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The Role of Generative Artificial Intelligence in Judicial Decision-Making Process

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Abstract

Artificial Intelligence (AI) has permeated all sectors of society, and the legal profession is no exception to such a development. As an expanding innovation in modern technology AI holds promise for improving efficiency and consistency in all spheres of human life. This paper explores the integration of generative AI, specifically ChatGPT, into judicial decision-making, highlighting both its transformative potential and inherent challenges. While ChatGPT's impartiality, rationality, and capacity to process vast legal data offer promising solutions to judicial inefficiencies, its limitations in contextual reasoning and purposive interpretation raise concerns. Ethical considerations, such as bias amplification, lack of accountability, and opacity in decision-making, further complicate its application. By examining these aspects, this study advocates for a hybrid judicial model, where generative AI serves as an assistive tool under human oversight, ensuring fairness and transparency. This balanced approach could redefine efficiency and equity in justice delivery while safeguarding against the risks of over-reliance on technology.

Keywords: Generative AI, Judicial Decision-Making, Potential, Prospects and Role.

Introduction

In recent years, rapid progress has been made in the field of information technology and, in particular, the domain of AI technologies. The birth and subsequent launching of generative AI programs have provided ordinary users open access to AI for the first time in history. This has allowed everyday users to use and apply AI in their everyday tasks. Consequently, the common use of generative AI across all professions has generated a utilitarian

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discourse over the potential of generative AI to function and replace human tasks and the wisdom behind such a course of action (Dwivedi, 2023). The legal profession is no exception to such a development, where the true role of generative AI is yet to be assessed. A critical aspect of this discussion is whether generative AI can be used for the purpose of judicial decision-making. While overuse of AI in the judicial system can raise well-reasoned apprehensions of algorithmic bias and the need for human oversight, the determination of the true potential of generative AI in judicial decision-making, and by extension in the judicial system, requires a thorough analysis of the operative attributes of generative AI within the parameters of what is envisioned as judicial decision-making (Bell et al., n.d.).

In order to further the academic discourse on this impertinent topic, the ChatGPT tool can serve as a valuable case study. The propriety of using ChatGPT tool can be attributed to three reasons. Firstly, it is truly the first of its kind generative software and its advent is considered a revolutionary development in AI technologies thus, it can be reasonably concluded that it sets the minimum standards for future generative AI tools (Ray, 2023). In other words, future generative AI tools can be expected to boast greater capabilities than ChatGPT; hence, ChatGPT can serve as a useful benchmark. Secondly, the ChatGPT tool is freely available and as such, is the most commonly used AI tool, which is being used across all professions (Haleem et al., 2022). Thus, ChatGPT has widespread popularity, acceptance and usage. Thirdly, the ChatGPT tool has been, and continues to be, used in the legal profession (Perlman, 2023). Thus, there are readily available case studies of ChatGPT tool being used in various tasks related to the legal profession.

The ChatGPT tool is based on the operational framework of a generative AI (GPT) based Large Language Model (LLMs) (Ray, 2023). Large Language Models are fed with large data sets and generative AI programs, then those data sets are used to generate desired results (Ray, 2023). This is the basic working theory behind the functioning of ChatGPT. The unification of Large Language Models (LLMs) based technology with the Pre-trained Transformers (GPT) led to the development of the ChatGPT tool (Ray, 2023). The ChatGPT 3.5 version is now available for public use for free. People from all sectors and industries are rapidly

experimenting with the tool and using it in their relevant fields (Nazir & Wang, 2023). Subsequently, ChatGPT has emerged as a powerful tool which utilises machine learning and large language processing models to generate humanised text. It has the capabilities to generate all sorts of text, including legal documents, articles and blog posts (Ray, 2023). As far as the legal profession is concerned, ChatGPT's primary use is content creation. As lawyers rely on legal documentation for most of their work, such as case briefs, legal contracts and agreements, ChatGPT can reduce the workload by drafting these legal documents much more rapidly and efficiently. ChatGPT can allow lawyers to generate such legal documents through some pre-built templates provided by ChatGPT, which can save their valuable time (Kulmuhametov, 2023). However, this paper shall concern itself with the potential of generative AI, such as ChatGPT, in a more decisive role in the field of law, specifically judicial decision-making. An understanding of the operational attributes of ChatGPT and their analysis within the recognised parameters of judicial decision-making can furnish an informed answer to the said query, and this paper will endeavour to create such an understanding.

Research Methodology

This research paper aims to examine the implications of using generative AI in the judicial process of decision-making. As explained above, the generative AI program used for this study is ChatGPT. For this purpose, the paper uses qualitative and analytical research methodology.

