

# Human Brain Plasticity as a Limiting Factor in the Use of Artificial Intelligence as a Tool in Legal Argumentation

*La plasticidad del cerebro humano como factor limitante de la inteligencia artificial utilizada como herramienta en la argumentación jurídica*

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Received: July 13rd, 2025

Accepted: November 10th, 2025

Published: December 10th, 2025

DOI: <https://doi.org/10.22201/ijj.24485306e.2026.2.20416>

**Abstract:** This article explores the cognitive and legal limits of Artificial Intelligence (AI) in the context of legal argumentation, by using a hermeneutic methodology focused on Mexican *amparo* proceedings. While AI has become an increasingly valuable tool for legal professionals, optimizing time and automating tasks such as the drafting of lawsuits, agreements, and legal documents, its capacity to engage in complex legal reasoning remains questionable. This article analyzes whether AI can properly build *conceptos de violación*<sup>1</sup> up, the argumentative core of *Amparo*, which require a deeper axiological and ontological assessment that surpasses algorithmic programming.<sup>2</sup> The central hypothesis of this article is that, despite recent advancements in natural language processing and machine learning, AI cannot replicate human brain plasticity, which allows jurists to interpret, adapt, and argue within ethical, social, and constitutional contexts.<sup>3</sup> Employing a dogmatic and legal-philosophical methodology, this article examines the structure of *Amparo*, the theoretical foundations of legal argumentation, and the cognitive requirements for higher-level legal rea-

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<sup>1</sup> The *conceptos de violación* is a legal argument derived through judicial hermeneutical reasoning in which the complainant bases their petition for protection, indicating how and why they consider that the act complained of is contrary to the human rights recognized in the constitution and/or in international treaties.

<sup>2</sup> JOSÉ RAMÓN COSSÍO DÍAZ, LA ARGUMENTACIÓN JURÍDICA 88 (Fontamara 2003); ROBERT ALEXEY, A THEORY OF LEGAL ARGUMENTATION: THE THEORY OF RATIONAL DISCOURSE AS THEORY OF LEGAL JUSTIFICATION 273 (Ruth Adler & Neil MacCormick trans., Oxford Univ. Press 2010).

<sup>3</sup> ALGORITHMIC TRANSPARENCY AND DECISION-MAKING: CHALLENGES TO ACCOUNTABILITY IN THE EU 204 (Karen Yeung & Martin Lodge eds., Oxford Univ. Press 2021); David García Sarubbi, *El principio pro persona en el Sistema Interamericano de derechos humanos*, 8 ANUARIO DE DERECHOS HUMANOS 137, 138 (2012).

soning.<sup>4</sup> The conclusion is that AI can serve as an instrumental support in legal practice, but it faces inherent limitations when confronted with the axiological and interpretive challenges of constitutional law.

**Keywords:** artificial intelligence in law; legal argumentation; axiology; amparo trials; constitutional remedies; means of constitutional control; cognitive limits of AI; neural plasticity; legal reasonings.

**Resumen:** Este artículo explora los límites cognitivos y jurídicos de la Inteligencia Artificial (IA) en el contexto de la argumentación jurídica, utilizando una metodología hermenéutica enfocada específicamente en el juicio de amparo mexicano. Si bien la IA se ha convertido en una herramienta cada vez más valiosa para los profesionales del derecho, optimizando tiempos y automatizando tareas como la redacción de demandas y contratos, su capacidad para participar en un razonamiento jurídico complejo sigue siendo cuestionable. Este estudio analiza si la Inteligencia Artificial puede construir adecuadamente los *conceptos de violación*, núcleo argumentativo de los juicios de amparo, que requieren una profunda valoración axiológica y ontológica que trasciende la programación algorítmica. La hipótesis central de este artículo sostiene que, a pesar de los recientes avances en el procesamiento del lenguaje natural y el aprendizaje automático, la Inteligencia Artificial no puede replicar la plasticidad del cerebro humano, que permite a los juristas interpretar, adaptar y argumentar dentro de contextos éticos, sociales y constitucionales. Empleando una metodología dogmática y jurídico-filosófica, el artículo examina la estructura del juicio de amparo, los fundamentos teóricos de la argumentación jurídica y los requerimientos cognitivos del razonamiento jurídico de alto nivel. La conclusión es que la IA puede servir como un apoyo instrumental en la práctica jurídica, pero enfrenta limitaciones inherentes cuando se enfrenta a los desafíos axiológicos e interpretativos del derecho constitucional.

**Palabras clave:** inteligencia artificial en el derecho; argumentación jurídica; axiología; juicio de amparo; medios de control constitucional; límites cognitivos de la IA; plasticidad neural; razonamiento jurídico.

**Summary:** I. *Introduction*. II. *Artificial Intelligence and Law: An Emerging Relationship*. III. *Human Brain Plasticity: An Irreducible Capacity*. IV. *Artificial Intelligence in Mexican Legal Practice*. V. *“Conceptos de violación”: the Core of Legal Argumentation in Amparo*. VI. *High-Level Legal Argumentation: Axiology, Ontology and Human Reasoning*. VII. *The Myth of the Algorithmic Jurist*. VIII. *Conclusions*. IX. *References*.

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<sup>4</sup> See generally CHAIM PERELMAN & LUCIE OLBRECHTS-TYTECA, *THE NEW RHETORIC: A TREATISE ON ARGUMENTATION* 45 (Univ. of Notre Dame Press 1969); AULIS AARNIO, *THE RATIONAL AS REASONABLE: A TREATISE ON LEGAL JUSTIFICATION* 75 (Rechtstheorie Supplement 1997).

## I. Introduction

### 1. *Contextualizing the Use of AI in Law*

The technological revolution of the 21st century has profoundly transformed the ways in which societies communicate, learn, and work. One of the most significant advances in this process has been the development of artificial intelligence (AI), a technology that has shifted from academic abstraction to a practical tool used across numerous disciplines. The legal professional field is not the exception.

AI has begun to play an increasingly relevant role in this field. Tasks that were once exclusively performed by human legal professionals, such as case analysis, document drafting, and even outcome prediction, are now being explored, automated, or partially delegated to advanced computational systems. This shift is particularly evident in areas such as the processing of large volumes of legal data (big data), automated document generation, and the identification of jurisprudential patterns.<sup>5</sup> Internationally, companies like ROSS Intelligence, LexisNexis, and Westlaw have developed AI-based platforms that perform legal research within seconds, locating precedents, doctrines, and relevant regulations with increasing accuracy.<sup>6</sup> In Mexico, although development remains at an early stage, several law firms and notaries public have already implemented automated legal assistance systems.

This progress has generated both enthusiasm and legitimate concern regarding the limitations of AI in the legal professional context. While it is evident that such technologies have optimized time and facilitated mechanical procedures, serious doubts persist about their ability to replicate argumentation, particularly in *amparo* proceedings.<sup>7</sup> Thus, reflecting on the role of AI between legal professionals requires not only a technical approach but also a critical evaluation through the lenses of legal philosophy and argumentation theory.

