

Legal Research Methods in the Age of Artificial Intelligence

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Abstract

Artificial intelligence is reshaping the practical conditions of legal research, from identifying sources to drafting scholarly text. Against this background, the study examines whether AI marks a genuine methodological transformation, merely accelerates familiar operations, or risks elegantly recasting existing knowledge into a veritable ars recombitoria. The analysis employs doctrinal, analytical, historical, and critical methods within an epistemological reflection on the nature of legal knowledge and scholarly creativity. The risks and limitations of artificial intelligence extend beyond erroneous information and fabricated sources; they more fundamentally affect the researcher's relationship with method itself. These risks include confusing fluency with validity, dependence on preprocessed results, the invisible narrowing of the bibliographic horizon, weakening of the researcher's own idea-forming process, and the gradual replacement of methodological effort with the convenience of the tool. AI's usefulness lies primarily in its documentary, exploratory, and heuristic functions: it can broaden access to sources, organise complex information, suggest comparative perspectives, and support the testing of research hypotheses. The study therefore proposes a hybrid methodology in which artificial intelligence operates as an auxiliary cognitive instrument, while the human researcher retains the decisive role in interpretation, critical judgement, doctrinal construction, and scholarly responsibility.

Keywords: legal research methodology; artificial intelligence; legal science; scientific creativity; hybrid methodology; human-AI collaboration.

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1. The Central Dilemma: Transformation or Illusion of Progress?

Within a remarkably short period, artificial intelligence has become an

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undeniable presence in contemporary scholarly research. Given its textual, argumentative, and interpretive nature, legal research is perhaps among the fields most directly affected by generative tools: source identification, doctrinal synthesis, the exploration of judicial decisions, and the comparison of legal systems now proceed at a pace unknown to traditional research.

What appears to be a profound transformation of legal methodology may be no more than an acceleration of documentation, synthesis, and drafting. Does artificial intelligence open a new horizon of legal knowledge, or does it instead fuel an overproduction of seemingly original texts in which knowledge is no longer produced but merely recombined from what has already been thought?

Scientific progress requires the emergence of a genuine difference within a field — an effective advance in knowledge itself. From this perspective, the central dilemma of the present study may be formulated as follows: can artificial intelligence be creative, properly speaking, in legal research, or are we witnessing merely a more sophisticated reorganisation of existing knowledge?

The presence of artificial intelligence in the sciences, legal science included, can no longer be ignored. The real dilemma concerns the extent to which this influence reaches the methodology of research itself. What are its limits? What is its actual usefulness? Can we speak of a genuine transformation of AI-assisted scientific research, or only of the acceleration of already familiar operations (documentation, classification, synthesis, comparison)? These are the questions that will guide the present analysis, in an attempt to weigh both the promise and the risks of artificial intelligence in legal research.

2. Legal Science and the Traditional Methods of Legal Research

Legal research cannot be understood outside the broader framework of scholarly knowledge. Before discussing the role of new tools — whether computerised or generative — in legal methodology, we shall first outline the distinctive character of legal scholarship and its relationship with the methods that have established it as an autonomous discipline.

Science, broadly understood, has been defined as a coherent and systematic body of knowledge concerning particular categories of facts, objects, or phenomena, obtained through appropriate methods and verifiable by reference to reality². Every science therefore presupposes an object of study, specific methods of investigation, results open to critical scrutiny, and the integration of those results into a coherent system of knowledge. Scientific knowledge is not a random

² See G. Lucas and Cl. Moreau, eds., *Petit Larousse illustré* (Paris: Librairie Larousse, 1982); Élisabeth Clément, Chantal Demonque, Laurence Hansen-Love, and Pierre Kahn, *Filosofia de la A la Z: Dicționar enciclopedic de filosofie* (Bucharest: ALL Educațional, 2000), 513–14; Julia Didier, *Dicționar de filosofie* (Bucharest: Univers Enciclopedic, 1999), 330–31; and *Webster's Encyclopedic Unabridged Dictionary of the English Language* (New York: Gramercy Books, 1996), 1297.

accumulation of information but a rational process oriented toward understanding and open to continuous refinement. These are the epistemological requirements³ against which every form of research, including AI-assisted research, must be assessed.

