



IMPLICATIONS OF EMERGING TECHNOLOGIES ON SOCIAL BEHAVIOUR AND CRIME CONTROL IN THE 21ST CENTURY

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ABSTRACT: *This work explores the implications of emerging technologies on social behaviour and crime control in the 21st century. The study focuses on the ethical implications of these technologies, as well as the ways in which they are changing people's behavioural interaction with others and introducing processes of crime control. Social media and Artificial Intelligence are used to illustrate the impact of specific technologies in our societies. The study aims at providing a comprehensive understanding of the complex and rapidly evolving relationship between technology and society, with a focus on how this relationship affects our social behaviour, maintaining social stability and preventing. Interview, questionnaire and content analysis are typical qualitative survey and SPSS methods used in data collection, SPSS and analysis in the study. Two theories were adopted: social cognitive theory by Albert Bandura (1986) and social shaping theory by Sheila Jansanoff (2004). It was observed among others that most people are not aware nor understand the social norms, ethics and perceptions around the use of these technologies. Secondly, those specific technologies, such as social media platforms, Artificial Intelligence have legal implications and ethics that guide its usage and if properly utilised will help instil moral behaviour, control and prevent crime. It was recommended among others that companies and governments should collaborate to develop policies and regulations that promote ethical and responsible use of emerging technologies for proper modification of behaviour and crime control/prevention.*

KEYWORDS: Implications, Emerging technology, Crime control, Social behaviour, Crime prevention.



INTRODUCTION

The landscape of emerging technologies has become an integral component of modern society, fundamentally altering the way individuals interact, communicate, and behave. Commercial and Industrial Security Cooperation (CISCO), 2020. From the advent of social media platforms, to the proliferation of Artificial Intelligence (AI) and virtual reality (VR), technology has revolutionised the social fabric, presenting both opportunities and challenges for individuals and communities worldwide. Boyd (2024) opined that the intersection of emerging technologies and social behaviour is a topic of increasing importance, as it sheds light on the complex dynamics of contemporary human behaviour and interaction. Understanding how these technologies shape and influence social behaviour is essential not only for academics but also for policymakers, industry professionals, community leaders and individuals navigating an increasingly digital world. This paper seeks to explore the implications of emerging technologies on social behaviour, examining various facets of social life ranging from communication patterns to psychological and sociological implications of technological development. By delving into existing literature, theoretical frameworks and real-world examples, this study provides a comprehensive analysis of the ways in which technology shapes, and is shaped by, human social dynamics as well as explore the multifaceted relationship between emerging technologies, social behaviour and ultimately informing our understanding of the present landscape and guiding future developments in technology and society. It is evident that the intersection of technology and social behaviour is not merely a subject of pressing concern with far-reaching implications for the well-being and future of humanity.

The study provides an overview of the rapid pace of technological change in the 21st century and examines ethical and legal issues arising from the emerging technologies such as privacy concerns or questions about bias and discrimination. Van (2013) argues that as new technologies continue to develop at a rapid pace, it is important to keep pace with the changes and ensure that they are being used in a way that is beneficial to society. This requires ongoing dialogue and collaboration between researchers, policy makers and technology developers. The ultimate goal is to create a future where technology is used to promote social conduct and improve the lives of people around the world.

Statement of the Problem

Emerging technologies have brought about unprecedented conveniences and opportunities for connectivity, learning, security, health services, conduct management and production and have raised significant concerns regarding individual privacy and behaviour. One of the primary concerns is the proliferation of surveillance technologies in public, governments and private agencies. For example, CCTV cameras for facial recognition systems. Technologies have the potential to erode personal privacy and civil liberties, leading to concerns about mass surveillance and government overreach. Moreover, the collection and exploitation of personal data by technological companies have raised concerns about data privacy and consent. According to Jerkins (2006), many popular platforms and services collect vast amounts of user data and often without transparent disclosure or meaningful consent, raise questions about the ethics of data mining as well as the modification of personal information.

The increasing prevalence of data breaches poses significant attacks on cyber security, risks to individuals and organisations. From scams to ransomware attacks, cybercriminals exploit



vulnerabilities in digital infrastructure to steal sensitive information and extort money from victims, highlighting the importance of robust cyber security measures and proactive risk management strategies (Willie, 2020). Thus, technology has greatly impacted the stability of the society.

