TECHNOLOGICAL PREJUDICE: DEMONSTRATING THE ONTOLOGICAL CHALLENGE OF BUILDING A CRITICAL THEORY OF ARTIFICIAL LEGAL INTELLIGENCE

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Abstract

This paper contributes to a theory of artificial legal intelligence (ALI) that harmonizes concerns for artificial intelligence (AI) bias and prejudice with 1) the critical perspective, and (2) Jacques Ellul's critique of the "technological phenomenon". Necessary to this contribution is an argument for the importance of ontology in understanding the multidimensionality of ALI, and critical theory's ability to deal with this multidimensionality. First, the paper introduces critical theory and some of its tenets. My focus then is critical legal studies (CLS) and their contentious relationship with the ontological issue of instrumentality. I emphasize that one way a theory of ALI can engage with this critical theme is through an ontological classification of AI. I propose two classifications: AI as a tool and AI as an ideological phenomenon. Each classification is attributive of a certain autonomy to AI and telling about a potentiality for domination a critical theory of ALI should recognize, deconstruct, and challenge. Ellul's argument that the technological phenomenon is "autonomous" informs this part of my argument. I then discuss the concept of "prejudice" and find that, considering the ontological classifications, prejudice is visible in more than one form. Although the "algorithmic bias" approach is adequate for AI as a tool, it does not account effectively for another form of prejudice rooted in technology. I call it technological prejudice.

Keywords: Artificial Legal Intelligence; Critical theory; Prejudice; Ontology; Technology.

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Résumé

Cet article contribue à une théorie de l'intelligence juridique artificielle (IJA) qui harmonise les préoccupations relatives au biais et au préjudice de l'intelligence artificielle (IA) avec 1) la perspective critique, et 2) la critique de la « technique » énoncée par Jacques Ellul. Cette contribution repose sur un argument soulignant l'importance de l'ontologie dans la compréhension de la multidimensionnalité de l'IJA et la capacité de la théorie critique à tenir compte de cette multidimensionnalité. L'article présente d'abord la théorie critique et certains de ses principes. Je me concentre ensuite sur les études juridiques critiques (CLS) et leur relation conflictuelle avec l'enjeu ontologique de l'instrumentalité. J'insiste sur le fait que l'une des façons dont une théorie de l'IJA peut aborder ce thème critique est à travers une classification ontologique de l'IA. Je propose deux classifications : l'IA comme outil et l'IA comme phénomène idéologique. Chaque classification attribue une certaine autonomie à l'IA et révèle une potentialité de domination qu'une théorie critique de l'IJA devrait reconnaître, déconstruire et défier. L'argument d'Ellul selon lequel la technique est « autonome » éclaire cette partie de mon argumentation. Je discute ensuite le concept de « préjudice » et constate que, compte tenu des classifications ontologiques, le préjudice est visible sous plus d'une forme. Bien que l'approche du « biais algorithmique » soit adéquate pour l'IA comme outil, elle ne rend pas compte efficacement d'une autre forme de préjudice enracinée dans la technique. Je l'appelle le préjudice technique.

Mots-clés : Intelligence Juridique Artificielle ; Théorie critique ; Préjudice ; Ontologie ; Technique.

Introduction

Exponential progress in artificial intelligence (AI) research is engulfing society in a wave of enthusiasm for technology the legal field cannot ignore. Publicly available ChatGPT shows natural language prowess that was unthinkable not so long ago: drafting papers, summarizing literature, writing computer code.[1] Soon, similar software trained with more complete datasets of legal literature may generate reliable assessments of complex fact patterns in legal language, for example, predictions about the outcome of a case, arguments for a particular opinion or judicial reasons. "Lawyering", judging, legislating and other legal activities are not reducible to these tasks, but it is hard to deny that the realm of legal reasoning exclusive to the human mind is getting narrow.

Artificial legal intelligence (ALI) is here,[2] and it triggers a range of reactions in legal

[1] Eva A M van Dis et al, "ChatGPT: five priorities for research" (2023) 614:7947 Nature 224–226 <https://doi.org/10.1038/d41586-023-00288-7> at 224.

[2] In recent years, there has been an explosion of the Legal Tech industry following breakthroughs in artificial intelligence. These new technologies are used both by the private sector as well as by governments. China, among other countries, has "aggressively investigated" judicial applications of AI. Ray Worthy Campbell, "Artificial Intelligence in the Courtroom: The Delivery of Justice in the Age of Machine Learning" (2020) 18:2 Colo Tech LJ 323–350 <https://doi.org/10.2139/ssrn.4425791> at 324.

scholarship, whether it is optimistic, prudent, or skeptical.[3] The critical response is more quiet.[4] Yet, critical theory is a useful framework for assessing the social implications of automating legal tasks with AI technologies and has a role to play in the scholarly response to ALI, even though technology is arguably a blind spot in the current critical field.[5] Contemporary law and technology scholarship too often neglects the critical method and its proposals about technology, namely that technology is a social phenomenon. This is problematic because understanding the relationship between AI and the "technological phenomenon" helps us see through the ideologies that make ALI possible, for instance, that AI and technology are neutral tools.

I suggest that a comprehensive theory of ALI is a critical theory. This paper's main goal is contributing to a theory of ALI that harmonizes concerns for AI bias and prejudice, namely the preoccupation with "algorithmic bias" and "automation bias", with 1) the tenets of critical theory, and (2) Jacques Ellul's critique of the "technological phenomenon". Necessary to this contribution is an argument for the importance of ontology in understanding the multidimensionality of ALI, and critical theory's ability to deal with this multidimensionality. I examine an *ontological issue* that transpires in critical legal studies (CLS), and then wonder about the challenge of attending to ontology in another context: that of artificial legal intelligence and its potential for prejudice. By ontology, I here mean an engagement with the question of what something (in our case, law, or

[3] See for example Sandra Wachter, Brent Mittelstadt & Chris Russell, "Why fairness cannot be automated: Bridging the gap between EU non-discrimination law and AI" (2021) 41 Computer Law & Security Review 105567 <https://doi.org/10.1016/j.clsr.2021.105567>; Eugene Volokh, "Chief Justice Robots" (2018) 68:6 Duke LJ 1135–1192; Richard M Re & Alicia Solow-Niederman, "Developing Artificially Intelligent Justice" (2019) 22:2 Stan Tech L Rev 242–289; Ric Simmons, "Big Data, Machine Judges, and the Legitimacy of the Criminal Justice System" (2018) 52:2 UC Davis L Rev 1067–1118.

