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KEEPING PACE WITH THE TECHNOLOGY- ARTIFICIAL INTELIGENCE AND CRIMINAL LAW, WITH SPECIAL FOCUS ON COMMERCIAL (FINANCIAL) OFFENCES IN INDIA

AUTHORED BY - MS. RITI SINGH
& MR. SHUBHAM SINGH

Abstract:

Today we are living in the era which is often referred as the 4th industrial revolution which is accompanied by unprecedented technological developments such as artificial intelligence, block-chain and big data to name a few. Today, these technological innovations are impacting every aspect of our lives including the legal field, from predicting the outcome of legal disputes, to doing the work of paralegals, etc. the presence of technology can be felt everywhere. The development of big data and artificial intelligence has profoundly affected our social life, changed our lifestyle, and has affected all the aspects of society. At the same time, however, they have also raised a number of legal issues that require legal theory researchers to respond.

Artificial intelligence (AI) has gone from a fringe field of computer science, to the forefront of the tech conversation. Artificial intelligence is and will shape the future and touch on nearly all areas of life, perhaps beyond any technology we've seen to date. As with any developing technology, there are fundamental ethical considerations as the adoption rates increase, and its usage becomes more widespread. The influence of AI will require us to approach it with a vision and care for the impacts it will have in a legal framework.

The Indian economy is one of the fastest growing economy of the world and in India also the awareness for Artificial Intelligence is increasing with every passing day. Since the early 90s, the Information Technology and other services sector in India has been of tremendous importance to its economy eventually growing to account for 7.7% of India's GDP in 20161. In an attempt to capitalize

[1] https://www.ibef.org/industry/information-technology-india.aspx

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on this foundation, the current Indian administration announced in February 2018 that the government think-tank, National Institution for Transforming India, NITI Aayog, will spearhead a national program on AI focusing on research2. This development comes on the heels of the launch of a Task Force on Artificial Intelligence for India's Economic Transformation by the Commerce and Industry Department of the Government of India in 20173.

Keywords: *Artificial Intelligence, Commercial offence, Block- chain, economic transformation and legal personality.*

Methodology

A. Objectives: -The study was geared to achieve the following objectives: -

1. To study the meaning and use of Artificial Intelligence and its impact on Indian economy.
2. To understand the major commercial offences committed by Artificial Intelligence in India and what are its legal implications in India.
3. To study the ways in which these advanced commercial offences are committed wit the use of Artificial Intelligence.
4. To analyze the concept of "Legal Personality of Artificial Intelligence".
5. To study the accountability and liability which can be fixed with regard to the commercial offences committed under criminal law with the use of Artificial Intelligence.
6. To analyze the existing laws which are there with regard to Artificial Intelligence and also analyzing its viability with the growing pace of the technology and advanced commercial offences.
7. To suggest the changes in the laws which can be incorporated in India with regard to regulating the areas in which this technique can be used and fixing the liability for the commercial offences committed by the use of Artificial intelligence.
8. To study how Artificial Intelligence can be used for the prevention of future commercial crimes.

[2] https://economictimes.indiatimes.com/small-biz/startups/newsbuzz/budget-2018-niti-aayog-to-establish-national-programme-on-artificial-intelligence/articleshow/62738713.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
[3] http://pib.nic.in/newsite/PrintRelease.aspx?relid=170231

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B. Hypotheses:- The following hypotheses will be examined in this study:-

1. With the growing pace of the technology, Artificial Intelligence have come up like a revolution in the world and in India also people are becoming familiar with this technique. The intellectual class of Indians are more likely to be aware of this technique.
2. Artificial Intelligence has affected the social life of people and have some serious legal implication.
3. Artificial Intelligence is facilitating the commission of crimes.
4. Commercial offences is one of the major serious implication of Artificial Intelligence under the Indian Criminal law regime.
5. A major area of Indian law which relates to Criminal Law and Artificial Intelligence in India is still unregulated.
6. There is a need of new set of laws and amendments to fix the accountability and liability for the wrongs committed by the use of this technique.
7. As Artificial Intelligence is used in the commission of advanced commercial offences, it can also be used in the prevention of these offences by the individual as well as the financial industry entities.

A. Research Questions: - The following research questions will be dealt in this study: -

1. Does Artificial Intelligence technology used in Indian markets and if yes then who are the consumers of this technique?
2. How far Artificial Intelligence technology has influenced the Indian society and economy and in particular the legal regime of India and to be more precise the Criminal Law system in India?
3. What is an Artificial Intelligence Crime that is, is there a possible definition for example, are they traditional crimes performed by means of an Artificial Intelligence system? Are they new types of crimes?
4. What are commercial crimes, with special reference to Artificial Intelligence?
5. Who commits the Artificial Intelligence Commercial Offences - human agent or an artificial agent or both of them?

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6. How is an Artificial Intelligence Commercial Offence performed (e.g., are these types of offences typically based on a specific conduct or they also required a specific event to occur, in order to be accomplished?
7. What are the fundamentally unique and plausible threats posed by these types of Commercial Crimes?
8. Can legal personality be granted to Artificial Intelligence?

