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2022 A LEGAL ODYSSEY:

THIS MISSION IS TOO IMPORTAINT FOR US TO ALLOW

COMPUTERS TO JEOPARDIZE IT

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Submitted to the Honors College

At Bowling Green State University

April 27th, 2022

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<u>Abstract</u>

The purpose of this paper is to discover if Artificial Intelligence could and should replace human jurists. By looking at the two theories that offer a way to apply the law (legal formalism and legal realism), multiple different answers to this question emerge. Looking at the corner stone of legal realism which is considered empathy, reasons as to why A.I. in the court room begin to emerge. Many studies and data were included in this study that covered a variety of topics such as A.I. experiments, legal data, and psychological emotions. In summary, the results of the research are that A.I. would apply a strict application of the law as a human jurist. While a legal formalist would support this, such a formalistic view could hinder the evolution and adaptation of the law.

Key words: Empathy, Legal Formalism, Legal Realism, A.I.

Introduction

In 1955, Stanford University Professor John McCarthy coined the term "artificial Intelligence" (Lambrechts, 2020). Simply put, AI is "the science and engineering of making intelligent machines" (Lambrechts, 2020). Before 1980, AI was only capable of carrying out menial tasks. However, after the introduction of deep learning algorithms, AI is now able to learn through experience, and mimic human decision-making (Lambrechts, 2020). According to the Oxford dictionary, an algorithm is a set of rules that must be followed when solving a particular problem. While the entire process is vastly more complicated, AI is essentially comprised of a multitude of algorithms that the machine uses to learn, adapt, and produce information (Lambrechts, 2020). It is because of the algorithms that AI can process and evaluate vast amounts of data. Today, we have been able to formulate algorithms for AI's that allow them to accomplish many tasks without the aid of a human. Some of these tasks include chess AI, Siri, Alexa, self-driving cars, email spam filters, and even Netflix recommendations (IBM, 2020). As AI devices become more advanced, and because of their cost-effectiveness and efficiency, designers are beginning to replace human labor.

One field AI has permeated is the practice of law. Although AI has a limited role in the practice of law (for now), it has been helping law firms and attorneys save time and money. Legal software, such as LawGeex, is able to review contracts in a fraction of the time it would take an attorney (Bilbrey, 2017). ROSS, a virtual attorney, is currently saving attorneys hours' worth of legal research that is required for their cases (Bilbrey, 2017). Also being used in today's courtrooms are "chatbots" (David, 2016). These algorithmic attorneys have been able to assist refugees seeking asylum and overturn parking fines (David, 2016). The influence of AI has come so far, the American Bar Association has stated, "AI is the next great hope that will revolutionize

the legal profession" (David, 2016). Some developers argue that AI could one day replace the human jurist (Lambrechts, 2020). Of perhaps more consequence is whether AI *should* replace human jurists. On the one hand, AI may be capable of replacing human jurists; on the other hand, a purely mechanical practice of the law may be a retreat from the development of the law and a restraint on its future growth.

Review of Literature

Legal Formalism

"We are governed by laws, not men."

Recognized as "classical" legal thought, legal "formalism," or "conceptualism," is a theory that law should be practiced in the same manner as math or science (Posner, 1986). Proponents of legal formalism believe that laws should be applied using deductive logic, a mechanical application which they say yields a verifiable answer (Posner, 1986). Legal formalists argue that the law is rationally determinate, and that the trier of fact may point to legitimate criteria in justifying the correct outcome, and that decisions should be made autonomously, devoid of reasoning such as morality or political philosophy (Leiter, 2010). Judge Richard A. Posner illustrated a formalist conclusion by applying a mechanical reading of affirmative action laws: racial discrimination is illegal; affirmative action discriminates against whites; therefore, affirmative action is illegal (Posner, 1986). As Judge Posner reveals, a rigid interpretation of affirmative action laws would not consider the intent or reasoning behind affirmative action laws, only that whether they are legal. For the pure legal formalist, an experiential understanding of the circumstances should be disregarded, and application of the

black-letter law should be "cleansed of emotion" in favor of a system that favors "predictability and control" (Henderson, 1987).

