimental to society.³⁰

This does not mean modern technology should be discarded altogether under Sharia crimes. Technology has been used since the earliest days of Islam, evidenced by the Prophet who urged the search for science and knowledge,³¹ and the Qur’ān gives scientific

²⁹ Tarek Badawy, “Towards a Contemporary View of Islamic Criminal Procedures: A Focus on the Testimony of Witnesses,” *Arab Law Quarterly* 23 (2009): 298. It is important to note there is a school of thought in Sunni and Shi’a Islam that does not accept technology-based evidence. One of the main objections according to the scholars of this school of thinking is that the use of technology to prove a crime devalues “human” evidence, which is unacceptable since humans are one of Allah’s best creations. These scholars believe every other creation, including man-made things, are subordinate to human beings.

³⁰ Taymor Kamel, “The Principle of Legality and its Application in Islamic Criminal Justice,” in *The Islamic Criminal Justice System*, ed. M Cherif Bassiouni (London, New York: Oceana Publications Inc, 1982), 157, 152.

³¹ “Seeking knowledge is a duty upon every Muslim...” Ibn Majah, *Sunan Ibn Majah*, book 1, *hadīth* 29; “whoever goes out seeking knowledge, then he is in Allah’s cause until he returns,” Jami’ at-Tirmidhi, *Chapters on Knowledge*, vol. 5, book 39, *hadīth* 2647, accessed October 15, 2019, <https://sunnah.com/tirmidhi/41/3>; Abu Dawud, *The Office of the Judge*, book 24, *hadīth* 3576, accessed October 15, 2019, <https://sunnah.com/abudawud/25/13>; Sayed Sikander Shah Haneef, “Modern Means of Proof: Legal Basis for its Accommodation in Islamic Law,” *Arab Law Quarterly* 20, no. 4 (2006): 339.

approaches to problems of the creation and universe.³² Modern scholars have pursued this course, asserting Islamic sources under *ijtihad* acknowledge and prescribe using available and reliable means to establish evidence. Hence, using contemporary scientific developments, including modern technology, to aid the administration of criminal justice is within the spirit and duty of fulfilling Sharia rules' objectives.³³

The Prophet by his decisions, established precedents regarding forensic sciences long before they came into existence.³⁴ There are many examples where physical indicators in Sharia have traditionally been regarded as stronger evidence than witness testimony, because they do not lie,³⁵ such as the Prophet using experts on lineage (physiognomists) to determine paternity.³⁶ 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.³⁷

Succeeding generations of scholars used forensic science and their *ijtihad* based on using expert opinion in revealed texts, such as the Qur'ānic story of Prophet Yusuf, where a wise man instructed the location of the shirt's tear would validate or deny Yusuf's claim.³⁸ This story is seen to constitute authority in favour of the admissibility of expert opinion in conformity with forensic evidence.³⁹ The wise man has been analogised to a forensic sociologist of today.⁴⁰ Hence, forensic evidence has a basis in the Qur'ān, *sunna* and *ijtihad*, the main sources of Sharia. These examples give Sharia a legal framework to modernise the judicial system by incorporating forensic sciences.⁴¹

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.

³² The Qur'ān says, "...that the heavens and the earth were sewn together and then We unstitched them and that We made from water every living thing" (21:30) and "We created you from a drop of sperm then from a clot of blood then from a lump of flesh" (22:5), – Dr Keith Moore, embryologist, has affirmed the scientific accuracy of human development as described in the Qur'ān.

³³ Awad, "The Rights of the Accused," 92.

³⁴ Haneef, "Modern Means," 340.

³⁵ Baber Johansen, "Signs as Evidence: The Doctrine of Ibn Taymiyya (1293-1328) and Ibn Qayyim Al-Jawziyya (d. 1351) on Proof," *Islamic Law and Society* 9 (2002): 189.

³⁶ Haneef, "Modern Means," 339; Ron Shaham, *The Expert Witness in Islamic Courts: Medicine and Crafts in the Service of Law* (Chicago: University of Chicago Press, 2010), 58). All except the Hanafis accept this as a form of evidence (Shaham, *The Expert Witness*, 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, *The Expert Witness*, 157).

³⁷ Haneef, "Modern Means," 340.

³⁸ Shaham, *The Expert Witness*, 29.

³⁹ Haneef, "Modern Means," 341. Qur'ān 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..."

⁴⁰ Haneef, "Modern Means," 342.

⁴¹ *Ibid.*, 341.

