INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS

Open Access, Refereed JournalMulti Disciplinary
Peer Reviewed Edition :

www.ijlra.com

 ISSN: 2582-6433

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ISSN: 2582-6433

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ISSN: 2582-6433

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ISSN: 2582-6433

GENETICS, GENESIS, THE BIBLE & BEHAVIOR: PERSPECTIVES ON CRIMINALITY

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ABSTRACT

By incorporating the perspectives of biblical scholars and their analysis, this study aims to provide a comprehensive understanding of the role of psychiatrists in testifying on behaviour heredity within the criminal justice framework. This approach acknowledges the potential influence of religious beliefs and values on societal attitudes towards criminal behaviour and its determinants. Additionally, exploring these perspectives can contribute to a more nuanced and inclusive discussion surrounding the complex interplay between psychiatry, genetics, and the legal system.

KEYWORDS: Behavioural Genetics, Genesis, Old Testament, New Testament, Criminality, Cognition, Legal Process

INTRODUCTION

Genes exert significant influence on the formation of both our physical structures and cognitive abilities. The subject of behaviour genetics is progressively uncovering the intricate interactions across the environment and genes that influence the variations in behaviour among individuals. An area of study in behavioural genetics that has garnered significant interest is the investigation into the origins of aggressive conduct. Researchers aspire to eventually possess the capability to precisely identify individuals with a high propensity for violence and to create efficacious interventions to prevent violence within this group.

While it may seem that these advanced technologies are currently unattainable, the societal consequences of behavioural genetics studies may demand our attention sooner than anticipated.

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Behavioural genetics has the potential to become the next area of exploration in the field of criminal justice. The scientific evidence indicating that the propensity for malevolence may be partially ingrained in our genetic makeup offers a fresh perspective on a longstanding ethical and legal quandary concerning criminal culpability and retribution: if the predisposition towards violent conduct is inherent in an individual's innate characteristics, how should it impact the imposition of punishment for criminal acts? Should it be regarded as a component of mitigation that reduces the severity of the penalty, or should it be seen as an exacerbating feature that justifies a more severe penalty?

This article examines the subject from a Biblical standpoint, principally drawing upon the insights of classical rabbinic commentators, albeit not solely relying on them. Although the field of behaviour genetics is relatively young, the question of the connection between the propensity for wrongdoing and the penalty of criminal behaviour is not novel. The matter is examined through the Old Testament and deliberated over by its interpretations; their perspectives can enhance the present-day discourse on this matter.

THE ROLE OF GENETICS IN VIOLENT BEHAVIOUR

The hypothesis that genetic factors contribute to the development of criminal behaviour was proposed during the peak of research in genetics and inheritance in the late the nineteenth century. Francis Galton, a prominent scholar who extensively studied heredity, acknowledged the challenging nature of addressing the issue of the criminal classes being passed down through generations. The investigation is hindered by their transient behaviours, their illicit relationships, and their propensity for extreme dishonesty. Nevertheless, it is straightforward to demonstrate that criminal tendencies have a propensity to be passed down across generations. In his essay "The Criminal Man" published in 1876, Cesare Lombroso, an Italian psychologist and physician, posited that criminality is innate rather than acquired from the environment. He further suggested that it might be discerned by distinctive physical attributes. Subsequent years saw the emergence of other papers with a scientific focus, but the evidence supporting these conclusions remained insufficient.

During the 1960s and 1970s, individuals with an additional Y chromosome, known as XYY syndrome, were believed to have a higher likelihood of engaging in violent behaviour. However, this claim was later found to be false.

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In 1993, a distinct and more encouraging correlation amongst genetic traits and violent criminality was documented. Brunner et al. reported on a Dutch family in which multiple boys displayed borderline intellectual disability and atypical behaviour, characterised by impaired control over impulsive violence. They were discovered to exhibit a total lack of function of the enzyme monoamine oxidase A (MAOA), that breaks down certain important monoamine neurotransmitters. The genetic study showed that the men who were affected had an abnormality on the X chromosome in the MAOA gene, which caused the enzyme to become inactive. Genetic abnormalities in the metabolism of neurotransmitters may impact aggressive behaviour, as proposed by the authors.

In 2002, a further publication expanded the range of the MAOA results. While it is highly uncommon to have no MAOA activity at all, a team of researchers hypothesised that decreases in activity, which are associated with alterations within the promoter region of the MAOA gene, could potentially heighten the likelihood of violent and other antisocial behaviours. This risk may be further amplified when combined with unfavourable environmental conditions.