[4] Lindgren writes that AI scholarship in general is arguably "not critical enough." Simon Lindgren, "Introducing critical studies of artificial intelligence" in Simon Lindgren, ed, *Handbook of Critical Studies of Artificial Intelligence* (Edward Elgar Publishing, 2023) 1 <https://doi.org/10.4337/9781803928562.00005> at 1.

[5] Feenberg deplores that Habermas and his successors "left behind" the issue of technology. Andrew Feenberg, "Critical theory of technology and STS" (2017) 138:1 Thesis Eleven 3–12 <https://doi.org/10.1177/0725513616689388> at 3. There is however a growing body of critical studies of AI. See Simon Lindgren, ed, *Handbook of Critical Studies of Artificial Intelligence* (Edward Elgar Publishing, 2023).

ALI) *is* relative to us human beings.[6] Such an "ontology" of ALI is, for me, the first step in addressing a topic like "prejudice" in ALI.

The paper unfolds in three parts. First, it introduces critical theory, its legal branch (CLS), and its struggle with the ontological issue of instrumentality. Second, I examine artificial intelligence through a framework of *ontological classifications* informed by the issue above, accentuating the importance of ontology for understanding the multidimensionality of ALI. This exercise shows a critical perspective informed by Ellul's work can reveal artificial legal intelligence in at least two dimensions. Third, I examine the consequences of these findings for understanding prejudice as something ALI perpetuates or generates, all to approach current academic concerns in a new light. I then introduce the concept of technological prejudice.

1. The Critical Perspective

Critical theory has a rich intellectual history. Critical theory first designated a tradition of German social thinkers known as the Frankfurt School.[7] Technology was an important topic for these researchers. Despite them recognizing the close relationship of technology with capitalism, members of the Frankfurt School considered technology "as having its own dynamics" and "an expression of something more pervasive, namely instrumental rationality."[8] Early critical theory draws from Marxism, but tries to adapt it to the conditions of modernity by examining how power

[6] I am of course aware that ontology is more complicated than what I let it seem to be in this paper. Perhaps "ontology" is not the right term, but I think it is the one that comes the closest to what am referring to, which is the study of *what* "things" *are* relative to us human beings, how we influence them, and vice versa.

[7] Theorists like Max Horkheimer, Theodor W. Adorno and Herbert Marcuse were among its formal members, while others, such as Walter Benjamin, were associated with the program. Thinkers like Jacques Ellul or Martin Heidegger are generally not considered critical theorists per se, yet one can argue their work speaks to the themes and approach of critical theory.

[8] Gerard Delanty & Neal Harris, "Critical theory and the question of technology: The Frankfurt School revisited" (2021) 166:1 Thesis Eleven 88–108 <https://doi.org/10.1177/07255136211002055> at 90.

was exercised in the economic, political and cultural spheres of the twentieth century.[9]

Critical theory now encompasses far more than the Frankfurt School. Over time, critical theory became "the descriptive and normative bases for social inquiry aimed at decreasing domination and increasing freedom in all their forms."[10] Today, we are conscious of several forms of domination based on ethnicity, gender identity, sexual orientation, and social status, among others, issues that are the focus of multiple traditions of critical study that sprawled from the original Frankfurt stream and other social intellectual movements. Common to all of them is their grounding in the social sciences and humanities and a desire to not only describe social problems but address them. Critical studies question the neutrality of phenomena like AI or technology by arguing they are "political" and "driven by ideology."[11]

Law is one of these phenomena critical theory inquires. The critical approach to law is called critical legal studies (CLS) and it includes or relates to fields like feminist legal theory, critical race theory, queer theory, and post-colonial theory. The CLS movement (like critical theory) is not a monolith, and many who have identified with this tradition "resist or reject efforts to systematize their own work."[12] For this reason, our study speaks to critical theory in general as a method and approach to social topics such as law. But if we would have to explain the CLS argument, we could say it is, among other things, an ontological engagement with the thing that is "law". For Russell, "[a] major aspect of the CLS project is its analysis of the nature and function

[9] Ben Agger, "Critical Theory, Poststructuralism, Postmodernism: Their Sociological Relevance" (1991) 17:1 Annual Review of Sociology 105–131 <https://doi.org/10.1146/annurev.so.17.080191.000541> at 107. Critical theory is also grounded in sociology and psychoanalysis.
[10] Olli-Pekka Moisio, "Critical Theory" in Anne L C Runehov & Lluis Oviedo, eds, *Encyclopedia of Sciences and Religions* (Dordrecht: Springer Netherlands, 2013) 558.
[11] Lindgren, *supra* note 4 at 17.
[12] The Bridge, "Critical Theory: CLS Movement", online: <https://cyber.harvard.edu/bridge/CriticalTheory/critical2.htm>.

of law in modern Western society."[13] Implicit to this aspect of CLS are, I argue, ontological questions like: is law an autonomous system? Who or what influences it? How does it influence us?

We see this in how CLS deals with one issue key to Marxist thought: the instrumentality of law and the capacity of agents to direct and benefit from this instrumentality. It is generally accepted that CLS is skeptical about the instrumentality of law. Critical legal theories express doubt that law is an objective entity that operates outside of a moral order.[14] CLS reject Marx's instrumental approach to law that sees law as an instrument serving the interests of the ruling class,[15] and also the functional approach to legality, according to which "law is conceived as a social technology serving a given function."[16] This is because CLS reject the determinacy of law in favor of law as a "complex social totality."[17] From a critical perspective, law is not a neutral and defined entity, but a diffuse aggregate intertwined with ideologies and politics.