Modern Scholars' Views on Technology

There is no discrepancy between retaining immutable Sharia rules while simultaneously updating other laws and procedures, including the integration of modern technology. Qaradawi tries to reconcile between classical *fatwas* (Islamic legal rulings) and current scientific research.⁴² 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.⁴³ Past *ijtihad* was naturally based on custom and public interest, which Qaradawi believes can legitimately be reviewed under a modern light.⁴⁴

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.⁴⁵

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.⁴⁶ Ramadan argues that Islamic scholars and scientists are not consulting enough and combining skills in Islamic legal councils to produce innovative Sharia rules.⁴⁷ 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 with the essence of its message.⁴⁸ 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*.⁴⁹ 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. Modern scholars clearly see update and integration based on modern scientific development and technology are acceptable and necessary within Sharia.

⁴² Safian, "The Contribution of Yusuf Qaradawi," 50.

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Mohammad Hashim Kamali, "Legal Maxims and Other Genres of Literature in Islamic Jurisprudence," *Arab Law Quarterly* 20, no. 1 (2006): 100.

⁴⁶ Sayed Sikander Shah Haneef, "Discourse on *Hudud* in Malaysia: Addressing the Missing Dimension," *Journal of Islamic Law and Culture* 12, no. 2 (2010): 143.

⁴⁷ Ramadan, *Radical Reform*, 5.

⁴⁸ Ibid., 132.

⁴⁹ Mohammad Hashim Kamali, "Shari'ah and Civil Law: Towards a Methodology of Harmonization," *Islamic Law and Society* 14 (2007): 413.

REVIVING ISLAMIC CRIMINAL LAW TO USE MODERN TECHNOLOGICAL EVIDENCE

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.⁵⁰

Naturally, some proofs are not mentioned in the Qur'ān or *sunna* simply because they did not exist 14 centuries ago.⁵¹ 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.⁵² DNA testing, among its other uses,⁵³ 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* (mutual cursing).

However, there are issues involved with incorporating any new technology into traditional areas of Sharia, particularly under marriage, divorce and inheritance laws, which the issue of paternity falls under. This discussion seeks to answer 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. Finally, an assessment of modern jurisdictions and their use of DNA testing will be made.

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,⁵⁴ 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,⁵⁵ which would mean it is insufficient to prove *hudud* crimes or establish paternity. Classifying forensic and DNA testing is essential to determine its use under Sharia.

⁵⁰ Ayman Shabana, "Negation of Paternity in Islamic Law between Li'an and DNA Fingerprinting," *Islamic Law and Society* 20, no. 3 (2013): 158.

⁵¹ Badawy, "Towards a Contemporary View of Islamic Criminal Procedures," 305.

⁵² Ibid.

⁵³ Ibid. For instance, DNA testing is a certain method to prove rape or at least sexual intercourse between two people.

⁵⁴ See Rudolph Peters, "The Re-Islamization of Criminal Law in Northern Nigeria and the Judiciary: The Saffiyatu Hussain Case," in *Dispensing Justice in Islam: Qadis and their Judgements*, ed. Muhammad Khalid Masud, Rudolph Peters and David S. Powers (Leiden, The Netherlands: Brill, 2006).

⁵⁵ Shabana, "Negation of Paternity," 188.

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.⁵⁶ 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 (d. 1350), who stated evidence (*bayyina*) is “an umbrella term...for all that...manifests the truth” because the term *bayyina* in the Qur’ān means clear proof.⁵⁷ As such, he regards any type of legal evidence, including circumstantial evidence, as fulfilling the role of *bayyina*.⁵⁸ DNA testing as a new form of evidence has no precedent in the sources, so we must look to the word *bayyina* to provide scope that admits new methods of proof.⁵⁹ Haneef suggests forensic evidence, consistent with Imam Ali’s egg-white case, has a unique ability to prove or disprove a case, and is an improved method of establishing truth, ignoring which would be tantamount to injustice.⁶⁰ Forensic evidence, Haneef contends, fulfils the standard of *bayyina* as a means of ascertaining truth.⁶¹

Despite this compelling argument by the minority, the majority of contemporary scholars, jurists and authors have determined forensic evidence under Sharia is circumstantial,⁶² or even very strong/conclusive circumstantial evidence,⁶³ but not decisive evidence, due to the fear of error or tampering,⁶⁴ and because “it still rests on probabilities...tainted with doubts and obscurity,” which cannot prove *hudud* as these are nullified by doubt.⁶⁵

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, it is submitted the majority position is the more appropriate, and it is in society’s interests to limit evidence for *hudud* crimes and restrict DNA testing from interfering with traditional evidentiary requirements for *hudud* crimes as these warrant severe punishments. 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.⁶⁶ Nevertheless, DNA testing as a legitimate form of Sharia evidence is considered part of

⁵⁶ Ibn Taymiyya reports a *hadīth* to prove this point, “If I were to stone anyone without evidence, I would have stoned this woman” (Taqī al-Dīn ibn Taymiyya, *al-Siyasa al-Shar’iyya fī Islah al-Ra’y wa’l-Ra’iyya*, 2nd ed. (Cairo: n.p., 1951), 153 cited in Muhammad Hashim Kamali, “The Right to Personal Safety and the Principle of Legality in the Shar’ah,” *Islamic Studies* 39, no. 2 (2000): 260).