This research endeavour is intended to be an addition to the existing discourse on this subject in the sense that it focuses on identifying the traditionally approved positive attributes of judicial decision-making from existing legal jurisprudence and then analysing the features of ChatGPT thereby determining the extent to which those features can fulfill the identified attributes of judicial decision-making. Thus, the primary question addressed by this paper is to assess whether generative AI, such as ChatGPT can substitute the human element of judicial decision-making. The paper then addresses the implications of the answer, thus determining the actual and desirable role of generative AI tools like ChatGPT in the legal profession.

To effectively answer the primary question, this paper shall list various examples of the recent usage of ChatGPT in judicial tasks and the legal profession by categorically listing various instances where it has been employed or prescribed in court by judges. Secondly, it shall define judicial decision-making in terms of its attributes and elements, which have been prescribed in legal jurisprudence. Thirdly, it shall holistically examine the operative features of ChatGPT before evaluating the same on the established threshold of judicial decision-making.

The primary sources include research papers and articles written by academic experts, national and international case laws over the subject matter, as well as international literature available on the subject.

Literature Review

The ChatGPT tool has been eagerly adopted by judges and lawyers alike for simplifying previously extraneous tasks requiring human labour and long hours, including legal research, legal drafting and proofreading etc. (Perlman, 2023). Such use of generative AI has received a mixed response from professionals and analysts. For instance, the ChatGPT tool has generated positive responses when the questions asked in a legal paradigm were strictly logical, rational and not factual (Bohannon, 2023). Since ChatGPT can only access data provided or fed into its dataset, it cannot always return accurate results on factual questions (Bohannon, 2023). However, as far as the legal questions are concerned, ChatGPT has received a negative response to some extent. ChatGPT has become increasingly popular with lawyers and paralegal staff; however, strict care is to be taken in using this tool since a program cannot accurately identify the ethical and moral considerations of a given scenario or event (Bohannon, 2023). This academic discourse has been vast, and the following section presents a summary of opinions as to the implications and role of generative AI in the context of judicial decision-making.

Nay et al. (2023) have endorsed an approach called ‘Law Informed AI’ which aims to integrate regulatory and legal reasoning into Large Language Models (LLMs) for governing AI systems. In other words, this approach suggests that an understanding of legal principles and reasoning can be incorporated into the code of AI

systems, and thus, LLMs can learn the spirit of the law. Nay et al. have conducted extensive quantitative research on the capability of generative AI to solve legal problems and have demonstrated that currently, LLMs are capable of effective legal analysis when they are provided additional legal context of the proposition stipulated. Nay et al. have also noted the implications of generative AI for legal practice and have concluded that LLMs can enhance efficiency, offer reliable support in tasks like contract analysis and case prediction. They note that this has the potential to democratise legal access, lowering costs and complexity for individuals navigating the legal system. Lastly, they have pointed out that as LLMs possess an expansive knowledge base of legal statutes, they could be employed by government entities, citizens, and researchers to identify inconsistencies within existing laws. This has the potential to enhance government efficiency and transparency, as LLMs can offer clear explanations of complex legal frameworks and even predict the potential impacts of new laws or policies.

Casanovas et al. (2022) while endorsing the view espoused by Nay et al. hold that in addition to performing routine clerical tasks in the legal industry, ChatGPT could be properly calibrated to initiate novel conceptualisations of more abstract legal concepts and principles such as the role of ethic in law, human rights and rule of law. They asked ChatGPT the question: '*How can we model the rule of law?'* multiple times over 4 months, and each time ChatGPT provided a more detailed answer. The problem, as identified by Casanovas et al. was that its answers reflected a cultural bias as it overwhelmingly indoctrinated concepts of American legal jurisprudence and that its answers mostly contained 'iterative signs' such as legal codes, impartial courts, police force, human rights without any deeper meaning that rely on the perception that the user already has a knowledge base on the concept. This process has been called 'cognitive expository writing' by Shen et al. 2023 who define it as "sense making, evidence-driven, and knowledge-generating processes". Casanovas et al. hold this process to fall short and argue for the inclusion of something that can transform LLM into a semantically enabled tool capable of generating knowledge. They suggest the use of 'semantic injections', which is a process that introduces "additional knowledge from external sources into the transformer-based language models". They conclude that

eventually, generative AI can be improved through injected semantics and fine-tuning processes to generate knowledge.