Additionally, the emergence of new technologies such as Artificial Intelligence (AI) and the Internet of Things (IoT) have introduced new security challenges and attacks on society. Tuekle (2011) opined that emerging technologies such as social media and Artificial Intelligence have a profound impact on our social behaviour. However, there is a lack of research and legal implications of these technologies, and their potential impact on social behaviour have remained a matter of concern. This study aims at filling this gap by analysing the ethical and legal implications of emerging technologies, by identifying best practices for their use in a way that promotes social good. Without such guidance, there is risk that these technologies will be used in a way that has negative consequences, such as misuse of personal data, the spread of manipulated information and hate speeches, to exacerbation of social inequalities. These potential consequences could have a profound impact on individuals and society as a whole. Therefore, it is crucial to ensure that the use of emerging technologies is guided by a clear ethical framework and legal regulations to help realise the full potentials of these technologies, while mitigating the risk. The big question therefore is, does emerging technologies enhance good social behaviour and moral upbringing in the 21st century or do aid in crime spreading in the society?

Objectives of the Study

The main objective of this study is to explore the implications of emerging technologies on social behaviour and crime control. Other objectives are to:

1. Examine the ethical implications of emerging technologies in our society;
2. Analyse the impact of specific technologies such as social media and ArtificialIntelligence on crime control and prevention; and to
3. Investigate the relationship between emerging technologies and crime detection and control in the society.

LITERATURE REVIEW

Throughout history, emerging technologies have played a pivotal role in shaping human social behaviour and catalyses transformative shifts in how individuals interact, communicate, and perceive the world around them (Van, 2013). From the invention of the printing press in the 15th century to the proliferation of the internet in the 21st century, each technological milestone has left an enduring print on society. The printing press, arguably one of the most revolutionary inventions in human history, democratised access to information and facilitated the spread of ideas on an unprecedented scale. Lanier (2018) argued that with the mass production of books, pamphlets, and newspapers, individuals gained the ability to engage with diverse perspectives, challenging established hierarchies of knowledge and authority and regulated themselves in line with the prevailing social norms. This newfound access to information fueled the Renaissance, the Reformation, and the



Enlightenment, ushering in an era of intellectual inquiry and cultural renaissance (Lanier, 2018).

Similarly, the invention of the telephone in the late early 20th century revolutionised interpersonal communication, transcending spatial barriers and fostering new forms of social connectivity and inequality. For the first time in history, individuals could communicate in real-time across vast distances, strengthening familial bonds, facilitating business transactions, and cultivating global networks of exchange. The telephone became a symbol of modernity and progress, reshaping social conventions and norms surrounding communication and privacy. In the latter half of the 20th century, the advent of television emerged as a dominant force in shaping collective consciousness and cultural discourse, with its unparalleled ability to disseminate images and narratives to mass audiences, television became a pervasive presence in households around the world, exerting a profound influence on social behaviour and cultural attitudes. From shaping political opinions to defining beauty standards, television wielded immense power in shaping societal norms and values. Deducting from these historical precedents, it is evident that emerging technologies have consistently served as catalysts for social change, challenging existing paradigms and redefining the contours of human interaction. By examining the impact of past technologies and innovations on social behaviour, we can glean valuable insights into the dynamics of technological adaptation, and assimilation within the society. These historical perspectives provide a critical foundation for understanding the contemporary implications of emerging technologies on social behaviour, illuminating the complex interplay between innovation, culture, and human agency (Resen, 2012).

The Concept and Impact of Emerging Technologies

In the contemporary digital age, a plethora of technologies are reshaping social behaviour and transforming the way individuals engage with the world around them. From ubiquitous smartphones to cutting-edge Artificial Intelligence systems, these technologies are revolutionising communication, information dissemination, and interpersonal relationships around the globe.

Social Media Platforms have become a cornerstone of modern social interactions providing individuals with unprecedented opportunities to connect, communicate, and collaborate across geographical boundaries (Rariser, 2011). Platforms such as Facebook, Twitter, Instagram, and TikTok have fundamentally altered the dynamics of interpersonal relationships, enabling users to share experiences, exchange ideas, and cultivate virtual communities and creating. However, concerns about privacy, misinformation, and algorithmic bias which raises questions about the impact of social media on social behaviour.

Artificial Intelligence (AI) technologies, including machine learning, natural language processing, and computer vision, are revolutionising various aspects of human life, from personalised recommendations decision-making processes, shaping individual preferences to behaviours in subtle yet profound ways as well as ethical considerations surrounding such bias, transparency, and accountability. AI poses significant challenges to its responsible deployment in society (Gillespie, 2018).