Some critical scholars nevertheless suggest that law is a tool or can be "instrumentalized". According to this instrumental standpoint, law can be used as a tool to push particular interests (generally those of the ruling class) and maintain power structures, but perhaps also to overturn them.[18] Several critical works indeed claim that the powerful "use" law for their benefit and

[13] J Stuart Russell, "The Critical Legal Studies Challenge to Contemporary Mainstream Legal Philosophy" (1986) 18:1 Ottawa L Rev 1–24 at 8.
[14] See Roberto Mangabeira Unger, "The Critical Legal Studies Movement" (1983) 96:3 Harvard Law Review 561–675 <https://doi.org/10.4135/9781452218427.n164> at 565.
[15] Andrew Vincent, "Marx and Law" (1993) 20:4 JL & Soc'y 371–397 at 384 <https://doi.org/10.2307/1410207> at 384.
[16] Corrado Roversi, "Ontology of Law" in Mortimer Sellers & Stephan Kirste, eds, *Encyclopedia of the Philosophy of Law and Social Philosophy* (Dordrecht: Springer Netherlands, 2018) 1 at 5.
[17] Russell, *supra* note 13 at 22. For CLS, legal doctrine and principles are indeterminate phenomena that contribute to "illegitimate social hierarchies". The Bridge, *supra* note 12.
[18] See Richard W Bauman, *Critical Legal Studies: A Guide To The Literature* (New York: Routledge, 2021) at 203; "critical legal theory", online: LII / Legal Information Institute <https://www.law.cornell.edu/wex/critical_legal_theory>; E Dana Neacsu, "CLS Stands for Critical Legal Studies, If Anyone Remembers" (1999) 8:2 JL & Pol'y 415–454 at 423.

envision law as a "tool" to overcome oppression.[19] Keywords like "use", "means", "utilize", "abuse" or "exploitation" are for me linguistic claims that law is tangible enough to be instrumentalized.

Instrumentality is an ontological issue, and it is at the heart of CLS because critical theory challenges power structures. For law to be something that can be "instrumentalized", there needs someone or something that does the "instrumentalizing": this someone or something has *power*. An instrumental conception of law presupposes agents can influence law to their benefit. By rejecting this view in large measure, CLS makes it possible to imagine that society is not a simple *zero-sum power game* according to which groups of interest, or agents, control structures of power with law and benefit from them being the way they are at the expense of other groups who are powerless. This does not mean CLS denies the existence of social groups and any possibility of them influencing law. In the fundamental CLS framework, privileged interest groups benefit from the apparent neutrality and objectivity of law, while the underprivileged are at a disadvantage.[20] Even within the Frankfurt School, which perception "lends itself naturally to the Foucauldian constitutive view of power", "there is a tendency to revert to an agent-centred, episodic view of power."[21] "Critical Theorists base their conceptions of *domination* on sociological insights into complex systemic forces", however, "their views of *power* often remains the agent-centred, episodic conception typical of mainstream political philosophy."[22]

This shows that law is an ontologically challenging issue. The critical perspective addresses

[19] See for example Janet Rifkin, "Toward a Theory of Law and Patriarchy" (1980) 3 Harv Women's LJ 83–96 at 95; Courtnee Melton-Fant, "New Preemption as a Tool of Structural Racism: Implications for Racial Health Inequities" (2022) 50:1 Journal of Law, Medicine & Ethics 15–22 <https://doi.org/10.1017/jme.2022.4> at 18; Daria Roithmayr, "Introduction to Critical Race Theory in Educational Research and Praxis" in Laurence Parker, Donna Deyhle & Sofia Villenas, eds, *Race Is...Race Isn't* (Routledge, 1999) <https://doi.org/10.4324/9780429503504-1> at 5.
[20] Legal Information Institute, *supra* note 18; The Bridge, *supra* note 12; Bauman, *supra* note 18 at 203.
[21] Mark Haugaard & Maeve Cooke, "Power and critical theory" (2010) 3:1 Journal of Power 1–5 <https://doi.org/10.1080/17540291003647530> at 2.
[22] *Ibid.*

this complexity through nuanced ontological standpoints with the concern of not denying humankind all its agency. CLS is a testament to how important it is to qualify what law, or any other social phenomenon, *is* before moving on to any conclusion about this phenomenon. Such an ontological engagement is for me what, among other things, makes up the specificity and potency of critical frameworks.[23] The critical perspective deals with social phenomena at the ideological level. Artificial legal intelligence is, like law, a complex social phenomenon. Therefore, a theory of ALI also benefits from the critical perspective and its ontological engagement. Critical studies are "much deeper-cutting" than other research works that are sometimes "conducted in close proximity to the technological and economic processes where AI is produced."[24] We will later see that critical lens is also helpful in making sense of "prejudice" and "bias" in ALI.

Before we get there, we must determine what a critical ontological engagement with ALI looks like. Like CLS, a critical theory of ALI should deal with the ontological issue of instrumentality and engage with oppressive structures on the ideological level. Instrumentalism assumes power is something human beings, interest groups, social classes or other agents can *have* and *use*, perhaps with the help of tools such as law and technology, and that this power benefits them at the expense of other entities. I contend that with ALI, an instrumental conception and a commitment to a "zero-sum power game" view blind us to a form of ideological domination characteristic of technology. Because law and technology scholarship is too rarely "critical", ALI is too often conceptualized as a neutral "tool" we design according to our needs. I fear that even a critical perspective on ALI is at risk of "instrumentalizing" ALI by concluding that it is only a servant to other oppressive power structures like patriarchy, racism, colonialism, or capitalism,

[23] See Lindgren, *supra* note 4 at 17–18 for what he considers to be "key tenets of critical AI studies".
[24] *Ibid* at 1–2.

disregarding the possibility of technology being its own powerful force of power or "agent".

The next section argues that no matter one's view on these matters, a classification of what ALI *is* relative to us is the starting point of a comprehensive theory of ALI. We need to address ALI ontologically if we want to determine whether it can be "instrumentalized", in other words, whether anyone or anything can have power over it like we often assume. An engagement with these questions is the building block of any critical framework, and I argue the critical approach, as well as the work of Ellul, are useful in making sense of ALI's multidimensionality.