9. Is there a need for new laws and amendments in Indian Criminal law so that commercial offences committed by Artificial Intelligence be punished?

10. What new laws and amendments can be suggested for fixing the liability under the criminal law for commercial offences committed by the use of Artificial Intelligence?

11. How Artificial Intelligence can be used preventing the future crimes?

D. Research Design: - In accordance with the objectives of this study the researcher would use both the doctrinal and non- doctrinal research design. The doctrinal method is used to study the theoretical and the jurisprudential aspect of the Artificial Intelligence and its implications on the Criminal Law field specifically on the Commercial offences in India. This will done with the help of cases, leading judgments, books, journals, articles, reports of various committees and commissions, etc.

Purpose and Scope of the Study: -

Purpose: -

The purpose of this study is to make a detailed analysis on the issue that is., Criminal Law with major focus on commercial (financial) offences and Artificial Intelligence regime taken together in India. Not much have been done on this issue till now and with the growing use of Artificial Intelligence and increase in the number advanced commercial crime, this issue needs to be addressed by legal practitioners and jurists. Hence the researcher would like to take up this issue so as to give a detailed account of the above mentioned issue.

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SCOPE: -

The researcher through the Doctrinal study which would firstly probe into the issues which would relate to the questions as to how far Artificial Intelligence have made its way in the Indian markets and also it will look into the issue as to who all are the consumers of this technique and what is the level of awareness about it in India and its impact on Indian economy. This would be done by various reports and secondary data collected through various articles and journals

Introduction

Today we are living in the era which is often referred as the 4th industrial revolution which is accompanied by unprecedented technological developments such as artificial intelligence, blockchain and big data to name a few. Today, these technological innovations are impacting every aspect of our lives including the legal field, from predicting the outcome of legal disputes, to doing the work of paralegals, etc. the presence of technology can be felt everywhere. The development of big data and artificial intelligence has profoundly affected our social life, changed our lifestyle, and has affected all the aspects of society. At the same time, however, they have also raised a number of legal issues that require legal theory researchers to respond.

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The Indian economy is one of the fastest growing economy of the world and in India also the awareness for Artificial Intelligence is increasing with every passing day. Since the early 90s, the Information Technology and other services sector in India has been of tremendous importance to its economy eventually growing to account for 7.7% of India's GDP in 2016[4]. In an attempt to capitalize on this foundation, the current Indian administration announced in February 2018 that the government

[4] https://www.ibef.org/industry/information-technology-india.aspx

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think-tank, National Institution for Transforming India, NITI Aayog, will spearhead a national program on AI focusing on research[5]. This development comes on the heels of the launch of a Task Force on Artificial Intelligence for India's Economic Transformation by the Commerce and Industry Department of the Government of India in 2017[6].

Just as Google, Oracle, Microsoft, and Amazon are battling to serve the cloud computing and machine learning needs of the US government, the next three to five years may lead to a similar dynamic within India. As the Indian government pushes for digitization and enacts more AI initiatives, private firms will flock to win big contracts – adding to the pool of funds to develop new technologies and spin out new AI and data science-related startups.

Mr. Avik Sarkar, the Head of the Data Analytics Cell for NITI Aayog explains that the think-tank – which has been tasked with spearheading India's AI strategy – is currently engaged in the following public sector initiatives: - Precision Agriculture, Healthcare, Indian Languages Project.[7]

The increased AI interest has manifested itself in the following three ways:
1) Industries have started working to skill their manpower to enable themselves to compete with other global players
2) Educational institutions have started working on their curricula to include courses on machine learning and other relevant areas
3) Individuals and professionals have started acquiring these skills and are comfortable investing in upgrading their own skills.

At the core, AI is a tool based on learning and adapting to new data based on an algorithm. One can't predict everything that is going to happen giving it an inherent uncertainty. Whereas our legal system is based on providing (relative) certainty and guidance for individuals and companies as to expectations on how to behave in society, so the unpredictable nature and potential impact of AI is unsurprisingly what scares people the most. In response to this uncertainty, many legal questions will

[5] https://economictimes.indiatimes.com/small-biz/startups/newsbuzz/budget-2018-niti-aayog-to-establish-national-programme-on-artificial-intelligence/articleshow/62738713.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
[6] http://pib.nic.in/newsite/PrintRelease.aspx?relid=170231
[7] www.niti.gov.in

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need to be solved to assess and control the risks related to an AI solution. Concretely, the usual aspects that will be involved in this study by the researcher is influence of Artificial Intelligence on Indian Criminal law especially on commercial (financial) offences and offenders, its future implications on Indian Criminal law and the policy suggestions.

