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LEGAL POSITIVISM, AI, AND THE MODERN LEGAL LANDSCAPE: CHALLENGES IN EDUCATION, RESEARCH, AND PRACTICE

Abstract. In a world that is constantly evolving and modernising, new technologies and automation mean rapid progress in many areas of society, including the law. This article aims to discuss whether artificial intelligence will have an impact on legal positivism by influencing the legal profession. This study will first discuss the foundations of legal positivism and the reasons for its crisis and criticism. It will then explore how AI is influencing legal education, research, and legal practice. Finally, it will conclude and indicate how AI is affecting the development of positivism or the stagnation of this legal theory.

Keywords: Artificial Intelligence, legal positivism, legal professions, legal education, Hans Kelsen, Herbert Lionel Adolphus Hart

POZYTYWIZM PRAWNICZY, SZTUCZNA INTELIGENCJA, I WSPÓŁCZESNE ŚRODOWISKO PRAWNE: WYZWANIA W EDUKACJI, BADANIACH I PRAKTYCE

Streszczenie. W świecie, który nieustannie się rozwija i modernizuje, nowe technologie i automatyzacja oznaczają szybki postęp w wielu dziedzinach życia społecznego, także i w prawie. Niniejszy artykuł ma na celu przedyskutowanie, czy sztuczna inteligencja będzie miała wpływ na pozytywizm prawniczy poprzez oddziaływanie na zawody prawnicze. W pierwszej kolejności omówione zostaną podstawy pozytywizmu prawniczego oraz przyczyny jego kryzysu i krytyki. Następnie zbadamy, w jaki sposób sztuczna inteligencja wpływa na edukację prawną, badania i praktykę prawniczą. Na koniec zostaną wyciągnięte wnioski i wskazane, w jaki sposób sztuczna inteligencja wpływa na rozwój pozytywizmu lub stagnację tej teorii prawa.

Słowa kluczowe: Sztuczna inteligencja, pozytywizm prawniczy, zawody prawnicze, edukacja prawnicza, Hans Kelsen, Herbert Lionel Adolphus Hart

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INTRODUCTION

Information technology is rapidly changing the world, and the vast amount of available information and its quick dissemination is accelerating our lives and shaping our history. While technology offers many opportunities, it also presents new challenges. Artificial Intelligence (AI) is a widely debated and researched topic in the scientific community. However, defining AI remains a challenge for many due to its complexity and multifaceted nature. Headlines in mass media often claim that artificial intelligence has enormous potential to double the annual growth rate of the economy, shorten the timeframe for economic growth, and improve labour productivity in most countries (see, e.g., Georgieva 2024). Some experts compare artificial intelligence with electrification, promising that it will revolutionise everything from industry to public services, including the administration of justice (Lynch 2017). The use of AI in medicine, transport, and cybersecurity has prompted discussions about its potential applications in the legal field: how can AI assist lawyers in their daily work; will AI replace lawyers and judges; or will it shift dispute resolution to online platforms? However, the legal community is also grappling with the compatibility of new technologies with established legal values and theories. Legal positivism is one of the most prominent legal theories, alongside natural law theory. It argues that the law is a human-made construct and that its legitimacy is determined by its source rather than its content.

The aim of this paper is to discuss whether artificial intelligence will have an impact on legal positivism by influencing the legal profession. This study will first present the foundations of legal positivism and the reasons for its crisis and criticism. It will then explore how AI is influencing legal education, research, and practice. Finally, it will conclude and indicate how AI is affecting the development of positivism or the stagnation of this legal theory.

The study applied linguistic, logical, and systematic methods of analysis. The linguistic method will be employed to conduct a detailed analysis of legal terminology and the linguistic dimensions associated with artificial intelligence and legal positivism. The logical method will provide a framework for structuring arguments and evidence, enabling a comprehensive exploration of the cause-and-effect relationships inherent in the interaction between AI and legal practice and theory. This will allow for a clearer understanding of the implications of AI on the legal landscape. Finally, the systematic method will be utilised to evaluate the foundational principles of legal positivism in the light of the challenges introduced by the modern legal landscape. This will aid the construction of a holistic perspective on the emerging trends and potential trajectories of legal development within the contemporary legal framework. By integrating linguistic, logical, and systematic methods, this study aims to contribute to the ongoing discourse on the

intersection of technology and the law, addressing the evolving nature of legal theory and practice in the age of artificial intelligence (see, e.g., Susskind 2019; Waisberg 2021).