2. A Critical Ontological Engagement with Artificial Legal Intelligence

In philosophy, ontology is the study of being.[25] Ontology explores questions such as what things exist, how we classify them and how they relate to each other. The ontological problem in legal theory addresses the nature of law, its properties, its domain, and its distinctive characteristics.[26] Roversi, for instance, distinguishes five approaches to "legality" (the features of what is legal), notably the "function" approach which conceives of law as a tool and relates to the "artifactual conception of law", and the "power" approach which sees law as "inextricably bound up with mechanisms of coercion".[27] In many ways CLS speaks to the ontology of law. Now, if artificial legal intelligence is the intersection of law and artificial intelligence, a comprehensive theory of ALI should focus not only on the ontology of law but on the ontology of artificial intelligence too.

I shall center on AI[28] and discuss two of the "categories" we can understand AI to *be* and what aspects and stages of AI technology these *ontological classifications* may be appropriate for.

[25] See my note above for the justification of why I choose to use this term.
[26] See Roversi, *supra* note 16 at 1.
[27] *Ibid* at 5.
[28] My ontological framework classifies "AI" as opposed to "ALI" because the following observations apply to any application of artificial intelligence.

There are examples of similar classifications in critical literature: Mohamed and peers distinguish "AI as object" ("the applications of AI research", "its products and predictions") from "AI as subject" ("the structures that support it", "data, networks and policies");[29] Waelen speaks of "AI systems as objects" and of "AI systems as subjects".[30] Both sets of classifications are useful, but I think they are incomplete for the purpose of this paper, although they highlight dimensions of AI we do not describe here. Mohamed and peers separate the material applications of AI from its more structural dimension and consider what AI is relative to us, but seem to submit AI to other structures, denying its autonomy as a phenomenon. Waelen attributes AI a degree of agency, but only focuses on AI as material artifacts (systems).

The two ontological classifications I suggest are *tool* and *ideological phenomenon*. Each classification, or standpoint, attributes AI a different level of autonomy from human will and control. They reconcile instrumentalism with critical conceptions of technology and Ellul's idea of the "autonomous technological phenomenon". My point is not that AI is a tool or an ideological phenomenon. Rather, both classifications are justifiable given that we consider different dimensions of artificial intelligence and stages in its development. I contend they grant us agency over AI while acknowledging it is beyond our control in some regards.

First, one can conceive of *AI as a tool*.[31] We could describe this ontological classification as a materialist and functionalist approach to artificial intelligence. According to AI as a tool, legal AI technologies, techniques, and methods are artifacts that can be used by lawyers, judges, lawmakers, the legal field, or even society to achieve certain ends, whether it is to augment human

[29] Shakir Mohamed, Marie-Therese Png & William Isaac, "Decolonial AI: Decolonial Theory as Sociotechnical Foresight in Artificial Intelligence" (2020) 33:4 Philos Technol 659–684 <https://doi.org/10.1007/s13347-020-00405-8> at 672.
[30] Rosalie Waelen, "Why AI Ethics Is a Critical Theory" (2022) 35:1 Philos Technol 9 <https://doi.org/10.1007/s13347-022-00507-5> at 1.
[31] Law and technology literature often calls AI systems "tools". See for example Re & Solow-Niederman, *supra* note 3 at 285; Simmons, *supra* note 3 at 1070; Volokh, *supra* note 3 at 1156; Campbell, *supra* note 2 at 326.

capacities for legal research and writing, resolve complex legal problems, provide access to justice, and more. "Artifacts are objects intentionally made to serve a given purpose" and include what we know as "tools", among other things.[32] AI as a tool implies a high level of power, influence and control by humanity over AI because considered as a tool, AI refers to the computers and algorithms as artifacts at the disposal of the ends of whoever uses them.

To recapitulate AI as a tool is an ontological classification of artificial intelligence. It is a materialist conception of what AI *is* relative to us, since it presupposes that because AI is an artifact, we can subject it to our will. If we take the standpoint of AI as a tool, the impact of AI on law seems predictable and controllable given that we develop ALI responsibly. But AI is not always understood in a way that reduces it to a thing we can use for particular ends, which leads us to the second ontological classification: *AI as an ideological phenomenon*.

Modern AI systems produce output that resembles human behavior, in the sense that AI of a certain sophistication does not just execute commands, it engages in thinking, problem-solving, creation, conversation, learning and relationships.[33] And this behavior sometimes features "emergent properties".[34] Given this, it seems appropriate to understand "artificial intelligence" as an intangible phenomenon; perhaps we perceive it as "the display of intelligence in machines." Pushing this argument further, we could conceive that not only AI is a phenomenon, this phenomenon appears to us as such because of ideology. What I mean here is that necessary to our understanding of AI as "the display of intelligence in machines" is the acceptance of a set of ideas about intelligence. In the light of this, AI is revealed as more than a material tool; rather, AI appears as the manifestation of an ideology in everyday material reality: an ideological phenomenon. An

[32] Lynne Rudder Baker, "The ontology of artifacts" (2004) 7:2 Philosophical Explorations 99–111 <https://doi.org/10.1080/1386979041000169446 2> at 99.
[33] According to some, AI can even produce art.
[34] Volokh, *supra* note 3 at 1167.

ideology is "a systematic body of concepts especially about human life or culture."[35] A phenomenon is "an observable fact or event",[36] "[a] thing which appears, or which is perceived or observed".[37] AI as an ideological phenomenon understands AI as the observable manifestation of an ideology.

We do not control this ideology, so in the context of law, the more ALI improves, the more it may become unpredictable, misunderstood and seemingly or actually capable of "autonomously" changing law. If ALI is autonomous (we will explore this idea in more detail), we also lose our sense of control of ALI's impact on law. It is only natural, then, that our ontological perspective on what ALI *is* relative to us changes, that as AI technologies progress it becomes difficult to justify a classification of AI as a tool. AI as an ideological phenomenon is the recognition that artificial intelligence happens more than we make it happen. According to this classification, legal automation is an ideological event, not a policy.