Grossman et al. (2023) have noted the potential of generative AI in changing the way in which judges decide cases. They assess that while generative AI such as ChatGPT may produce hallucinations, i.e., give incorrect information to some prompts and cite fictional citations and references, it has changed the longstanding notion that generative AI cannot be as creative as humans. Citing cogent references, they prove that ChatGPT is constantly improving its answers. This can be assessed from the fact that while ChatGPT scored at the tenth percentile in the U.S. bar exam, GPT-4 scored at the 90th percentile and passed it easily (Wilkins, 2023). They convincingly argue that "not only can Gen AI be expected to get better at what it does, it will also be able to take on increasingly complex tasks, with varying degrees of human involvement." They summarise that such rapid developments will affect judicial decision-making in several ways. Firstly, the detection of deep fakes by generative AI will require a reappraisal of the rules of evidence, as there is ample proof that AI can be used to generate fake evidence. Secondly, soon courts will overwhelmingly rely upon the increasing support of forensic experts well-versed in generative AI technologies. This will undoubtedly increase the cost of litigation, which will be a huge problem for defence attorneys, and this scenario will increase appellate litigation. In the context of jury-based trials, generative AI will pose a serious problem as research has "shown jurors who hear oral testimony along with video testimony are 650% more likely to retain the information," and that "video evidence powerfully affects human memory and perception of reality." (Hess, 2001; Jackson, 1998). While this opinion primarily caters to jury-based trials, it can equally be applied to judges by analogy, who are, after all, human, and can be equally influenced by deep fake audio and video prepared by generative AI.

Delfino (2023) has voiced similar apprehensions regarding the emergence of what she labelled "the deep fake defence." This term, previously coined by Chesney and Citron (2019) as "the liar's dividend," suggests that defendants may exploit the increasing awareness of how easily audio and visual evidence can be manipulated to their advantage. Instances of this defence have arisen in several cases, such as one case involving Elon Musks. His legal

team argued that a long-standing YouTube video featuring Musk's statements could have been tampered with, and another case, involving defendants in the January 6th insurrection trial, who contended that AI might have altered videos depicting their participation. Despite courts rejecting such arguments, the prevalence of this defence poses a significant challenge to the justice system, especially in criminal proceedings.

While the above cited academic sources have observed the operational capacity of generative AIs in the domain of law, the extent of capability of AI to generate knowledge rather than superficially iterate existing information and the prospective uses of AI in the field of law, they steer clear on the question of the role generative AI can play in judicial decision-making. This question in itself requires, firstly, the determination of the parameters of judicial decision-making. When such parameters are established, the attributes of ChatGPT can be evaluated on those set parameters.

Contemporary Application of Generative AI tools in Legal Profession

Today, despite all the apprehension shown by members of the legal community, generative AI is poised to become an integral part of the legal profession and is slowly progressing on a trajectory to fulfil that role. There are several reasons for its growing popularity (Callister, 2023). In today's tech-centric world, people trust AI because it speaks like humans, simplifies tasks, and seems expert-like. Social influence, along with a belief in AI's fairness and accuracy, also play a role (Callister, 2023). Fear of missing out on new tech and the perception of AI as neutral and objective add to its appeal. Plus, its novelty and lack of personal biases make it even more attractive, potentially changing how law is practised. Use of generative AI has also emerged as a factor under consideration by judges in deciding cases. For instance, in Canada, during *Cass v. 1410088 Ontario Inc. (2018),* the Superior Court of Justice was presented with the question of determining costs award after a defendant had obtained a summary judgment motion in his favour. The Court dismissed the defendant’s plea for disbursements expended on legal research while holding that the party had failed to use freely accessible legal research services while noting that AI

tools should have been employed to "significantly reduce" the party's legal costs.

However, it would be incorrect to insinuate that generative AI has received the same feedback across all jurisdictions. Certain jurisdictions, such as the United States, have recently witnessed cases where the research rendered by ChatGPT has been proven to be fictitious. In *Mata v. Avianca, Inc. (2023),* decided by the United States District Court, S.D. In New York the Court reprimanded the respondent counsels for submitting false and fictitious case laws which were then presented by the respondents. The Court found the respondents guilty of subjective bad faith and fined them for using unverified cases produced by ChatGPT.

The existing apprehension for the inclusion of generative AI tools in the legal profession extends not only to legal research. The use of ChatGPT by lawyers to furnish arguments and prove arguments is also struggling to find acceptance. In India, for instance, in the case *Christian Louboutin Sas & Anr. vs M/S The Shoe Boutique - Shutiq (2023),* relating to intellectual property theft and trademark infringement, the Delhi High Court expressed its concerns regarding the use of AI in the process of adjudication when one of the counsels for the petitioner used ChatGPT to show that his client's trademark was a well-established and recognised trademark. The Court observed that the said tool cannot be the basis of adjudication of legal or factual issues in a court of law. The response of a Large Language Model (LLM) based chatbot such as ChatGPT, which is sought to be relied upon by ld. Counsel for the Plaintiff depends upon a host of factors, including the nature and structure of the query put by the user, the training data, etc. Further, there are possibilities of incorrect responses, fictional case laws, imaginative data, etc., generated by AI chatbots. The accuracy and reliability of AI-generated data is still in the grey area. There is no doubt in the mind of the Court that, at the present stage of technological development, AI cannot substitute either the human intelligence or the humane element in the adjudicatory process. At best, the tool could be utilised for a preliminary understanding or preliminary research and nothing more.