Supporters of the "scientific" application of law point to predictability, consistency, and the absence of politics in the decision-making process. Legal formalists believe that applying the "black letter law" to cases allows individuals to predict the consequences of their actions, and to build faith that the judicial system is "fair." (lawteacher.net, 2003). Formalism, they say, seeks to impose the law objectively and consistently, regardless of who is in power or who is the trier-of-fact (lawteacher.net, 2003). Perhaps most importantly, the objective imposition of rules would disregard who the parties are, ignoring race, religion, national origin, background, upbringing, etc. (lawteacher.net, 2003). Some, like Justice Antonin Scalia, an ardent formalist who preferred clear rules, also believe that political consideration of rules should be left to those with "superior democratic ancestry," and not by the judiciary, the "least accountable" branch of government (lawteacher.net, 2003). Justice Scalia believed that when human jurists engage in policymaking or stray from the application of the black-letter law, predictability and fairness is sacrificed (Davis, 2009). In sum, legal formalism is based on a belief that reason and emotion are distinct, that reasons should restrain emotions, and that "law-as-reason can and must order, rationalize, and control" (Henderson, 1987). For ardent legal formalists, the use of artificial intelligence would seemingly represent the ideal mechanism to accomplish even the higher levels of legal sophistication.

AI in the Practice of Law

As mentioned, AI programs depend on the use of algorithms, a step-by-step set of instructions to be performed in the execution of a particular task. The idea is a machine will start the program, follow the mechanical steps of the algorithm, and complete the work (Chamberlain,

2016). Like many aspects of society, AI programs are currently utilized in the practice of law (Chamberlain, 2016). Due to their raw computing power, these AI programs are now mainly used to carry out lower-level legal tasks, such as document generation, research, and data collection and storage (Alexandra Jones, 2018). For example, the website company "Legal Zoom" advertises that it may assist in the creation of an estate plan for individuals (www.legalzoom.com, 2001). An individual may visit the website and populate fields asking for information such as name, spouse's name, dependent's names, agent names, end-of-life decisions, and much more (www.legalzoom.com, 2001). Once the required fields are populated, LegalZoom inserts the information into prepared documents and sends them to the client (www.legalzoom.com, 2001). On Thomson Reuters' "WestLaw," users may enter information related to a personal injury case such as hospital bills, type of injury, location of case, etc., to retrieve information on average jury verdict monetary rewards to the victim (WestLaw.com, 1975). Although some have argued that these types of programs are engaging in the "unauthorized practice of law," many see the cost-saving and efficiency of these types of programs as a benefit to the practice of law (Alexandra Jones, 2018). Some advanced systems even receive information back and begin to learn on their own, modifying their own algorithms to improve its function to make human-like decisions (Alexandra Jones, 2018).

With advancements in technology, the use of AI in the practice of law is expanding, eroding human tasks that were at one time considered "too challenging" for computer programs (Lambrechts, 2020). AI developers are creating algorithms and computer self-learning to emulate the human thought process (Lambrechts, 2020). Westlaw has recently incorporated computer learning which supposedly aids legal researchers with analysis and recommendations (Alexandra Jones, 2018). A more recent advancement is termed quantitative legal prediction ("QLP")

(Alexandra Jones, 2018). Questions that a client would normally ask a human attorney, such as "Do I have a case?", "How much is this going to cost?", or "What are the odds of a guilty verdict?", are being plugged in to a QLP computer program for the answers. These types of programs depend on "deep learning" computer programs, which are based on artificial neural networks which seek to simulate the biological networks contained in the human brain (Lambrechts, 2020). In essence, the computer program trains itself to process and learn from data to make decisions that a human would normally make (Lambrechts, 2020). Some believe that these systems will continue to improve and develop to the point they will "undoubtedly be deployed into activities that are presently seen as the sole purview of the human jurist." (Lambrechts, 2020).