Artificial intelligence (AI) research and regulation seek to balance the benefits of innovation against any potential harms and disruption. However, one unintended consequence of the recent surge in AI research is the potential re-orientation of AI technologies to facilitate criminal acts. Criminal acts are defined here as any act (or omission) constituting an offence punishable under Indian criminal law. Artificial Intelligence is used very widely in commission of offences and also in commercial offences such as fraud, forgery and counterfeiting, money laundering, forgery or use of credit/debitcards, offences against the legislation governing cheques (in particular forgery or use of stolen cheques), offences against companies (such as misuse of company assets), bank fraud, etc,

The main issue which crops up while dealing with Artificial Intelligence and Criminal law is that of fixing the liability and accountability for the criminal acts committed by the use of Artificial Intelligence. The major sub issue related to this main issue is the question of **'Legal Personality of Artificial Intelligence'.** As of now, no law in force recognizes AI to be a legal person and there are no AI related laws or legislations. However, with incidents such as the fatal accident caused by Uber's self-driving vehicle thereby killing a pedestrian in Tempe, Arizona and Sophia, a robot being awarded citizenship by Saudi Arabia it has become vital to address the legal identity of Artificial Intelligence and till the time this issue is not addressed, the liability under the criminal law cannot be fixed. India has not proceeded as far as giving citizenship rights to a robot but what happens if it does? Further, who would be responsible for their actions? If she/he commits a crime, what punishment would be awarded? Such challenges will be addressed only if the government makes a pre-emptive move and address the legal identity of an Artificial Intelligence.

Another important aspect with regard to crimes and Artificial Intelligence is that how human can use Artificial Intelligence for committing crime. **Machine learning poisoning** is a way for criminals to circumvent the effectiveness of Artificial Intelligence. The researcher, through this study would also like to probe into this issue and make a detailed analysis of it and how this technique is used is the

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commission of commercial wrongs both against individuals and also against business enterprises operating in the financial industry in India. Financial offenders are using Artificial Intelligence for committing crime and hence it has become very difficult to trace and stop these crimes. Hence, changes are needed in the existing criminal law of India.

Prevention of financial offences is a major issue which will be dealt in this study as preventing financial crimes will not only save the banking industry millions, if not billions, of dollars while keeping regulators happy, but it would save scores of lives and improve our global economy through the adoption of new technologies. Advancements in data science such as AI and machine learning are needed to fight global crime and to stop financial criminals in their tracks. AI-based solutions can easily analyze massive amounts of data, and quickly identify where exceptions or anomalies exist, unveiling sophisticated intelligence networks which are utilized as a flow of communication between fellow fraudsters and money launderers. AI systems have progressed to the point where large volumes of transactional and other sources of financial data can be culled, consolidated, analyzed, and scored for risk so that investigators can make more accurate determinations of suspicious activity.

No financial institution wants to be used by criminals seeking to further their illegal and immoral money laundering schemes and other commercial offences. The time is now for our legislators, regulators, and covered institutions to adopt the emerging technologies of AI and machine learning in the fight against global financial crime.

Therefore the researcher would like to include the future implications and the policy suggestions which can be made to make an effective and progressive Criminal law system with regard to the fixing of liability for offences committed by the use of Artificial Intelligence in India and how artificial Intelligence itself can be used to prevent commercial offences will also be analyzed.

REVIEW OF LITARATURE

The interaction between the disciplines of law, computer science and artificial intelligence are attracting increasing attention within the academic and commercial communities, especially in the areas of "intelligent" computer fraud, copyright of software, data protection, representing law on the computer, and legal liability of producers of intelligent and non intelligent software. The chapters in

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this volume are representative of the debate and of the central issues. They include material concerning the way that the discipline of law will affect computer science and AI and also how computer science and AI will affect law. The chapters lend support to the hypothesis that in years to come law will have a severe impact on computer science (via data protection and copyright); that computers will have an effect on law (via legal databases and electronic presentation of evidence); that law will impact on AI (via liability of intelligent software writers and codes of conduct); and that AI will have an impact on law (via models of legal reasoning and implementations of various statutes). By grouping the chapters into theory, implications, and applications sections, the authors make an initial attempt to identify separate, but interrelated methodological stances.[8]

The growing use of artificial intelligence (AI) software and robots in the commercial, industrial, military, medical, and personal spheres has triggered a broad conversation about human relationships with these entities. There is a deep and common concern in modern society about AI technology and the ability of existing social and legal arrangements to cope with it. What are the legal ramifications if an Artificial Intellligence software program or robotic entity causes harm? Although AI and robotics are making their way into everyday modern life, there is little comprehensive analysis about assessing liability for robots, machines, or software that exercise varying degrees of autonomy.

Gabriel Hallevy develops a general and legally sophisticated theory of the criminal liability for AI and robotics that covers the manufacturer, programmer, user, and all other entities involved. Identifying and selecting analogous principles from existing criminal law, Hallevy proposes specific ways of thinking through criminal liability for a diverse array of autonomous technologies in a diverse set of circumstances. In most developed countries, unmanned vehicles, surgical robots, industrial robots, trading algorithms, personal robots, and other artificial intelligence entities are in common use. Such use may be personal, medical, military, commercial, or industrial. The question of criminal liability arises when the unmanned vehicle is involved in car accidents, the surgical robot is involved in surgical errors, the trading algorithm is involved in fraud, and so on. Who is to be held criminally liable for these offences: the manufacturer, the programmers, the user, or the Artificial intelligence entity itself?[9]

[8] **AJIT NARAYANAN, MERVYN BENNUN , LAW, COMPUTER SCIENCE, AND ARTIFICIAL INTELLIGENCE** (1991)
[9] **GABRIEL HALLEVY , WHEN ROBOTS KILL: ARTIFICIAL INTELLIGENCE UNDER CRIMINAL LAW (2013).**

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For millennia, laws have ordered society, kept people safe and promoted commerce and prosperity. But until now, laws have only had one subject: humans. The rise of artificial intelligence presents novel issues for which current legal systems are only partially equipped. Who or what should be liable if an intelligent machine harms a person or property? Is it ever wrong to damage or destroy a robot? Can AI be made to follow any moral rules?