⁵⁷ Haneef, “Modern Means of Proof,” 346. Many verses of the Qur’ān use the term ‘*bayyina*’ such as 5:32. *Bayyina* is used many times in the Qur’ān, such as: 5:32 – “Our Messengers came to them with Clear Signs [*bayyinat*]” (also translated as evidence) – and 98:4 – “Those who were given the Book did not divide into sects until after the Clear Signs [*bayyina*] came to them”; Ibrahim and Mehemeed, “Basic Principles of Criminal Procedure,” 23-4.

⁵⁸ Ayman Shabana, “Islamic Law of Paternity Between Classical Legal Texts and Modern Contexts: From Physiognomy to DNA Analysis,” *Journal of Islamic Studies* 25, no. 1 (2014): 13.

⁵⁹ Haneef, “Modern Means,” 360.

⁶⁰ *Ibid.*, 349-350.

⁶¹ *Ibid.*, 350.

⁶² Shabana, “Islamic Law of Paternity,” 15.

⁶³ ‘Uzayzah, another scholar, gives greater weight to some forensic tests on identification, classifying them as evidence because forensic sciences established that finger impressions of different individuals are not identical, a fact stated in the Qur’ān centuries ago (Haneef, “Modern Means,” 344).

⁶⁴ Haneef, “Modern Means,” 343.

⁶⁵ *Ibid.*, 345.

⁶⁶ Haneef, “Modern Means,” 350-1.

modern *ijtihad*, having a basis in scriptural passages and earlier legal precedents.⁶⁷ Thus, a two-level approach is suggested, where DNA testing under *hudud* is considered circumstantial evidence meaning it cannot be used, however authoritative, to prove a *hudud* crime nor see the imposition of *hudud* penalties including capital punishment. But, for the purposes of *taazir*, technology may be used as a form of evidence by the courts to prove a crime.

DNA Testing to Establish Paternity

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.⁶⁸ 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,⁶⁹ and could potentially lead to incestuous relationships, personal and social immorality, and even financial and economic ruin.⁷⁰ 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.⁷¹

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*.⁷² Similarly, forcing men to have DNA tests to admit evidence of sexual relationships is a way to establish paternity but potentially invades *fiqh* privacy principles.⁷³ Often when faced by these cases, the court's overriding aim is first to establish paternity in the interests of the child, and second to maintain adultery be established only by testimony or acknowledgment,

⁶⁷ Shabana, "Negation of Paternity," 187.

⁶⁸ Jamal J. Nasir, *The Islamic Law of Personal Status*, 2nd ed. (London: Graham and Trotman, 1990), 156, 167; Jamal J. A. Nasir, *The Status of Women under Islamic Law and Modern Islamic Legislation* (Leiden: Brill, 2009), 169; Lynn Welchmann, *Women and Muslim Family Laws in Arab States: A Comparative Overview of Textual Development and Advocacy* (Amsterdam: Amsterdam University Press, 2007), 143-4; Eva Schlumpf, "The Legal Status of Children Born out of Wedlock in Morocco," *Electronic Journal of Islamic and Middle Eastern Law* 4 (2016): 7.

⁶⁹ Jamila Bargach, *Orphans of Islam: Family, Abandonment, and Secret Adoption in Morocco* (Lanham: Rowman and Littlefield Publishers, 2002), 58.

⁷⁰ Amira al-Azhary Sonbol, "Adoption in Islamic Society: A Historical Survey," in *Children in the Middle East*, ed. Elizabeth Warnock Fernea (Austin: University of Texas Press, 1995), 49.

⁷¹ Shaham, *The Expert Witness*, 155-156, 168.

⁷² Delfina Serrano-Ruano, "Redefining Paternal Filiation through DNA Testing: Law and the Children of Unmarried Mothers in the Maghreb," *Journal of Middle East Women's Studies* 14, no. 3 (2018): 294.

⁷³ Muhammad Aslam Hayat, "Privacy and Islam: From the Quran to Data Protection in Pakistan," *Information and Communications Technology Law* 16, no. 2 (2007): 141-4.

not by a physical test that “violates the privacy of a woman’s body and her honor.”⁷⁴ These considerations evidence the many stakeholders to consider when admitting this form of modern technology.