At first glance, the use of artificially intelligent jurists appears to produce promising results. One example is from a study done by Katie Anderson of the University of Liverpool's Department of Computer Science. Although some weaknesses were identified in her methods, such as the small number of cases tested, a small variety of the types of cases tested, and no information on the judges' views, Anderson's results show that her AI had an accuracy of 96% when it came to being constant with the human jurists' decisions (Zimmerman, 2016). While this research was admittedly not thorough enough to result in a definitive statement about the performance of AI as a legal jurist, it did send reverberations through the legal world (Zimmerman, 2016). Another artificially intelligent jurist in development is ROSS, "the first AI virtual attorney from IBM" (Bilbrey, 2017). ROSS has done some remarkable things in the field of law with the help of its ability to find legal answers from the law in seconds (Bilbrey, 2017). ROSS was also given a state bar exam— and it passed (Bilbrey, 2017). Like ROSS, chat-bot

technology is yielding significant results when it comes to defending small cases like traffic tickets (Schwarz, 2022).

These artificially intelligent jurists are inputted with the black-letter law, algorithms based on pure logic, established fact patterns, and pre-packaged outcomes from which to compute their results. For classical legal formalists, these artificially intelligent jurists may indeed have the capability to one day replace the human jurist. However, long before the introduction of AI into the practice of law, the Supreme Court repeatedly rejected the notion that jurists are "mere machines," intended to mechanically apply legal doctrines to cases (Fennell, 1999).

Legal Realism

In response to the rigidity of legal formalism, the American Legal Realist Movement emerged in the later part of the 19th century (Ambrosio, 2000). While a mechanical application of the law is synonymous with Legal Formalism, Legal "Realism" is a theory that lies somewhere on the other end of the legal spectrum. This concept puts the law in terms of a "malleable and pliable body of guidelines" (SFT Lawyers, 2013). Rather than viewing the law as rationally determinate, legal realists take the position that the purpose of the law is to encourage fairness and the defense of human rights (SFT Lawyers, 2013). Today, Legal Realism maintains its relevance and continues to shape the legal system. According to a paper published by the ABA, "Legal Realism enhances our understanding of how law works in action, in order that we may better appreciate and facilitate law's capacity for progressive social change" (Gulati, 2006). To better serve social interests and for the good of public policy, Legal Realists enforce the law creatively and liberally on an individual case basis (SFT Lawyers, 2013). This allows jurists to contemplate the full assortment of human experience and to understand the complexity of

people's situations (Massaro, 1989). Many legal scholars maintain that "we are all realists now" (Ambrosio, 2000).

The hallmark of legal realism is an attitude, or state of mind characterized by skepticism and critical thinking (Balganesh, 2015). So, legal realism not only considers "what the law is" but also "what the law should be" (Ambrosio, 2000). In other words, legal realists consider whether a mechanical application of the law results in outcomes perverse to societal objectives.[1] For proponents of legal realism, the practice of law includes the search to better understand, develop, and improve the law by incorporating insights and methodologies of the social sciences, allowing for the exercise of discretion based on human jurists' sense of morality and notions about justice (Ambrosio, 2000). Therefore, realism embraces the notion that human jurists can and should draw off of their personal experiences and relationships to others in the exercise of the law (Davis, 2009). In Justice Samuel A. Alito's confirmation hearings, the future Justice was criticized by some Senators as being too formalistic by not caring about the "less fortunate," the "little guy," or the "weak or the innocent" (Alito Confirmation Hearing, 2006). Justice Alito responded,

> [W]hen a case comes before me involving, let's say, someone who is an immigrant, and we get an awful lot of immigration cases and naturalization cases, I can't help but think of my own ancestors, because it wasn't that long ago when they were in that position. And so, it's my job to apply the law. It's not my job to change the law or to bend the law to achieve any result. But when I look at those cases, I have to say to myself, and I do say to myself,

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[1] Recall Judge Posner's example: racial discrimination is illegal; affirmative action discriminates against whites; therefore, affirmative action is illegal. This mechanical reading would ignore the widely-accepted societal objectives of affirmative action laws, Judge Posner's actual purpose in this exercise.

this could be your grandfather. This could be your grandmother. They were

not citizens at one time, and they were people who came to this country.