Within this general framework, *legal science* has an essential particularity: its normative character. As a branch of the social sciences and humanities, it belongs to the sphere of normative inquiry and takes as its object law in its positive form — that is, the legal dimension of social life⁴. Unlike sciences with a predominantly descriptive or explanatory object, legal science does not confine itself to observing phenomena: it engages with norms, values, institutions, and criteria of validity. It interprets and evaluates legal reality and contributes, through doctrine and conceptual construction, to its understanding and, at times, its development. Its object is not a raw fact but a normative and social reality, institutionalised and axiologically oriented.

Legal methodology is therefore shaped by the philosophical reflection, prevailing scholarly outlook, and social conditions of its time⁵; it is never neutral toward the values of the age in which it is practised. Legal research consequently requires constant attention to the meaning and purpose of a norm and to the place it occupies within a living legal system.

The Methods of Legal Research. The methods of legal research reflect this specificity. Without attempting an exhaustive catalogue, and following the Romanian doctrinal tradition, the principal methodological approaches warrant consideration.

The logical method secures the internal coherence of legal reasoning and the structure of the argument. It has been defined as “the study of discursive legal thought in its entire extent, in all the intellectual operations it performs in the elaboration, interpretation, and application of law”⁶.

The hermeneutic method guides the understanding of the norm beyond its letter, seeking the authentic meaning of the text in the legislator’s intent and in the purpose of the regulation.

The historical method places the norm in the context of its genesis and

³ “Epistemology—Etymology: Greek *epistēmē*, ‘science,’ and *logos*, ‘discourse.’ Broad sense: analysis or study of the general processes of knowledge; epistemology is thus synonymous with ‘general theory of knowledge’ (or gnoseology). Strict sense: analysis of the ‘scientific spirit,’ the study of methods, crises, and history of the sciences, the philosophical study of a particular science (in this sense one speaks of the epistemology of mathematics, of history, etc.).” Clément et al., *Filosofia de la A la Z*, 162 (author’s translation).

⁴ Bogdan Cristian Trandafirescu, *Teoria generală a dreptului: Curs universitar [General Theory of Law: University Course]* (Bucharest: Universul Juridic, 2025), 9–12.

⁵ Ion Craiovan, *Metodologie juridică [Legal Methodology]* (Bucharest: Universul Juridic, 2005), 8.

⁶ Georges Kalinowski, *De la spécificité de la logique*, quoted in Gheorghe Mihai, *Elemente constructive de argumentare juridică [Constructive Elements of Legal Argumentation]* (Bucharest: Editura Academiei Republicii Socialiste România, 1982), 24.

evolution, revealing that every legal rule bears the marks of the time that produced it.

The comparative method opens legal research to other legal systems, allowing an understanding of paradigmatic differences that goes beyond the mere juxtaposition of texts.

The sociological method anchors the norm in the social reality it regulates, recalling that law does not operate in a vacuum but amid concrete social relations and interests; it introduces into the jurist's arsenal observation, the survey, and the interview.

The dogmatic or doctrinal method systematises legal concepts and institutions into a coherent construction, giving legal science the rigour and stability of an organised discipline. The systematic method, in turn, integrates the norm into a body of interdependent rules, demonstrating that no legal provision can be understood correctly in isolation.

The quantitative methods, used in the empirical study of legal phenomena, allow the statistical analysis of relevant data volumes, from which the researcher may draw conclusions, formulate interpretations, and ground proposals for the improvement of positive law.