The best- known answers to any of these questions are Isaac Asimov's Laws of Robotic, from 1942:

First: A robot may not injure a human being or, through inaction, allow a human being to come to harm.

Second: A robot must obey orders given it by human beings except where such orders would conflict the first law.

Third: A Robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

Fourth: A Robot may not harm humanity or, by inaction, allow humanity to come to harm.[10]

Artificial Intelligence is a rapidly evolving technology which is surrounded by hype, misinformation and hysteria, with very little cogent or helpful written to aid the practitioners. If you are lost and need clear direction, 'Artificial Intelligence - The Practical Legal Issues' will guide you through the implications and structure of existing AI technologies and provide a practical and easily digestible path to the real issues that you need to consider as a legal practitioner.

For years, robots were solely a matter of science fiction. Today, artificial intelligence technologies serve to accelerate our already fast-paced lives even further. From Apple's Siri to the Google Car to GPS, machines and technologies that make decisions and take action without direct human supervision have become commonplace in our daily lives. As a result, laws must be amended to protect companies that produce robots and the people that buy and use them. This book provides an extensive examination of how numerous legal areas--including liability, traffic, zoning, and international and constitutional law--must adapt to the widespread use of artificial intelligence in

[10] ISSAC ASIMVOC, "RUNAROUND" in I, ROBOT (LONDON: HARPER VOYAGER, 2013).

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nearly every area of our society. The author scrutinizes the laws governing such fields as transportation, medicine, law enforcement, childcare, and real estate development. The questions raised by robots' rise will seem like they are from science fiction, but they are becoming all too real. In *Robots Are People Too*, John Frank Weaver tackles the legal side of this fascinating new story, from what happens when driverless cars get into an accident to fundamental questions that are being raised for the Constitution itself.[11]

The technology of legal practice is challenging rapidly. Predictive coding is transforming discovery litigation. Start-ups like Ravel (Ravel Law 2015a)[12], Lex Machina, and the Watson- based Ross Intelligence, 2015 are gearing attention and enlisting law firm subscribers. These and other developments in text analytics offer new process models and tools for delivering legal services, promising greater efficiency and, possibly, greater public accessibility. These changes present challenges and opportunities for young attorneys and computer scientists, but it has not been easy to predict the future of legal practice. Declines in hiring by law firms have led to reductions in the number of law school applicants. Prospective applicants weigh the chances of gainful employment against the size of their student loans and look elsewhere. There is uncertainity about what law- related tasks the technology can perform.[13]

Artificial Intelligence is a buzzword that we are beginning to hear with increasing regularity. The news constantly keeps on telling us how advances in Artificial Intelligence are happening at a very rapid pace. Given this, it is but natural to expect that Artificial Intelligence will be an integral part of our day-to-day lives in the next decade and half. In that context, it becomes essential to examine as on current date what are the legal, policy and regulatory issues pertaining to Artificial Intelligence. These are early days when the foundation of the Artificial Intelligence building is currently being built. This is also a right time where the legal frameworks pertaining to Artificial Intelligence must be evolved and developed at an early stage so as to help enable mankind to not just reap the benefits and advancements of Artificial Intelligence but also to ensure that Artificial Intelligence does not become so intelligent so as to surpass human intelligence in the coming times. In this context, the law

[11] **JOHN FRANK WEAVER, ROBOTS ARE PEOPLE TOO: HOW SIRI, GOOGLE CAR, AND ARTIFICIAL INTELLIGENCE WILL FORCE US TO CHANGE OUR LAWS (2013).**
[12] https://www.lexisnexis.com/infopro/keeping-current/b/weblog/archive/2017/06/14/lexisnexis-acquires-ravel-law.aspx
[13]**KEVIN D. ASHLEY , ARTIFICIAL INTELLIGENCE AND LEGAL ANALYTICS. (2017).**

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pertaining to Artificial Intelligence becomes an important subset of the Cyber law umbrella that is constantly evolving. In this Book, the writer have sought to examine as on date, the various significant legal, policy and regulatory issues pertaining to Artificial Intelligence. The Book tends to ask various questions. The answers of number of these questions are currently not available. However, the Author believes that by raising the important questions and flagging the important issues, the legal jurisprudence pertaining to Artificial Intelligence could be substantially evolved and further developed with the passage of time. The Book deals with all major and important legal, policy and regulatory issues pertaining to Artificial Intelligence, at the time of writing. As time passes by and as further advances of Artificial Intelligence continue to keep on happening, it is a question of time that more elaborate legal principles and legal frameworks pertaining to Artificial Intelligence need to evolve with the passage of time.[14]

