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Recommendations Report on The Role and Framework of Plurilateralism in AI-enabled Crimes and Judicial Governance

1. Transformation of Natural Justice Principles and their usage vis a vis Artificial Intelligence.

- Artificial Intelligence (AI) is something which is certainly reaching its zenith, whether we talk about remote sensing technologies or deal with the creation of AI machines and their use in the society. However, it is imperative to understand that with the development of something, innumerable issues ought to follow. Considering the development of AI, it is imperative to understand that AI mechanisms could severely violate the principles of natural justice, when it comes to adjudicating matters wherein machines or robots are involved. Artificially Intelligent Robots who are programmed by innumerable connections and coding, may tend to learn new things by itself and it could have a significant impact on the criminal and civil laws. A lot of countries are making various pieces of legislation in order to legalise and provide an adequate support to robots, however, developing economies are still working towards these aspects and are constantly endeavouring towards developing a robust piece of legislation, however, they are still in their nascent stages.. Arguably, the most important near-term legal question associated with AI is who or what should be liable for tortious, criminal, and contractual misconduct involving AI and under what conditions.
- Now, it is being noticed that artificial intelligence can be used within the financial markets in order to enable traders to quantitatively analyse each stock and understand whether the stock is going to provide enough returns or not. AI machine learning and quantitative analysis can surely act as an aid to traders, thereby enabling them to efficiently trade on the stock exchange. The quants could be coded in a manner which could enable traders to monitor every single move pertaining to the share or the commodity in question and they can simply analyse the data and the rest would be done by the quant system. However, it is imperative to note that this could lead to a rise in AI-enabled crimes. Before delving into the discussion of whether criminal liability can be assigned to an A.I or not, it is quite pertinent to understand what a crime is. A crime consists of two elements: a voluntary criminal act or omission (*actus reus*) and an intention to commit a crime (*mens rea*). If robots were shown to have sufficient awareness, then they could be liable as direct perpetrators of criminal offenses, or responsible for crimes of negligence. If we admit that robots have a mind of their own, endowed with human-like free will, autonomy or moral sense, then our whole legal system would have to be drastically amended. Although this is possible, it is not likely. Nevertheless, robots may affect criminal laws in more subtle ways. Considering the development of AI related crimes in the field of finance, the liability which may



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be imposed upon traders cannot be determined when stock broking firms use quants to deal with the shares on the stock exchange. The increasing delegation of decision making to AI will also impact many areas of law for which *mens rea*, or intention, is required for a crime to have been committed. What would happen, for example if an AI program chosen to predict successful investments and pick up on market trends make a wrong evaluation that leads to a lack of capital increase and hence, to the fraudulent bankruptcy of the corporation. Then in such cases as the intention requirement of fraud is missing, traders or financial brokers could only be held responsible for the lesser crime of bankruptcy triggered by the robot's evaluation. Since, these quant systems would be automated, there are chances that the system may be highly prone to external attacks. Trading agents could analyse and execute a “profitable” market manipulation campaign comprising a set of deceitful false-orders, however, all of this could be a result of the machine making decisions on behalf of the traders, since quant analysis does not necessarily involve traders, however, it solely takes into consideration the performance of a stock and provides the details with regards to its performance to the traders, which enables the traders to understand the fluctuations in a better manner, thereby understanding the trend lines and the pattern in which it functions. However, there may arise major concerns with regards to AI's involvement pertaining to market manipulation, price fixing and collusion. Traders in a market understand the emotion of the market, however, quants may not and they may make calls which could be criminal in nature or could short a stock, thereby calling undivided attention from regulatory authorities, however under these circumstances, it would be highly difficult to understand who is at fault, whether the traders or the autonomous quants used powered by AI used for trading. Now, existing liability models may be inadequate to address the future role of AI in criminal activities. For example, in terms of *actus reus*, while autonomous traders or quants can carry out the criminal act or omission, the voluntary aspect of *actus reus* would not be met, since the idea that an autonomous agent can act voluntarily is contentious. This means that agents, artificial or otherwise, could potentially perform criminal acts or omissions without satisfying the conditions of liability for that particular criminal offence.