### 2. *Hypothesis: The Limits of AI in Legal Argumentation*

AI has shown remarkable advancements in the automation of repetitive tasks, classification of legal data, and even the generation of standardized legal documents. However, it cannot replace the argumentative capacity of human beings, especially in contexts that require axiological interpretation, ontological

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<sup>5</sup> ALGORITHMS AND LAW 12-17 (Martin Ebers & Susana Navas, eds., Cambridge Univ. Press 2020); WOODROW BARFIELD, ADVANCED INTRODUCTION TO LAW AND ARTIFICIAL INTELLIGENCE 36-39 (Edward Elgar Publ'g 2020).

<sup>6</sup> ALGORITHMIC TRANSPARENCY AND DECISION-MAKING: CHALLENGES TO ACCOUNTABILITY IN THE EU, *supra* note 3.

<sup>7</sup> See David García Sarubbi, *supra* note 3; PEDRO SALAZAR UGARTE, DERECHOS HUMANOS Y CONSTITUCIÓN: ESTUDIOS SOBRE EL NUEVO CONSTITUCIONALISMO LATINOAMERICANO 112-115 (Universidad Nacional Autónoma de México 2015).

analysis, and creative adaptation, such as those prevalent in the legal field. High-level legal reasoning is not limited to the mechanical application of rules: It involves deliberation, prudential judgment and sensitivity to social, ethical, and historical factors.<sup>8</sup>

This hypothesis is grounded in the concept of “human brain plasticity”, understood as the human brain’s capacity to reorganize, learn, and generate new responses to diverse stimuli. This quality enables legal professionals to integrate multiple normative sources, interpret the spirit of the law, and even create new legal categories in response to social evolution.<sup>9</sup> In contrast, AI lacks consciousness, legal intuition and experiential understanding, which limits its ability to engage in deep axiological reasoning. Consequently, while AI can assist lawyers in technical or procedural tasks within the legal domain, its capacity to replace them in legal argumentation, particularly at *amparo* proceedings, is structurally limited.

### 3. *The Dogmatic and the Legal-Philosophical Methodology*

This article is methodologically grounded in two complementary approaches: Dogmatic legal analysis and legal-philosophical hermeneutics. From a dogmatic perspective, it describes Mexican *amparo* proceedings as a complex procedural institution that emphasizes the central role of *conceptos de violación* (violation of law concepts). It explores their formal and substantive requirements, as well as their significance in the protection of fundamental rights.<sup>10</sup> This approach highlights why certain procedural acts cannot be reduced to mere logical-formal schemas, since they require argumentative construction that incorporates normative interpretation, jurisprudential integration and constitutional contextualization.<sup>11</sup> From a legal-philosophical perspective, the analysis draws on ontological and axiological frameworks, as well as contemporary theories of legal argumentation. We examine authors such as Robert Alexy, Chaïm Perelman, and Aulis Aarnio to explain the difference between arguing based on legal rules and arguing from principles, the latter of which requires balancing, rational deliberation and consequence-based reasoning.<sup>12</sup> These processes are not purely

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<sup>8</sup> RONALD DWORKIN, *LAW’S EMPIRE* 11-13 (Harvard Univ. Press 1986); JÜRGEN HABERMAS, *BETWEEN FACTS AND NORMS: CONTRIBUTIONS TO A DISCOURSE THEORY OF LAW AND DEMOCRACY* 104-109 (William Rehg trans., MIT Press 1996).

<sup>9</sup> Chaïm Perelman & Lucie Olbrechts-Tyteca, *supra* note 4; ROBERT ALEXY, *supra* note 2.

<sup>10</sup> Ley de Amparo, [Amparo Law] Reglamentaria de los Artículos 103 y 107 de la Constitución Política de los Estados Unidos Mexicanos. <https://www.diputados.gob.mx>

<sup>11</sup> CARLOS BERNAL PULIDO, *EL PRINCIPIO DE PROPORCIONALIDAD Y LOS DERECHOS FUNDAMENTALES* 89-90 (Centro de Estudios Políticos y Constitucionales 2007).

<sup>12</sup> ROBERT ALEXY, *A THEORY OF CONSTITUTIONAL RIGHTS* 66 (Julian Rivers trans., Oxford Univ. Press 2002); Chaïm Perelman & Lucie Olbrechts-Tyteca, *supra* note 4; AULIS AARNIO, *supra* note 4.

computational but demand practical capacity, ethical experience, and cognitive plasticity.

This article also incorporates insights from cognitive neuroscience to support the thesis that human legal reasoning is deeply rooted in adaptable, plastic neural structures that the current AI cannot replicate. This interdisciplinary approach makes it possible to argue, empirically and conceptually, that AI faces structural limitations in performing the argumentative functions inherent to complex legal reasoning.<sup>13</sup>

## II. Artificial Intelligence and Law: An Emerging Relationship

### 1. *Types of AI Used in the Legal Field*

The use of AI in law is not uniform. It takes different forms depending on the level of autonomy, complexity, and the type of task being automated or assisted. For analytical purposes, we can identify three primary typologies of legal AI, each one with its specific scope and limitations:

**Assistive AI:** It fulfills mechanical or repetitive tasks such as legal research, document classification, and generation of standard templates. Platforms like Westlaw, LexisNexis, or CaseText use this type of AI to optimize legal research.<sup>14</sup>

**Predictive AI:** Designed to forecast judicial or administrative decisions' outcomes using statistical models based on large databases. This type of AI not only organizes information but calculates litigation success probabilities, identifies judicial behavior patterns and estimates legal risks. It includes tools such as Lex Machina and Premonition. However, its predictive power is based exclusively on data stored in the database. Therefore, when new contexts emerge, its algorithm cannot predict them.<sup>15</sup>

**Generative AI:** The most advanced and controversial form, it uses large language models (e.g., GPT, Claude, LLaMA) to produce full legal texts, memos, opinions and simulated rulings based on user prompts. While this type of AI can interact in natural language and generate complex legal writing, it does not understand its output: It lacks legal consciousness, normative intent, or axiological reasoning. Consequently, its use remains problematic.<sup>16</sup>

These three typologies are not mutually exclusive; many legal tools combine assistive, predictive, and generative features. However, as the intellectual and

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<sup>13</sup> David García Sarubbi, *supra* note 3; JÜRGEN HABERMAS, BETWEEN FACTS AND NORMS: CONTRIBUTIONS TO A DISCOURSE THEORY OF LAW AND DEMOCRACY 104-109 (William Rehg trans., MIT Press 1996).

<sup>14</sup> ALGORITHMS AND LAW, *supra* note 5.

<sup>15</sup> *Id.* at 55-59.

<sup>16</sup> WOODROW BARFIELD, *supra* note 5 at 67-73.

axiological complexity of a task increases, the structural limitations of AI become more pronounced.

## 2. *Technological Tools in Legal Practice*

At an international level, systems such as ROSS Intelligence, one of the first to enable natural language-based legal searches, or Lex Machina, which allows the analysis of judicial behavior patterns and the development of litigation strategies by using predictive analytics, have gained prominence.<sup>17</sup> Additionally, Thomson Reuters Westlaw Edge has integrated natural language processing functionalities to provide more accurate and context-sensitive responses in legal research.<sup>18</sup> These platforms have primarily been adopted in jurisdictions with high litigation volumes and strong traditions of legal technology use, such as the United States, Canada, and the United Kingdom. However, their global expansion has also led to similar initiatives in other regions, by adapting to local legal frameworks.