As noted earlier, the proliferation of technologies has exerted a profound influence on various aspects of social behaviour, reshaping the way individuals interact, communicate, and form



relationships. Even in workplace, emerging technologies can help provide optimal physical work conditions that enhances worker's performance and job satisfaction, as demonstrated by Haines *et al.* (2019), and Daniel, Ekoriko, Akpan and Nsima, (2024). While these technologies offer unprecedented opportunities for connectivity and innovation, they also present unique challenges and complexities that warrant careful consideration, United Nations Educational, Scientific and Cultural Organization (UNESCO), 2012.

i. Communication patterns: Emerging technologies have revolutionised the way individuals communicate, facilitating instant and ubiquitous connectivity across vast distances. Social media platforms, messaging apps, and video conferencing tools have become integral parts of modern communication, enabling real-time interaction and information sharing. However, the prevalence of digital communication has also led to concerns about the erosion of face-to-face interactions, weakening spirit of unity that is domiciled in rural communities (Mboho, Akpan, Daniel & Ekoriko, 2024), the blurring of personal and professional boundaries as well as the proliferation of relationships around the globe.

ii. Relationship Dynamics: Social media has also transformed the dynamics of relationships through the online dating landscape, interpersonal relationships, and offering new avenues for connection and intimacy. However, these platforms also introduce complexities such as self-presentation, cultural and relationships modification. Moreover, the prevalence of digital communication sometimes impedes authentic connection and empathy, leading to feelings of isolation and disconnection despite being constantly connected. This influence has a lot of impact on human social relationships.

iii Identity Formation: Emerging technologies also play a significant role in shaping individual identities and self-perceptions within the society. Social media platforms allow individuals to construct and create online persons and present idealised versions of themselves to the world. This self-presentation contributes to issues such as self-esteem, social comparison, and identity crises, as individuals strive to meet unrealistic standards set by digital culture.

iv Privacy and Security: The widespread adoption of emerging technologies raises concerns about data privacy, security breaches, and surveillance. Social media platforms and online services collect vast amounts of personal data, which can be exploited for targeted identity theft, or surveillance. Moreover, the integration of IoT devices into everyday life poses risks to privacy and security, as sensitive information becomes increasingly interconnected and vulnerable to cyber world and threats.

v Cultural and social Norms: Emerging technologies have the power to shape cultural norms and social values through the dissemination of information and the amplification of certain narratives. Social media for example, prioritise content that elicits strong emotional reactions or promotes engagement, potentially exacerbating polarisation and echo chambers within the society. Additionally, the rise of cultural and vital trends on the internet can influence consumer's behaviour, lifestyle choices, and societal attitudes towards success and fulfilment.

Emerging technologies have a profound and multifaceted impact on social behaviour, influencing communication patterns, relationship dynamics, identity formation,



unprecedented opportunities for connectivity and innovation; they also present significant challenges that require careful consideration and proactive measures to address antisocial behaviour in the society. By critically examining the implication of emerging technologies on social behaviour, we can work towards harnessing their potential for positive social change mitigating against social values and norms.

Artificial Intelligence (AI) and Crime Detection/Control

Artificial Intelligence is slowly but surely becoming a proficient tool to check unlawful actions, not just a concept to be speculated upon. Many of the Law Enforcement Agencies across the world are using AI for up-to-date solutions to crime prevention. One of such solutions is the 'facial recognition' which is being widely implemented in various sectors other than the law to maintain security. Artificial Intelligence in policing is a framework which is evaluated with the help of computers and is utilised for decisions regarding the future of crime detection and control.

Though Artificial Intelligence in policing is still at the progressive stage, the results are worthy. It has the propensity to deal with almost all kinds of crime for which it is being considered an influential tool that provides the Local education authority opportunity to concentrate their service delivery in a particular locality and at a particular time (Willie, Mboho & Daniel, 2023; Udo, Daniel & Willie, 2024).

Many countries have applied facial recognition devices like the close-circuit cameras in public areas to identify and apprehend trouble makers. It is also a method to monitor the citizens and catch criminals. In some cities, it is being used for surveillance in sensitive areas like the airport or the railway station. Artificial Intelligence in policing brings out positive results which enhances ethical conduct and security of lives and properties.