The researchers examined how the combination of participants' genetic traits and their environmental conditions influenced the effects of mistreatment during the ages of three to 11 on their later tendencies towards antisocial behaviour. Specifically, they focused on the implications of mistreatment on individuals with through either high or even low MAOA activity. It was discovered that the group with both reduced MAOA function and a background of severe abuse had a notable rise in signs of antisocial behaviour.

Conversely, individuals with elevated levels of MAOA exhibited a considerably less notable rise in antisocial behaviour, even when exposed to maltreatment. The gene-environment interaction is demonstrated by the fact that a tiny percentage of the cohort, who experienced both low MAOA levels and abuse, were responsible for almost half of the verdicts for heinous crimes. Most of the boys who possessed both risk variables exhibited some manifestation of antisocial behaviour.

Multiple endeavours have been undertaken to reproduce the Dunedin discoveries, with the majority yielding positive results but a few falling short. However, meta-analyses indicate that the impact is indeed genuine. This body of literature has been thoroughly examined in other

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sources. The variation in findings between research can be partially attributed to disparities in subject demographics and the operationalization of maltreatment or violence. This emphasises the necessity of more precisely defining and quantifying environmental elements in future empirical studies on gene-environment interactions. Furthermore, it highlights the potential impact of varying levels of early trauma on the findings.

Several research have been undertaken to investigate the underlying mechanism behind the variance in innate aggression, which has been attributed to changes in the synthesis of MAO-A protein in humans, accounting for more than thirty percent of the variability. One group suggested that hormonal activity could be the underlying cause of both reduced MAO-A activity and violent behaviour. A separate study demonstrated that there was an elevation in operational interconnectivity across the ventromedial prefrontal cortex & the amygdalae specifically in males who possess the low MAO-A gene.

Furthermore, the study revealed that males with low MAO-A activity had heightened stimulation of the amygdalae & reduced activation of the vmPFC during a face-matching assignment, in comparison to the control group. Based on previous evidence linking this pattern to antisocial behaviour, conviction for heinous crimes, as well as self-reported brutality, it was hypothesised that heightened stimulation of the emotion centres in the amygdalae and reduced stimulation of detrimental feedback via the prefrontal cortex could contribute to aggressive behaviour.

Subjects with low MAO-A activity exhibit increased stimulation of the anterior cingulate when excluded from a simulated ball-passing task, as well as an increased degree & severity of aggression in relation to provocation, in comparison to subjects with high MAO-A activity. These mechanistic investigations did not consider the potential impact of environmental factors on the genesis of aggressive behaviour, which is a methodological weakness that should be remedied in future research.

Despite the ongoing uncertainty surrounding the precise influence of monoamines and their genetic foundations on aggressive and antisocial behaviour, as well as the controversy surrounding the current relevance of this knowledge to court decisions, it is probable that with further progress in behavioural genetics, we will eventually be able to identify specific genes that, when combined with environmental factors, predispose individuals to higher levels of

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criminal activity. The expected results will present a difficulty to the criminal justice process in terms of their impact on determining criminal responsibility and sentencing.

Within legal frameworks that consider some mental diseases as grounds for diminished responsibility, analysts are now questioning why hereditary factors, such as reduced MAO-A activity, should not be treated similarly. A recent analysis of the function of MAO-A in violent behaviour emphasised two instances when the levels of MAO-A were presented as proof in trial and seemed to have an impact on the verdict in favour of the defendants. Estimating the precise contribution of genetic evidence to the final legal conclusion is challenging in both scenarios. However, it is noteworthy that despite the early stage of scientific understanding regarding the importance of low MAO-A activity's influence on violent behaviour, several courts have acknowledged this data and modified their judgements and sentencing appropriately.

The challenge of establishing a connection between genetic predispositions and the performance of specific criminal acts may hinder the ability to prove the necessary conditions for a determination of non-responsibility. Hence, it looks more probable that the primary challenges encountered by the criminal justice process in response to behavioural genetics discoveries would be to the determination of appropriate punishments rather than the exoneration of individuals, as is currently evident. Indeed, an analysis of the initial application of behavioural genetics in court demonstrates that the vast majority of defendants in criminal cases who have presented expert testimony concerning their predisposition towards certain behaviours in cases of crime have done so with the intention of reducing their sentence, rather than absolving or rationalising their criminal actions. While it is evident that such proof can have a neutralising impact, it can also be likened to a classic double-edged sword. Hence, both theoretically and practically, the influence that behavioural genetics information should exert on punishment is still uncertain.