When I have cases involving children, I can't help but think of my own

children and think about my children being treated in the way that children

may be treated in the case that's before me. And that goes down the line.

When I get a case about discrimination, I have to think about people in my

own family who suffered discrimination because of their ethnic background

or because of religion or because of gender, and I do take that into account.

When I have a case involving someone who's been subjected to

discrimination because of disability, I have to think of people who I've known

and admired very greatly who had disabilities and I've watched them struggle

to overcome the barriers that society puts up often just because it doesn't think

of what it's doing, the barriers that it puts up to them. So those are some of

the experiences that have shaped me as a person.

(Alito Confirmation Hearing, 2006). As Justice Alito testified, even in the face of seemingly

clear legal rules, human jurists may naturally and perhaps unwittingly draw from their own

experiences, emotions, and connection to others when reaching a legal conclusion (Davis, 2009).

The better the understanding human jurists have at these levels, the better their decision-making

is likely to be (Henderson, 1987). These human tendencies are "best captured by the word

empathy" and its companion, moral responsibility (Henderson, 1987).

Empathy

Abandonment of rules produces monsters; so does neglect of persons.

The word "empathy" is derived from the German word "*Einfühlung*" which describes aesthetic perceptions (Henderson, 1987). Closely related to "sympathy", the meaning of empathy has been understood in the U.S. as a specific type of sympathy that is comprised of a flooding of emotions (Henderson, 1987). While the word is seemingly interchangeable with other words such as love and altruism, empathy "actually encompasses a specific psychological phenomenon" (Henderson, 1987). Professor Lynne Henderson proposed that the phenomena known as empathy can be understood in three different ways. First, Henderson says that empathy is "the feeling of the emotion of another" (Henderson, 1987). The phenomena being observed is being able to detect the globalized feelings of another person such as anger, joy, sadness, love, etc. (Henderson, 1987). The interpretation of these meanings is left up to the individual, however, the understanding of them is present (Henderson, 1987). The second meaning is the understanding of the experience or situation of another person, both cognitively and affectively, often achieved by "putting yourself in someone else's shoes," so to speak (Henderson, 1987). According to a 2012 study done by neuroscientists, empathy is proven to be unique because it demonstrates a higher level of "emotional intelligence" (Wu, 2019). They concluded that empathy helps people work toward emotional unity as they proceed toward self-actualization (Wu, 2019). To quote Harper Lee's reference to empathy in *To Kill a Mocking Bird,* "You never really understand a person until you consider things from his point of view ... until you climb into his skin and walk around in it" (Lee, 1960). The idea here is being able to relate to one another by imagining going through similar experiences. The final meaning is an "action brought about by experiencing the distress of another" (Henderson, 1987). While the first two understandings are related to "knowing", this understanding is more of forming a "catalyst for action" (Henderson, 1987). This phenomenon is proof of a connection between empathy and

altruistic/helping actions that a person chooses to do (Henderson, 1987). Henderson summarizes empathy by stating that it "is the foundational phenomenon for intersubjectivity, which is not absorption by the other, but rather simply the relationship of self to other, individual to community" (Henderson, 1987).

The more human jurists attempt to understand the situation and experience of others, the more likely habitual legal thinking may change, and legal problems transform (Henderson, 1987). Moreover, foreclosure of empathy allows human jurists to escape moral choice and accountability (Henderson, 1987).

> In other words, legality gives judges a number of ways to block human pain and escape responsibility. Thus, a judge who believed himself to have chosen "fidelity to the law" as a "higher value" could discount any moral concern about enforcing fugitive slave laws. Mechanistic application of the law — applying "the law and the law alone" — was a "retreat to formalism" that sheltered the judge from recognizing the horror of keeping human beings in bondage. Personal responsibility for choice was subsumed under strict adherence to the law as literally interpreted, or as coming from a higher authority, with the decision maker serving as a mere conduit: "I do not make the law, I follow it."