- When criminal liability is fault-based, it also requires *mens rea* (a guilty mind). The *mens rea* may comprise an intention to commit the *actus reus* using an AI-based application, or knowledge that deploying an autonomous agent will or could cause it to perform a criminal action or omission. However, in some cases the complexity of the autonomous agent's programming could make it possible that the designer, developer, or deployer would neither know nor be able to predict the AI's criminal act or omission. On the other hand, legislators could define criminal liability without a fault requirement. This would result in liability being assigned to the person who designed the AI algorithm, regardless of whether they knew about it, or could predict the illegal behavior. Apart from this, it is imperative to understand that market manipulation is something which could again lead to innumerable issues arising for traders, thereby putting them under the watch of the regulatory authorities. Artificial agents or traders or quants could use the trades on the stock exchange and adapt to techniques pertaining to order-book spoofing. Now, it is imperative to understand what is meant by order-book spoofing. Order-book spoofing means placing an order for a particular share, however, with no intention whatsoever to buy or execute the trade. This is done simply in order to short the prices of various shares, however, despite it being a profitable move, it cannot be deemed to be regarded as ethical and could put a financial broking firm in jeopardy, since social bots or quants have been proven to be highly effective instruments dealing with such schemes. However, this scheme can clearly be deemed to be regarded as an AI enabled crime and thereby there could be no judicial control over it. Therefore, a joint liability system needs to be regulated and developed and therefore, only one entity should not be held responsible.



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- Criminal actions have two important elements, that is, *actus reus* and *mens rea*. The *actus reus* taking place may still be proved, but proving *mens rea*, i.e. guilty mind can be specifically challenging for judicial actors to rule upon
- This burden to prove criminal activities, has led to a move towards product liability. This can help prove faultless liability. The problem is that, if *mens rea* is not entirely abandoned and the threshold is only lowered, then, for balancing reasons, the punishment may be too light
- Natural principles of reasoned decisions become critical for rule of liability. There should be proportionate tests, cause of action and nexus of activity with people are tests that must be administered to ascribe liability in cases of AI enabled crimes.
- Another point of view, which could be taken is to abandon the natural principles of justice when it comes to adjudicating upon matters where an A.I has committed the crime
- It is pertinent to take note that an A.I, if solely based on machine learning algorithms does not have any conscience of its own and negligible cognizance. In such a case the liability of the criminal act can be directly associated with the entity responsible for developing the A.I or who owns the rights to it.
- Even when an A.I programme possesses cognizance abilities and processes data in real time while interacting with a complex environment, the entities who develop A.I can use this as a “jail free card” to evade liability
- Joint -Liability and Vicarious Liability framework needs to be regulated and developed in the case of AI enabled crimes. Research groups and Independent Committee’s must be set up to deal with contention to develop such a framework, while considering the complex structure of AI systems.
- Understanding of BlackBox situations perfectly to the very roots in order to ascertain the intent of the AI in order to discern *mens rea*.
- Understanding of the concept of “free - will of AI” & requisite Boards of Ethics to govern the philosophy behind the very algorithms that will facilitate deep learning or machine learning towards free will. Furthermore, technical education in the field of AI is imperative for AIs to be effectively represented in Courts of Law, & advocates need to be trained.
- Principles of natural justice are the basic fundamentals of our justice framework and these need to be upheld in all aspects of the legal framework. But aspects like bias, is something that can be inevitable, the algorithms so developed may be neutral but will result in indirect discrimination against a certain category of individuals.
- India being a diverse country where discrimination and victimization exists so much, how will AI be able to avoid this. This discrimination can occur because of the inaccurate training data which also relates to the prejudices and does not take into account how the statistic came into being. Another important point is in algorithmic processing where a quantitative value will be given to the individuals and this will eventually call for discrimination.
- Transparency, another principle of natural justice is also at stake since transparency firstly, must exist in the social surroundings. Secondly, the legal framework must also be able to provide the parties with the AI assessment that the judgement is based on. Now this is important and the framework is not able to do so, therefore violating the rule of law.
- Studies also show that even though AI could predict a suspect’s behaviour better than a judge, it does not take into account as many parameters as a judge does. It also gives way to the fact that there might be additional facts of the case which might be unique and go beyond the parameters.
- It is important to note that a lot of times AI takes into account parameters that are not in accordance with the legal issue at hand and take into account the activities of an individual in a holistic manner. For instance, a tracking app collects information on the individual and its movement and takes this