In Mexico, the use of AI in legal practice is still at its early stages but shows clear signs of growth. Several law firms have begun implementing virtual legal assistants that automate agreement generation, privacy notices, and standard civil lawsuits.<sup>19</sup> Some notaries public already use AI tools to verify data consistency and prevent formal errors. Pilot projects in universities and courts are also exploring the use of AI in drafting rulings and analyzing legal precedents. It has attracted particular interest, though, in *amparo* proceedings, especially in the drafting of complaints and *conceptos de violación*. Tools like ChatGPT and other generative language models have been used, experimentally or semi-professionally, to draft documents simulating legal argumentation.<sup>20</sup> However, this practice has triggered controversy regarding the authenticity, validity, and depth of the arguments produced, particularly when the goal is to protect fundamental rights against public authorities.

In summary, the presence of AI in legal practice is already a reality, although levels of integration vary depending on the context and the tool used. Its use is undeniable in technical-operational tasks, but the debate over its role in constructing complex legal arguments goes on. This ongoing discussion raises both epistemological and ethical concerns.

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<sup>17</sup> See LEX MACHINA, <https://lexmachina.com/>; ROSS INTELLIGENCE, <https://rossintelligence.com/>

<sup>18</sup> THOMSON REUTERS, WESTLAW EDGE OVERVIEW, <https://legal.thomsonreuters.com/en/products/westlaw/edge> (last visited Oct. 10, 2023).

<sup>19</sup> EASYLEX, <https://easylex.mx/>; TUAPPLLEGAL, <https://tuapplegal.com.mx/>; LEGALARIO, <https://legalario.com/> (last visited Oct. 10, 2023).

<sup>20</sup> Susana Navas Navarro, *Inteligencia artificial y Derecho: impacto en el ejercicio profesional de la abogacía y la Administración de Justicia*, 66 REV. ESP. DER. CONST. 61, 74 (2022).

### 3. *Risks, Opportunities, and Doctrinal Debates Surrounding the Use of AI in the Legal Field*

The emergence of AI in the legal field has generated both high expectations and legitimate concerns, resulting in a wide-ranging doctrinal debate regarding its scope, limitations, and implications. In this context, it is essential to analyze in detail the risks and opportunities that AI presents for law as a normative, social, and axiological system.

Among the main opportunities, AI has the potential to:

- 1) Reduce the workload in courts and law firms.
- 2) Increase procedural efficiency by automating repetitive tasks.
- 3) Improve access to justice through user-friendly interfaces for the public.
- 4) Detect patterns of discrimination or systemic bias by analyzing large datasets of case law or regulations.<sup>21</sup>

These advantages are especially valuable in overburdened judicial systems, where AI can serve as a complementary resource that contributes to procedural efficiency and transparency.

Nevertheless, numerous authors have pointed out structural risks associated with the uncritical implementation of these technologies. The first is the issue of algorithmic opacity, commonly referred to as the “black box” problem, that is, the inability to understand or audit the internal processes by which the AI systems, particularly those based on deep learning, arrive at their decisions. This lack of transparency is fundamentally incompatible with legal principles such as due process and democratic control over judicial functions.<sup>22</sup>

Another major risk is the reproduction of biases: If the data used to train the AI systems contains structural prejudices (based on gender, class, race, etc.), the outputs will inevitably perpetuate those injustices, often without the user’s awareness. As Burri has argued, automation does not neutralize human bias; it amplifies it.<sup>23</sup> On the theoretical level, the central question concerns whether AI can replace the interpretive and deliberative capacities of legal professionals or not. Scholars like Martin Ebers and Susana Navas argue that AI may be useful as a technical tool, but it can never replace the rational, ethical, and argumentative functions required by the legal profession.<sup>24</sup> Others, such as Woodrow Barfield, advocate for a regulated integration of AI, with clear legal limits on the autonomy of intelligent systems in legal decision-making.<sup>25</sup>

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<sup>21</sup> WOODROW BARFIELD, *supra* note 5 at 51-52 (Edward Elgar Publ’g 2020).

<sup>22</sup> *Id.* at 64-67.

<sup>23</sup> ALGORITHMIC TRANSPARENCY AND DECISION-MAKING: CHALLENGES TO ACCOUNTABILITY IN THE EU, *supra* note 6.

<sup>24</sup> ALGORITHMS AND LAW *supra* note 5 at 20-23

<sup>25</sup> WOODROW BARFIELD, *supra* note 5 at 89-93.

This debate has also raised the question of whether AI should be employed in legal areas where principle-balancing and axiological interpretation are central, such as constitutional law and *amparo* proceedings. The prevailing view in legal scholarship appears to be negative, at least as long as AI continues to lack normative awareness, semantic understanding, and practical legal reasoning.

In sum, the doctrinal debate reflects a tension between the promise of efficiency that AI offers and the need to preserve the humanistic foundations of law. This article aligns with the latter position, defending the view that although AI can serve as a useful complementary tool, it cannot occupy the space of human legal reasoning in contexts where principles, rights, and fundamental values are at stake.

### III. Human Brain Plasticity: An Irreducible Capacity

#### 1. *Neuroscientific Foundations of Brain Plasticity*

Brain plasticity is one of the most significant discoveries of contemporary neuroscience. Contrary to the long-held belief throughout most of the 20th century, that the adult brain was structurally rigid and static, recent research has shown that the nervous system is highly dynamic and capable of reorganizing neuronal connections in response to new experiences, learning processes, and changing environments. This phenomenon, known as neuroplasticity, implies a structural and functional adaptability that remains active even in adulthood.<sup>26</sup>

From a biological standpoint, brain plasticity manifests across various levels:

- 1) Synaptic, through the creation or elimination of connections between neurons.
- 2) Cortical, through the functional reassignment of brain areas.
- 3) Behavioral, by modifying response patterns to complex stimuli.

This cerebral dynamism allows humans to learn new languages, develop strategies for novel situations, and generate creative responses to ethical, legal, or social dilemmas. Moreover, studies have shown that processes involving complex deliberation, such as those required in legal argumentation, activate multiple brain regions simultaneously, engaging both rational circuits (e.g., prefrontal cortex) and emotional and memory systems (e.g., amygdala, hippocampus).<sup>27</sup>

In the field of legal epistemology, this plasticity is essential. It enables legal professionals to reinterpret norms in dynamic contexts, balance seemingly con-

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<sup>26</sup> ERIC R. KANDEL, IN SEARCH OF MEMORY: THE EMERGENCE OF A NEW SCIENCE OF MIND 306-312 (W.W. Norton & Co. 2006).

<sup>27</sup> ANTONIO DAMASIO, DESCARTES' ERROR: EMOTION, REASON, AND THE HUMAN BRAIN 83-92 (Putnam 1994).

tradictory principles, and create new legal categories in response to emerging social realities. Legal reasoning is not merely about applying pre-established rules; it involves the exercise of practical judgment using a hermeneutic methodology that integrates technical knowledge, social experience, and ethical reasoning.<sup>28</sup>

By contrast, artificial intelligence, no matter how advanced is, lacks an organic system capable of learning in a nonlinear or context-sensitive way. Current language models, such as ChatGPT or LLaMA, operate through statistical correlations across vast text datasets, but they possess no situational, emotional, or ethical awareness. Although they can simulate human responses, they do not have the plastic capacity of a brain, that can reconfigure itself in front of the unexpected.