(Henderson, 1987). The purely legal question that asked whether a person could be property allowed human jurists to avoid consideration of the obvious moral issues of slavery for centuries (Henderson, 1987). As many cases illustrate, however, the Supreme Court of the United States' evolution to the use of empathic understanding has led to a "transformation of legal understanding, an opening of opportunities for new legal categories and interpretations"

(Henderson, 1987). One of the Court's most well-known is the landmark *Brown v. Board of Education of Topeka*.

Empathy's Role in the Development of the Law

In 1896, in *Plessy v. Ferguson* the Supreme Court ruled that it was legal to segregate public facilities so long as the facilities were equal. The Court's ruling was eventually extended to bussing, schools, and many other public facilities through the collective "Jim Crow" laws (Amar, 2011). These laws stood for decades until they started facing challenges in the 1950s (Amar, 2011). In 1954, plaintiff Oliver Brown filed suit against the Board of Education of Topeka, Kansas, arguing that the "separate but equal" doctrine established in Plessy v. Ferguson violated the Equal Protection Clause of the United States Constitution (Brown v. Board, 1953). Though the decision may now seem clear-cut, Brown v. Board of Education is remarkable,

> [I]n large part because it is a human opinion responding to the pain inflicted on outsiders by the law. In Brown, legality in its many forms clashed with empathy, and empathy ultimately transformed legality. The Supreme Court Justices' understanding of racism was radically illuminated; as a result, the Court subsequently delegitimized segregation in a series of decisions known as the per curiams

(Henderson, 1987). The Courts' opinion cites feeling, human pain, and moral evil as considerations in its decision (Brown v. Board, 1953). "To separate [school children] from others of similar age and qualifications solely because of their race generates a feeling of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone" (Brown v. Board, 1953). The Justices' decision obviously relied on their own

experiences and feelings, too, as legal scholars and political communities decried the social

scientific evidence presented (Henderson, 1987). In an age where formalism still permeated legal

thinking, the Courts' decision has stood as an example of the embrace of empathic knowledge

that transformed policy in America (Henderson, 1987). Other landmark cases in which the

Justices changed the legal landscape include Shapiro v. Thompson, Roe v. Wade, and Doe v.

Bolton (Henderson, 1987). These, and many other cases, illustrate the role of empathy in not

only altering habitual legal thinking, but also in pulling back the shield of legality to demand

moral choice and accountability from human jurists.

Computers Cannot be Programmed with Empathy or Moral Accountability

As it stands, artificial intelligence units may be programmed to replicate human behavior

(Frye, 2018). Robots employing artificial intelligence can replace human labor in factories, in

homes, and even on the battlefield (Frye, 2018). Software programs utilizing artificial

intelligence are replacing traditional human duties in banking, business and, as discussed, the

legal industries. But currently artificial intelligence cannot replicate human thought and emotion,

especially more complex emotions like empathy (Frye, 2018). In a field of study called

"affective processing," artificial intelligence designers are currently developing systems and

devices that can recognize, interpret, process, and emulate human emotions which they believe

may yield some form of "artificial" empathy (Lambrechts, 2020). However, building a machine

that recognizes emotional signals is far different than being able to interpret and make an

appropriate emotional *response* (Lambrechts, 2020). The primary challenge now facing

developers is designing an artificial moral decision-making system based on a system, the human

moral decision-making system, that itself is not yet understood (Lambrechts, 2020). For now,

scholars believe that it will be impossible to teach computers how to think because we do not yet

know how humans think (Frye, 2018). And, as Affectiva CEO and pioneer of emotional AI Dr. Rana el Kaliouby points out, complex emotions like pride or inspiration have yet to be addressed (Kaliouby, 2017). And it follows that because computers cannot employ empathy in the decision-making process, they could not feel the burden of moral choice and accountability. For some, even as computers are being taught to recognize human emotion through physical cues, "no machine will ever be able to replace the 'gut' feelings or the fear in the pit of your stomach over being held accountable for a decision" (Falls River Group, 2020). In sum, because an artificially intelligent jurist could not employ empathy or engage in moral choice, the question as to whether they *should* replace human jurists… raises more questions.