The study drew on current research on artificial intelligence by authors such as R. Susskind, N. Waisberg, and A. Hudek, as well as on studies by various legal organisations, such as the International Bar Association.

1. LEGAL POSITIVISM AND CRITICISM

Legal positivism emerged in the 19th and 20th centuries as a critical response to natural law theories, which posited that laws are inherently linked to moral principles and universal truths. Thinkers such as Hans Kelsen and H.L.A. Hart sought to establish a clear distinction between the law as a social construct and morality, emphasising that the legitimacy of the law derives from its creation by recognised authorities rather than from its moral content (Kelsen 2002; Hart 1997). This shift was significant, as it allowed legal scholars and practitioners to approach the law as a system of rules grounded in human conventions, free from the subjective interpretations of morality that characterised natural law perspectives.

In contemporary legal discourse, legal positivism remains a foundational theory, but it also faces challenges that question its capacity to account for ethical considerations in an increasingly complex societal landscape. Critics argue that the rigid separation of the law and morality inherent in positivism may lead to legal systems that are ill-equipped to address pressing social issues, particularly in the light of evolving norms and values. As technology, especially artificial intelligence, changes the legal landscape, the relevance and resilience of legal positivism are called into question, prompting a re-examination of its principles and their application in the modern legal context. Taking into account the scope of this article, the analysis here draws attention to the famous positivists H. Kelsen's and H. L. A. Hart's ideas, but also includes the works of J. Bentham, J. Austin, J. Raz, and other positivists.

Hans Kelsen, a prominent figure in legal positivism, aims to establish a "pure theory of law" (which is the actual title of his 1934 book), which focuses exclusively on the description of the law, intentionally excluding elements of psychology, sociology, ethics, and politics (Kelsen 2002, 464). He argues that legal practice should rely on legal rather than moral arguments, thereby promoting an objective understanding of legal norms as constructs created by legislators. Kelsen emphasises the importance of distinguishing between the sources of legal norms and the moral imperatives associated with natural laws. For Kelsen, the task of legal science is not to construct a set of binding norms but to describe what the legislator has already artificially created. "A lawyer who scientifically

describes a legal norm does not identify himself with the legal authority that issued that norm. A Rule of law remains an objective description; it does not become a prescription," as the philosopher of law concludes (Arlauskas 2009, 252).

In contrast, the English philosopher of law H.L.A. Hart supports Kelsen's notion of law as an independent social phenomenon but seeks to reconcile it with moral considerations (Hart 1997, 177).[1] Hart introduces the concepts of primary and secondary norms, arguing that while primary norms reflect fundamental truths about the human society, they require transformation into enforceable laws through secondary norms. He recognises the creative nature of legal norms and the necessity for a legal system to address evolving societal needs (Arlauskas 2009, 254). Despite their contributions, both Kelsen and Hart as well as other positivists face criticisms regarding the adequacy of their theories in addressing the complexities of modern legal challenges, particularly the relationship between the law and morality.

This criticism calls into question the resilience of legal positivism to changes in society (e.g. Luban 2007, 15; Kaufman 2023, 31). The growing crisis of this theory is manifested in the fact that more and more lawyers are inclined to view the law not only as a factual system of norms but also in terms of its moral dimension.

The following criticisms of legal positivism can be identified:

1. Legal positivism distorts the picture of legal reality by separating the law from sociological, ethical, and political factors.

2. Legal positivism neglects certain aspects of contemporary reality, e.g. legal norms outside the jurisdiction of the state. This is not the case in the EU, the UN, or in the law developed by non-governmental organisations. It accuses positivism of singling out important elements that permeate legal standards from different areas of society.

3. For example, Hans J. Morgenthau's analysis concludes with a warning against the political consequences of legal positivism. He asserts that an uncritical adherence to positivist principles – seeking certitude through rational calculation – is politically disastrous (Chas 2023, 60). This critique resonates in the realm of international law, where positivism may misguide efforts to achieve peace by misunderstanding the true nature of international society.