On the contrary, there are certain jurisdictions where the potential use of generative AI tools like ChatGPT in judicial decision-making has been comprehensively explored in judgments. In Pakistan, in the case of *Muhammad Iqbal v. Zayad (2023),* the

Additional District and Sessions Court of Mandi-Bahauddin heralded the introduction of generative AI tools in judicial decision-making as a necessary tool for professional and social progress. Terming it as "courtroom technology", the court noted that in present times, Artificial Intelligence or AI is a new opportunity for courts and judges to be adopted in their decision-making process, of course, subject to its compatibility with the Pakistani legal system.

While citing instances where AI tools have replaced judges altogether, namely Dubai and China, the Court inquired Why don't the judges also take the lead and remain relevant? Why not to test the potential of this powerful human brain like AI assistant"? If courts and judges have research associates who are humans, then they also need to give a test to AI „associates" like „chatbots" for providing some unbelievable, but quite rational, answers to their legal queries based on the machine learning from within the data relevant to the judge or court's query. Of course, the purpose of such assistance is never to let the basic function of judging „rented out" to AI, at least at the moment. However, based on experiments and results, and as has been done in Dubai, China and other countries, some part of judging can be allowed to be handled by the AI tools and robots. It will lessen the burden on courts and human judges.

Interestingly, after discussing the necessity of incorporating generative AI tools in the judicial decision-making process, the Court conducted an innovative experiment by submitting the legal issues raised in the case to ChatGPT to test the tool's capability of interpreting the law and reaching a legally sound conclusion. The case itself related to an appeal whereby the appellant challenged the vires of a judgment of a lower court which had refused to grant a decree of injunction in a property being contested by the appellant. In the instant case, the Court adjudicated upon the appeal and dismissed the same as it concluded that the necessary conditions for a grant of injunction as prescribed by the Code of Civil Procedure, 1908, were not met. After reaching its verdict, the Court asked ChatGPT to list the conditions that were necessary for the grant of an injunction. The exact question asked was "What are principles to grant injunction in a civil case in Pakistan?" The established ingredients for a successful claim of injunction include an arguable case (prima facie case), a balance of convenience and irreparable loss, in favour of the Appellant. In its reply, ChatGPT not only listed these three conditions but also listed additional qualities that are

considered an established part of civil law in Pakistan, namely good faith, public interest and equitable interest. The Court held

> "……. points formulated by the ChatGPT-4 are very impressive, as our law of Civil Procedure (Code of Civil Procedure, 1908), developed over the years, has also guided the courts to deliberate on these dimensions while deciding such an application, if circumstances so justify. However, generally, for deciding an application for an Injunction, we formulate three points for determination, i.e., an arguable case, balance of convenience and irreparable loss. The remaining three points shown by the ChatGPT-4 are also within the domain of our statutory laws and precedents developed over the years."

The Court not only endorsed the use of generative AI in judicial decision-making but also ordered that a copy of its judgment be sent to the Law and Justice Commission of Pakistan "to consider discussion on Artificial Intelligence in this Civil Appeal as a law reform proposal". Such judgments may suggest the tendency to accept of ChatGPT tool by the subordinate judiciary in Pakistan. While there are no visible prospects for any policy formulation to incorporate ChatGPT institutionally into the judicial system, the above-cited case is an instance where a trial court has endorsed ChatGPT, operating as it is, as capable of performing judicial decision-making. The above-referenced cases from different jurisdictions present a polarised view expressed by judges regarding the potential and capacity of ChatGPT to operate as a valid component of the judicial system. Such views are dependent on distinct factors and comprise solely subjective views.

However, this does not mean that such a discussion is fruitless. These subjective views establish that firstly, generative AI tools, like ChatGPT, are on a trajectory to become an integral part of the legal profession and secondly, that their capacity to operate in the judicial decision-making process is a disputed matter which requires an independent approach to answer. To obtain a more objective view, the parameters of judicial decision-making require an independent determination, based on which the qualities or attributes of generative AI can be analysed. Thus, the parameters of judicial decision-making can serve as a benchmark on which the

qualities/ attributes of generative AI can be discussed to determine its potential in the important process of judicial decision-making.