Methods Used to Solve the Problem

Question Presented: Could/should artificially intelligent jurists replace human jurists?

I settled on this research question(s) in part because it was interesting and because it touched on each area of my major: politics, philosophy, economics, and law. Because it dealt with each of these subjects (and admittedly many more), the primary challenge of this research question was to reduce broad subjects and tie them together to these related questions. I could not have imagined that a seemingly straightforward question could have raised so many more. It took a great deal of reading (which led me down rabbit hole after rabbit hole), but after a broad review of these questions I narrowed my research down to several areas I felt I should study in the attempt to answer them, or at least bring the issues into focus.

First, I studied the two prevailing theories on just how human jurists (to include judges, attorneys, and jurors) apply the law to a set of circumstances: legal formalism and legal realism. These theories drove my research and formed the basis for what would become my final

discussion (which really consists of more questions). The legal formalism theory, viewed as the "classical" method of jurisprudence, held that the law should be applied mechanically to a set of circumstances, and that emotion and personal experiences should not be considered. Utilizing logic, legal formalists believe that a mechanical application of the law would yield a single, predictable, consistent result. For effect, I discuss artificial intelligence and its use in the law after my discussion on legal formalism. For a pure legal formalist, creating a logic-based algorithm that consists of applying the black-letter law to established fact patterns and pre-packaged outcomes may not be the worst thing in the world.

I next discuss how legal formalism eventually gave way to the legal realism theory, which allowed for human jurists to consider their emotions and experiences. Moreover, legal realism called for skepticism and empathy to go beyond "what the law is" to began to ask, "what the law should be." I found it ironic that as I researched legal formalism, its opponents essentially argued that humans should not act as robots in applying the law. This argument was made well before the widespread use of artificial intelligence in current society. In researching legal realism, I discovered that its embrace of considering emotions, morality, and personal experience amounted to empathy, which some scholars called the foundation of legal realism. In essence, empathy is the consideration of the feelings, position, and fate of another person. In time, empathy opened what was viewed as a "closed, self-referential" legal system and allowed for moral choice and accountability. For example, as I briefly discuss, for decades the morality of slavery was largely ignored, shielded by the purely legal argument as to whether a person could be property. I conclude my research on empathy (and legal realism) and its role in the development of the law by briefly discussing several landmark cases that, if not for the empathy

of the Supreme Court Justices, may have prolonged what are now considered clear morally reprehensible laws.

After my discussion on legal realism and its empathic foundation, I discuss how computers cannot be programmed to feel empathy. Although some argue that an artificial empathy may eventually be created, others believe that computers will never be able to recognize, interpret, and respond the way humans do, especially when it comes to the more complicated emotions like pride, inspiration, and especially empathy. In any event, researchers point to the fact that we do not yet fully understand the human thought process, therefore we cannot create an artificial system designed to emulate human thought.

I close my research with my own discussion on the implications of replacing human jurists with artificially intelligent jurists. I pose the question that given the limitations of artificial intelligence, with its inability to feel empathy and moral accountability, would the legal system be taking a step backwards to the period of legal formalism. I briefly address proponents' arguments that artificial intelligence would help eliminate human prejudice and bias by providing counterarguments and examples where their concerns have actually been realized by artificial intelligence systems. I also briefly discuss a Virginia sentencing scheme that is facing constitutional challenges because it may impermissibly infringe on jury discretion (which is, in part, fueled by empathy).

Finally, I discuss the implication for future research and practice. It took decades to evolve from legal formalism to legal realism. It would likely take another several decades to realize the impact of inserting artificially intelligent jurists into the legal system to perform higher-level functions.

Description of the Results

Summary of Results, Discussion, and Conclusion: Artificially Intelligent Jurists— A "Retreat" to Formalism?