In short, brain plasticity is not merely a biological trait. It is an epistemic condition for legal thought. It is precisely this capacity for adaptation, reinterpretation, and deliberation that places humans in a privileged position over any artificial system.

## 2. *The Relationship Between Plasticity and Legal Reasoning*

Legal reasoning, particularly in its argumentative dimension, is neither a mechanical nor a strictly deductive process. It requires a series of mental operations involving interpretation, deliberation, contextualization, and assessment of social consequences. These skills do not rely solely on formal logic, but on a plastic and adaptive cognitive capacity that enables jurists to respond to changing scenarios, conflicts between principles, and normative or axiological gaps.<sup>29</sup>

Brain plasticity plays a central role in this process. Thanks to its ability to reorganize itself in response to *novel stimuli*, the human brain can integrate legal, factual, and axiological information in real time, generating arguments that respond not only to formal legality, but to material justice as well. This flexibility is especially evident in contexts lacking of preconfigured solutions, such as *amparo* proceedings or constitutional balancing of fundamental rights.<sup>30</sup> Legal reasoning requires a holistic understanding of the legal system, the capacity to evaluate the normative impact of decisions, and sensitivity to the underlying principles involved.

These cognitive abilities depend on interconnected neural networks that do more than store information. They learn, correct, update, and recreate normative meanings in context.<sup>31</sup>

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<sup>28</sup> Robert Alexy, *supra* note 2.

<sup>29</sup> MANUEL ATIENZA, EL DERECHO COMO ARGUMENTACIÓN 42-43 (Ariel 2013).

<sup>30</sup> PEDRO SALAZAR UGARTE, *supra* note 7 at 115–118

<sup>31</sup> ANTONIO DAMASIO, SELF COMES TO MIND: CONSTRUCTING THE CONSCIOUS BRAIN 132–138 (Pantheon Books 2010).

By contrast, even the most advanced legal AI systems operate under a statistical logic that, while effective in structured tasks, does not reproduce the interpretive or creative nature of human reasoning. Machine learning models learn patterns, but they do not understand meanings; they can imitate legal language, but they do not deliberate legally. They lack of experiential memory, prudential judgment, and the capacity for normative innovation.

Furthermore, brain plasticity enables something beyond the reach of any artificial architecture: the incorporation of vital, emotional, and ethical experience into legal decision-making. It is no coincidence that major advancements in legal argumentation have often emerged in times of crisis, when jurists had to reinterpret the law considering new values or social realities.<sup>32</sup> Such processes demand an epistemic plasticity that no machine can emulate.

In sum, the relationship between brain plasticity and legal reasoning is not incidental but structural. It is the basis that enables human beings to practice law as an interpretive, deliberative, and ethical endeavor. Thus, the belief that AI could replace jurists at this level of reasoning ignores the neurocognitive foundations that sustain legal argumentation.

### 3. *Cognitive Adaptability in Complex Legal Environments*

In complex legal environments, marked by conflicts between fundamental rights, constitutional principal clashes, or normative and/or axiological gaps in response to new social or technological realities, legal actors must deploy a highly flexible type of reasoning. This reasoning does not rely solely on formal logic but entails contextual evaluation, ethical deliberation, cultural understanding, and practical experience.<sup>33</sup> Cognitive adaptability allows, for example, a judge or a lawyer to recognize the need to reinterpret a rule in light of a new social phenomenon (such as AI, climate change, or emerging human rights), while maintaining coherence within the legal system. The tension between stability and change requires a mind capable of reorganizing its categories, revising assumptions, and reformulating interpretive methods.

This way of thinking is not replicable by current AI models. Regardless of how sophisticated they might be in text generation or statistical prediction, algorithms do not have legal consciousness, axiological understanding, and, above all, the ability to redefine their own interpretive frameworks.<sup>34</sup> Machine learning systems can adjust outputs within their training parameters but cannot deliberate on the ultimate meaning of a rule nor anticipate new legal paradigms.

Moreover, law is not merely a system of rules. It is a cultural and normative project in continuous evolution, shaped by history, politics, ethics, and so

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<sup>32</sup> JÜRGEN HABERMAS, *supra* note 14 at 108–110.

<sup>33</sup> ROBERT ALEXY, *supra* note 3 at 66-72; AULIS AARNIO, *ESSAYS ON THE DOCTRINAL STUDY OF LAW* 95-100 (Springer 2011).

<sup>34</sup> ALGORITHMS AND LAW *supra* note 6 at 56-59.

cial practice. In this context, brain plasticity enables jurists not only to adapt to complexity, but to act as agents of normative change, something that AI, by definition, cannot do.<sup>35</sup> Therefore, cognitive adaptability derived from brain plasticity constitutes a foundational condition for legal reasoning in complex environments. It is not only a matter of solving problems within the law, but of reformulating the law itself in response to emerging realities. This level of normative creativity, interpretive prudence, and social sensitivity remains beyond reach of artificial intelligence, reaffirming the thesis that high-level legal argumentation continues to be, at least for now, an exclusively human capacity.

## IV. Artificial Intelligence in Mexican Legal Practice

### 1. *Law Firms and Courts*

In Mexico, the use of AI in the legal field remains in an early stage of development. However, it is showing a growing trend, particularly in the private sector, where operational efficiency is a priority. While there is no unified institutional infrastructure for the systematic use of AI across the Mexican legal system, emerging practices and pilot programs are beginning to shape up a gradual transformation.<sup>36</sup>

In law firms, AI is primarily used to facilitate tasks such as the automated generation of agreements, drafting of basic legal briefs, and organization of legal databases. Some firms have begun to implement AI-based virtual legal assistants using natural language processing (NLP) algorithms that streamline the search for regulations and case law. Although these tools are limited in terms of interpretive depth, they have proven effective in enhancing productivity and reducing human error in repetitive tasks.

Moreover, the use of tools like ChatGPT and Microsoft Copilot has become increasingly common in daily legal practice, not as definitive solutions, but as initial support tools for structuring documents, drafting preliminary legal texts, or systematizing normative contents. While their use remains largely unregulated, many young legal professionals and independent practitioners are turning to these technologies to accelerate their workflow.<sup>37</sup>

In the judicial branch, the integration of AI has been more conservative. Nevertheless, recent institutional efforts point to an ongoing digital transformation within the Mexican judiciary. The Supreme Court of Justice of the Nation

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<sup>35</sup> NORBERTO BOBBIO, *TEORÍA GENERAL DEL DERECHO* 175-179 (Debate 2004).

<sup>36</sup> Jesús Medina Villegas, *La justicia digital en México: entre la modernización y el rezago tecnológico*, 49 *REV. MEX. DE DERECHO* 101, 105-107 (2022).

<sup>37</sup> Alejandro Salazar & Jimena Aguayo, *Abogacía digital: la irrupción de la inteligencia artificial generativa en la práctica jurídica mexicana*, 14 *REV. LATINOAM. DE DERECHO Y TECNOLOGÍA* 67, 71-73 (2023).