The criticism of legal positivism has implications for its crisis. This crisis is also caused by lawyers' actions, such as courts creating laws or legal scholars criticising the theory's lack of consideration for moral and ethical issues.

Legal positivism, with its fundamental premise that laws are human-made constructs distinct from moral values, faces critical challenges as artificial intelligence becomes increasingly integrated into the legal field. The use of AI in legal practice raises important questions about the interpretation and application

[1] In this way, H.L.A. Hart attempts to free the theory of legal positivism from the criticism that it is indifferent to morality (Arlauskas 2009, 253).

of legal norms, potentially blurring the lines that positivism seeks to maintain between the law and morality.

The impact of AI on legal positivism has been researched by several contemporary researchers such as R. Susskind, M. Hildebrandt, H. Surden, and others. Based on their findings, it can be said that AI can have a significant impact on legal positivism, but it also raises critical questions. AI systems, which rely heavily on the automation of legal decisions and advanced data analysis, can strengthen legal positivism by reinforcing its emphasis on the separation of the law and morality, and the application of legal norms according to established rules. Since AI systems typically operate based on legal precedents and codified norms, they align with the positivist view of the law as a system of rules grounded in human conventions rather than subjective moral judgments (see more in: Hildebrandt 2020, 284).

However, the use of AI in the law also poses challenges to legal positivism. R. Susskind points out in his research that the automation of legal decisions by AI highlights potential weaknesses in the rigid formalism often associated with positivism, particularly when addressing complex moral issues that are not easily structured by algorithms. AI may thus expose the limitations of legal formalism, raising questions about the adaptability of legal systems when faced with ethical dilemmas. Furthermore, AI prompts discussions about the flexibility of legal interpretations and the importance of the human element in legal decision-making processes (Susskind 2010, 2017).

As a result, the development of AI technologies presents a dual impact on legal positivism: on the one hand, it may bolster positivism by reinforcing its focus on objective legal reasoning, while on the other, it challenges the boundaries of legal automation and the extent to which the law can remain isolated from broader moral considerations (see more in: R. Susskind, M. Hildebrandt, H. Surden). Consequently, the evolution of legal positivism must address these technological advancements, ensuring that legal systems adapt to new realities while remaining anchored in their foundational theories.

Further, this article analyses the relationship between legal positivism and new technological challenges, such as AI. First, it discusses the impact of artificial intelligence on legal studies and the work of legal practitioners and researchers. Second, conclusions will be drawn regarding how these new technologies are influencing the development of positivism or the stagnation of this legal theory.

2. ARTIFICIAL INTELLIGENCE IN THE LAW

Yuval Noah Harari – a renowned erudite, a visionary Israeli historian, the author of popular books on the history of humanity (*Sapiens*) and on the probable future of humanity (*Homo Deus*), as well as professor at the Hebrew University

of Jerusalem – points out that "Artificial Intelligence is set to decode and surpass human beings in areas that were hitherto considered purely in human domain" (Harari 2018, 37). AI is already proving to be highly adaptable and is helping us to tackle critical human challenges, from curing chronic diseases or reducing traffic fatalities to combating climate change or predicting cybersecurity threats. Is it possible that artificial intelligence systems can replace humans in the law?

The use of artificial intelligence in the law is far from new; it has been discussed since 1958 and the first working prototypes appeared in 1970. There have been specialised AI and law associations for more than 30 years as well as research and experimentation in this field for 60 years. Today, there are thousands of legal tech start-ups worldwide (Waisberg, Hudek 2021, 21).

The European Charter on the Ethics of Artificial Intelligence in Judicial Systems was adopted in Strasbourg on 3–4 December 2018. The charter highlights the importance of developing artificial intelligence in both the private and public sectors, including judicial systems, for all EU Member States. The Charter emphasises that AI can be utilised in various ways in legal activities related to judicial systems, such as searching for relevant case law, online dispute resolution, drafting pleadings, analysing cases (predicting outcomes), sorting contracts based on different criteria and identifying different or incompatible contract terms, keeping litigants informed about the progress of the case, and performing other functions during the judicial process (e.g. chatbots) (Babayan 2019). The AI Act, the first EU regulatory framework for artificial intelligence, will also be adopted in the near future and will also have an impact on the possibilities of using artificial intelligence in the law (European Parliament 2023).