The majority opinion of scholars maintains paternity verification exclusively as established via marriage or *li’an*,⁷⁵ and DNA testing cannot be used to create paternity outside wedlock. In the famous 2005 *Hinawi v. Fishawi* case in Cairo,⁷⁶ 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.⁷⁷ 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.⁷⁸ Most scholars support the mufti,⁷⁹ preserving the traditional proof of four eyewitnesses for adultery.⁸⁰ The Islamic Fiqh Council and other councils⁸¹ likewise stated DNA paternity testing should be used with extreme caution, as Sharia texts take precedence over such testing.

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 diminishes the marital bed maxim, which was developed to maintain legal lineage, spare society from moral degeneration⁸² and save children from being harmed by paternity disputes. 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.⁸³ These *fiqh* and Sharia principles evidence that, in Islam, unique notions of modesty and licit sexual relations must be maintained in judicial rulings. While opinions state DNA testing can be used for public welfare issues, such as criminal cases or personal identification,⁸⁴ many confine its use in paternity cases to supporting evidence only.⁸⁵

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. The minority opinion in the *Hinawi v. Fishawi* case was represented by

⁷⁴ Shaham, *The Expert Witness*, 168-170.

⁷⁵ Shabana, “Islamic Law of Paternity,” 16; Shaham, *The Expert Witness*, 173).

⁷⁶ *Hind al-Hinnawi v. Ahmad al-Fishawi* case 2005, Family Court of al-Khalifa, Cairo; Shaham, *The Expert Witness*, 175-181.

⁷⁷ Shaham, *The Expert Witness*, 178-9,244.

⁷⁸ Shaham, *The Expert Witness*, 179.

⁷⁹ *Ibid.*, 180.

⁸⁰ *Ibid.*, 172, citing Dr Zayd, director of the High Judicial Institute in Saudi Arabia, who 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.

⁸¹ See Serrano-Ruano, “Redefining Paternal Filiation,” 294; Bjorn Bentlage, “Legislating for the Benefit of Children Born out of Wedlock,” *Die Welt Des Islams* 55, no. 3-4 (2015): 382; Shabana, “Negation of Paternity,” 199-200.

⁸² Serrano-Ruano, “Redefining Paternal Filiation,” 302.

⁸³ Serrano-Ruano, “Redefining Paternal Filiation,” 302.

⁸⁴ Shaham, *The Expert Witness*, 172, citing Dr Zayd.

⁸⁵ *Ibid.*, 173.

modern followers of Ibn Qayyim, whose opinion was to establish filiation for children born out of wedlock, and treat men and women equally.⁸⁶ Salih argues in accordance with Qur'ān 33:5⁸⁷ 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.⁸⁸ Opinions are cited from first 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,⁸⁹ also evidenced under Maliki tradition.⁹⁰ 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.⁹¹

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.⁹² An Azhar civil law expert argues similarly, 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.⁹³ Both scholars account for modern technology and principles of Sharia proofs in using *ijtihad* to come to a ruling. These opinions look at the development of DNA testing as a means of furthering Sharia principles rather than blindly rejecting or accepting technology and ignoring the ramifications unique to Sharia and Muslim society.

There are three positions in this debate over whether DNA testing can be used to prove paternity or whether such moves should be resisted when a couple is unmarried. One position seeks to defend traditional values and concepts, fearing the 'erosion of the marital family' will result in social chaos;⁹⁴ the opposing position is willing to incorporate updated methods to traditional Sharia constructs, such as totally supplanting witness testimony with DNA testing. The final 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 and considers the benefits of establishing biological paternity, while simultaneously separating *hudud* crimes from allowing the use of DNA testing. The same argument suggests DNA testing be done outside of establishing *hudud* crimes of adultery or *qadhif* that have higher evidentiary standards of eyewitness testimony, confining DNA testing to the interests of the mother and

⁸⁶ Shabana, "Negation of Paternity," 193; Serrano-Ruano, "Redefining Paternal Filiation," 294.

⁸⁷ Qur'ān 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."

⁸⁸ Shaham, *The Expert Witness*, 174, 180, 244.

⁸⁹ *Ibid.*

⁹⁰ Serrano-Ruano, "Redefining Paternal Filiation," 300-1.

⁹¹ Welchmann, *Women and Muslim Family Laws in Arab States*, 148-50; Serrano-Ruano, "Redefining Paternal Filiation," 294.

⁹² Shaham, *The Expert Witness*, 174.

⁹³ Dr 'Abd Allah al-Najjar as cited in Shaham, *The Expert Witness*, 180.