Ethical and Legal Implications of Emerging Technologies

Artificial Intelligence in Law Enforcement:

It is possible to use Artificial Intelligence in the processes of investigation, research and interrogation with the accused crime victim to assess the extent to which she committed the crime or that he is innocent of it. By generating a number of questions on the subject of the crime related to the accuse, including traditional routine questions and other data related to the personality of the accused and the circumstances of its occurrence. The extent of the accused relationship to the execution of the crime, are paramount and the evidence from the presence of tools used in the execution of crime, or the presence of witnesses to prove that the accused committed the crime, make the use of Artificial Intelligence importance in the study of human behaviour and crime control.

It is believed that this skill is very suitable in crime prevention, arresting the criminal during the commission of crime, or searching for suspects involved in a particular crime for investigation. It is worth noting that with the help of Artificial Intelligence, it is possible to gather a lot of information about crimes, their situation and legal adaptation, and to determine priorities and social information, which is used to recommend the issuance of certain sentences, identify the perpetrators of the crimes committed and detect people who are at risk of algorithms and huge databases within Artificial Intelligence. All of these assist the law enforcement agencies when investigating the accused (Rigano, 2019). Artificial



Intelligence can also benefit the law enforcement community by emphasising a scientific point of view and evidence, and this shows clearly, especially in the forensic DNA test, that it has an unprecedented impact on the detection of criminals (Rigano, 2019). Technology in the area of Artificial Intelligence has allowed forensic scientists to detect crimes and provide evidence from analysis especially in sexual assault crimes, and murders detected by analyzing the nucleic acids (Rigano, 2019).

Behavioural Change Caused by Emerging Technology

Digital addiction: The constant availability of these platforms has led to a rise in digital addiction, where individuals spend excessive amounts of time on social media, messaging apps, or video conferencing. This can have negative effects on mental health, relationships, productivity and total behaviours with others.

Information overload and attention span: With the vast amount of information available on social media and messaging apps, users often experience information overload. This can lead to overwhelming feelings of depression, anxiety, and decreased attention span. It also induces crime behaviour among young people causing negative behaviours among them. Also the constant stream of information and notification from media platforms has shortened attention spans in many individuals. People are now more likely to quickly scan through content, rather than reading or watching it in depth. This affects human concentration.

Increased social comparison: Social Media platforms have also made it easier for people to compare themselves to others, which can lead to feelings of inadequacy, low self-esteem and depression. This has also led to rise in the use of filters and photo editing apps to present a curated version of set online which can influence differential relationships and deviancy.

Arising from the above, messaging apps and video conferencing have changed the way people interact with each other. It has made it easier for people to communicate instantly, and also led to a decline in face-to-face interactions and deep, meaningful conversations as well as significant behavioural changes in individuals and society.

Addressing Ethical and Societal Challenges

To effectively address these challenges, a multifaceted approach is needed:

Inclusive Policy-Making, Public Awareness and Education

Policymakers should improve the utilisation of technology in crime prevention and behavioural control. Also needed are technologists, ethicists, civil society organisations, and the public, in the development of regulations and standards for emerging technologies. Raising public awareness about the implications of emerging technologies and promoting digital literacy are essential for empowering individuals to make informed decisions and participate in discussions of technology's role in society.

Ethical Design and Development

Governments and companies should prioritise ethical consideration in the design and development of new technologies. This includes conducting ethical impact assessments and adopting principles of fairness, accountability, transparency, and global cooperation (Willie, Mboho & Daniel, 2023). It is important to note that the challenges posed by emerging



technologies are global in nature and require international cooperation to address. Governments, international organisations, and the tech industry, therefore stakeholders in the industry should work together to develop harmonised regulations and best practices for proper social behaviour and crime control (Udo, Daniel & Willie, 2024).

To address these ethical and social challenges societies should harness the benefits from the emerging technologies while mitigating potential harms, ensuring a more equitable and just technological future.

THEORETICAL FRAMEWORK

Understanding the impact of emerging technologies on social behaviour requires a theoretical framework that can elucidate the complex interactions between technology and human behaviour. Several theoretical perspectives have been employed to analyse this phenomenon, each offering unique insights into the dynamics at far. In this section, the study will discuss two prominent theoretical frameworks: social cognitive theory and social shaping theory.

Social Cognitive Theory:

The social cognitive theory, proposed by Albert Bandura (1986), posits that behaviour is influenced by reciprocal interactions in a cognitive process influenced by environmental factors, and personal experiences. According to this framework, individuals learn through observation, imitation, and modelling, with technology serving as a prominent environmental influence on their character. In the context of emerging technologies, social cognitive theory can help elucidate how individuals acquire new behaviours and attitudes through exposure to digital platforms and online interactions that rather than negatively affect their behaviour, enhance moral perception and reduce their involvement in crime.