REFLECTIONS ON PHILOSOPHICAL MATTERS

There are two conflicting approaches to criminal punishment that exist in opposition to one other. The retributive approach assigns blame and determines the appropriate level of punishment based on past actions. Retributivists analyse the criminal conduct and determine suitable sanctions based on the character of the mens rea, which refers to the guilty mind associated with the action. The retributive approach to assessing punishment considers the offender's level of

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responsibility for their conduct when deciding what kind of punishment, they deserve. Consequently, advocates of the retributive perspective may hesitate to assign complete blame to an individual for an action that was influenced, to some extent, by factors outside of their control. Therefore, considering that an individual cannot be held accountable for possessing genes that, in conjunction with early life events, partially contribute to criminal conduct, it would be unwarranted to impose the same level of punishment on an offender as in a situation where someone has complete agency over their actions.

Conversely, the utilitarian perspective on sentencing is future-oriented, prioritising the punishment that will be most efficacious in deterring future offences. Utilitarians prioritise safeguarding society from potentially harmful criminals over the painstaking pursuit of perfectly justified retribution for past criminal acts. Therefore, if a defendant is determined to possess an inherent inclination towards criminal conduct, whether due to genetics or other factors, and there is no viable remedy for this condition, it could be justifiable, from a utilitarian perspective, to lengthen his or her sentence.

In practise, however, the process of sentencing may often be influenced by various moral intuitions rather than by deliberate moral reasoning. According to certain researchers, actual moral judgements are formed instinctively and immediately based on what feels morally correct. For instance, the responsible control model suggests that evaluations which are relatively unconscious and spontaneous. Emotional responses to the detrimental incident and the individuals implicated are influential in determining attributions of culpability. According to this perspective, where emotion takes precedence over reason, both retributive and utilitarian rational reasons are seen as after-the-fact occurrences, serving as intellectual defences for prior, intuitive moral judgements.

Extensive research indicates that individuals often possess instinctive biases when forming moral and legal judgements regarding criminal responsibility. Offenders' personality traits influence people's legal intuitions about legal responsibility. Due to the established connections between perceived freedom and aggressiveness and judgements of responsibility and punishment, it is logical to assume that genetic information would have a comparable impact on the moral and legal intuitions of sentencing judges.

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The dominance of instinctive reactions in moral decision-making is logical when considering the evolutionary history of organisms. Throughout the evolution of the human species, it is likely that our ancient predecessors relied on their innate pro-social instincts to make moral judgements before they were capable of providing logical explanations for their actions. Rousseau proposed that if nature had not endowed mankind with a sense of compassion to support their reason, they would have remained no better than beasts. Generosity, clemency, and humanity can be defined as the act of applying compassion towards those who are weak, guilty, or humanity as a whole. This compassion compels us to promptly assist others who are in pain, without pausing for consideration. Modern researchers have suggested contemporary, scientifically grounded interpretations of Rousseau's theory, which hold that our inclination to form moral judgements is inherent, having developed from pro-social feelings. According to these views, it is plausible to believe that the emergence of reflective conceptualizations of morality and rational justifications of moral decisions occurred only as human cognitive abilities advanced and language became established.

A VIEWPOINT BASED ON THE TEACHINGS AND PRINCIPLES FOUND IN THE BIBLE

The Old Testament contains one of the oldest organised sets of moral principles. The moral philosophy of the Hebrew Bible cannot be simplified to a singular moral system, as it encompasses both deontological and utilitarian perspectives. Similarly, because of the Bible's presentation of multiple justifications for punishment in diverse scenarios, it would be incorrect to attribute to its authors a singular theory of punishment. The Bible's multifarious nature in terms of morality has maintained its ability to serve as an inspiring reference for supporters of various moral perspectives.

The Bible's inconsistent stance on moral concerns is evident when studying two early biblical verses that address the quandary of whether an inherent inclination towards wrongdoing should be seen as a mitigating or aggravating factor. Due to the limitations of this study, we shall only examine the example provided by two references in the book of Genesis, as a comprehensive analysis of the biblical solution to this difficulty is beyond our scope.

The Bible addresses the issue of human inclination towards evil and the subsequent consequences throughout the narrative of Noah. Following the flood, the Bible implies that God

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holds a negative view of human nature, stating that the thoughts and desires of man's heart are inherently wicked from a young age. The Bible attributes to God the belief that humans possess an innate inclination towards evil from an early point of their development. Some contemporary scholars, such Thomas Hobbes and Sigmund Freud, have expressed a similar idea found in the Bible, albeit they have different theoretical justifications.