(SCJN) has promoted digital case management systems and technological tools for procedural organization, although there is no formal implementation of AI in judicial decision-making processes.<sup>38</sup> At the state level, some local courts have begun to try on with automated jurisprudential analysis tools and alert systems for contradictory rulings, with preliminary but promising results.

In the academic sphere, several Mexican universities have launched pilot projects that incorporate AI in legal simulators and expert consultation systems. Although limited in institutional reach, these initiatives offer a valuable laboratory for exploring the risks, opportunities, and responsible use of AI in the Mexican legal system.

In summary, although the Mexican legal ecosystem is still far from a full AI integration, current uses in firms and courts reflect a progressive interest in strategically incorporating these tools. However, their impact remains mostly operational rather than substantive, as reservations persist, both technical and ethical, regarding the AI's suitability for complex legal argumentation.

## 2. *Automation of Lawsuits and Legal Documents*

One of the most widespread uses of AI in contemporary legal practice is the automation of legal documents, ranging from simple agreements to preliminary court filings, including civil, labor, and even amparo lawsuits. While this practice has been more common in Anglo-American legal systems, it is increasingly gaining ground in the Mexican legal environment, particularly in law firms managing high case volumes and digital legal service platforms. These systems use decision trees and text templates that adapt to the information provided by the user.<sup>39</sup>

Automation is carried out through systems that integrate natural language processing, legal databases, and pre-programmed legal templates. Based on simple inputs or questionnaires, these systems can generate fully structured documents with formal legal validity. In some cases, they also include features for grammatical review, inconsistency detection, and procedural adaptation. Platforms such as Legalario, EasyLex, and TuAppLegal, all of which operate in Mexico, offer services for the automated drafting of agreements, powers of attorney, articles of incorporation, lawsuits, and other legal documents. Additionally, the use of generative models like ChatGPT has become increasingly popular as a support tool for drafting preliminary legal complaints.

Across social media, academic forums, and professional networks, there are numerous examples of users prompting these systems to draft *amparo* com-

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<sup>38</sup> Suprema Corte de Justicia de la Nación [SCJN] [Supreme Court of Justice of the Nation], Plan Estratégico de Modernización Tecnológica 2022-2025. <https://www.scjn.gob.mx> (last visited Nov. 20, 2023).

<sup>39</sup> EASYLEX, <https://easylex.mx/>; LEGALARIO, <https://legalario.com/> (last visited Oct. 10, 2023).

plaints, motions for provisional release, or appeals. While often informal, these practices reflect the growing presence of AI in the early stages of legal drafting.

However, this automation involves considerable risks. Firstly, the generated documents typically lack personalized legal assessment, which can result in substantive errors, argumentative omissions, or even legal violations of due process.

Second, there is a danger of trivializing the legal profession, by reducing it to a merely technical function, when in fact legal practice requires critical analysis, contextual interpretation, and ethical judgment. This concern is particularly acute in the case of *amparo* lawsuits, where the drafting of *conceptos de violación*<sup>40</sup> (which are the grounds for constitutional complaint) requires a higher degree of argumentative sophistication. Attempting to automate this core aspect of the proceeding risks not only oversimplifying constitutional reasoning but also creating the illusion of argumentation, one that lacks of the hermeneutic, ontological, and axiological depth that this procedural instrument demands.

Therefore, while document automation represents an important step forward in legal efficiency, its usefulness should be understood as instrumental, limited to low-level argumentative tasks. The use of AI for drafting legal texts cannot replace conscious, critical, and contextually informed legal deliberation, which remains an exclusively human function.

### 3. *AI in Amparo Proceedings: Opportunities and Risks*

*Amparo* (or *juicio de amparo*) is, undoubtedly, one of the most sophisticated institutions of Mexican constitutional procedural law. Its function as a mechanism for constitutional review and the protection of fundamental rights grants it a central role in the Mexican judicial system. Also, *amparo* needs a high degree of precision, argumentative coherence, and axiological depth. In this context, the introduction of AI-based tools has sparked a complex debate regarding their potential applications, advantages, and structural risks.

From a functional perspective, AI can contribute to operational efficiency in the preparation of *amparo* lawsuits, particularly in the initial stages of proceedings. Documented cases exist in which lawyers and students use generative models such as ChatGPT to draft preliminary complaint templates, identify relevant case law, or suggest introductory arguments.<sup>41</sup> In these cases, AI acts as a technical assistant that helps reduce drafting time and systematize the exposition of facts and legal foundations.

However, when it comes to constructing *conceptos de violación*, the core of the *amparo* complaint, the intervention of AI becomes highly problematic. This legal figure forms the central axis of *amparo*, as it connects the allegedly violated constitutional norm with the challenged governmental act. It implies a complex legal operation that far exceeds textual logic or statistical correlation. The lack

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<sup>40</sup> Alejandro Salazar & Jimena Aguayo, *supra* note 38 at 71-73.

<sup>41</sup> *Id.* at 71-72.

of hermeneutic, semantic, axiological, and teleological understanding in current AI models prevents them from developing legal arguments with the depth and rigor required by a valid *concepto de violación*.<sup>42</sup> Although generative systems can produce apparently coherent paragraphs, they lack normative intentionality, prudential judgment and constitutional awareness.

Moreover, the indiscriminate use of AI to draft *amparo* lawsuits could generate counterproductive effects in judicial practice. On the one hand, it could flood the courts with filings devoid of genuine legal reasoning. On the other, it could undermine the integrity of the *amparo* complaint as a last resource guaranteed by trivializing its axiological dimension through automated, uncritical argumentation.

From an ethical standpoint, too, critical questions arise:

- 1) Can AI assume responsibility for arguments that affect human rights?
- 2) Who is accountable for errors, omissions, or deviations in algorithmically generated arguments?

These issues remain unaddressed by current Mexican regulation, creating a worrisome legal vacuum.<sup>43</sup> In conclusion, although AI may offer instrumental support in an *amparo* proceeding, particularly when organizing legal material or drafting basic structures, its involvement must be clearly limited. *Conceptos de violación*, as a complex and context dependent argumentative construction, still requires the exclusive intervention of human jurists, whose cognitive plasticity, prudential judgment, and axiological consciousness remain irreplaceable, regardless of how advanced AI is.

## V. “Conceptos de violación”: the Core of Legal Argumentation in Amparo

### 1. *The Legal Nature of Amparo*

Designed as a mechanism of constitutional control and a procedural guarantee of fundamental rights against arbitrary actions by public authorities, legislation on *amparo* has a dual legal nature: On the one hand, it is a concrete judicial procedure, and on the other, it is an institutional guarantee of the rule of law.<sup>44</sup>

Established in Article 103 of the Mexican Constitution, *amparo* protects individuals against general norms, acts, or omissions by authorities that infringe

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<sup>42</sup> ROBERT ALEXY, *supra* note 13 at 66-72; JÜRGEN HABERMAS, *supra* note 14 at 108-110.

<sup>43</sup> Suprema Corte de Justicia de la Nación [SCJN] [Supreme Court of Justice of the Nation], Plan Estratégico de Modernización Tecnológica 2022-2025, <https://www.scjn.gob.mx> (last visited Nov. 20, 2023).