Legal and philosophical scholars provide additional examples of AI applications in the law. Emotions can influence the decisions of judges, leading to incorrect rulings. In contrast, AI operates based on rationality and impartiality. One such example is the use of AI to prevent errors in the administration of justice. Proponents of AI in the law also believe that the use of algorithms will lead to fewer errors and reduce the cognitive load on judges (Teise.pro 2019). The use of new technologies, particularly AI, in the legal field is not a futuristic concept, but a current reality. AI is of great importance in all areas of the law, including practice, science, and research. However, it is important to note that AI is not a replacement for human intelligence but, rather, a tool created by humans to aid them in their legal affairs.

2.1. The impact of AI on legal education

One of the key ways in which AI is transforming the legal profession is through the automation of tasks that were once performed by junior lawyers and paralegals. In response to these changes, law schools must rethink their curriculums to ensure that graduates are prepared for the future of the legal

profession. This means not only teaching students about the latest AI technologies and their applications in the legal field, but also equipping them with the skills needed to work alongside these tools effectively. One way in which law schools can embrace AI in their curriculums is by incorporating courses on data analysis and programming. These skills are becoming increasingly important for lawyers, as AI-powered tools often require a basic understanding of coding and data manipulation to be used effectively. By teaching students how to work with large datasets and write simple algorithms, law schools can ensure that their graduates are better prepared for the challenges of the modern legal profession. Another approach is to incorporate AI into existing courses, such as contract law or legal research (Fornasier 2021, 19).

Moreover, law schools should also focus on developing students' soft skills, such as critical thinking, problem-solving, and communication. While AI has the potential to automate many tasks, it is unlikely to replace the need for human judgment and empathy in the legal profession. By fostering these skills, law schools can ensure that their graduates remain valuable assets in the workforce, even as AI continues to reshape the industry (Smith 2023, 339).

From my academic practice, I would just point out that law teachers need to encourage their students to read more legal doctrine and case law. If students use AI tools and only read the summaries of the doctrines that AI creates, it will not be effective learning. Summaries of legal documents or scholarly articles will not give the student comprehensive knowledge; they will only know the fact, but not the decisions that were made to recognise a certain fact. AI is an excellent learning tool when, after reading academic information, students want to know if they have understood the information correctly or if they have a good recall of the key points.

2.2. The impact of AI on legal research

Legal research is an indispensable skill for lawyers. Legal research, which refers to the process of identifying, analysing, and applying the law to solve a particular problem, is a core lawyering skill that significantly contributes to almost every aspect of legal practice. There is no particular field in the legal profession that does not involve the underway of legal research. Hence, legal research is determinant to almost all the activities of legal professionals (McConville, Chui 2007, 19). Although different professionals may undertake different types of research in scope, nature, and magnitude, researching the law is a common denominator to accomplish the tiniest of legal tasks. Therefore, it is not an exaggeration to conclude that the quality of legal services rendered by lawyers is directly dependent on the quality of the research undertaken to that effect (Biresaw 2022, 54).

AI provides celerity, simplicity, and effectiveness in solving a multitude of legal problems by researchers. AI can also perform automated tasks and adopt mass decisions efficiently. The use of AI is critical in legal research in terms of efficiency in searching, classifying, filtering, rating, and ranking issues, facts, ideas, laws, and so on. On the other hand, AI combined with computer systems is also capable of many other impressive feats that make the undertaking of legal research very easy, such as recognising and pointing out spelling errors and finding poor writing, and suggesting the rewriting of ill-constructed sentences (see: Cass 2001, 8).

AI is also a very useful tool for the law and the legal science in general. By applying knowledge to find a solution to legal problems, AI applications are assisting in legal reasoning. AI provides tools and techniques developed to solve specific problems in the law in general. The legal science recognises the usefulness of AI for legal reasoning and research. Legal reasoning is a general concept that refers to the process of forming and providing a justifiable answer to a particular legal question, e.g. by searching databases of legal texts and identifying which cases are relevant to the respective ongoing judicial proceedings. Moreover, AI tools significantly simplify legal research in the judiciary, as they can filter out irrelevant information. Besides, some AI expert systems can autonomously reason and provide specific answers to legal various problems (Krausova 2017, 55).