The book provides a grounding of what differentiates artificially intelligent systems from traditional technology and explains the differences between AI, Machine Learning and Deep Learning as well as other AI concepts such as neural networks. Understanding what AI systems can and cannot do is also essential to developing a clear legal awareness of the technology. From these introductory foundations, you'll learn how the deployment of AI technology creates issues and risks that need to be considered carefully and that permeate across causation, intellectual property ownership, confidentiality and data protection, recruitment and even criminal law. In each case the author will suggest practical approaches to solving and mitigating such risks and will show how current liability frameworks need to be adapted to accommodate these risks.[15]

Our immediate reaction is emotional: anger, horror, disgust and then reasons sets in. A crime has been committed. A punishment must follow. Now imagine the perpetrator is not a human, but a robot. Does your response change? What if the victim is another robot? How should society, and the legal system, react?[16]

From the early days of vaccum tube computers to the current generation of supercomputers which operate in the exaflop computing range much progress has been made in the field of artificial

[14]**PAVAN DUGGAL , ARTIFICIAL INTELLIGENCE LAW (INDEPENDENTLY PUBLISHED)(21-SEP-2017)**
[15]JOHN BUYERS , ARTIFICIAL INTELLIGENCE - THE PRACTICAL LEGAL ISSUES BY(LAW BRIEF PUBLISHING)(2018).
[16] **JACOB TURNER , ROBOT RULES: REGULATING ARTIFICIAL INTELLIGENCE. (2018).**

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intelligence. But perhaps the most striking example of progress in AI has been the advances in the design of algorithms and analytical techniques which allow AI systems to learn from experience, to be creative, and to perform autonomously from humans. However, while these aspects of AI are impressive, current systems operating with AI have begun to challenge established areas of law and have resulted in the beginnings of an important conversation among legal scholars in Europe, the U.S., and Asia on how to regulate AI.[17]

1. Present Study

A. Statement of the Problem

The present study intends to focus upon the issues and problems relating to the use of Artificial Intelligence in India, commercial offence committed by it and by the use of such technology and the question relating to the "Legal Personality of Artificial Intelligence" and also questions related to its accountability, liability and punishment under the Indian Criminal Law. With the help of doctrinal as well as non- doctrinal method, the proposed exercise is attempted to know as to how this technology is affecting the people in India and Indian economy what are the its implications on the legal field. Are there any specific legal areas under the Indian Criminal Law such as commercial offences, which are getting affected by this technique? A systematic probe in to some of these questions has been made in the study. The issues relating to fixing the accountability and liability with regard to commercial offences committed by Artificial Intelligence technique have been dealt in a comprehensive way in the study and would be examined in the light of various case laws. Also the future implications of the Artificial Intelligence on the Commercial offences (its prevention and cure) in India will be critically evaluated and what government regulations, new laws and amendments can be imposed on the use of this technique so as to regulate the use of this technique would be suggested in this study so that Indian legal system could also match its pace with the growing technology.

B. Conceptual Framework

[17] **WOODROW BARFIELD, UGO PAGALLO , RESEARCH HANDBOOK ON THE LAW OF ARTIFICIAL INTELLIGENCE (2018).**

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Artificial Intelligence: - Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self-correction. Particular applications of AI include expert systems, speech recognition and machine vision.

In computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. Colloquially, the term "artificial intelligence" is often used to describe machines (or computers) that mimic "cognitive" functions that humans associate with the human mind, such as "learning" and "problem solving".[18]

Artificial intelligence can be classified into three different types of systems: analytical, human-inspired, and humanized artificial intelligence.[19] Analytical AI has only characteristics consistent with cognitive intelligence; generating cognitive representation of the world and using learning based on past experience to inform future decisions. Human-inspired AI has elements from cognitive and emotional intelligence; understanding human emotions, in addition to cognitive elements, and considering them in their decision making.

Hence, artificial intelligence refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.

The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal.

Criminal law and Commercial Offences

[18]**RUSSELL STUART J.; NORVIG, PETER, ARTIFICIAL INTELLIGENCE: A MODERN APPROACH (3RD ED.).(UPPER SADDLE RIVER, NEW JERSEY: PRENTICE HALL.) (2009), (ISBN 978-0-13-604259-4.)**

[19] **KAPLAN ANDREAS; MICHAEL HAENLEIN , SIRI, SIRI IN MY HAND, WHO'S THE FAIREST IN THE LAND? ON THE INTERPRETATIONS, ILLUSTRATIONS AND IMPLICATIONS OF ARTIFICIAL INTELLIGENCE(BUSINESS HORIZONS) (2018)**

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The rapid progress of artificial intelligence (AI) and machine learning raises key questions regarding benefits and risks related to the criminal justice system. Software is now to be found in devices of all descriptions that are by people to run their business and private lives. Artificial Intelligence is used in committing many types of crimes. The major types of crimes in which Artificial Intelligence has become instrumental are: - a.) economy- focused area of crime such as cartel offences, such as price fixing and collusion, insider dealing, such as trading securities based on private business information, and market manipulation; b.) harmful or dangerous Drugs such as- trafficking, selling, buying, and possessing banned drugs; c.) offences against the Person which includes from murder to human trafficking to harassment to torture and sexual offences which includes rape (i.e., penetrative sex without consent), sexual assault (i.e., sexual touching without consent), and sexual intercourse or activity with a minor; d.) theft and fraud, and forgery and personation. The major question which crops up here is that who can be held responsible and accountable in this case and how can the liability be fixed for the criminal act (or omission) committed.