Tool and *ideological phenomenon*. Two ontological classifications of AI implying different levels of autonomy for AI and different interactions of artificial intelligence and law. I hastily defined ALI as the intersection of law and artificial intelligence, yet we have not yet discussed what ALI has to do with "technology". Technology is an important theme in early critical theory and is the missing piece of our present task, which is making sense of ALI ontologically. By questioning how the concepts of "AI" and "technology" intersect within the ontological classification framework, we shall understand "AI as an ideological phenomenon" better.

One way to approach this intersection is considering the ideological phenomenon of

[35] *Merriam-Webster* (2024) sub verbo "ideology", online: <https://www.merriam-webster.com/dictionary/ideology>.
[36] *Merriam-Webster* (2024) sub verbo "phenomenon", online: <https://www.merriam-webster.com/dictionary/phenomenon>.
[37] *Oxford English Dictionary* (Oxford University Press, 2023) sub verbo "phenomenon", online: <https://www.oed.com/search/dictionary/?scope=Entries&q=phenomenon>.

artificial intelligence as a technological phenomenon. Such a claim might not strike as a radical proposition.[38] After all, we often associate the expression "artificial intelligence" with the word "technology" in everyday conversation. In building a comprehensive theory of ALI, however, saying AI is a technological phenomenon matters because critical theory of technology reveals dimensions of domination invisible to AI as a tool. Critical theory of technology challenges our conception of what technology is, suggesting it is a lens through which we see ourselves and our world.[39]

A critical theory of ALI speaks to the complexity of artificial intelligence, law and technology, including the power dynamics associated with them. And I argue domination or power manifest differently depending on *what* we understand AI to be relative to us, therefore a comprehensive theory of ALI takes each ontological classification into account. CLS and other branches of critical theory engage ontologically with topics like instrumentality. A critical theory of ALI does the same because, like law and other objects of critical study, ALI is "a complex social totality".

At last we can picture the role "prejudice" plays in our study. If we recall the previous section, power is a central critical theme in the sense that critical theory questions who or what can exercise or impose its will over who or what, and who or what benefits from these dynamics. The ontological issue of instrumentality is crucial to the challenge of structures power because "artifacts" or "phenomena" like law or technology can play a role in establishing, perpetuating or even addressing domination. Prejudice reflects power structures of domination based on sex,

[38] See, however, Lindgren who writes that "AI is not only a technological phenomenon. It is *co-produced* at the intersection of the social and the technical." Lindgren, *supra* note 4 at 17. While this is a valid reminder by Lindgren, I think we must nevertheless consider the possibility that AI is, in large part, technological because technology is the most dominant of ideologies. Accepting such a claim does not entail AI is non-social and non-ideological.

[39] Heidegger sees technology as a "mode of revealing." Martin Heidegger, "The Question Concerning Technology" in *The Question Concerning Technology and Other Essays* (New York & London: Garland Publishing, 1977) at 13.

ethnicity, social status, and so on, but I contend there is a distinct form of prejudice specific to AI and technology.

The two ontological classifications we discussed each allow one understanding of prejudice as propagated or generated by ALI. If we first think of AI as a tool, it makes the most sense to see AI as a neutral vehicle for the biases that already make up or imbue the law. Follows from this instrumental conception of prejudice that one implication of ALI is a faster and unaltered spread of prejudicial ideas across the law, since AI enhances standardization. I think this view is compatible with the "algorithmic bias" approach. Law and technology scholarship has been effective in recent years to highlight the prejudice and biases that imbue the data used to train ALI systems (case law, incarceration rates, crime rates, recidivism rates, etc.), as ALI has been limited mostly to predictive tools of little "intelligence". Correlations and trends in historical data manifest in their output. AI as a tool is an appropriate ontological classification of "predictive tools".

But with new technologies like ChatGPT independently displaying eerie signs of "intelligence", the "tool" classification becomes increasingly reductive and decreasingly useful. Why? Because such a classification overlooks that in some regards, ALI may be an ideological event happening beyond our control instead of a means we are creating for ourselves. This phenomenon is autonomous to the extent that ALI is its own ideological project fulfilling itself in the material AI technologies we see today. Leading us to my claim that considering the possibility of AI's autonomy[40] is the first step towards making sense of AI as an ideological phenomenon and realizing that AI may not be a neutral vehicle for prejudice after all. Ellul helps us see what "autonomy" means when talking about technology:

> "An autonomous technology. This means that technology ultimately depends only on itself, it maps its own route, it is a prime and not a secondary factor, it

[40] We find a similar claim in CLS with regard to law. Bauman, *supra* note 18 at 204.

> must be regarded as an "organism" tending toward closure and self-determination: it is an end in itself."[41]

The French thinker goes as far as claiming technology "conditions" social, political and economic changes.[42] Coming back to ALI in light of Ellul's proposition leaves one to imagine ALI as a technological phenomenon, as an "organism", serving its own self-determination. Artificial legal intelligence, in this scenario, does not submit to political or economic factors, let alone to social groups and their will. This includes the oppressive power structures we usually associate with prejudice. AI as a tool presupposes the neutrality of technology in such a way that it concludes that the power over neutral artificial intelligence must belong to the technicians or companies who create it. Taking AI as an ideological phenomenon into account, a critical theory of ALI looks for power and prejudice not only in material places such as companies (Google, Microsoft, and so on), governments or human agents (data scientists, directors, politicians), but in ALI as an ideological phenomenon.