AI has also transformed another field important to human rights investigations, namely Forensic Anthropology. It has played a significant role in human rights abuse documentation since the 1980s, involving the examination of bones and other physical evidence to reconstruct the circumstances of death. In recent years, DNA sequencing has introduced a much greater degree of scientific accuracy and efficiency in forensic investigations (Biresaw 2022, 54).

Currently, AI tools can do almost all types of activities related to legal research, such as Legal Text Analyses, Legal Question and Answer (Advisory), Legal Outcome Prediction, Contract Review, Due Diligence, E-discovery (Technology Assisted Review), Document Drafting, Citation Tools, and so on.

Unfortunately, studies have shown that AI is limited in its ability to comprehend legal texts compared to human lawyers. While machine language can extract some meaning from legal texts, it is unable to provide explanations for its answers. Additionally, AI is typically unable to explain its responses to legal questions, and legal reasoning is limited (Searle 2002, 669). AI tools cannot consider how different circumstances would affect their answers, and most of them require human support (Ashley 2017, 22). Moreover, AI is also blamed for other disruptive features in the legal profession such as the problems of complexity, the worrisome increasing autonomy of AI systems over time, the problem of opacity in the decision-making of AI systems, and the technological vulnerability of AI systems as they are highly dependent on collected data, which may be insufficient, inaccurate, or biased (Biresaw 2022, 54). Furthermore, currently, the fact that

AI systems are highly exposed to cybersecurity attacks or breaches is a major challenge to the development of legal AI.

Only some decades ago legal research was an activity that could only be done by lawyers in a physical library. At present, many of the activities that constitute legal research are being done by AI tools with minimal human support, which resulted in monumental efficiency (in time, energy, and resources) in the underway of legal research and legal grunt work. At present, there are up to 5,000 legal tech start-ups throughout the world which are automating some type of legal work, which is a good reminder for tomorrow's lawyers that they will need to familiarise themselves with how to research the law using such AI tools in addition to possessing a working knowledge of the law (Biresaw 2022, 55). The same applies to law schools, which should consider incorporating courses on legal AI into their academic curricula.

2.3. The impact of AI on legal practitioners

AI has the potential to transform the legal industry, with a growing bevy of AI tools for lawyers already unlocking new efficiencies. Legal writing is a cornerstone of the practice of law. The question is how artificial intelligence can help legal writing and how AI is changing legal writing. It is a specialised skill that requires the expertise and critical thinking of legal professionals, but this does not mean that AI tools do not impact how lawyers get legal writing done. Just as word processors allowed legal professionals to write briefs more quickly than they could on typewriters in the past, generative AI tools can be used as supplemental tools to improve efficiencies in the realm of legal writing. When it comes to legal writing, tools such as ChatGPT can assist lawyers with tasks such as:

- **research**, such as conducting secondary research for cases or summarising complex legal cases in plain language for clients;
- **document-drafting and review** for legal documents such as contracts and briefs – with the input and review of lawyers;
- **proofreading** legal documents to help check for spelling and grammatical errors;
- **drafting** legal citations, though lawyers would still need to fact-check and format AI-generated draft citations, as ChatGPT lacks text formatting capabilities and can sometimes create inaccurate citations.

However, it is important to note that all of the above legal writing tasks require the input and review of legal professionals. AI should be considered a supplemental tool, and not as a main source for legal writing, as generative AI tools such ChatGPT have certain key limitations and risks, including:

- **a limited scope** – first, the developers of ChatGPT stated that ChatGPT is being trained on data until 2021. Later, OpenAI announced plans for future models that may contain more recent information; however, the exact timing of

these updates and the extent of current information remain unclear. Additionally, users who join ChatGPT for free may find that the availability of information sources is limited, which may affect the completeness of responses (Mok 2023);

• **the lack of reliability** – as some lawyers are learning it the hard way, there is no guarantee that the facts or cases that ChatGPT generates are real or accurate. It is up to the lawyers to verify the veracity and reliability of outputs that come from AI tools;

• **copyright infringement concerns** – when it comes to intellectual property and copyright, who owns contents generated by ChatGPT? Even though OpenAI has terms of use stating that it assigns the user "all its right, title and interest in and to Output," there are still many unresolved questions related to ChatGPT, intellectual property, and copyright. For example, if ChatGPT provides two users with identical output, who is the owner of that content? As these questions and answers evolve, lawyers must stay in the know if using AI tools;

• **ethical concerns** – from client confidentiality to the potential bias, there are many ethical considerations that arise for lawyers using AI tools, including in legal writing (Clio 2023).