Parameters of Judicial Decision-Making: A Theoretical Evaluation

While there is no singular definition, judicial decision-making can be defined as a complex process wherein courts interpret and apply statutory provisions, legal principles, and precedents to the facts of a case in order to reach a reasoned judgment (Federal Judicial Academy, n.d.). This process is not unidimensional but rather encompasses both descriptive dimensions, which relate to the systematic application of law as it is, and normative dimensions, which incorporate moral and societal values in determining what the law ought to be (Tumonis, 2012). Some matters are descriptive claims, which require actual application of law, while some matters are normative claims, which require application of moral and political ideas, such as in cases involving equitable principles (Tumonis, 2012).

The primary function of a judge in the judicial system is to ensure that justice is dispensed in accordance with established legal rules (Pound, 1923). This involves a careful consideration of the facts of the case, the application of relevant legal rules and judicial precedents and arriving at a judicial decision complying with principles of natural justice, equity, fairness and impartiality (Pound, 1923). Judges are responsible for upholding the law and protecting rights of the individuals. For a judge to function properly, a sound understanding of the legal principles, doctrines, social theories, political and economic paradigms is crucial. Judges are the guardians and the interpreters of statutory instruments. Legitimacy and integrity of a judicial decision can only be preserved by following these principles (Pound, 1923).

There are theories of adjudication which provide a philosophical perspective as to how judges are expected to conduct decision-making judiciously. Some of the prominent theories include H.L.A. Hart's and Ronald Dworkin's theory of adjudication. Hart's theory of adjudication is rooted in legal positivism and emphasises the systematic and structured nature of the law (Lyons & Dworkin, 1977). He asserts that legal rules operate within a broader framework of interconnected rules, including both primary

rules (obligations) and secondary rules (rules about rules). Thus, judicial decision-making requires strict adherence to these established legal rules, which serve as the foundation of the legal system. Judges are expected to interpret and apply the law as it is, without relying on extraneous factors such as morality or personal beliefs (Dajović, 2023). Hart contends that this approach ensures consistency and predictability in judicial outcomes. However, Hart also admits the existence of "penumbral" cases—situations where the legal rules are vague or incomplete (Dajović, 2023). In such instances, he advocates for exercise discretion grounded in the legal framework rather than subjective considerations. Hart's approach underscores the importance of objectivity, limiting judicial creativity to the minimum necessary for resolving ambiguities (Dajović, 2023).

In contrast, Dworkin's theory of adjudication challenges the strict separation of law and morality proposed by Hart (Lyons & Dworkin, 1977). He argues that judges must interpret the law in light of underlying moral principles and societal values to ensure the legitimacy and fairness of judicial decisions. Central to Dworkin's philosophy is the concept of "law as integrity," which asserts that legal decisions should reflect a coherent narrative of moral and legal principles that best justify the law as a whole (Lyons & Dworkin, 1977). He stipulates judges should aim to reconcile existing legal precedents with broader moral ideals. For example, in cases involving fundamental rights, Dworkin contends that judicial decisions should be guided not just by legal texts but also by the moral principles underlying those texts. This approach encourages a dynamic interpretation of the law, enabling judges to adapt legal principles to evolving societal norms (Riesthuis, 2023).

Different models of judicial decision-making are followed, and they are responsible for a judge's response in delivering a judgment. The two fundamental models of judicial decision-making include realism and formalism (Capurso, 1998). The realism doctrine propounds that judges are humans with individualistic attributes which are responsible for their decision-making. As per the doctrine of realism, personal beliefs, biases, and interpretation of the law are responsible for influencing a judge's decision and hence several judges might reach to a different judicial decision over a similar case or situation (Sweta, 2021). This is the reason why a bench of more than one judge might have a difference of opinion

(Sweta, 2021). Therefore, judges following the realism doctrine are often called realists. However, in contrast, the doctrine of formalism states that judges follow established principles of law to the circumstances and facts of the matter without any prejudice (Posner, 1986). Therefore, formalists are those judges whose judicial decision-making is not influenced by personal beliefs, interpretations of law rather they approach the matter with an objective approach and application of the established principles of law (Capurso, 1998).

Development and utilisation of a judicious mind is an attribute exclusive to the judge administering justice. It refers to the ability to apply legal rules, theories of adjudication, judicial precedents, and principles of interpretation depending upon the context or requirements of the case for dispensation of justice (Guthrie, Rachlinski & Wistrich, 2001). However, a judicious mind is prone to some limitations. Since all judges are human, there are certain cognitive implications which adversely affect the application of their judicious mind (Guthrie, et al., 2001). For instance, a study was conducted on 167 federal magistrate judges in the United States, and the results indicated that even well-experienced and qualified judges are prone to the cognitive implications, which can ultimately result in erroneous application of law, i.e., erroneous judgment. One such cognitive implication is the anchoring effect (Guthrie, et al., 2001). The anchoring effect stipulates that some judges are inclined to heavily rely on the first piece of information or evidence they obtain and they develop an unconscious bias towards that piece of evidence (Guthrie, et al., 2001). The anchoring effect can have severe consequences in trial matters where a judge is required to make critical decisions severely affecting the rights of parties to the case. To minimise the cognitive implications, judges are required to receive proper training so that they can consciously comprehend their biases and be able to mitigate them (Guthrie, et al., 2001).