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into account in delivering justice on a particular issue. It is clear that this will be a clear violation of the rights of the individual.

- These make us question what our goals of AI in the legal framework would be, would it be decreasing crime with AI or would it be the fairness of procedure?
- Certain solutions would be the use of a charter for AI in justice to make sure it remains in ethical boundaries but is beneficial at the most.
- A human rights approach is of prime importance to upload the principles of natural justice.
- These changes or innovation in our legal framework will affect our fundamentals of the system and may even answer some of the smaller but important questions.

2. Liability framework and jurisdictional competence with regards to AI in private international law.

- AI has been proving itself in shaping the world. A large discussion has been done on how IBM's Watson will prove to be disruptive in industries. But AI in private international law is still a matter of discovery.
- Private international law has always been a composite field and its application was always a challenging topic both on jurisdictional gap and overreach.
- Discerning which laws shall govern which acts or omissions of AI systems.
- Alleviation of ambiguities in municipal laws to ready the world of the future for an AI enabled criminal empire/ecosystem.
- Discussion of extradition in reference to AI systems, & further, designing of treaties to ensure that the original softwares/algorithms for the AI system(s) are to be handed over to the Court of Proceedings in discovery, & further checking of the same to ensure that it's not a decoy.
- Separate Law related to robotics and AI laws concepts and different sets of Legislation to understand and adjudicate, regulate could be made
- Nations have cyber-laws that determine their jurisdictions in their respective laws. This would help cover broad ranges of criminal activities. However, at the same time conflicting laws with other nations need to be regulated.
- Because it is often the case when it comes to cyber crimes that there is always an issue of jurisdiction, considering that there are certain A.I programs which would solely operate over the internet, international forums can be set up for specifically dealing with A.I related crimes, to clear out any form of confusion of jurisdiction
- For example: Identity-cloning bots have succeeded, on average, in having 56% of their friendship requests accepted on LinkedIn. Now, in such examples we would have a problem of several countries claiming jurisdiction. Therefore, we need a contextual legal system, where the laws of other countries must be applied. Conflicting jurisdiction can be resolved through a co-operated approach of judicial actors as well as nations co-operation globally.
- To determine jurisdiction judicial actors and states must consider basic principles relating to jurisdiction. Legitimate as well as balancing interests must be taken into consideration, while determining jurisdiction of regulating AI criminal activities.
- Now, artificial intelligence is something which can be deemed to be regarded as the new marketplace reality. It is quite necessary to understand that with the advancements in technology, there has been a significant rise in computing power, improved algorithms and the availability of massive amounts of data which is being used to transform the society. Now, a lot of countries are coming up with various acts and policies which they wish to implement in order to regulate the rights and the liabilities that



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follow with the extensive use of AI. For instance, in Canada, the Treasury Board Secretariat of Canada (the “Board”) is looking at issues around the responsible use of AI in government programs and schemes implemented by the government. The European Union can be deemed to be regarded as the most active when it comes to proposing and contributing to various rules and regulations, with existing or proposed rules in seven out of the nine categories of areas where regulation might be applicable to AI. On the other hand, the USA maintains a not-so-strict regulatory posture when it comes to legislation revolving around AI. Autonomous vehicles are beginning to make an impact on the roads and a lot of governments and legislative bodies are working tremendously towards ensuring that their traffic laws and other relevant pieces of legislation pertaining to autonomous or unmanned vehicles remain relevant. It is also quite necessary to throw light upon the fact that a number of governments are adopting a “wait and see” approach when it comes to dealing with laws and regulations pertaining to AI. Just like how governments deal with new aspects when it comes to a technological wave being adhered to, it is hard to predict as to how AI would be implemented in the laws of the various countries.