With all that being said, AI can assist legal professionals in areas beyond legal writing. The following study will investigate the potential benefits of AI for law companies in various operations.

Despite the legal industry's long-standing hesitancy to adopt new technologies, AI is also beginning to make its mark on law companies. AI in law companies can deliver significant efficiency and cost-saving benefits for the companies' practice, helping automate routine tasks such as legal research and analysis, document management, and billing. The legal industry increasingly uses AI in many aspects of its work. AI in law companies may not be explicitly noticeable, but it helps lawyers and paralegals do their jobs better. Specifically, AI in law companies helps legal professionals transform their practice by putting clients first in an unprecedented way (Clio 2023). Below are just several of the ways lawyers can take advantage of AI in their companies (see more in: The Law Society of England and Wales 2018, 7–8):

• **electronic discovery** – the simplest and most common form of AI in law is e-discovery, i.e. the process of scanning electronic information to obtain non-privileged information relevant to a case or claim.[2] E-discovery aids the exchange of electronic information between parties during litigation and investigations, and is becoming commonplace for today's law companies;

[2] The Electronic Discovery Reference Model, or EDRM, is a common starting point for putting together an effective e-discovery workflow. The EDRM lays out the e-discovery legal process from identification and preservation through processing, review, and analysis to the final presentation of information.

• **AI-powered legal research software** allows legal professionals to quickly scan and search large databases, including regulations, statutes, case laws, and more;[3]

• **document management and automation** – while law companies continue to move away from paper documents, electronic document storage has similar challenges to hard copy document storage. Electronic records take less physical space, but sorting and finding documents is still challenging. Using tagging and profiling functionality, AI-driven document management softwares store and organise legal files, including contracts, case files, notes, and e-mails. This method of storing and organising digital files, along with full-text search, makes documents a lot easier to find. Document automation helps law companies create documents using intelligent templates; legal professionals can automatically fill form fields directly from case records into the templates, saving time and effort. Legal document automation provides a centralised and efficient process for producing letters, agreements, motions, pleading, bills, invoices, etc.;

• **due diligence** – conducting due diligence often requires legal professionals to review a large number of documents, such as contracts. As with other document-related challenges, AI can help legal professionals review documents more quickly;

• **litigation analysis** – determining the viability of litigation or quantifying the value of a lawsuit requires extensive analysis of precedent-setting cases. AI can quickly review those precedents and help lawyers draft more accurate and appropriate documents based on that data.[4]

It can be concluded that the use of AI in law companies enhances the abilities of legal professionals to perform their duties. AI helps to reduce the time spent on manual tasks, freeing up more time for relationship-building and client-focused activities. Automating routine manual tasks and brainstorming ideas with AI improves efficiency across the company. When lawyers become more efficient, they can devote more time to their clients and increase billable work. The main advantage of using AI in law companies is to provide lawyers and legal

[3] It should be noted that the majority of such Legal Research Tools are dedicated to the US law, e.g. Fastcase, Findlaw, Legal Information Institutes. However, also in Lithuania, to give one example, law companies are using Luminance, i.e. an artificial intelligence technology that uses machine learning to read and analyse contracts and other documents in a very human-like way, increasing the efficiency of processes such as due diligence. See more in: Kondratas (2018).

[4] It is interesting to mention that some companies in Germany are currently working on software that will automatically analyse judgments. The software is intended to make statements for the future based on judgments already made. How could a court decide? What could the reasoning be based on? Does judge 'A' possibly have special features in his/her decisions or does judge 'B' always decide in a particularly strict or lenient manner? It could also be used to examine when a decision is particularly often or particularly rarely overturned by a higher court. One of these tools, 'law stats', independently evaluates revisions using quantitative risk analysis. It is, therefore, less a legal service than machine learning from statistical data. However, it improves lawyers' work by setting them free from repetitive work. See more in: International Bar Association (2022, 77).

professionals with more time. AI-driven tools create time and labour efficiencies, allowing lawyers to spend more time directly with clients in order to foster meaningful relationships.