Results

Could artificially intelligent jurists replace human jurists? My research revealed that in some respects, it is possible. In fact, it has been done, albeit on a limited basis and with mixed results. For pure legal formalists, an artificially intelligent jurist may be able to fulfill their theory of how law should be applied— mechanical application, based on logic alone, producing a rationally determinate answer from a field of possible outcomes. Legal formalism seeks to produce consistent, predictable outcomes. It is little surprise then, that artificial intelligence programs scored well on the law school admissions test and state bar exams, as much of those tests can be reduced to purely logical exercises. One section of the law school admissions test is nicknamed "logic games." However, my research also revealed that the legal formalism largely gave way to a theory of law that included the use of emotion, namely, empathy, in the application of the law, called legal realism. As I researched legal realism, my initial question asking whether artificially intelligent jurists could replace human jurists evolved into whether artificially intelligence _should_ replace human jurists.

Reasoning/Discussion

Legal realism theory allows (and perhaps encourages) human jurists to use their emotions, experiences, and morals in applying the law to a set of facts. Collectively, these

methods amount to empathy. In sum, empathy is the ability for human beings to put themselves in position of another to understand and sympathize with the other's situation. The use of empathy in the law also exposes jurists to moral choice and accountability. As legal formalism gave way to legal realism in the 1930s, empathic jurisprudence began to develop and improve the law. It is no coincidence that some of the most morally reprehensible laws finally gave way during that time. This is why an artificially intelligent juror, devoid of empathy and moral accountability, may represent a step backwards.

An artificially intelligent jurist cannot be programmed to feel empathy or moral accountability. Artificially intelligent devices may be programmed to replicate human behavior, whether physical or data processing, but AI cannot currently replicate human thought. Developers are working on enabling AI to *recognize* human emotion, but emotional responses and complex emotions such as pride, or inspiration are currently not possible; some believe they never will be. Simply put, scientists cannot replicate the human moral thought system because they do not yet understand it.

If an artificially intelligent jurist did not possess empathy, would the development of the law slow? Would improvements in the law slow? And, without empathy, how could an artificially intelligent jurist know if a moral choice was before it? And if not empathy, on what basis could it decide that moral choice? If faced with a purely legal proposition, such as whether a human could be property under the law, would the artificially intelligent jurist ignore the question as to whether slavery is moral? What about questions and social issues we cannot possibly anticipate? In sum, would the artificially intelligent jurist, with its emotional limitations and limited applications, mark a return to legal formalism? Just as the evolution from formalism to realism took decades, it would likely take decades of researching artificially intelligent jurists

to determine whether the law is leaving a particular group of people behind, or sentences are prejudicial, or if someone was not receiving the equal protection of the law. Moreover, research shows that algorithms cannot entirely escape human attributes.

For example, because computers cannot replicate human thought, computers are limited to making "decisions" based only on data inputs entered by humans (Levin). Therefore, this data may contain prejudices and biases present in the real world and incorporate them into the decision-making process (Levin). For example, one commercially developed program was marketed as being able to assist judges in making unbiased sentencing decisions (Levin). However, studies revealed that the program was biased against black defendants (Levin). Insufficient data that is inputted into the AI also creates a great risk of containing and producing implicit racial, ideological, or gender biases (Lambrechts, 2020). "If a deep-learning algorithm is fed more photos of dogs than cats, the resulting animal recognition system would understandably be less adept at recognizing cats" (Lambrechts, 2020). Amazon's artificially intelligent hiring system illustrated this issue. Due to the large numbers of jobs and applicants, Amazon decided to allow an AI to take charge of the hiring process (Lambrechts, 2020). After a few days, the AI system taught itself that white, male workers were the best candidates for the job while denying all other applications (Lambrechts, 2020). Microsoft's twitter bot produced similar results. After a few hours, the bot got ahold of biased information and "misogynistic and racist remarks", causing Microsoft to shut it down in less than 24 hours after its launch (Lambrechts, 2020). Researchers concluded that "Even a thoughtfully designed algorithm must make decisions based on inputs from a flawed, imperfect, unpredictable, idiosyncratic world" (Levin).