Since the end of the last century, Romanian doctrine has also included in the jurist's methodological toolkit the cybernetic approach and legal informatics, that is, applications of cybernetic concepts and methods to law, aimed at the storage, processing, and rapid retrieval of legal information⁷. Legal methodology thus anticipated, in germ, the possibility of collaboration with tools for the automated processing of legal information, a collaboration that generative artificial intelligence now deepens in an unprecedented way.

Method and Instrument. At this point, a decisive distinction must be drawn — one that supports the entire argument of this study: the distinction between method and instrument. A method is a way of knowing, a mode of approaching an object of study; an instrument is a technical means that serves one or more methods. However refined, computerised tools do not in themselves produce legal knowledge; they facilitate access to data and its organisation and analysis, which the chosen method then further processes.

Each method expresses a distinct perspective on law, and their epistemic value lies precisely in their complementarity and interdependent use⁸. This observation, formulated with respect to the classical methods, must now be confronted with a new question, which the present study undertakes: to what extent do artificial-intelligence tools integrate themselves into this methodological ensemble,

⁷ Ion Craiovan, *Tratat de teoria generală a dreptului* [*Treatise on the General Theory of Law*], 3rd ed. (Bucharest: Universul Juridic, 2015), 335–45.

⁸ Ion Craiovan, *Doctrina juridică* [*Legal Doctrine*] (Bucharest: All Beck, 1999), 17: “In principle, no method is excluded from the research of legal phenomena, their value being amplified by their interdependent and complementary use” (author's translation).

and to what extent do they claim, on the contrary, to supplant it?

Legal research cannot be reduced to the application of methods: it requires the *interpretation of the norm*, the process by which legal text is transformed into legal meaning. A norm is not exhausted by its textual formulation. Literal, systematic, teleological, and historical interpretation are paths through which the spirit of the law is distinguished from the letter of the normative text. Without this process, law would remain a formal language, mechanically applied and detached from the concrete case and from the values it is meant to serve.

Legal research, however, does not end with interpretation. It also requires *argumentation and doctrinal construction*. Identifying and interpreting norms constitutes only the starting point of an endeavour directed toward formulating reasoned positions, which inevitably presupposes a choice among competing alternatives and responsibility for the chosen solution. The researcher develops explanations, draws distinctions, criticises existing solutions, and advances hypotheses and proposals for improving positive law; through this activity, doctrine indirectly informs the evolution of law itself.

The legal researcher is therefore an interpreter and a constructor of meaning, not a compiler of information. The researcher's activity entails the selection of appropriate methods, the critical evaluation of sources, the construction of logical demonstrations, and the assumption of the conclusions reached.

This characterisation of legal research is the premise from which any analysis of the role of artificial intelligence must depart. Were research reducible to the identification and organisation of information, AI tools could indeed claim the status of substitute for human activity. Since legal research, however, involves interpretation, argumentation, doctrinal construction, choice, and assumption, the question of the place and limits of artificial intelligence in this process remains open.

3. The Evolution of Legal Research: From the Library to Artificial Intelligence

For centuries, legal research was the expression of exclusively human thought, carried out in direct contact with the text and dependent on the researcher's capacity to read, interpret, and construct legal meaning. Artificial intelligence alters this fundamental relationship between the researcher and the working material. For the first time in the history of science, the researcher is no longer alone in processing legal information.

In what follows, we shall distinguish three major stages of legal research: the analogue paradigm (in which the library was the researcher's working universe), digitalisation (which, from the 1990s onward, transformed the research infrastructure), and the age of generative artificial intelligence (which intervenes, for the first time, in the very plane of the intellectual operations of research). This

periodisation is, of course, not rigid: the stages partly overlap, and the transition from one to another has not followed a uniform timetable across national legal traditions. It has, however, the merit of making visible a decisive distinction, to which we shall return: the distinction between an infrastructural transformation and a transformation in the very nature of the methodological endeavour.