- Countries like Australia, China, India, Indonesia, Japan, Malaysia, New Zealand, Pakistan, Singapore, South Korea, Taiwan have taken steps when it comes to the regulation of AI. In 2018-19, the Australian Federal Government incorporated in its budget, a sum of AU\$ 29.9 million, which was allocated for the development of artificial intelligence and machine learning capabilities of Australian businesses and workers. The package consisted of four elements which were developed specifically for the growth of AI. It included the funding of postgraduate scholarships and the “development of online resources to engage students and support teachers to deliver AI content in the Australian curriculum, development of a technological roadmap to inform government investment in artificial intelligence by identifying global opportunities in both artificial intelligence and machine learning, and any barriers to adoption in Australia. Further, the National Transport Commission of Australia also undertook the publication of a particular set of guidelines which could be adopted for trials of automated vehicles in Australia. Similarly, China’s State Council passed a Next Generation Artificial Intelligence Development Plan which elucidated in detail the AI development which China aims to undertake by 2030. It enumerates upon the various guarantee measures which include the development of a regulatory system, thereby strengthening intellectual property protection and at the same time, promoting the development of AI.

3. Vertical Hierarchies in Judicial Governance and the role of AI in those hierarchies

- Tribunals will need to be set up by states to deal with such specialised laws. There will be numerous challenges for the tribunals to give reasoned decisions. Training and Capability building is critical for making the stakeholders aware about the different aspects of these specialised laws.
- Expert Opinions and Independent Committee’s dealing with technology will be an essential aspect that can help give judgments. The apex courts will depend on lower courts and their reasoning to achieve justice. Hence, along with expert opinions, decisions by courts at lower levels will be essential for development of this law.
- The United Nations Development Programme reports that the reduced human interaction and traceability allowed by the ‘e-Courts’ case management system have great potential to reduce corruption risks in the Philippines. Similarly, the use of AI in the performance of more complex tasks could help to prevent manipulations in judicial decision-making, as well as monitor the consistency of case law. As the examples of China and the Philippines demonstrate, the potential benefits of emerging



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technologies have increasingly encouraged judiciaries around the world to use and explore the possibilities of using smart technology in the performance of judicial functions. An increase in investments in the development of such technology, both in the private and public sector, also suggests that we will see more smart justice tools in the future.