⁹⁴ Shaham, *The Expert Witness*, 187.

child.⁹⁵ This article 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* (objectives of Sharia), 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.⁹⁶

DNA Testing and Li'an

Lineage is one of the five objectives of Sharia; hence, its determination is significant for the protection of progeny and their legal and social rights and obligations.⁹⁷ The most important principle in Islamic family law to protect these rights is establishing paternity using the marital bed maxim.⁹⁸ Importantly, jurists have traditionally been unanimous that mutual condemnation (*li'an*) found in Qur'an 24:6⁹⁹ is the only method of paternity negation and has the added impact of irrevocably ending the marriage.¹⁰⁰ Using DNA testing as the sole evidence for establishing or negating paternity is consequently looked on as a "direct attack" of Sharia.¹⁰¹ 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.¹⁰²

Legal councils in the Muslim world, including experts in Sharia and scientific fields, have looked at issues concerning the impact of modern technology specifically upon *li'an* and evidence rules, resulting in two opinions on the issue.¹⁰³ As discussed, such proof, whether circumstantial or decisive, should not be used to prove adultery or *qadhaf* crimes because the aim of the Sharia is to deter criminal behaviour and not necessarily to punish it.

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.¹⁰⁴ 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

⁹⁵ Ibid., 178.

⁹⁶ Ibid., 188.

⁹⁷ Shabana, "Islamic Law of Paternity," 4.

⁹⁸ Ibid., 6.

⁹⁹ Qur'an 24:6-9; Shaham, *The Expert Witness*, 174.

¹⁰⁰ Shabana, "Negation of Paternity," 159, 179.

¹⁰¹ Shabana, "Negation of Paternity," 187.

¹⁰² Ibid., 177-8.

¹⁰³ Shabana, "Negation of Paternity," 160.

¹⁰⁴ Shabana, "Negation of Paternity," 191-2.

sacred texts in accordance with time and place, and consequently sees DNA evidence as a scientific means that should take preference over at least some traditional evidence forms.¹⁰⁵

‘Uthman agrees DNA testing can be used to verify paternity in disputed cases as well as verify traditional proofs such as witness testimony.¹⁰⁶ Likewise, Hilali states DNA testing can verify traditional methods of paternity verification, such as the marital bed maxim,¹⁰⁷ as it is more accurate than any maxim and can supplant *li’an* because it is more than ‘overwhelmingly’ probable.¹⁰⁸ However, Hilali and ‘Uthman limit the use of DNA testing to establish or deny paternity so long as the marital bed maxim is not violated, such as birth outside marriage.¹⁰⁹ 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.¹¹⁰ Agreeing with this, some scholars have argued *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.”¹¹¹

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*.¹¹² However, this argument was criticised¹¹³ and has seen the former mufti accused of *ijtihad* that deviates from Sharia and its objectives, and contradicts the majority of modern jurists who see *li’an* as overruling DNA testing.¹¹⁴ However, many of Ibn Taymiyya’s (d. 1328) 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 or is not his would seek to render the *li’an* ineffective because the word *shahada* in Qur’ān 24:6 could mean any evidence to support this claim.¹¹⁵

The alternative opinion on this matter was expressed by a second group of scholars at the 1998 IOMS conference, who restricted DNA testing to supporting evidence,¹¹⁶ or corroborative only, so *li’an* continues to be preferred and is still useful for a husband.¹¹⁷ DNA testing, as circumstantial evidence, can be used with the same restrictions given to

¹⁰⁵ Serrano-Ruano, “Redefining Paternal Filiation,” 302; Ayman Shabana, “Paternity Between Law and Biology: The Reconstruction of the Islamic Law of Paternity in the Wake of DNA Testing,” *Zygon* 47, no. 1 (2012): 225-31; Shabana, “Negation of Paternity,” 187–201.

¹⁰⁶ Shabana, “Islamic Law of Paternity,” 18.

¹⁰⁷ *Ibid.*, 17-18.

¹⁰⁸ *Ibid.*, 19.

¹⁰⁹ *Ibid.*, 18-19.

¹¹⁰ Shabana, “Negation of Paternity,” 189-190.

¹¹¹ Shaham, *The Expert Witness*, 179.

¹¹² Shabana, “Islamic Law of Paternity,” 19; Serrano-Ruano, “Redefining Paternal Filiation,” 301.

¹¹³ See Shabana, “Islamic Law of Paternity,” 19-20.

¹¹⁴ Serrano-Ruano, “Redefining Paternal Filiation,” 301.

¹¹⁵ Shabana, “Negation of Paternity,” 191-2.