There are certain external factors which also influence the process of judicial decision-making. For instance, in criminal cases, the personal characteristics of the accused like gender, age, race, economic status etc. have been observed to influence judicial decisions (Hansen, 2005). It has been observed that these factors have affected or prejudiced the judge's mind and impact the objective consideration of evidence (Hansen, 2005). For instance, the enactment of Jim Crow laws led to development of a prejudiced

attitude towards the black community (Center, 2021). It has been estimated that innocent black people spend almost 14 years on death row as wrongly imprisoned before being acquitted in such matters (Center, 2021). Factors like timing of the trial, order of examination of witnesses, as well as the order of presenting documentary evidence can also impact judicial decision-making process (Hansen, 2005). Judges are also influenced by sentencing guidelines and policy measures adopted by the government. Some judges tend to inflict less punishment because of their personal beliefs owing to different theories of punishment. Judges following a deterrence theory of punishment are predicted to award harsher punishments as compared to judges who believe in the reformative theory of punishment (Hansen, 2005). Therefore, judicial decision-making is a phenomenon which does not occur in isolation rather it is a comprehensive thought process integrated with external factors and circumstantial considerations some of which have been explained above (Hansen, 2005).

Attributes of Generative AI: A Case Study of ChatGPT

Generative AI, including ChatGPT have exhibited several major attributes, a few of which are those that are necessary for judicial decision making while others are those that can limit their role in judicial decision-making processes in the near future. These two categories of attributes merit a detailed discussion.

First and foremost, as a generative AI tool, ChatGPT is capable of rational assessment, unhindered by emotional considerations. Rationality is a vital aspect of judicial decision-making (Epstein, 2014). The rational aspect of judicial decision-making requires an exclusion of the impact of values, normative rules and cultural principles from the decision-making process. The rational aspect denotes the idealistic application of legal principles and established laws towards the case at hand. This aspect is often criticised because it cannot be manifested in totality owing to human constraints (Epstein, 2014). However, with the advent of generative AI, the doctrine of rational judicial decision-making can be implemented since generative AI tools are free from the shackles of biases, personal opinion and cultural values. They operate strictly on data and information that is available to it (Uriel & Remolina, 2024). Therefore, ChatGPT is capable of adhering to rational

principles and objective criteria and is capable of reaching a rational decision over a particular legal dispute or controversy.

Impartiality is another distinctive feature that is embodied by ChatGPT due to a complete absence of any social connection/ constraint. Lord Hewart's dictum of "justice should not only be done, but should manifestly and undoubtedly be seen to be done" is still relevant, especially in matters where the composition of judges is in question (Kogelmann, 2021). This principle is based on the ethical requirement of impartiality that it must be reasonably apparent (Kogelmann, 2021). There are situations in which the composition of benches is influenced by political means. Therefore, it is necessary to ensure impartiality in both composition of benches and in the dispensation of justice (Rädler, 2022). ChatGPT being a non-human and an objective tool based on rational principles and the data fed to it, can function as an alternative to human judges when it comes to ensuring impartiality (Oakes & Davies, 2016). If ChatGPT is used as the primary source for dispensation of justice, the effect of partiality or bias in the composition of benches can be minimised (Oakes & Davies, 2016). Furthermore, the cognitive implications or biases faced by judges won't be able to affect the judgment and mind of a ChatGPT tool. This can allow for judicial decisions based on the principle of impartiality and free from ethical, political and moral biases (Oakes & Davies, 2016).

The requirement of a judge to possess a comprehensive knowledge of law is a well-trenched aspect of adjudication. The Supreme Court of Pakistan has held in *Chairman NAB v Muhammad Usman (2018)* that "law was written on the sleeves of the judges and it was the primary duty of a judge to apply correct law to a case before it." One of the major features of ChatGPT is its vast database. In contrast, it is difficult for a human mind to memorise and store all the relevant large amounts of data available on the subject. Generative AI tools like ChatGPT are likely to outperform human judges in the domain of knowledge and databases. Furthermore, ChatGPT is capable of conducting data integration which means it can access previous data and at the same time accumulate fresh data through integration (Hetler, 2023). It translates into the judicial decision-making as relying on all previous case laws or statutory instruments available, while also adding recently developed case laws and recent enactments in its database at the same time

(Ambasht, 2023). This makes the ChatGPT self-sufficient and self-reliant when it comes to judicial decision-making (Ambasht, 2023).