Hobbes produced a political theory predicated on the premise that human nature is inherently malevolent and antagonistic, but Freud's psychological theory, along with its cultural implications, is grounded in the assertion that baby behaviour is influenced, to some extent, by innate aggressiveness.

At what age may one detect the initial signs of this malevolence in a child? Early Christian and Jewish beliefs ascribe inherent wickedness to individuals, even from infancy. Saint Augustine posited that no one is exempt from sin, not even the newborn who has just spent a single day on this planet. The infant's innocence resides in the frailty of their physique rather than in their cognitive abilities. He personally seen a non-verbal newborn displaying jealousy, evident by its furious expression while observing another infant being breastfed. During that era, Jewish academics also held the belief that inherent wickedness exists inside humans from the moment they become aware of the universe.

Biblical interpreters and translators have faced a barrier in comprehending a certain part of the story of Noah. This challenge arises when God declares that he would never again annihilate all living beings on the planet. The Lord resolved within himself that he would no longer bring a curse upon the earth for the sake of mankind, nor would he inflict destruction upon all living beings as he had previously done. God's proclamation, which initially appeared to solely prohibit collective retribution, was interpreted by the traditional Jewish interpreters as also encompassing individual chastisement. Furthermore, by connecting this commitment to the previous assertion regarding humanity's inherent tendency towards wickedness, they construed it as a manifestation of leniency stemming from the belief that uncontrollable urges reduce moral responsibility.

Rabbi Moses ben Nachman Girondi, a renowned mediaeval Jewish physician and scholar, argued that the inherent tendency towards wrongdoing acts as a moderating element, based on these words. Rabbi Hezekiah ben Manoah, a Jewish scholar, said that due to the inherent

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immaturity of human beings and the inherent evilness of their hearts, it is unethical to seek retribution against them through such an extreme means as a flood. An in-depth analysis of Rabbi Hezekiah ben Manoah's viewpoint demonstrates the correlation between a punitive mindset and a tendency to view the inherent inclination towards wrongdoing as a mitigating element.

The inclusion of the phrase ‘take revenge’ provides insight into his underlying understanding of punishment and its intended objective. Arguing for a decrease in punishment based on an inherent inclination towards wickedness, in relation to the reasons for seeking revenge, indicates that, from a retributive perspective, individuals are not deserving of severe penalties, such as a worldwide deluge.

In his reasoning, Rabbi Chaim ben Moses ibn Attar, a later commentator, recognised that an individual's inclination towards misbehaviour is not sufficient to absolve them from punishment. However, he contended that it is crucial to evaluate it during the sentence stage. God opted to mitigate the intensity of forthcoming penalties, particularly those of a capital nature, but refraining from fully eliminating punishment, as humans still possess the capacity to triumph against malevolence.

The analysis of the initial Biblical phrase explored earlier, which considers the inherent tendency towards malevolence as a mitigating element, appears accurate when viewed just from a literal standpoint. The Hebrew term 'kee', which is used to link the assertion about a man's inherent inclination towards evil with the lessening of future penalties, typically translates to 'because'. Therefore, according to this prevailing interpretation of 'kee', the Biblical phrase implies that God will diminish the severity of the punishment due to the inherently wicked nature of man's heart from an early age.

Nevertheless, while this interpretation that lessens the severity of the situation may seem more attractive when considering the literal meaning, it encounters challenges when compared to a contrasting viewpoint expressed earlier in a few chapters. In that earlier passage, God observed that the wickedness of humanity was extensive on the earth, with every thought and intention of their hearts being consistently evil. The Lord then declared his intention to eradicate mankind, whom he had brought into existence, from the face of the earth.

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This scripture clearly indicates that, in contrast to the mitigating approach, the inherent inclination of humans towards evil plays a pivotal role in God's determination to administer punishment to humanity. In this context, the inherent tendency towards malevolence is regarded as a contributing element that warrants the use of capital punishment.

The Bible's exegetes observed this inconsistency. Furthermore, God regarded mankind's inclination towards wickedness as a basis for imposing a devastating curse, while simultaneously regarding this inclination as a rationale for refraining from punishing the earth. How may a single assertion be used to support two conflicting inferences?