<sup>44</sup> IGNACIO BURGOA ORIHUELA, EL JUICIO DE AMPARO 13-14 (Porrúa 2009).

upon human rights recognized in the Constitution or in international treaties to which Mexico is a party.<sup>45</sup> Through this procedure, the Federal Judiciary evaluates the constitutionality and conventionality of state actions, thus serving as a last line of defense for legality and justice.

Legal scholarship characterizes the existing legislation regarding *amparo* as a *sui generis* procedural instrument, due to its technical structure, specialized procedure, and individualized focus. Unlike other constitutional control mechanisms that operate in the abstract (such as diffuse control in the United States or constitutional actions in Colombia), *amparo* in Mexico is strictly individual in nature. It protects specific persons against specific grievances.<sup>46</sup>

Among the principles governing *amparo* are:

- 1) Instance for the requirement of the aggrieved party (*instancia de la parte agraviada*): only the directly affected party may bring the action.
- 2) Relativity of judgments, inter-party effect (*efecto inter partes*): The protection applies only to the claimant.
- 3) Principle of definitiveness: A trial is admissible only after exhausting ordinary legal remedies.
- 4) Strict procedural formalism: Governed by rigid technical rules and deadlines.

One of the most legally and argumentatively significant aspects of *amparo* is that it is not merely a defensive procedural mechanism; it is also a privileged space for constitutional argumentation. The lawyer must not only identify the challenged act he or she is facing, but also argue its incompatibility with constitutional principles and values, and articulate *conceptos de violación*, which require a high-level normative reflection, systematic interpretation, and ethical reasoning.<sup>47</sup>

The abovementioned makes *amparo* a field in which human legal reasoning reaches its highest complexity. It also raises serious doubts about the possibility of delegating its construction, even partially, to artificial intelligence systems. As long as the legislation on *amparo* remains a mechanism for defending human dignity and applying the pro-persona principle, its exercise will require a form of reasoning that cannot be reduced to algorithms or replicated through past data models.

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<sup>45</sup> Constitución Política de los Estados Unidos Mexicanos [C.P.], art. 103, Diario Oficial de la Federación [DOF], 5 de febrero de 1917 (Méx.); see also Suprema Corte de Justicia de la Nación [SCJN] [Supreme Court of Justice of the Nation], Constitución comentada: <https://www2.scjn.gob.mx> (last visited Oct. 10, 2023).

<sup>46</sup> HÉCTOR FIX-ZAMUDIO & EDUARDO FERRER MAC-GREGOR, EL JUICIO DE AMPARO EN EL SIGLO XXI 61-65 (Universidad Nacional Autónoma de México-Porrúa 2011).

<sup>47</sup> PEDRO SALAZAR UGARTE, *supra* note 8 at 143-145

## 2. *Conceptos de Violación: a Central Element of Amparo*

Within the technical structure of *amparo*, *conceptos de violación*, which are the grounds for constitutional complaint, constitute the most important elements. The correct formulation of them determines the scope for the constitutional analysis that the court will carry out. In other words, they serve as the starting point and central axis of the legal argumentation in the process.<sup>48</sup>

In practice, this means formulating arguments that integrate facts, legal norms, values, and consequences. For example, in alleging a violation of due process, it is not sufficient to cite Article 14 of the Constitution. The claimant must show how the authority deviated from constitutionally required procedures, how substantive rights were affected, and how the Supreme Court or the Inter-American Court of Human Rights' case law support the claim.<sup>49</sup>

Many *conceptos de violación* involve conflicts between constitutional principles, such as the best interests of the child versus due process, or freedom of expression versus the right to honor. In such scenarios, the legal practitioner must go beyond the mere rule application to ponder principles, to justify interpretive choices, and to propose legally and morally coherent solutions: A task that requires a high-level hermeneutic and ethical effort.<sup>50</sup>

## 3. *Argumentative Complexity in the Analysis of Principles*

The analysis of principles in constitutional legal reasoning represents one of the most complex, sensitive, and demanding tasks in legal practice. Unlike rules, which can be applied through logical subsumption, principles are optimization mandates that often appear in conflict and whose application is neither binary nor automatic, but rather contextual, deliberative, and justified.

As Robert Alexy has argued, principles are not applied in an “all or nothing” manner. Instead, they must be pondering against other valid principles, with the result depending on the circumstances of the specific case. This intellectual operation requires a form of practical, ethical-legal, and axiological reasoning that goes beyond the knowledge of the norm. It requires the understanding of its purpose, context, and impact on human dignity.

The jurist must analyze the facts, the legal context, the relevant values, the applicable jurisprudence, and construct a justification that is coherent, proportional, and reasonable throughout the hermeneutic deliberation. This is the essence of high-level legal reasoning: A combination of hermeneutic capacity, prudential deliberation. AI, in contrast, operates based on statistical models trained on massive amounts of text, and while it can replicate linguistic

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<sup>48</sup> Héctor Fix-Zamudio & Eduardo Ferrer Mac-Gregor, *supra* note 47 at 153-157.

<sup>49</sup> Constitución Política de los Estados Unidos Mexicanos [C.P.] art. 14; *see also Corte IDH, Caso Castillo Petruzzi y otros v. Perú, Sentencia de 30 de mayo de 1999, Serie C.Nº. 52, para. 128.*

<sup>50</sup> PEDRO SALAZAR UGARTE, *supra* note 8 at 149-152.

structures, it cannot evaluate, weigh, nor justify an argument from an ethical perspective. It neither possess legal intentionality, institutional awareness, nor moral responsibility.

Furthermore, principal balancing requires deeper contextual understanding of social, political, and historical background. Such understanding is accessible only to a human mind with ethical experience, cultural knowledge, and empathy. Brain plasticity allows the jurist to revise premises, adjust reasoning, and propose novel solutions to evolving realities; this ability is fundamentally missing in current AI systems.

In conclusion, the complexity of principle-based reasoning confirms the structural limits of AI in law. As long as law remains a justice-oriented normative system grounded in human dignity, it will require legal actors capable of deliberating, interpreting, and deciding beyond what is preprogrammed. This is the boundary that separates algorithms from jurists: The capacity to choose responsibly in a morally complex world.

## VI. High-Level Legal Argumentation: Axiology, Ontology, and Human Reasoning

### 1. *Contemporary Theories of Legal Argumentation*

Modern legal systems, particularly those influenced by constitutionalism, demand that legal decision-making be based not only on formal legality, but on rational justification, value coherence, and respect for human dignity. In this context, legal argumentation has become a central theme in contemporary legal theory, giving rise to diverse schools of thought focused on the conditions, methods, and validity of legal reasoning.

One of the foundational theorists in this area is Chaïm Perelman, who redefined legal argumentation as a process of persuasion oriented towards rational audiences, where the strength of an argument depends not only on its formal structure but also on its ethical and contextual relevance. For Perelman, legal discourse must be justified in relation to justice, social order, and the reasonable expectations of citizens.<sup>51</sup>

Following a more analytical line, Robert Alexy proposed a model that integrates legal positivism with discursive ethics. In his works *Theory of Legal Argumentation* and *Theory of Constitutional Rights*, Alexy conceptualizes legal reasoning as a practical discourse guided by principles of rational justification, coherence, and proportionality. He argues that legal norms, particularly constitutional principles, must be applied through a process of weighing, in which the arguments must be justifiable to all participants in a legal discourse.<sup>52</sup>

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<sup>51</sup> Chaïm Perelman & Lucie Olbrechts-Tyteca, *supra* note 3 at 45-47.