All of the above AI capabilities are also relevant to the work of the courts. However, I would like to discuss three more key areas where AI is poised to make a significant impact in courts, namely transcription, translation, and judicial guidance. I will dissect in this study how these technologies are being applied, their potential benefits, and the challenges:

1. AI can assist with transcription in courtrooms. Stenographers play a crucial role in creating an official record of all spoken words during hearings and trials, preserving important court records for posterity. AI transcription services can listen to spoken words and translate them into text in real-time, creating robust court transcripts. The potential for AI tools to take over this role is increasing with advances in technology. AI transcription can be used for recorded depositions and other types of audio and video evidence, making it easier to create searchable records regardless of the original format. The advantages are clear: AI transcription services can generate instant records of court activities and hearings, speeding up processes and reducing the cost of judicial services. The use of stenography can improve the accessibility of records, allowing a prompt review after a proceeding. However, concerns persist regarding the human aspect of stenography, which involves not only transcribing words but also understanding the context and nuance. Although AI has made significant progress in this area, questions about its accuracy remain. Addressing these challenges is crucial as we integrate AI into the courtroom (CEPEJ 2023).

2. AI can help with translation in courts. Language barriers can pose significant obstacles in court proceedings. Not knowing the language can make some people afraid to go to court. This is evidenced by a study by the Judicial Council of California, which analysed the use of translation services by individuals in court (see more in: Judicial Council of California 2020). This study reported the following:

> There were over one million interpretations a year for each of the four previous fiscal years. Criminal cases are the main driver of interpretation volume representing around 75% of the total recorded volume. Criminal case interpretations numbered approximately 3.3 million for the study's four-year period. This means that the use of interpreters in civil proceedings is small, implying that the state's highly diverse population may not be accessing courts for civil justice services as much as English-speaking populations.

This shows that unequal provision of translation services may violate a person's constitutional right to a court. Here is where AI can play a transformative role. Generative AI can intercept written formats and convert them into audio, helping those who are illiterate or who do not know a particular language used in court proceedings. As with transcription, accuracy is a concern. For example: can

these AI models interpret appropriately and translate both literal and idiomatic expressions? Are they able to convey emotionally-charged words used in testimonies? How does AI translation impact the perceived credibility of a witness?[5]

3. AI can help guide judges.[6] Modelling and supporting legal decision-making and predicting the outcome of legal cases have been central topics of AI and the law since its beginnings in the 1970s (Buchanan, Headrick 1970, 40). New technologies can help judges evaluate briefs or find legal reasoning about cases, conduct legal research, and aid in drafting rulings (Collenette, Atkinson, Bench-Capon 2023). They can sift through mountains of legal data and pinpoint relevant information, making the decision-making process more efficient. While these tools can speed up the decision-making process, they are not without flaws. Lithuanian legal scholar D. Murauskas identifies several stages of how AI can help a judge. 1) In the case of fact-finding, algorithms can help analyse large amounts of information in the evidentiary process.[7] 2) In the case of law discovery, algorithms can help to analyse a large number of sources of law and to select the applicable law. 3) In the final decision-making step, the potential of algorithms is limited and may involve the resolution of simple disputes or, based on an algorithm, the suggestion of certain historical data based on past case law (see more: Murauskas 2020, 54).

4. The court decision is made by the AI system. The use of AI systems to resolve legal disputes is one of the most interesting and questionable applications

[5] There are also considerations about vocal characteristics and their potential impact on perception. Research, such as a report by UNESCO on gendered AI, shows that gendered voice assistants receive disparate treatment (this report explains how gender imbalances in the digital sector can be 'hard-coded' into technology products), raising questions about how this could translate in a courtroom setting (see more in: UNESCO n.d.)

[6] Already, judges in India and Colombia are using ChatGPT to help justify their reasoning and answer legal questions, respectively (see more: Smith, Moloney, Asher-Schapiro 2023). The situation in Germany is different: according to the German constitution, a judge may not be replaced by AI. However, it is already less clear whether the judge should be allowed to use AI in his/her decision-making. The use of AI seems conceivable, especially in lower courts with less complex facts and legal issues. However, this is only a theoretical problem and only discussed in the literature, as there is still a lack of functional software (see more in: International Bar Association 2022).