- However, as recent studies and policy documents show, artificial intelligence poses significant challenges for judiciaries in terms of reliability, transparency and accountability. In cases where machine learning and predictive analysis are involved in the judicial decision-making process, there is a risk that technical tools are replacing the discretionary power of judges and judicial officers, creating an accountability problem. Therefore, it is crucial that the judges are aware of the limitations of such technology to ensure compliance with judicial integrity and values endorsed by the Bangalore Principles of Judicial Conduct. One challenge involved in the use of AI in judiciaries is how judges will maintain control over the judicial decision-making process if AI technology is increasingly involved. The Villani Report, which is the result of a parliamentary mission that aims to shape AI strategy in France, points out that judges may feel pressured to follow decisions made by AI systems for the sake of standardization, instead of applying their own discretionary powers. This poses a serious risk of undermining judges' independence, while reducing judgements to "pure statistical calculations." This concern is addressed by the European Ethical Charter on the Use of Artificial Intelligence's guiding principle "under user control" that suggests that judicial officers should "be able to review judicial decisions and the data used to produce a result and continue not to be necessarily bound by it in the light of the specific features of that particular case."
- Another challenge concerns whether the internal operations of AI and the data fed into it are reliable and accurate. AI provides certain outcomes based on the processing of the input of existing data. As a 2016 policy document from the United States (U.S.) government phrases it, "if the data is incomplete or biased, AI can exacerbate problems of bias." This poses a significant challenge for judicial impartiality, as judiciaries cannot render impartial decisions based upon biased AI recommendations. The biased decision-making would also threaten judicial integrity and due process rights. It is, therefore, recommended by the U.S. that federal agencies in the U.S. conduct evidence-based verification and validation to ensure the efficacy and fairness of the technical tools that inform decisions bearing consequences for individual citizens.
- Contemplating the inclusion of AI at every rung of the ladder of the federal structures.
- It is imperative to understand that with the rising global interest with regards to the various advancements in the field of transformative technologies, such as Artificial Intelligence, the Indian Judiciary has marked its niche. The Chief Justice of India, Justice Bobde specifically enumerated upon how the launch of a neural machine translation (NMT) tool called the SUVAS (Supreme Court Vidhik Anuvaad Software) has been deemed to be regarded as capable of transforming orders and translating judgements and the various orders passed by the courts in English to up to nine vernacular languages spoken and read in India. Justice Bobde further enumerated upon how the use of AI has significantly improved the overall efficiency of the Indian Judiciary and how it can enable the judiciary to lower the backlog of cases. The backlog of cases is a major issue in Indian Courts, however, with the development of AI tools, the process of adjudication could be undertaken in a time bound manner, swiftly and smoothly. However, the implementation of such a mechanism would take long considering the fact that India is still in its nascent stages and the large interest in the growth of transformative technology in India, especially in the Indian Judiciary, can be deemed to be regarded as a challenge. For the most part, it can be said that it is highly a difficult task to adapt to such a technology given the fact that there is immense scarcity of open access to judicial information and datasets. With the Covid-19 outbreak, innumerable conversations have been developed with regards to the



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various technological interventions such as video conferencing in Indian Courts and these need to be institutionalised within the judiciary itself even after the crisis averts. Unless, the current judicial data regimen is not opened up for a technological development, attempts to inculcate a strong, AI judicial ecosystem seems like a farfetched option. This is, however, possible in the higher courts like the High Courts and the Supreme Courts. In fact, higher courts have already adopted in some way or the other, the benefits arising out of an AI legal ecosystem. However, with regards to the district courts or the small courts, there has been no significant development yet and it is highly imperative that the computerisation and interconnectivity of all courts take place on an urgent basis. However, it cannot be rendered possible unless an overarching open data policy is taken into consideration. This policy needs to be implemented and the information with regards to the cases and orders from each court in the vertical hierarchy needs to be collated by the judiciary, which at present remains scattered and haphazard.

- It is safe to say that Data is something which acts the primary driving force when it comes to AI innovation and the absence of curated data which could be fed to these machines needs to be compiled and coded before it could be deployed in the Courts. Therefore, it is highly imperative that all the existing information with regards to the information that needs to be collected and collated in the future, should be archived into a readily available data set, which should be in consonance to the recognised principles of open access to data. A number of countries are already conducting test runs with a huge variety of cases and analysing this data with the help of smart searches. Courts are also implementing software which could prepare legal briefs based on precedents.
- There have been innumerable developments in the judiciary wing of a number of countries. Such tools, which are developed in consonance with the judiciary could be deemed to be regarded as a remarkable achievement when it comes to improving access to justice. AI has already been adopted and used in a number of decisions passed by the American Courts. For instance, in the case concerning *Washington v. Emanuel Fair*, the defence in a criminal proceeding sought to undermine the results of a genotyping software program which had the capacity to analyse complex DNA mixtures based on AI while at the same time, asking that its source be disclosed. The Court accepted the contention that the use of the software was valid and reiterated that a lot of states have accepted the use of such a program. The court however, declined the request that the source code be disclosed.
- Next, in the case of *State v. Loomis*, the Wisconsin Supreme Court contended that a trial judge's use of an algorithmic data risk assessment software while granting a sentence does not violate the accused's rights, despite the fact that the methodology which may be used could be used to produce the assessment of the judgement, however, this assessment was not disclosed to the accused and neither was it disclosed to the court. It is imperative to understand that AI in Litigation is evolving and it is in its early stages in a lot of countries. For instance, in Argentina, AI is relied upon extensively in order to assist district attorneys while they pen down their decisions in cases which are less complex, such as a taxi license dispute wherein presiding judges could either approve the same, reject the same or rewrite the same. The algorithm relies upon the district attorney's digital library containing 2000 rulings and the AI program is coded in a way which enables the judges to match cases specifically with the most relevant decisions provided for in the database and this therefore enables the court to provide its ruling.
- However, for such systems to be implemented in India, it is necessary that Indian Judiciary truly exploits the transformative potential of emerging technologies such as AI and recognises the impediments in the current data system and provides a remedy for them in a swift manner. An open data policy could be undertaken and passed which could set out the ground rules of data accessibility, as well as carving exceptions to preserve the privacy which can be deemed to be regarded as a sine qua non for the Indian Judiciary in the present times.