Various responses, many of which are outside the purview of this document, have been proposed by the traditional Biblical interpreters. A single, concise suggestion, comprising just two words, is incredibly pertinent to our ongoing conversation. Rabbi Sa'adia Gaon suggested that the word "kee" should be understood as "even though" rather than "because." The alteration in the perception of this particular word dramatically impacts the correlation between the propensity for wrongdoing and retribution. Contrary to viewing the tendency towards evil as a reason to lessen punishment, the alternative interpretation argues that this inclination should actually be considered as a component that worsens the harshness of punishment. According to this reading, there is no inconsistency between the two scriptures that describe God's distinct mental attitudes. When considering the destiny of humanity from God's perspective, which aligns with the utilitarian approach, it appears pointless to exhibit mercy. What is the advantage of mitigation if the criminal is likely to reoffend? Human beings would not face the same level of punishment as the deluge, just because of God's mercy, without any requirement for intellectual justification. Given that the Bible was initially written in Hebrew, and translating it involves interpreting its meaning, it is not unexpected to discover that various translators have differing opinions regarding the translation of the Hebrew word "kee." As a result, they also present different viewpoints on the connection between the tendency towards wrongdoing and its consequences. As per the King James Version, the key phrase translates to the Lord's declaration that he will no longer curse the ground for the sake of mankind, as man's heart is inherently evil from a young age. Additionally, he will refrain from causing harm to all living beings, as he has done in the past. Here, following the mitigating approach, the belief that the human heart is inherently wicked from a young age result in a decrease in the severity of punishment.

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Conversely, as per the New International Version, the Biblical expression is rendered as follows: He will never again curse the ground because of mankind, even though every inclination of their hearts is evil from childhood. He will never again annihilate all life beings, as he previously did. In this iteration, akin to Rabbi Sa'adia Gaon's exegesis, the inherent human propensity towards malevolence necessitates an exacerbating approach. Nevertheless, despite the valid request, God elects to embrace kindness and proclaims that he would never again impose a punishment as severe as the deluge, regardless of the extent of human sinfulness.

CONCLUDING REMARKS

We are currently facing a period in which we will surely encounter ethical and legal difficulties as our understanding of the genetic foundations of behaviour continues to expand. Nevertheless, when it comes to the influence of behavioural genetic data on criminal sentencing, the fundamental factors are not completely novel. The interpretation of genetically determined tendencies as either reducing or intensifying may indicate two opposing moral intuitions of human wrongdoing. One approach exhibits greater leniency and a tendency towards clemency, whilst the other approach is characterised by strictness and a more punitive nature. These two distinct fundamental human tendencies likely represent instinctive evaluations, occurring before contemplation and independent of any intellectual rationale.

The contrasting viewpoints are apparent in the initial chapters of the Bible, where they are depicted without explanation as reflections of God's mindset on various occasions. Throughout the decades, Biblical commentators and translators have provided additional details and explanations for each perspective. However, even those who support a less severe approach do not claim that the tendency towards wrongdoing is sufficiently strong to completely absolve an individual from punishment.

What insights can be gained from the Bible's portrayal of the dilemma as a universal issue, relevant to all individuals and not exclusively confined to a certain vulnerable group? Furthermore, what might be the significance of God Himself upholding two conflicting viewpoints of the matter on separate occasions? The passage suggests that accurately and fairly judging the immoral actions of others is a complex undertaking. However, as humans, we consistently and instinctively make moral evaluations of this nature. Inquiries pertaining to the impact of the propensity for wrongdoing on retribution extend beyond the legal system and are

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widespread and relevant to our daily assessments. For instance, a parent or teacher may respond differently to the same misbehaviour exhibited by a child with an explosive temperament and seemingly uncontrollable behaviour, as compared to a youngster whose acts appear more intentional.

Nevertheless, there are circumstances in which the determination of the connection between the propensity for wrongdoing and retribution is far more intricate, requiring greater effort and having broader implications. This occurs when individuals are tasked with deciding the fate of another individual who has committed a crime, assessing the appropriate level of punishment, potentially including the imposition of the death penalty. Given the intricate nature of these circumstances, it is not unexpected that humans struggle with making judgements when even God, as indicated in the Bible, seems uncertain between the two options.

Considering God's inconsistencies in this topic serves as a reminder that each scenario possesses unique attributes. Each person possesses a distinct combination of genetic factors and environmental influences, resulting in their distinctive characteristics and behaviours. Hence, it is imperative to make decisions on a personalised basis, and the ability to be adaptable and open-minded, known as cognitive flexibility, should be a crucial element in our ethical and legal decision-making process.

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