[7] A number of court decisions in Australia have endorsed the use of AI in legal proceedings to assist with discovery processes and document review. An example includes a decision from the Supreme Court of Victoria in 2016, *McConnell Dowell Constructors (Aust) Pty Ltd v Santam Ltd & Ors*. The plaintiff identified at least 1.4 million documents that required review in order to determine discoverability. It was identified that a manual review process for these documents would take over 23,000 hours. The parties could not agree how to conduct discovery and the court was required to make an interlocutory decision. In his decision, Vickery J endorsed the use of 'technology-assisted review' (TAR) in managing discovery and identified that a manual review process risked undermining the overarching purposes of the Civil Procedure and was unlikely to be either cost-effective or proportionate. Subsequently, TAR was explicitly endorsed in the Victorian Supreme Court' practice notes for cases involving large volumes of documents (see more in: Supreme Court of Victoria, n.d., 6).

of AI in the law. The idea was not first conceived by the courts, but by private businesses (e.g. eBay, one of the largest online auction and e-commerce sites, resolves an average of 60 million consumer disputes a year through its online dispute resolution center) (Juškevičiūtė-Vilienė 2020, 124). Some scholars believe that such adjudication may even be more accurate than decisions made by a judge (Babayan 2019). Algorithms developed by artificial intelligence can help to evaluate a case and even calculate the probability of winning a case. The automation of judicial decision-making would significantly reduce the workload of judges and promote the economy and speed of court proceedings. Oxford Professor Richard Susskind says that online court as a service is the future that awaits all courts. "They will have to detach themselves from indoor courtrooms and boardrooms, and focus more on delivering the service online, in a virtual space" (Susskind 2017, 17).

In addition to the advantages (cost-effectiveness, the speed of proceedings, non-discrimination between the parties in the court process), there are several disadvantages of having AI systems to resolve disputes. For example, with online-only proceedings and electronic data sharing, there is the possibility that parties may not interpret written information from the judge or the other party in the same way, or may feel that they have not been listened to enough (Juškevičiūtė-Vilienė 2020, 125). Moreover, in many disputes, judges assess complex factual situations and nuanced legal frameworks. Judges deal with jurisprudential tensions, face value dialogues between the parties, see the context of the society and the social situation, and assess many other invisible factors. As Justice Barak has pointed out, one of the functions of a judge is to understand the purpose of the law in society and to help the law fulfil its purpose (Barak 2006, 292). Algorithmising specific, contextual indicators is, therefore, hardly possible today in the technical sense.

Studies, such as the one conducted by ProPublica (see more in: Angwin, Larson, Mattu, Kirchner 2016), show that these tools can contain systemic bias in their data, leading to skewed results. Transparency is another issue, as IT companies often do not disclose their algorithms, citing trade secrecy. These issues raise questions about the potential for undue influence on the judiciary and the preservation of its independence. Judges and lawyers need to advocate for full transparency on the AI tools used when issuing rulings or decisions and protect a court's discretionary authority to fight the machine recommendations.

CONCLUSION

The rapid growth of AI has brought to light several legal and ethical questions, sparking a heated debate on the subject of AI and legal positivism. Legal positivism is a philosophy of law that asserts that the law is a set of rules

and regulations created and enforced by the state. Therefore, the law is a product of human creation, and its validity depends on the processes of its creation and enforcement. On the other hand, AI is an autonomous and self-learning system that operates outside of human control. This often raises questions about the validity of the laws governing its actions. Critics of legal positivism argue that its limitations in dealing with AI arise from its inability to deal with non-human actors.

The study shows that the impact of AI on legal professions is immeasurable, affecting everyone from law students to judges. However, it is important to note that AI will not replace humans, and new technologies are guided by the existing positive law created by humans. Therefore, it is necessary to understand that legal positivism theories are particularly relevant at this time, as new technologies are guided by state laws and regulations. It is crucial that the new technologies do not replace or 'reinvent' this law. Lawyers must be critical when using new technologies and monitor whether the content of the law has changed. Additionally, it is important to note that AI lacks the capacity to understand and act on moral principles and values in the same way as humans. Therefore, decisions made by AI will align more with the positive law theory than the natural law theory.

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