¹¹⁶ *Ibid.*

¹¹⁷ *Ibid.*, 190.

physiognomy and should be used only if it does not conflict with established Sharia methods of proof,¹¹⁸ such as the marital bed maxim, witness testimony or acknowledgement,¹¹⁹ *li'an*, or if there is contradictory evidence.¹²⁰ 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,¹²¹ and imperfect scientific theories, as time often evidences.¹²² This group along with 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.¹²³ This opinion gives *li'an* priority regardless of DNA results¹²⁴ 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.¹²⁵ Sharia's role is seen as a safeguard to individual privacy, even if it means such claims will remain unverified.¹²⁶ 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.¹²⁷ The 2002 Islamic Fiqh Council similarly stated DNA testing cannot be used to negate paternity nor can it take priority over *li'an*.¹²⁸ This second view, which constitutes the majority of Muslim scholars, attaches paternity to marriage and otherwise gives priority to *li'an* in conflict.¹²⁹ This accords with the tendency in *hudud* cases to relegate the truth to the parties' conscience.¹³⁰

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 *hadīth* that the

¹¹⁸ Shabana, "Islamic Law of Paternity," 20, as established at the IOMS meeting.

¹¹⁹ *Ibid.*, 21.

¹²⁰ Shaham, *The Expert Witness*, 181.

¹²¹ Shabana, "Negation of Paternity," 192.

¹²² 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] (Algeria: Dar al-huda, 2010), 90-95 cited in Serrano-Ruano, "Redefining Paternal Filiation," 302; Shabana, "Negation of Paternity," 198.

¹²³ Shabana, "Islamic Law of Paternity," 21.

¹²⁴ Shabana, "Negation of Paternity," 190.

¹²⁵ *Ibid.*, 192-3.

¹²⁶ *Ibid.*, 192-3.

¹²⁷ *Ibid.*, 196-7.

¹²⁸ *Ibid.*, 198.

¹²⁹ *Ibid.*, 193.

¹³⁰ *Ibid.*

adulterer receives the stone,¹³¹ 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.¹³² This latter opinion believes DNA testing should supplant physiognomy but not override the marital bed maxim or *li'an*.¹³³

A reasonable approach to reconciling these opinions comes from Qaradawi, who 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 removing the husband's doubt.¹³⁴ 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 sufficient¹³⁵ to end a paternity dispute and to avoid disgracing a wife and child.¹³⁶ 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.¹³⁷ Hence, while DNA testing may seem desirable, it should be left to the woman to decide. These opinions maintain adultery is limited to the traditional proof of eyewitnesses or confession.

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.¹³⁸ 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*.¹³⁹

Several conclusions may be drawn from these arguments. 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. Second, DNA testing at the request of the woman can help resolve paternity issues. Further, such a novel method of paternity testing can be used primarily to protect children, which should underpin any form of *ijtihad* or alteration to *fiqh* principles. Finally, although adultery is a crime in Islam, the *hadd* of adultery and *qadhf* retains the need for eyewitness evidence as the objective of Sharia is not to punish but deter criminal behaviour. The *hadd* and possibly even the *taazir* punishment for adultery then deserves to be

¹³¹ Sahih Muslim, *The Book of Suckling*, book 8, *hadith* 3437. 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), cited in Shabana, "Negation of Paternity," 193-4.

¹³² Shabana, "Islamic Law of Paternity," 23-4.

¹³³ *Ibid.*, 24.

¹³⁴ Shabana, "Negation of Paternity"; Shaham, *The Expert Witness*, 174.

¹³⁵ Shaham, *The Expert Witness*, 174.

¹³⁶ Shabana, "Islamic Law of Paternity," 22.

¹³⁷ Shaham, *The Expert Witness*, 174.

¹³⁸ Shabana, "Negation of Paternity," 190.

¹³⁹ Shabana, "Negation of Paternity," 190.

separated from DNA paternity cases to give latitude to test for paternity without fear of punishment for adultery or *qadhif*. Whether adultery should be punished under *taazir* using modern technology such as DNA proof is a complex question that Muslim states must individually assess, keeping in mind the aim of Sharia, which emphasises deterrence over punishment.

DNA Testing and Filiation in Modern Muslim Jurisdictions

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.¹⁴⁰ 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.¹⁴¹ In adopting legal codes based on secular sources, post-colonial Muslim states lost their history of dynamically developing context-based laws¹⁴² 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.¹⁴³ 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.¹⁴⁴ 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.¹⁴⁵ Many jurisdictions consider the child's 'best interest' before allowing DNA testing rather than allow parents to use the test to undermine their spouse.¹⁴⁶ 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.¹⁴⁷ 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.¹⁴⁸

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

¹⁴⁰ Serrano-Ruano, "Redefining Paternal Filiation," 306.