And legal realism itself continues to evolve, as human jurist discretion is increasingly becoming an issue across the country. In Virginia (and in other states), critics argue that a jury

sentencing scheme may place impermissible burdens on a defendant's right to a jury trial by removing nearly all discretion from jurors (McCloy, 2021). In criminal cases, bound by state-sentencing requirements and processes, it was discovered that jurors are imposing increasingly extreme sentences (McCloy, 2021). It was found that these extreme sentences were a result of sentencing requirements developed by the Virginia Criminal Sentencing Commission who devised a scoring system to determine the appropriate level of punishment (McCloy, 2021). The system assigns points for a variety of factual circumstances surrounding the criminal event—whether a weapon was present, prior convictions, etc. (McCloy, 2021). At the sentencing phase, judges inform jurors of the statutory minimum and maximum sentence for each crime the defendant is charged with (McCloy, 2021). Jurors are not allowed to review sentencing guidelines, receive any information about them, and are unable to recommend whether sentences should be suspended or served consecutively (McCloy, 2021). Critics allege that "juries represent a cross section of the community and in theory serve as that community's conscience," and by not allowing juries to review guidelines, Virginia's sentencing scheme essentially forecloses jury empathy (McCloy, 2021). In essence, Virginia's juries are being fed data from which they may "choose" pre-determined results.

And what of moral accountability? As discussed, treating the law as a closed, self-referential system allows us to dodge human pain and escape moral choices and accountability—"I do not make the law, I follow it." If artificially intelligent jurists replaced human jurists and a mistake is made, or a class of persons did not receive equal protection under the law, or a case begging for a moral choice to be made falls to the black-letter law, who would be accountable for those failures?

Human beings seek accountability. People want to know who is responsible

for certain actions and who is accountable for the consequences of those

actions. Harry Truman referred to his famous desk sign on more than one

occasion to point out that responsibility, in the end, must be taken by

someone—some identifiable person must be held to account. Truman was

willing to accept that accountability. Increasingly today, people are more

likely to ask, "Where exactly does the buck stop, or does it ever stop?" In the

wake of a multitude of recent corporate scandals, commentary has been rife

with questions of responsibility and accountability.

(Bivins, 2006). In an age where it is difficult if not impossible to discern "where the buck stops,"

would handing over legal decision-making to computers and algorithms exacerbate this issue?

Today, the easy answer would be on the humans who inputted the data into the algorithms. In the

future, it may be more difficult to assign blame— "[Artificially intelligent devices] will not be

tools used by humans; they will be machines deployed by humans that will act independently of

direct human instruction, based on information the machine itself acquires and analyzes, and will

often make highly consequential decisions in circumstances that may not be anticipated by, let

alone directly addressed by, the machine's creators" (Vladeck, 2014). Ultimately, without

accountability, would we lose faith in the legal system itself?

Final conclusion

In conclusion, like many areas of society, AI has a beneficial place in the practice of law.

It's cost effectiveness, unparalleled ability to crunch data, and time-saving attributes alone are

making it nearly indispensable for modern law practices. And, in some limited instances,

artificially intelligent jurists could successfully replace human jurists. However, whether

artificially intelligent jurists *should* replace human jurists is fraught with grave questions. Foremost, because they could not employ empathy or detect moral choice and accountability, would artificially intelligent jurists represent a step backwards in the thought of how the law should be applied, stifling the development and the improvement of the law? For now, limitations on the understanding of the human moral thought process, as well as programming limitations, make the question moot.

Implications for Future Research

Based on the information presented in this paper, it would likely require decades of research to fully answer the questions posed. One area that must be understood more is how the biological mind of a human works. Biological processes in the brain that give way to emotions such as empathy and inspiration must be understood. Without this, there is no way to ever program a computer to even comprehend these emotions. Another avenue of research that must be done is the application of legal realism over legal formalism. If AI is going to be introduced to the courts with a purely (and for now, necessarily) formalistic approach, we must discover what we are losing. Yet, another area that requires more research is the function of AI itself. Understanding how this bias is computed and how to prevent it in a computer is critical to understand before we can let these computers act as a legal jurist. While these questions may lead to a better understanding of how artificially intelligent jurists would perform in our legal system, the answers would likely lead to more questions. Judging by the rabbit holes that are revealed upon researching this topic, there are undoubtably many more that we have not yet discovered.

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