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- In the vertical framework of judicial governance, the advent of AI has many beneficial aspects and recent news on the introduction of E-filing proves that there are many areas we can progress and include AI into.
 - What is necessary is the facilitating functioning communication between human and machine.
 - Lower courts are of prime importance. Since, this is the first level of the judiciary, it is necessary that the processes and the functioning be consistent starting from here.
 - As these courts will be in contact with the lowest strata of the economy, introduction of AI in the lower courts must be in consideration of all classes, specially in a diverse country as India.
 - The need of the hour is an AI which not only is comprehensible but also culturally acceptable to the society. One must keep in mind that certain areas of the country are still lacking in their acceptance or use of technology, hence making it absolutely crucial that we make sure that we are ready for the introduction of AI in the judiciary.
 - Taking into example the filing system which arose due to the Covid-19 pandemic has seen to be very beneficial and has been the opportunity of 24*7 filing, work from home and also paper free and economical processes.
 - This is the moment to urge the innovators that the daily wage workers who constitute a major population of the Indian economy are the ones who can benefit and also be against the introduction of AI if not done properly with prior trials.
 - A simple example would be the jobs of the important person in a courtroom who is the Clerk, with the introduction of AI systems in courts or court rooms, a clerk's job is reduced to only a few things and this is going to create social problems for the community and may lead to further issues.
 - One must also keep in mind that the dependency on AI must be limited and should be kept in check so as to avoid being completely dependent on AI. As this would create more issues and take away the human touch from the judiciary.
 - Well in case involvement of AI in the vertical structure of judicial governance. Firstly, we need to understand the all our current structural system is standardised enough to adopt such an advance AI
 - The first goal is to educate these forums and people who were working there about the advancement of AI technologies and how it can aid them in their working process. Secondly, we need test runs trails on these forums before final working mechanism
 - Thirdly we had to locate to what extent of Ai has been used in its day to day process so that AI can be utilized at its fullest. That would be the first step towards moving into the Age of AI. Otherwise all the efforts will be pointless.
 - When people were educated enough to utilize its resources enough. That will give us additional data to innovate on the basic structure of applicable AI. The additional data will greatly help in understanding the composition and thought or interpretation of AI and Ai can innovate their after on the fast scale.
 - We also had to understand the Limitation on application of AI as well because as well as to what extent we are letting in this technology. We have to understand that one should control a technology rather than it control us.
 - Of course, anything new and innovative always interests the human mind but excessive usage of the particular application might result in its own demise.
4. Plurality of Tribunal mechanisms and dealings
- Plurilateralism has always been a part of the International Order. Disputes settled by Negotiation, Arbitration or even under National and International courts, there could be varied opinions. However, this can be used to form and understand best practices of entities across the world.



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- Judicial actors will have a critical role to integrate the larger International order and its principles, in a specialised law such as AI. Also, they must indulge in cross-references and coordinate decision making to improvise and develop the AI norms and values in the future.
- Plurilateralism has to maintain the integrity of multilateral agreements and follow the principles of universality, inclusiveness and transparency because it is often witnessed that Plurilateralism fragments and disrupts the larger multilateral process, including multilateral cooperation on different issues.