¹⁴¹ *Ibid.*, 307.

¹⁴² Frances S. Hasso, "'Bargaining with the Devil' States and Intimate Life," *Journal of Middle East Women's Studies* 10, no. 2 (2014): 110–12.

¹⁴³ Ali, "Exploring New Directions in the Islamic Legal Traditions," 18.

¹⁴⁴ Shabana, "Islamic Law of Paternity," 31.

¹⁴⁵ *Ibid.*

¹⁴⁶ *Ibid.*

¹⁴⁷ *Ibid.*

¹⁴⁸ Betsy Fisher, "Why Non-Marital Children in the MENA Region Face a Risk of Statelessness," *Harvard Human Rights Journal Online* (2015); Serrano-Ruano, "Redefining Paternal Filiation," 294.

paternity for children born out of wedlock.¹⁴⁹ These laws include the right of a child to bear the father's name but not to inherit, and the mother may claim financial support for upbringing.¹⁵⁰ Despite ongoing social denunciation, the rate of unmarried mothers who abandon children in Tunisia decreased by a third since these laws were introduced.¹⁵¹

DNA testing is seen in Morocco as the solution to establish paternal filiation for children born outside marriage, and there has been a call for Sharia to support such measures, where advocates of DNA testing state it is essential to protect children and maintain equality of both parents.¹⁵² In 2004, Morocco reformed its Personal Status Law establishing the *Moudawana*, a family code that deals with paternity issues.¹⁵³ The *Moudawana* sees Morocco as the first Arab country to include DNA testing when it added "all other means" under article 158 to prove paternity (including and taken to mean DNA testing, which can only occur at a judge's discretion),¹⁵⁴ despite traditional methods of paternity filiation remaining more common.

Current judicial practice in Morocco sees DNA tests (article 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*.¹⁵⁵ However, judges assume a husband's refusal to attend court over a paternity denial commensurate with admitting paternity.¹⁵⁶ 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 article 409 of the Moroccan Penal Code.¹⁵⁷ Another judge citing the law on obligations and contracts ordered a man to pay financial compensation for fathering a child outside

¹⁴⁹ 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], accessed October 22, 2019, www.jurisitetunisie.com/tunisie/codes/csp/L1998-0075.htm; Serrano-Ruano, "Redefining Paternal Filiation," 297.

¹⁵⁰ 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], accessed October 22, 2019, www.jurisitetunisie.com/tunisie/codes/csp/L1998-0075.htm, art 3, 3a.

¹⁵¹ Serrano-Ruano, "Redefining Paternal Filiation," 297; Sarah Souli, "'They're Not Seen as Human Beings': Life for Unmarried Mothers in Tunisia," *The Guardian*, May 9, 2017, accessed October 22, 2019, <https://www.theguardian.com/lifeandstyle/2017/may/08/theyre-not-seen-as-human-beings-life-for-unmarried-mothers-in-tunisia>.

¹⁵² Serrano-Ruano, "Redefining Paternal Filiation," 293.

¹⁵³ The Moroccan Family Code (*Moudawana*), February 5, 2004 ('*Moudawana*'); Schlumpf, "The Legal Status of Children," 1-5.

¹⁵⁴ Kai Kreuzberger, "Single Mothers and Children Born out of Wedlock in the Kingdom of Morocco," *Year Book Islamic and Middle Eastern Law* 14 (2008-2009): 71; Serrano-Ruano, "Redefining Paternal Filiation," 298.

¹⁵⁵ Serrano-Ruano, "Redefining Paternal Filiation," 303.

¹⁵⁶ *Ibid.*; Schlumpf, "The Legal Status of Children," 9.

¹⁵⁷ Serrano-Ruano, "Redefining Paternal Filiation," 304.

wedlock,¹⁵⁸ which 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 evidence allowing paternal filiation of children of unwed parents,¹⁵⁹ and it is suggested that countries such as Morocco would do better to incorporate these *fiqh* opinions into their laws.

In Algeria in 2000, a woman sued a man she claimed was her baby's father, which was established by DNA testing.¹⁶⁰ 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.¹⁶¹ The DNA test was considered *bayyina* (apparent evidence), as defined by Ibn Qayyim, which has a wide definition of not just witnesses, and where it was considered these alternative forms of evidence may provide stronger proofs than two eyewitnesses.¹⁶²

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. 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.¹⁶³ DNA evidence in these cases is only used in disputed or contested cases where a marital relationship exists or is in doubt, not in extramarital relationships.¹⁶⁴ However, a 2006 *fatwa* that is more liberal states paternity is not dependant on establishment of a marital relationship and refusal to submit to DNA testing is strong circumstantial evidence against a defendant in disputed paternity.¹⁶⁵ 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 *qadhf*.¹⁶⁶ This *fatwa* does not uphold *li'an* as the ultimate procedure for paternity negation, as it allows DNA to establish paternity after *li'an*.¹⁶⁷ Further, this *fatwa* sees *li'an* and paternity as separate and distinct, where *li'an* is not a form of paternity negation to the court. The use of DNA testing 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*. It is therefore imperative these paradoxical *fatwas* reconcile the divergent opinions for the sake of consistency and predictability, essential in any legal system. Further, there are many stakeholders impacted by DNA testing who should all be

¹⁵⁸ Ibid., 304-5.