<sup>52</sup> ROBERT ALEXY, *supra* note 3 at 273-278; ROBERT ALEXY *supra* note 13 at 66-72.

In contrast, Aulis Aarnio emphasized the internal rationality of legal discourse, focusing on the role of interpretive coherence, doctrinal justification, and cultural legal context. For Aarnio, legal argumentation involves not only the application of rules, but the interpretive construction of normative meaning based on the legal culture in which the argument takes place as well.<sup>53</sup>

All of these theories share a common premise: Legal reasoning is a deliberative, value-laden, and discursively structured activity that cannot be reduced to formal logic. It requires the integration of moral values, institutional context, and practical consequences. Therefore, legal argumentation is not algorithmic. It is a human act of understanding and justification.

This implies that the replacement of high-level legal argumentation by AI faces not only technical obstacles but also epistemic and philosophical limitations. As long as the AI systems miss the capacity for axiological deliberation, contextual interpretation, and discursive justification, they will be unable to satisfy the requirements established by the main theories of legal reasoning.

## 2. *Balancing Principles: Perelman, Alexy, and Aarnio*

Another demanding area of legal argumentation is what is called balancing of constitutional principles. This task arises when two or more principles, each one with constitutional validity, come into tension or conflict in a specific case. The resolution of these cases does not follow a deductive or mechanical logic; it requires a deliberative process that involves assigning relative weight to each principle in the context of concrete facts and social values.

For Perelman, resolving these conflicts involves appealing to a universal audience, i.e., developing arguments that would be acceptable to any rational and ethically situated observer. The criterion of reasonableness plays a crucial role: the jurist must articulate a justification that is coherent, proportionate, and oriented toward justice. Robert Alexy, on the other hand, developed a structured model of principle balancing that includes the so-called Weight Formula, which allows evaluating:

- 1) The intensity of interference with one principle (e.g., privacy),
- 2) The degree of importance of the conflicting principle (e.g., public security), and,
- 3) The probability that the measure will effectively achieve the pursued objective.

This model reflects the gradual and non-binary nature of constitutional principles and underscores the need for justifiable reasoning to resolve conflicts. Aulis Aarnio, in turn, emphasized the need to consider legal culture, doctrinal coherence, and institutional legitimacy when resolving these tensions. For

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<sup>53</sup> AULIS AARNIO, *supra* note 34 at 95-100.

Aarnio, a principle is not only a norm but also a cultural construction with historical meaning, which requires being interpreted considering evolving social practices too. In all cases, the process of balancing principles is not merely technical. It involves a type of reasoning that requires the ability to understand values, anticipate consequences, and provide reasoned justifications that are transparent and ethically sound.

### 3. *Legal Ontology and Its Limits for AI*

Legal ontology refers to the philosophical and conceptual foundation upon which the legal system has been built up. It encompasses not only the structure of legal norms, but also the conceptual categories, institutional relationships, and interpretive frameworks that give coherence and meaning to the law. Understanding law ontologically implies going beyond the text to address questions such as: What is the nature of legal obligation? What is the source of authority behind a norm? How is legal validity constructed? This level of analysis reveals that law is not simply a system of rules, but a semantic and institutional reality that emerges from a specific historical, social, and axiological context.<sup>54</sup> Legal concepts such as “state,” “rights,” “due process,” or “human dignity” do not have fixed meanings. They evolve, are debated, and are reconstructed based on social practices, jurisprudential developments, and constitutional interpretation.<sup>55</sup>

From this ontological perspective, legal reasoning requires the ability to navigate multiple layers of meaning, to interpret categories within historical and political contexts, and to articulate normative positions that respond to human dignity and justice. It is not simply a matter of identifying the applicable rule, but of understanding why and how that rule fits into the legal system and whether it serves for the purposes for which it was created.

In this sense, the limits of AI become clear. Although AI systems can analyze texts, identify patterns, and simulate legal writing, they do so without semantic awareness, ontological understanding, or juridical intentionality. They are incapable of discerning the deep meaning of legal categories or questioning their foundations. They cannot deliberate on normative purposes, institutional legitimacy, or the ideological premises of a legal norm.<sup>56</sup> Even so-called legal ontologies developed in the field of computer science, such as ontology-based legal information systems, operate on syntactic and taxonomic models, but not on philosophical or constitutional reflection.<sup>57</sup> While they help to organize da-

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<sup>54</sup> RONALD DWORKIN, *supra* note 9 at 90-96.

<sup>55</sup> LUIGI FERRAJOLI, *PRINCIPIA IURIS: TEORÍA DEL DERECHO Y DE LA DEMOCRACIA* vol. I, 83-85 (Trotta 2007).

<sup>56</sup> Mireille Hildebrandt, *Law as Computation in the Era of Artificial Legal Intelligence: Speaking Law to the Power of Statistics*, 68 U. TORONTO L.J. 12, 23-26 (2018).

<sup>57</sup> Giovanni Sartori, *Legal Reasoning: A Cognitive Approach to the Law*, 17 ARTIFICIAL INTELLIGENCE & LAW 217, 220-223 (2009).

tabases and classify legal terms, they cannot reproduce the interpretive and deliberative reasoning required in complex cases.

The inability of AI to access legal ontology also prevents it from addressing concrete cases, where the law does not offer a clear or predetermined solution. In these scenarios, jurists must go back to fundamental principles, institutional roles, and axiological commitments that transcend all over formal texts. This reasoning demands critical distance, moral responsibility, and intellectual creativity, all of which depend on brain plasticity, social experience, and ethical sensitivity, none of which AI possesses.

Therefore, any attempt to substitute or emulate ontological legal reasoning with artificial intelligence not only falls short on a technical level but fails conceptually and epistemologically as well. Law is not a closed logical system that can be solved through computational efficiency. It is a human cultural construction, subject to change, controversy, and ethical evaluation. It requires interpreters who are committed to the search for justice and the defense of human dignity.

## VII. The Myth of the Algorithmic Jurist

### 1. *The Illusion of Substitutability*

In recent years, the idea of an “algorithmic jurist” has gained ground in both academic and public discourse. This concept refers to the hypothetical possibility of replacing human legal reasoning with artificial intelligence systems capable of processing legal information and issuing decisions with speed, accuracy, and neutrality. The image of the “robot judge” or the “AI lawyer” has emerged in news headlines, corporate promotions, and even in experimental judicial programs in various countries.<sup>58</sup>

However, this idea, fascinating as it may be, rests on a false premise: that legal reasoning can be fully reduced to a computational process, and that legal decision-making is merely a matter of applying rules to facts via formal logic. This notion ignores the foundational dimension of legal argumentation: Its interpretive, axiological, and human character.<sup>59</sup>

The illusion of substitutability is rooted in a mechanistic view of law, one that sees legal work as a series of operations that can be standardized, digitized, and ultimately replaced by artificial systems. But this perspective neglects the plurality of legal sources, the ambiguity of language, the conflict of values, and the historical contingency that characterizes all legal reasoning. It assumes a

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<sup>58</sup> MIREILLE HILDEBRANDT, *LAW FOR COMPUTER SCIENTISTS AND OTHER FOLK* 3-6 (Oxford Univ. Press 2020); *see also* RICHARD SUSSKIND, *ONLINE COURTS AND THE FUTURE OF JUSTICE* 117-123 (Oxford Univ. Press 2019).