Under economic offences, cartel offences are included and Artificial Intelligence's involvement in market manipulation, price fixing, and collusion is of great concern.[20] Market manipulation is defined as "actions and/or trades by market participants that attempt to influence market pricing artificially", where a necessary criterion is an intention to deceive. Yet, such deceptions have been shown to emerge from a seemingly compliant implementation of an Artificial Agent that is designed to trade on behalf of a user (that is, an artificial trading agent). This is because an Artificial Agent, particularly one learning from real or simulated observations, may learn to generate signals that effectively mislead. Simulation-based models of markets comprising artificial trading agents have shown[21] that, through reinforcement learning, an Artificial Agent can learn the technique of order-book spoofing. This involves placing orders with no intention of ever executing them and merely to manipulate honest participants in the marketplace.

In this case, the market manipulation emerged from an AA initially exploring the action space and, through exploration, placing false orders that became reinforced as a profitable strategy, and

[20] ARCHBOLD, J. F. CRIMINAL PLEADING, EVIDENCE AND. LONDON: SWEET & MAXWELL LTD. (2018).
[21] MARTINEZ-MIRANDA, E., MCBUCNEY, P., & HOWARD, M. J: LEARNING AND UNFARE TRADING (2016).

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subsequently exploited for profit[22]. Further market exploitations, this time involving human intent, also include acquiring a position in a financial instrument, like a stock, then artificially inflating the stock through fraudulent promotion before selling its position to unsuspecting parties at the inflated price, which often crashes after the sale. Further, Collusion, in the form of price fixing, may also emerge in automated systems. Near-instantaneous pricing information (e.g., via a computer interface) meets the coordination condition. When agents develop price-altering algorithms, any action to lower a price by one agent may be instantaneously matched by another. In and of itself, this is no bad thing and only represents an efficient market. Yet, the possibility that lowering a price will be responded in kind is disincentivising and hence meets the punishment condition.

Crimes falling under this category include trafficking, selling, buying, and possessing banned drugs are also included under the commercial offences. business-to-business trafficking of drugs as a threat due to criminals using unmanned vehicles, which rely on AI planning and autonomous navigation technologies, as instruments for improving success rates of smuggling because smuggling networks are disrupted by monitoring and intercepting transport lines, law enforcement becomes more difficult when unmanned vehicles are used to transport contraband.

Further, Artificial Intelligence is used where social bots can be used to advertise and sell products thes social bots could be programmed to send and reply to email or use instant messaging (IM) to spark one-on-one conversations with hundreds of thousand or even millions of people every day, offering pornography or drugs to children, preying on teens' inherent insecurities to sell them needless products and services. Therefore these are few popular types commercial offences committed in today's era.

Another issue which needs to be dealt with is the legal personality of Artificial Intelligence.

Liability: -

Liability refers to the concern that Artificial Intelligence Crime could undermine existing liability models, thereby threatening the dissuasive and redressing power of the law. Existing liability models

[22] MARTINEZ-MIRANDA, E., MCBUCNEY, P., & HOWARD, M. J: LEARNING AND UNFARE TRADING (2016).

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may be inadequate to address the future role of Artificial Intelligence in criminal activities. The limits of the liability models may therefore undermine the certainty of the law, as it may be the case that agents, artificial or otherwise, may perform criminal acts or omissions without sufficient concurrence with the conditions of liability for a particular offence to constitute a (specifically) criminal offence. The first condition of criminal liability is the *actus reus*: a voluntarily taken criminal act or omission. For types of Artificial Intelligence Crime defined such that only the Artificial Agent can carry out the criminal act or omission, the voluntary aspect of *actus reus* may never be met since the idea that an AA can act voluntarily is contentious.

When criminal liability is fault-based, it also has a second condition, the *mens rea* (a guilty mind), of which there are many different types and thresholds of mental state applied to different crimes. In the context of Artificial Intelligence Crime, the *mens rea* may comprise an intention to commit the *actus reus* using an Artificial Intelligence-based application (intention threshold) or knowledge that deploying an Artificial Agent will or could cause it to perform a criminal action or omission (knowledge threshold).