A critical theory of ALI must consider AI as an ideological phenomenon because otherwise the framework cannot answer new AI capabilities and behavior that are irreconcilable with a "tool" classification. If, as law and technology scholars, we only focus on the material proponents of ALI, like technological companies or the state, ignoring ideologies, we may overlook that ALI fosters domination in another way; early critical theory speaks to this domination characteristic of technology. AI as an ideological phenomenon opens a theory of ALI to the insights of critical theory of technology and to Ellul's proposal that technology may serve no end other than its own

[41] Jacques Ellul, "The 'Autonomy' of the Technological Phenomenon" in Robert C Scharff, ed, *Philosophy of Technology: The Technological Condition: an Anthology* (Newark, US: John Wiley & Sons, Incorporated, 2014) at 430.
[42] Jacques Ellul, *La technique ou l'enjeu du siècle* (Paris: Economica, 2008) at 142; Ellul, *supra* note 41 at 436.

self-determination.

According to the ontological classification framework, ALI nurtures domination on at least two levels. AI as a tool poses that ALI systems are artifacts we can control and predict. AI as a tool also implies that the designers of these technologies can use them to assert their will over society according to the rules of a zero-sum power game. In this scenario, AI does not inherently serve certain power structures or ideologies; it can be neutral. This conception justifies the position that as a society, we have the duty to ensure artificial intelligence is developed in compliance with ethical standards and trained with unbiased data. What matters then is that the stakeholders of technological development work for the public good.

The ontological standpoint of AI as an ideological phenomenon raises another possibility informed by the critical perspective: that no identifiable group or individuals in society have power over technology. In that scenario, power is found in ideologies that serve themselves at the expense of humankind with no clear (human) winner of the game, although some human beings may win or lose more than others. Economically speaking, of course it seems ALI benefits some groups more than others, but if it is not a neutral tool, if nobody can *use* it per se, then we should worry about whether ALI will ultimately benefit anyone's freedom in the long term. The zero-sum power game is an inadequate model if such a future awaits us.

A critical theory of artificial legal intelligence is informed by both AI as a tool and AI as an ideological phenomenon. Disregarding AI as an ideological phenomenon can make a conceptualization of ALI oblivious to a domination that is subtle but most threatening to the human condition. Ignoring AI as a tool is also a mistake because doing so, we deny ourselves any sense of agency over AI and technology in its dimensions that are perhaps controllable. A critical theory of ALI deconstructs the false sense of control we have over our technological reality, without,

however, making impossible any way out of it. Such a theory should help deal with "practical" issues, so we shall now proceed to a case study. The concept of "prejudice" makes for a perfect example because AI's "potential for 'bias'—or, rather, discrimination, exclusion, and oppression" is an important concern in critical studies of AI.[43] Beginning with a discussion of prejudice in general, we will then move on to a demonstration of how the ontological classification framework reveals prejudice in ALI through two dimensions, both of which a critical theory of ALI should recognize, deconstruct, and challenge.

3. Technological Prejudice

The word "prejudice" originates from Old French *prejudice*, Medieval Latin *prejudicium* and Latin *praeiūdicium*, words made of the prefix *pre* and *prae*, "before", and of the root *judicium* or *iūdicium*, "judgement, sentence".[44] Together, these parts of the Latin word for prejudice mean judicial examination before trial, preceding decision, opinion formed in advance, preconception.[45] In the fourteenth century, prejudice came to mean injury, detriment, damage, and then preconceived opinion.[46] These definitions are similar to contemporary ones, according to which prejudice is "an unfair and unreasonable opinion or feeling, especially when formed without enough thought or knowledge",[47] "an unreasonable dislike of or preference for a person, group, custom, etc., especially when it is based on their race, religion, sex, etc.",[48] "a feeling of like or

[43] Lindgren, *supra* note 4 at 16.
[44] *Oxford English Dictionary*, (Oxford University Press, 2023) sub verbo "prejudice", online: <https://www.oed.com/search/dictionary/?scope=Entries&q=prejudice>; Douglas Harper, *Online Etymology Dictionary* (2024) sub verbo "prejudice", online: <https://www.etymonline.com/word/prejudice>.
[45] *Ibid.*
[46] Harper, *supra* note 44.
[47] *Cambridge Dictionary* (Cambridge University Press, 2024) sub verbo "prejudice", online: <https://dictionary.cambridge.org/dictionary/english/prejudice >.
[48] *Oxford Advanced Learner's Dictionary* (Oxford University Press, 2024) sub verbo "prejudice", online: < https://www.oxfordlearnersdictionaries.com/us/definition/english/prejudice_1?q=prejudice>.

dislike for someone or something especially when it is not reasonable or logical",[49] or "an adverse opinion or leaning formed without just grounds or before sufficient knowledge."[50] Prejudice is a concept similar to "bias", but we can distinguish "prejudice" from "bias" on the basis that prejudice is typically given a negative connotation. Bias is a more neutral term referring to "[a] tendency, inclination, or leaning towards",[51] while prejudice is an unreasonable judgment at the expense of something or someone.

Bias is already an important topic in law and technology scholarship: one only must think of concepts like "algorithmic bias" or "automation bias". In recent years, "algorithmic bias" has drawn much interest in law and technology scholarship.[52] Empirical studies show that judicial predictive algorithms produce unfair outputs in repetition, reflecting systematic prejudice against certain groups of people.[53] Algorithmic bias thus enables several forms of prejudice, including racism, sexism, nationalism, discrimination based on gender identity, etc.

If we consider the ontological classifications framework, the problem of "algorithmic bias" as I define it is best addressed through AI as a tool because under that classification, AI is a vehicle for bias that can prejudice individuals on a variety of grounds. Because predictive AI "tools" infer decisions from past data rather mechanically (or mathematically), it is reasonable to conclude that

[49] *The Britannica Dictionary* (2024) sub verbo "prejudice", online: <https://www.britannica.com/dictionary/prejudice>.
[50] *Merriam-Webster* (2024) sub verbo "prejudice", online: <https://www.merriam-webster.com/dictionary/prejudice>.
[51] *Oxford English Dictionary*, (Oxford University Press, 2023) sub verbo "bias", online: <https://www.oed.com/dictionary/bias_n?tab=meaning_and_use#21580744>.
[52] Michael Klipphahn-Karge, Ann-Kathrin Koster & Sara Morais dos Santos Bruss, "Introduction" in Michael Klipphahn-Karge, Ann-Kathrin Koster & Sara Morais dos Santos Bruss, eds, *Queer Reflections on AI* (Routledge, 2023) <https://doi.org/10.4324/9781003357957-1> at 8.
[53] COMPAS makes assessments about the likelihood of recidivism and misconduct on the basis of risk scales designed using "behavioral and psychological constructs that are of very high relevance to recidivism and criminal careers."equivant, Practitioner's Guide to COMPAS Core at 30. The predictive system COMPAS is a good example of "algorithmic bias" because investigators found out the system is more likely to conclude, on the basis of discriminatory sentencing history, that black defendants will reoffend than white defendants. Julia Angwin et al., "Machine Bias", *ProPublica* (23 May 2016), online: <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>.