<sup>59</sup> RONALD DWORIN, *JUSTICE FOR HEDGEHOGS* 115-118 (Harvard Univ. Press 2011).

level of determinacy and objectivity that does not exist in constitutional, human rights, or public interest law.<sup>60</sup>

Even in relatively clear-cut areas, such as administrative or tax law, legal interpretation requires contextual judgment, ethical considerations, and social awareness. Far from being reducible to formulas, law requires a capacity for practical judgment that takes into account the unique circumstances of each case and the normative weight of different values involved. In contrast, AI systems operate based on pattern recognition, statistical inference, and machine learning algorithms trained on past data. These technologies can be useful tools, capable of assisting in research, organizing information, or drafting preliminary documents, but they lack the deliberative consciousness and axiological intentionality required for legal reasoning. They do not deliberate; they predict. They do not interpret; they approximate. They do not justify; they imitate.<sup>61</sup>

Therefore, the notion that the AI could replace the human jurist is not only technically premature, but also epistemically unfounded and philosophically unsustainable. It is a myth that confuses instrumental efficiency with normative judgment, and text processing with legal argumentation.

## 2. *The Role of a Jurist in the Age of AI*

In this technological context, the role of the human jurist is not diminished but transformed. Rather than being replaced, the legal professional must become a critical operator capable of navigating, managing, and ethically integrating new technological tools into legal practice.<sup>62</sup>

This new role implies several challenges:

- 1) Technical competence: Jurists must understand the basic functioning, scope, and limits of AI systems. This includes distinguishing between reliable and biased data, recognizing the logic behind algorithms, and being able to interpret automated results critically.<sup>63</sup>
- 2) Epistemic vigilance: It is essential to maintain a critical attitude toward the apparent objectivity of algorithmic results. Jurists must question the episte-

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<sup>60</sup> DUNCAN KENNEDY, *LEGAL EDUCATION AND THE REPRODUCTION OF HIERARCHY: A POLEMIC AGAINST THE SYSTEM* 43-45 (NYU Press 2004).

<sup>61</sup> FRANK PASQUALE, *NEW LAWS OF ROBOTICS: DEFENDING HUMAN EXPERTISE IN THE AGE OF AI* 64-68 (Harvard Univ. Press 2020).

<sup>62</sup> Karen Yeung, *A Study of the Implications of Advanced Digital Technologies (Including AI Systems) for the Concept of Responsibility Within a Human Rights Framework*, (European Parliament Research Paper PE 634.452, 10-12, 2019).

<sup>63</sup> Sandra Wachter, Brent Mittelstadt & Luciano Floridi, *Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation*, 7 *INT'L DATA PRIV. L.* 76, 80-83 (2017).

mological validity of outputs, trace the decision-making process behind AI recommendations, and avoid the automatization of judgment.<sup>64</sup>

- 3) Ethical responsibility: Legal professionals must preserve their ethical role in defending justice, equality, and dignity values that cannot be delegated to machines. In legal reasoning, especially when fundamental rights are at stake, moral deliberation is irreplaceable.<sup>65</sup>
- 4) Interpretive capacity: The jurist continues to play an indispensable role in the interpretation of norms, balancing of principles, and justification of decisions. These tasks require a hermeneutic, cultural, and axiological sensitivity that cannot be replicated by the AI. In this way, rather than competing with artificial intelligence, the jurist must become its critical counterpart: An interpreter of the law who knows how to use technology without surrendering their own judgment. Far from disappearing, the legal profession becomes more relevant, as it must now guide, supervise, and ethically filter the growing power of intelligent systems.<sup>66</sup>

Ultimately, the future of legal practice in the age of the AI does not depend on the replacement of jurists, but on their capacity to remain human in the most profound and responsible sense of the word. The great challenge is not to make law more automatic, but to ensure that it remains just, human-centered, and ethically oriented, even in the digital age.

## VIII. Conclusions

Throughout this article, we have examined the complex relationship between AI and legal reasoning, particularly within the framework of the Mexican legal system and *amparo*. Our central thesis has been that, despite the enormous technological advances and growing instrumental utility of AI in the legal field, a higher-level legal argumentation remains a distinctively human task, rooted in neurocognitive, axiological, and ontological dimensions that the current AI is unable to replicate.<sup>67</sup>

We have shown that AI can contribute meaningfully to the automation of routine tasks, the organization of information, and the drafting of preliminary legal documents. These applications offer clear advantages in terms of efficiency, cost reduction, and access to legal services. However, such contributions must not be confused with the ability to reason, interpret, or justify in legal

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<sup>64</sup> MIREILLE HILDEBRANDT, *SMART TECHNOLOGIES AND THE END(S) OF LAW* 169-172 (Edward Elgar 2015).

<sup>65</sup> Luciano Floridi et al., *AI4People-An Ethical Framework for a Good AI Society*, 28 *MINDS & MACHINES* 689, 692-696 (2018).

<sup>66</sup> FRANK PASQUALE, *supra* note 65 at 182-185.

<sup>67</sup> RONALD DWORKIN, *supra* note 62; ANTONIO DAMASIO, *SELF COMES TO MIND: CONSTRUCTING THE CONSCIOUS BRAIN* 132-138 (Pantheon Books 2010).

terms, functions that require brain plasticity, semantic awareness, and moral responsibility.<sup>68</sup>

Using *amparo* as a paradigmatic case, we have demonstrated that the construction of legal arguments, particularly the drafting of *conceptos de violación*, involves an interpretive, deliberative, and value-oriented reasoning that AI is structurally incapable of performing. This process is not merely linguistic or formal, but rather epistemic, hermeneutic, and ethical. It requires understanding the meaning of constitutional principles, weighing conflicting rights, and proposing just solutions based on context.<sup>69</sup>

We also critically addressed the idea of the “algorithmic jurist,” highlighting its epistemological weaknesses and its tendency to reduce law to a mechanistic procedure. In contrast, we defended a model of legal practice centered on the human jurist as an interpreter, whose function is not limited to applying rules, but includes transforming the legal system considering new realities, social demands, and emerging rights.<sup>70</sup> Finally, we proposed that the true role of jurists in the age of AI is not one of replacement, but of critical integration: To use AI as a tool without surrendering their own discernment, deliberation, and ethical commitment. In this way, the legal profession not only maintains its relevance but becomes more vital than ever, as it is tasked with guiding, supervising, and humanizing the use of intelligent systems in law.

In conclusion, while AI will undoubtedly reshape many dimensions of legal practice, the core of legal argumentation remains firmly anchored in the human capacity to reason, deliberate, and pursue justice. It is here, in this irreducible human dimension, where law preserves its dignity, its purpose, and its future.

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<sup>68</sup> Luciano Floridi et al., *supra* note 68 at 692-696.

<sup>69</sup> ROBERT ALEXY, *supra* note 12 at 66-72; CHAIM PERELMAN & LUCIE OLBRECHTS-TYTECA, *supra* note 4.

<sup>70</sup> FRANK PASQUALE, *supra* note 64 at 182-185.

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