¹⁵⁹ See note 183 below.

¹⁶⁰ Serrano-Ruano, "Redefining Paternal Filiation," 306.

¹⁶¹ Ibid., 306. See note 97.

¹⁶² Serrano-Ruano, "Redefining Paternal Filiation," 306. Jilali at 134, n 6 discusses the connection of similar judgments with Ibn Qayyim's opinion, cited in Serrano-Ruano, "Redefining Paternal Filiation," 309.

¹⁶³ 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, "Islamic Law of Paternity," 29.

¹⁶⁴ Ibid.

¹⁶⁵ Ibid., 30.

¹⁶⁶ Nasir Farid Wasil argues that performance of *li'an* should not necessarily result in negation of paternity, cited in Shabana, "Islamic Law of Paternity," 30-1.

¹⁶⁷ Ibid.

involved in making decisions on its use, including laypersons, academic scholars, religious scholars, jurists and parliamentarians.¹⁶⁸

CONCLUSION

While principles and objectives remain constant, Sharia maintains its dynamism through the process of *ijtihad*. Redress of traditional *fiqh* rules using *ijtihad* principles is necessary to decide on appropriate methods to incorporate DNA testing into Sharia based on past scholarship and modern technological proofs to account for societal and legal changes necessary in Muslim states that incorporate Sharia or a version of it in their family laws.

Analysing traditional scholarly statements and Prophetic examples indicate modern technology has always been part of Sharia rules and procedure. In assessing past and present sources, this article has found modern technology fits neatly within evidence rules as circumstantial, not definitive proof. Consequently, evidence that uses modern technology falls outside the exacting evidentiary standards required to prove *hudud* crimes, such as adultery or *qadhaf*, whose difficulty of proof is inherent to their act and punishment. This is particularly so with the crime of adultery that imposes capital punishment. It is because the aim of Sharia is to deter crimes of *hudud* such as adultery and not necessarily seek punishment. This is not to say that improvement on evidentiary proofs would be unwelcome or prevented from use in other forms of non-adultery crime. A two-tiered approach is suggested where DNA testing cannot prove *hudud*, but is used as proof under *taazir* categories of crime, where seeking *hudud* punishments is avoided.

Scholars such as Ibn Qayyim agree judges need to use all available proofs to establish justice when making a decision. Modern technology is such a proof. However, the implications of using invasive forms of proof must be counterbalanced against other considerations. 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 must assess. The majority of scholars, in regarding DNA testing as circumstantial evidence, continue to see marriage and *li'an* as the sole methods of paternity verification, restricting DNA testing from establishing paternity in cases outside legally valid marriages. The minority have looked to Sharia objectives and principles and found paternity is a social justice issue impacting children and view this modern technology as essential to prove paternity and redress injustice for the social benefit of children and unwed mothers where various legal areas are impacted, including guardianship, maintenance and inheritance. This minority view appears to be gaining traction manifested in changing legislation that incorporates DNA testing in a bid to address these issues. It is submitted such measures are a way forward to balance traditional and sanctified laws with modern demands, and ensures this technology is used only as proof in matters of paternity and not in establishing the act of adultery or for that matter any other *hadd* crimes.

¹⁶⁸ Ali, "Exploring New Directions in the Islamic Legal Traditions," 19.

Qaradawi's opinion provides even greater scope for the effective use and incorporation of DNA testing concerning traditional *li'an* laws by allowing traditional 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 under *li'an*, it will provide proof of paternity and maintain a child's legal rights. This is a clear benefit of modern technology.

Restricting DNA testing in *hudud* crimes, while allowing it to establish biological paternity, is appropriate in the modern day and effectively balances Sharia principles and objectives with modernity under the banner of *ijtihad*. However, the issue is complex and needs a multidisciplinary committee, which includes all experts in the field to reach a balanced conclusion.¹⁶⁹ It is necessary for Sharia evidentiary standards to advance with modernity 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.

¹⁶⁹ Ramadan, *Radical Reform*, 132.

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