the bias and prejudice lie in the data and that AI systems only perpetuate them.[54] Like a disease which needs a host to spread and evolve, bias finds refuge in neutral AI systems to reproduce, the AI system being in the scenario of ALI a channel for the replication and amplification of historical trends of bias and prejudice in human law. Current ALI fulfills minor judicial or administrative tasks (calculating risk of recidivism, managing caseload, etc.), so ALI does not appear like an ideological "force" or "agent" that overtakes the decision-making process. In these circumstances, AI as a tool feels right.

According to this first conception of prejudice, the danger of ALI is that it cements existing bias and prejudices into trends of decision-making. "Algorithmic bias" in itself is not prejudice, though, because AI as tool assumes that machines cannot make prejudicial judgments like humans do. What is the place "automation bias" in the present discussion? Automation bias is "the tendency to over-rely on automation", "to over-accept computer output".[55] Automation bias is observable in our dealings with machines such as ALI systems; it is a symptom of our ever-growing faith in machines. Like algorithmic bias, the automation bias approach presupposes AI as a tool and trusts we have a choice to rely on automation, or not, although this concept hints at the possibility that some sets of beliefs support our tendency to favor automated decision making. Still, we attribute automation bias to us, not to the automated system.

With only "algorithmic bias" and "automation bias" on the table, there is a gap in the understanding of prejudice as something ALI generates, not as a tool, but as an ideological phenomenon. Consider the above analogy which compares prejudice with the spread of diseases.

[54] In the context of judicial automation, we might consider, for instance, a criminal case law that is historically discriminatory against people of color.

[55] Kate Goddard, Abdul Roudsari & Jeremy C Wyatt, "Automation bias: a systematic review of frequency, effect mediators, and mitigators" (2012) 19:1 Journal of the American Medical Informatics Association 121–127 <https://doi.org/10.1136/amiajnl-2011-000089> at 121.

According to that analogy, given that we conceptualize AI as a tool, AI (understood as the material AI systems) is a neutral vehicle for the transmission and reproduction of the prejudice "disease"; AI is not thought to be harmful in itself. The neutral, objective AI system falls victim to bias, like a living organism hosts a disease against its will.

AI as an ideological phenomenon raises the possibility that AI, or technology, may, in fact, be the disease. As an ideological phenomenon, AI is the manifestation of an ideology we can trace back at least to the beginning of AI research: AI research indeed begins with an implicit theoretical orientation which determines what is a successful AI system as well as where researchers should seek intelligence.[56] Models of AI research can only be simplifications (this is what "model" means) of cognitive mechanisms because none of neuroscience, psychology, cognitive sciences, or philosophy claim to understand "intelligence" in full.[57] The theorizing behind AI research entails choices or preferences relying on insufficient information about how our minds work because artificial intelligence did not wait for neuroscience or other sciences of the mind to be "complete" to make its first steps (this being, of course, impossible).[58]

So what is *technological prejudice*? Technological prejudice is an irrational preference for "rational" thinking and efficiency at the expense of other forms of cognition, values, and methods for approaching problems, with no regard for the possibility that these discarded dimensions of

[56] Russell and Norvig explain that a few theoretical approaches ground AI research, each of them with a different goal: the rational agent approach is looking to create a being "that acts so as to achieve the best outcome", the cognitive modeling approach wants to mimic the way the human mind functions, etc. Stuart Russell & Peter Norvig, *Artificial Intelligence: A Modern Approach* (Pearson, 2010) at 1–5. For Agre, what matters to AI people is how concepts related to intelligence (reasoning, planning, learning, etc.) "can be defined in formal terms that permit suitably narratable systems to be designed". Philip E Agre, "Toward a Critical Technical Practice: Lessons Learned in Trying to Reform AI" in Geoffrey Bowker et al., eds, *Social Science, Technical Systems, and Cooperative Work* (Psychology Press, 1998) at 139–40.

[57] In a fierce piece, Noam Chomsky and peers claim that ChatGPT relies on a model that simplifies human mind and language, placing "significant limitations" on what they can achieve. Noam Chomsky, Ian Roberts & Jeffrey Watumull, "Noam Chomsky: The False Promise of ChatGPT", *The New York Times* (8 March 2023), online: <https://www.nytimes.com/2023/03/08/opinion/noam-chomsky-chatgpt-ai.html>.

[58] In some regards, artificial intelligence research *is* the study of intelligence. Indeed "[m]any of the founders of AI were psychologists, and they explained the field in terms of computer modeling of human thought processes." Agre, *supra* note 56 at 135.

thought are integral parts of our identity as human beings. Technological prejudice is the spurn of ideas that belong to the "irrational", the "illogical", the "unreasonable". Unlike automation bias that has the connotation of a relatively harmless inclination *for* machines with neutral consequences, technological prejudice is a much deeper preconception that happens at the expense of our existence as free beings. Unlike algorithmic bias, technological prejudice in AI is not specific to how given AI systems are programmed and harmful only to some categories of people; rather, technological prejudice is intrinsic to AI as an ideological phenomenon and griefs humankind in its capacity to process reality freely. Technological prejudice is a critical concept that attributes agency and autonomy to technology.