Concerning an intention threshold, if it is admitted that an Artificial Agent can perform the *actus reus*, in those types of Artificial Intelligence Crimes where intention (partly) constitutes the *mens rea*, greater Artificial Agent autonomy increases the chance of the criminal act or omission being decoupled from the mental state. Alternatively, legislators may define criminal liability without a fault requirement. Such faultless liability, which is increasingly used for product liability in tort law (e.g., pharmaceuticals and consumer goods), would lead to liability being assigned to the faultless legal person who deployed an Artificial Agent despite the risk that it may conceivably perform a criminal action or omission. Such faultless acts may involve many human agents contributing to the *prima facie* crime, such as through programming or deployment of an Artificial Agent. However mens rea is the main essential for committing any crime hence its requirement cannot be disregarded.

Legal Personality of Artificial Intelligence

What is legal personality?

Legal personality, and the capacity to be the subject of rights and obligations and to determine one's own legal situation, is ascribed by the law to human beings (natural persons). A natural person has

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self-awareness, intelligence, free will, and feelings. Some natural persons, in light of their immaturity (children) or intellectual disability, have partially or completely limited capacity to autonomously acquire rights and assume obligations, and thus the responsibility for them is borne by legal guardians. The notion of legal personality in the sense of the capacity to be the subject of rights and obligations and to establish one's own legal situation has been expanded to cover entities grouping together individuals sharing common interests, such as states and commercial entities. They are "artificial" persons, known as "legal persons," created by the humans standing behind them. The detachment of legal persons from the natural persons standing behind them (e.g. authorities and entrepreneurs) occurred over a long process, through the evolution of abstract legal concepts.

Legal Personality and Artificial Intelligence: -

Undoubtedly AI uses cognitive processes to achieve identified aims, but this does not seem sufficient reason to vest it legal personality, in light of the criterion of rights and obligations. Using the example of a commercial entity, awarding it legal personality is justified by the human substratum behind it. In particular in the context of criminal responsibility, it is the human responsibility for the decision-making processes and organization of the entity who is punished.

In the context of a robot equipped with Artificial Intelligence with regard to conferring them with legal personality one view is that it is hard to say that it has a free will which could lead to commission of prohibited acts with the aim of achieving its own ends. Thus it cannot be ascribed a degree of fault, such as negligence or recklessness. Nor is it possible to hold it liable for damages for its errors, for example as in the case of an accident caused by an autonomous car or malpractice by surgical robots. AI code may ensure that AI complies with certain rules, but application of such rules is not the result of an act of will, and thus cannot give rise to responsibility.

Considering the level of self-awareness, autonomy and self-determination, we may seek an analogy between robots and animals. But what makes people eager to provide legal protection to animals (and attempt to vest them with personhood) is not just the intelligence some of them display, but also their capacity to feel pain, joy or attachment, which Artificial Intelligence lacks.

Consequently, what distinguishes human beings is their capacity for understanding the rules

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governing society, as well as the intention to comply with those rules, along with the ability to feel emotions. A human understands, interprets and applies legal rules in nuanced situations of daily life, which cannot be said of animals or robots.

Thus the rights and obligations associated with possessing legal personality arise from who people are and how the social relations are organized among them. Notions like freedom of expression, moral losses and responsibility make little sense in the context of artificial intelligence.

Another view supports the fact that legal personality can be given to Artificial Intelligence, like the way Saudi Arabia has done. giving AI legal personality does not mean treating it as a human. Legal personality refers to a bundle of rights and obligations. Like rights, legal personality is a fiction: a tool to further the aims of a given society. Turner suggests that legal personality for AI could be justified as an elegant solution to (i) pragmatic concerns arising from the difficulties of assigning responsibility for AI (ii) in order to support AI's moral rights. If legal personality for AI is adopted as a solution, helpful features of such a regime would include the ability for AI to holds rights, obligations, and assets, and for there to be a means of verifiable identification or registration.[23]

Artificial Intelligence and the Future of Criminal Law: Conclusion

Artificial intelligence has the potential to be a permanent part of our criminal justice ecosystem, providing investigative assistance and allowing criminal justice professionals to better maintain public safety. One facet of human intelligence is the ability to learn from experience. Machine learning is an application of AI that mimics this ability and enables machines and their software to learn from experience. Particularly, important from the criminal justice (particularly commercial offences) perspective is pattern recognition. Humans are efficient at recognizing patterns and, through experiences, we learn to differentiate objects, people, complex human emotions, information, and conditions on a daily basis. Artificial Intelligence seeks to replicate this human capability in software algorithms and computer hardware. For example, self learning algorithms use data sets to understand how to identify people based on their images, complete intricate computational and robotics tasks,

[23] **JACOB TURNER LEGAL PERSONALITY FOR AI (2018).**

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understand purchasing habits and patterns online, detect medical conditions from complex radiological scans, and make stock market predictions.