While ChatGPT incorporates a vast knowledge of law with the elemental requirements of impartiality and rationality, there are certain attributes which seriously inhibit it from playing an active role in judicial decision-making. The first and foremost problem is the inability of ChatGPT to interpret laws (Uriel & Remolina, 2024). ChatGPT is only capable of conducting a literal interpretation. The Courts in Pakistan prefer purposive interpretation rather than literal interpretation of statutory instruments. In the case of *Muhammad Shafi v. Deputy Superintendent of Police (1992)*, the Court held**:**

> "The meaning of a statute consists in the system of social consequences to which it leads or of the solution to all possible social questions that can arise under it. These solutions and systems of social consequences cannot be determined solely from the words used, but require a knowledge of the social conditions to which the law is to be applied as well as the circumstances which led to its enactment. Legal rules relate to human life, and grammar and formal logic alone will not enable us to reduce their judicial consequences. Therefore, not only is 'purpose' a legitimate aid to the interpretation of a statutory provision, contemporary canons of constructive give primacy, if not total supremacy, to the purposive interpretation."

The process of fact-finding and fact-observation is an intricate phase of judicial-decision-making since a judge should be able to comprehend the anxieties and limitations of evidence in different cases and consider the application of several interpretations of the law to reach to a sound judgment. For instance, in the case of *R v. M'Naghten (1843),* murder was committed by the defendant. However, the judges developed new jurisprudential rules governing insane automatism which states that a person suffering from disease of mind, and defect of reason is insane and his actions are involuntary if done under such impression Capurso, 1998). A generative AI like ChatGPT might not have been able to develop the same jurisprudential rule in that context, because the defendant ought to have been convicted if the strict and literal interpretation of

the law were made. Therefore, in contrast, the ChatGPT might not be able to relax the application of evidentiary principles in cases where the evidence is not sufficient. It requires a judicious mind to aptly interpret and read the evidence available on the record, which would be difficult in the case of generative AI. For instance, as per Article 164 of the Qanun-e-Shahadat Order (1984) it is the discretionary power of the court to admit evidence which has become available through modern devices. Since ChatGPT is incapable of conducting judicial interpretation of statutes, it might not utilise the discretionary powers in a beneficial manner. Therefore, all such provisions of law which vest discretionary powers with the judge might be construed strictly as ChatGPT works on literal rule of interpretation since it primarily relies on the text of the law and not otherwise.

Secondly, ChatGPT lacks the operational capacity to carry out sentencing disparity (Uriel & Remolina, 2024). Sentencing disparity means the differences in sentences awarded to individuals who have committed similar offences and which could result in different outcomes and judgment depending upon various circumstances in each case such as mitigating circumstances governing the facts of the case (Kowshikaa, 2024). Sentencing disparity has been criticised for undermining the principle of equal justice under the legal principles, since it violates the equality-based application of judicial system (Kowshikaa, 2024). However, many jurists and legal experts argue that there are circumstances in which sentencing disparity is required. For instance, the presence of mitigating circumstances in a murder case suggest that an individual's act was influenced by external factors, hence, he ought to receive a lesser sentence as per the decided sentence scale (Kowshikaa, 2024). Therefore, it is mandatory that some degree of variation in sentencing is maintained on the basis of individualised and contextual analysis of the circumstances of every case. Hence, a balance has to be maintained between warranted and unwarranted sentence variations. The ability of ChatGPT or similar tools in assessing sentencing disparity remains disputed. ChatGPT may render the same sentence to every individual involved in a similar offence, irrespective of the presence of mitigating factors, which would be harmful for the dispensation of justice and the principle of proportionality (Uriel & Remolina, 2024). ChatGPT might inflict

harsher sentences on individuals without considering any equitable principles.