This theory therefore provides a lens through which the role of social modelling and reinforcement in shaping technology-mediated social behaviour is examined. For example, research has shown that individuals learn social norms and communication strategies by observing and imitating others' behaviour on social media platforms (Bandura, 2001). Additionally, the concept of self-efficacy, or one's belief in their ability to perform certain behaviours, is relevant to understanding how individuals navigate online environments and interact with technology for proper behaviour modification (Compeau & Higgins, 1995). By applying social cognitive theory, researchers can explore how emerging technologies influence the development of digital literacy skills, online identity formation, and social interactions in virtual environments and crime control. It is submitted that technology, if properly utilised, will boost human behaviour and control crime rate.

Social Shaping Theory:

Social shaping theory emphasises the mutual shaping of human behaviour and society by technology. It highlights interplay between technological utilisation, social contexts, and power relations. Developed by Langdon Winner (1986) and Sheila Jasanoff (2004), this perspective challenges deterministic views of technology and underscores the importance of technology trajectories in shaping social factors like crime and human behaviour. According



to the theory, technological change is not predetermined but contingent upon social values, interests, and negotiations.

It should be noted that the theory offers insights into the ways in which emerging technologies are shaped by and, in turn, shaping social structures and practices. For instance, research has examined how social norms and cultural values influence the design and adoption of digital platforms and how they influence societal actions (Suchman, 2007). Moreover, the concept of technological frames, which refers to socially constructed interpretations of technology, can help explain how individuals and communities make sense of and negotiate the use of emerging technologies in their everyday lives (Goffman, 1974). By applying social shaping theory, the social-technical dynamics underlying the development, implementation, and consequences of emerging technology on social behaviour can be analysed.

Both social cognitive theory and social theory shaping offers valuable frameworks for understanding the implications of emerging technologies on social behaviour, by integrating these theoretical perspective, researchers can gain a deeper understanding of the complex interactions between technological, individuals, and society, informing efforts to promote ethical, equitable, and sustainable technology development and prevention of crime.

METHODOLOGY

Qualitative approaches, such as in-depth interviews and focus groups, were explored to study the social norms and ethical perspectives around emerging technologies. Quantitative methods, such as surveys or statistical analysis, were used to examine the impact of emerging technologies on social behaviour and crime control. 150 respondents were purposely selected among police officers at Police Headquarters, IkotAkpanAbia, Uyo; Area Command Uyo, and two supermarkets (Nsteps and LandMarks) where respondents were selected for the study from the ICT units of the organisations selected. Data from questionnaire administration was processed by computer using a statistical package for social sciences (SPSS).

FINDINGS

Based on the literature and the potential research methods outlined above, it was observed that technology is used for surveillance, to monitor the crowd, evaluate video footage for crime and apply facial recognition for optimum effects. Artificial Intelligence in policing is expected to bring about changes in human behaviour, security and assurances to the society.

Findings also show that the rise of messaging apps and video conferencing has changed the way people behave and interact with others. It has made it easier for people to communicate instantly, and led to a decline in face-to-face interactions and deep meaningful conversations.

Social media, messaging apps, and video conferencing have brought about significant positive and negative behavioural changes in individuals and society. It is essential for users to be aware of these changes in and use these platforms responsibly to maintain a healthy balance between online and offline interactions. Careful analysis of the ethical and legal



implications of specific technologies, such as social media platforms or facial recognition systems should be used to avoid abuse.

The study also reveals that an understanding of the social norms and perceptions around the use of these technologies is necessary to avoid negative usage by unscrupulous elements called yahoo boys, internet fraud and street crimes. An assessment of the impact of emerging technologies will harness well enhancing crime control and proper behavioural modification and change.

RECOMMENDATIONS

Policymakers and technology developers are mandated to educate the public on how to address the ethical implications of these technologies.

Government should involve a diverse and range of stakeholders, including technologists, ethicists, civil society organisations, and the public, in the development of regulations and standards for emerging technologies.

Companies and governments should collaborate to develop policies and regulations that promote ethical and responsible use of emerging technologies for proper behavioural modification and crime control.

In addition, they should work together to develop innovative solutions that address the social, economic, and environmental challenges associated with these technologies and crime.

Technologies and companies should prioritise ethical consideration in the design and development of new technologies. This includes conducting ethical impact assessments and adopting principles of fairness, accountability, and transparency to help achieve the purpose of Artificial Intelligence.

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