To make sense of this, let us turn to Ellul, who we discussed already, and Herbert Marcuse, a critical theorist. Ellul defines the technological phenomenon (or *technique*) as "la préoccupation de l'immense majorité des hommes de notre temps, de rechercher en toutes choses la méthode absolument la plus efficace."[59] Technique is for Ellul a modern event concerned with efficiency across all spheres of human activity. The technical approach to work, for instance, seeks the greatest possible efficiency in action by replacing "natural" and "spontaneous" effort with a combination of acts that aim to maximize return.[60] For Ellul, technique has become "the one best way" in that we have no other choice than the most efficient one.[61] According to this mode of thinking, every technical activity is by default superior to every non-technical activity.[62] To put it otherwise, technique removes all possibilities for a choice of method to achieve a result: "[l]e choix

[59] Ellul, *supra* note 42 at 29. In the English translation of his work *La technique ou l'enjeu du siècle*, the technical phenomenon is defined as "the quest of the one best means in every field." Jacques Ellul, *The Technological Society* (New York: Vintage Books, 1964) at 21.
[60] Ellul, *supra* note 42 at 27.
[61] *Ibid* at 90.
[62] *Ibid* at 93.

est fait *a priori*."[63]

Both in French and English, "a priori" means "being without examination or analysis", "formed or conceived beforehand."[64] And critical theorist Herbert Marcuse uses the same language when he writes "[t]he science of nature develops under the *technological a priori* which projects nature as potential instrumentality, stuff of control and organization."[65] "The technological *a priori* is a political *a priori* inasmuch as the transformation of nature involves that of man, and inasmuch as the 'man-made creations' issue from and re-enter a societal ensemble."[66] For Marcuse, language has become one-dimensional, therefore, words and their meanings are classified, distinguished, kept apart in a way that closes access to a "realm of knowledge beyond common sense and formal logic."[67] Frameworks such as mathematics determine what is a valid statement about the world. We accept their authority a priori and thus they are unquestionable starting points for any knowledge on any matter.

Without speaking of prejudice in explicit terms, Ellul and Marcuse describe technology as a carrier of preconceived ideas that hinder true freedom of choice. Marcuse and others use terms like "common sense", "formal logic", "pure reason", or "technological rationality" to designate the modes of thought that so bind modern life along a predefined course. If we give these theories credit, and subscribe to the idea that technology is a phenomenon characterized by an original prejudice for efficiency, rationality and so on, and that ALI is a technological phenomenon, what

[63] *Ibid* at 94.
[64] *Merriam-Webster* (2024) sub verbo "a priori", online: <https://www.merriam-webster.com/dictionary/a%20priori>; *Larousse* (2024) sub verbo "a priori", online: <https://www.larousse.fr/dictionnaires/francais/a_priori/4822>.
[65] Herbert Marcuse, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (London: Routledge, 2013) <https://doi.org/10.432> at 157.
[66] *Ibid.*
[67] *Ibid* at 186.

role does ALI play in technological prejudice?

Artificial legal intelligence, considered as an ideological phenomenon, *is* technological prejudice. It is in the sense that ALI is the application of technological rationality and efficiency to intelligence made manifest in physical technologies. Artificial legal intelligence applies technological rationality to law. In that sense, ALI is not a "tool" or a means, but an end, an end that is prejudicial to the extent that we assume ALI is possible or desirable at all. By pursuing ALI, we favor (willfully or not) a specific type of legal logic and reasoning over others. This legal logic is the one of computers, formal logic as it were. Technological prejudice is about favoring machines over biological minds in all situations, whether our justification for this is that machines are faster, more efficient, more objective, and so on, no matter if these justifications are reasonable. The irony of technological prejudice is that it is an irrational judgment about rationality. We can say, then, that technological prejudice entails automation bias without being limited to it. Contrary to automation bias, which we see in ourselves, it is unclear whether technological prejudice is in us or rather belongs to technology as an external and autonomous entity. If it is not autonomous, then we, as a kind, are engaged in a profound prejudice against what makes us who we are.

Settling these questions is beyond the scope of this paper. So is a discussion of the implications of technological prejudice for law. My goal was to draw technological prejudice as an example of what a critical approach to ALI can reveal. From a critical standpoint, technological prejudice is threatening because it predetermines the "choices" we make about the use of technologies like AI in the legal field; technological prejudice closes us off to some forms of knowledge. Technological prejudice deprives us of our freedom to approach legal problems from more than one perspective. Critical theory is about "decreasing domination and increasing freedom in all their forms", therefore it makes technological prejudice visible. And this is only possible if

we acknowledge the ontological dimension of artificial legal intelligence.

Conclusion

This paper began with the desire to set the stage for a theory of artificial legal intelligence that benefits from the critical perspective, on the one hand, and Ellul's insights, on the other, all in an effort to address issues like prejudice with more depth. We first examined critical theory and some of its arguments. In doing so, we discovered instrumentality is an ontological issue of contention in CLS. Our conclusion was that this issue, and ontology at large, matter for the building of a comprehensive theory of ALI. This led us to stress the importance of an ontological discussion about artificial intelligence, because we exposed that thinking of AI as either a "tool" or an "ideological phenomenon" makes it conceivable that ALI generates more than one form of prejudice. Listening to scholars like Ellul and Marcuse, we encounter the supremacy of technology as a phenomenon, an event bigger than artificial intelligence. Technology, it seems, comes with an a priori about our world and knowledge, i.e. with technological prejudice.

Technological prejudice may in fact be so strong that it makes it difficult for us not to imagine ALI as the predetermined future of law. Addressing technological prejudice is urgent, but this is not to say that we should ignore algorithmic bias, automation bias and all the other prejudices of law, artificial intelligence, and technology. This paper stresses that law and technology scholarship should address artificial legal intelligence from as many angles as possible. Critical theory is one of them. One duty of future work about ALI will be to stay attentive to the ontological questions we engage with when we write or speak about AI, so we can leverage them as lenses into the complexity of the power dynamics that underlie artificial legal intelligence. The critical perspective can help in this regard. Our study focused on two ontological classifications, but it is possible to imagine other ones: AI as agent, AI as subject, to name two. Only by taking ontology

seriously, I believe, can we aspire to be more than tools in the face of artificial legal intelligence.