Every day holds the potential for new AI applications in criminal justice, paving the way for future possibilities to assist in the criminal justice system and ultimately improve public safety. Video analytics for integrated facial recognition, the detection of individuals in multiple locations via closed-circuit television or across multiple cameras, and object and activity detection could prevent crimes through movement and pattern analysis, recognize commercial crimes in progress, and help investigators identify suspects. With technology such as cameras, video, and social media generating massive volumes of data, AI could detect commercial crimes and also other types of crimes that would otherwise go undetected and help ensure greater public safety by investigating potential criminal activity, thus increasing community confidence in law enforcement and the criminal justice system. AI also has the potential to assist the nation's crime laboratories in areas such as complex DNA mixture analysis. Pattern analysis of data could be used to disrupt, degrade, and prosecute crimes and criminal enterprises. Algorithms could also help prevent victims and potential offenders from falling into criminal pursuits and assist criminal justice professionals in safeguarding the public in ways never before imagined. AI technology also has the potential to provide law enforcement with situational awareness and context, thus aiding in police well-being due to better informed responses to possibly dangerous situations. Technology that includes robotics and drones could also perform public safety surveillance, be integrated into overall public safety systems, and provide a safe alternative to putting police and the public in harm's way. Robotics and drones could also perform recovery, provide valuable intelligence, and augment criminal justice professionals in ways not yet contrived. By using Artificial Intelligence and predictive policing analytics integrated with computer-aided response and live public safety video enterprises, law enforcement will be better able to respond to incidents, prevent threats, stage interventions, divert resources, and investigate and analyze criminal activity. AI has the potential to be a permanent part of our criminal justice ecosystem, providing investigative assistance and allowing criminal justice professionals to better maintain public safety.[24]

[24] USING ARTIFICIAL INTELLIGENCE TO ADDRESS CRIMINAL JUSTICE NEEDS (NIJ JOURNAL 280).

ISSN: 2582-6433

References: -

BOOKS

- AJIT NARAYANAN, MERVYN BENNUN, LAW, COMPUTER SCIENCE, AND ARTIFICIAL INTELLIGENCE (1991).
- RUSSELL STUART J.; NORVIG, PETER, ARTIFICIAL INTELLIGENCE: A MODERN APPROACH (3RD ED.). (UPPER SADDLE RIVER, NEW JERSEY: PRENTICE HALL.) (2009), (ISBN 978-0-13-604259-4.)
- JOHN FRANK WEAVER, ROBOTS ARE PEOPLE TOO: HOW SIRI, GOOGLE CAR, AND ARTIFICIAL INTELLIGENCE WILL FORCE US TO CHANGE OUR LAWS (2013).
- ISSAC ASIMVOC, "RUNAROUND" in I, ROBOT (LONDON: HARPER VOYAGER, 2013).
- MARTINEZ-MIRANDA, E., MCBUCNEY, P., & HOWARD, M. J: LEARNING AND UNFARE TRADING (2016).
- KEVIN D. ASHLEY, ARTIFICIAL INTELLIGENCE AND LEGAL ANALYTICS. (2017).
- GABRIEL HALLEVY, WHEN ROBOTS KILL: ARTIFICIAL INTELLIGENCE UNDER CRIMINAL LAW (2013).
- ISSAC ASIMVOC, "RUNAROUND" in I, ROBOT (LONDON: HARPER VOYAGER, 2013).
- JOHN FRANK WEAVER, ROBOTS ARE PEOPLE TOO: HOW SIRI, GOOGLE CAR, AND ARTIFICIAL INTELLIGENCE WILL FORCE US TO CHANGE OUR LAWS (2013).
- KEVIN D. ASHLEY, ARTIFICIAL INTELLIGENCE AND LEGAL ANALYTICS. (2017).
- PAVAN DUGGAL, ARTIFICIAL INTELLIGENCE LAW (INDEPENDENTLY PUBLISHED) (21-SEP-2017)
- KAPLAN ANDREAS; MICHAEL HAENLEIN, SIRI, SIRI IN MY HAND, WHO'S THE FAIREST IN THE LAND? ON THE INTERPRETATIONS, ILLUSTRATIONS AND IMPLICATIONS OF ARTIFICIAL INTELLIGENCE (BUSINESS HORIZONS) (2018)
- JOHN BUYERS, ARTIFICIAL INTELLIGENCE - THE PRACTICAL LEGAL ISSUES BY (LAW BRIEF PUBLISHING) (2018).

ISSN: 2582-6433

- WOODROW BARFIELD, UGO PAGALLO , RESEARCH HANDBOOK ON THE LAW OF ARTIFICIAL INTELLIGENCE (2018).
- JACOB TURNER, ROBOT RULES: REGULATING ARTIFICIAL INTELLIGENCE (2018).
- JACOB TURNER LEGAL PERSONALITY FOR AI (2018).
- ARCHBOLD, J. F. CRIMINAL PLEADING, EVIDENCE AND. LONDON: SWEET & MAXWELL LTD. (2018).

JOURNAL

- USING ARTIFICIAL INTELLIGENCE TO ADDRESS CRIMINAL JUSTICE NEEDS (NIJ JOURNAL 280).

WEBSITES

- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6191666/
- https://www.wipo.int/wipo_magazine/en/2018/05/article_0001.html
- https://www.lexisnexis.com/infopro/keepingcurrent/b/weblog/archive/2017/06/14/lexisnexis-acquires-ravel-law.aspx
- https://www.wipo.int/about-ip/en/artificial_intelligence/
- https://www.forbes.com/sites/insights
- www.niti.gov.in
- https://link.springer.com/article
- https://www.ibef.org/industry/information-technology-india.aspx