Thirdly, and most importantly, the capability of ChatGPT to mimic the thought process of a judicial mind is far-fetched at the moment, but there might be some possibilities soon (Sourdin & Zariski, 2018). However, generative AI tools would never be able to completely replace human judges. Rather, generative AI tools like ChatGPT might be used by human judges for improving the efficiency of the judicial-decision-making process (Sourdin & Zariski, 2018). Similarly, there are many non-doctrinal elements which tend to impact the decision of a court in various cases which cannot be understood by generative AI tools. This requires human input and a judicious mind. ChatGPT can be fed with pools of data and information, but to inculcate a judicious mind with a jurisprudential thought process is quite far-fetched as of now (Sourdin & Zariski, 2018). There are factors such as the political inclinations of judges, the appointments of judges, and judges' personal biases and experiences which cannot be equated or supplemented by application of generative AI. ChatGPT is only capable of deciding a matter based on the facts and data available to it (Uriel & Remolina, 2024). A human judge is capable of comprehending and delving into the intricacies involved and use his intuition based on vast experience to reach an appropriate decision (Capurso, 1998). Judicial decision-making is greatly influenced by legal reasoning and logical analysis. Judges are specifically trained to conduct legal analysis and interpret statutes accordingly as per the circumstances of each case (Capurso, 1998). However, no such training is available to ChatGPT and it might not be able to assess the requirements and apply the principles of interpretation of statutes in cases where it is strictly required.

Fourthly, there are several ethical implications of ChatGPT when it is used in judicial decision-making processes (Uriel & Remolina, 2024). For instance, ChatGPT can cause bias amplification based on the dataset which is available to it. This increases the risk of exacerbating the biases already prevalent in society. Furthermore, it can cause algorithmic discrimination (Uriel & Remolina, 2024). It might not be able to identify and address its own discretionary choices made by the algorithm. Generative AI tools like ChatGPT have limited abilities in terms of rendering explanations (Uriel & Remolina, 2024). For instance, judges write

the reasons and grounds for reaching a certain conclusion and decision in their judgment. In contrast, ChatGPT is not capable of providing reasons for deciding since it only uses the data fed to it to reach a particular decision (Sourdin, 2018). Moreover, human judges are subjected to judicial scrutiny through proper evaluation and regulatory bodies. However, this is not true for generative AI tools. Accountability of generative AI tools like ChatGPT requires stringent institutional oversight by independent bodies, and even these extreme measures can only provide limited levels of accountability (Sourdin, 2018).

Lastly, it has been observed that generative AI tools like ChatGPT, based on computer programs, possess a degree of syntax, i.e., a formal structure of operation; they do not possess semantics, i.e., a process whereby they understand the deeper meaning behind that operation (Smith, 2023). In other words, while generative AI is capable of processing information coded in the form of binary numerals, unlike humans, it cannot understand the underlying meaning of that information and as such it can only mimic human reasoning to a superficial extent. This lack of human understanding can also manifest in other more pronounced forms such as lack of compassion or human emotion. While justice within legal frameworks requires a certain degree of strict interpretation of rules, as a principle, justice requires an inclusion of emotions such as compassion and fairness. There are well-grounded apprehensions that generative AI cannot apply discretion in such matters as a human, which further inhibits its ability for undertaking judicial decision-making (Sourdin, 2018).

Conclusion and Recommendations

In light of the discussion above, it can be concluded that while generative AI tools like ChatGPT are projected to become an integral part of the legal profession, their inclusion in judicial decision-making remains remote. While certain judges in different jurisdictions advocate the use of AI tools, the fact remains that generative AI lacks certain fundamental attributes that can enable it to substitute humans in the adjudication process. Undoubtedly, generative AI tools have a vast knowledge base of law and precedents, are capable of rational analysis and are impartial, but have limited application in aspects of interpretation of law,

valuating sentencing disparity and acting with a judicial mind. The ethical implications of using generative AI as a judge while being aware of the fact that it is capable of bias amplification are also an imperative concern which threatens transparency and fairness in the judicial system. Lastly, its inability to explain and understand the deeper principles underlying the language of law can be considered its biggest problem. As such, contemporarily speaking, there is limited potential for generative AI tools to substitute humans in judicial decision-making. However, this does not necessarily mean that the situation cannot change. Generative AI may be in the race to automate the judicial system, provided it is upgraded adequately to deal with the existing challenges explained above.

If generative AI is prescribed a more active role in judicial decision-making, it is crucial to establish certain ethical standards and frameworks for the regulated and safe use of generative AI. Use of generative AI for adjudication must be subjected to the strictest human supervision to prevent a miscarriage of justice. Easy access to appellate forums against decisions given by generative AI can be one way in which human supervision is maintained, and only nominal matters are delegated to generative AI. To practically incorporate generative AI in the legal profession, it is necessary to mobilise all stakeholders of the legal community. Lawyers, judges and law students must be trained to use AI and learn the intricacies of law and AI. Generative AI tools specifically modified for the legal profession must be designed, and these tools should not have data dataset containing biased or prejudiced information. The incorporation of generative AI in the judicial decision-making process requires continuous evaluation so that any biases or anomalies can be amended speedily. Lastly, special legislation specifically dealing with the usage of generative AI in the legal profession must be enacted so that ethical standards of transparency and fairness can be maintained.

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