The Analogue Paradigm: Direct Contact with the Legal Text. Until the end of the twentieth century, the library, the treatise, the specialised journal, and collections of case law constituted the legal researcher's working universe. Identifying, selecting, reading, and interpreting texts were slow, cumulative, and exclusively human operations; each step demanded its own intellectual effort, irreducible to merely working through the material. In this paradigm, legal argument developed through progressive sedimentation: the researcher read, returned, compared, and reconsidered; time itself was part of the method. This slowness was not a defect but an epistemic virtue. The sustained rhythm of reading and rereading enabled what has been called, not without reason, the sedimentation of meaning: the gradual process by which the legal text becomes part of the researcher's own thinking and the researcher's argument emerges both from the material studied and from the time spent with it.

The Information Society: Digitalisation and the Internet. In Alvin Toffler's terms, the transition to the "third wave" marks the emergence of a civilisation in which information becomes the central resource and its production, circulation, and use acquire unprecedented dynamism⁹. Legal research could not remain outside this transformation.

The technical groundwork had been laid much earlier. In the 1960s and early 1970s, the United States saw the emergence of pioneering computerised systems for retrieving legal texts. JURIS, developed by the US Department of Justice in the early 1970s, was among them¹⁰.

These systems prepared the ground for what followed. From the 1990s onward, digitalisation, legal databases, and the internet transformed the research infrastructure; access to legislation, case law, and doctrine became fast, broad, and independent of the library's physical support. Platforms such as LEXIS (later LexisNexis), Westlaw, HeinOnline, and JSTOR, joined in this period by a host of specialised national databases, mark the transition from manual searching in printed volumes to the instantaneous retrieval of legal information from vast databases.

⁹ Toffler distinguishes three great "waves" of human civilisation: agrarian civilisation; industrial civilisation, characterised by mechanisation and mass production; and the information society, in which information and knowledge become central resources. See Alvin Toffler, *Al treilea val [The Third Wave]* (Bucharest: Editura Politică, 1983).

¹⁰ US Department of Justice, Executive Office for US Attorneys, "JURIS Status Report," *United States Attorneys' Bulletin* 22, no. 6 (March 22, 1974): 163–65, <https://www.justice.gov/file/241086/dl>. The report states that the initial plan was formulated in early 1970 and that JURIS was subsequently developed and implemented on a pilot basis.

The transformation brought by digitalisation concerned, above all, the infrastructure of research: computerised tools took over the operations of searching, classifying, and storing data, without, however, intervening in the plane of intellectual operations proper. The researcher continued to interpret, to evaluate, to construct legal meaning; technology changed the speed and breadth of access to sources, not the nature of the methodological endeavour.

Legal Research in the Age of Artificial Intelligence. If digitalisation re-defined access to legal information, the third decade of the twenty-first century has brought a change of another kind: the emergence of generative artificial intelligence tools in legal research.

Generative tools do not merely organise information; they process and synthesise it, returning it to the researcher in an already structured form—synthesises, classifications, comparisons, summaries, or outlines of arguments. Part of the preliminary work of research is thus outsourced.

What more deeply changes the researcher's relationship with the tool, however, is something else: artificial intelligence creates the experience of an interlocutor. It formulates arguments, suggests counterarguments, orders ideas, and proposes conclusions; the researcher no longer consults a source but engages in dialogue with a system that answers, challenges, and guides. At this point, we must ask: can artificial intelligence generate new scientific knowledge? Can it be creative?

4. Artificial Intelligence and the Problem of Scientific Creativity

Creativity as a Premise of Scholarly Progress. Before asking whether artificial intelligence can be creative, we must acknowledge a prior difficulty: creativity itself resists any exception-free definition. Its boundaries are unclear, and the criteria proposed by specialists are indicative rather than absolute. Even with human works, the questions "Is this truly creative?" and "Does it add value?" often remain open: a work may seem novel without being valuable, be praised today and forgotten later, or, conversely, be recognised as creative only after decades. This difficulty should be borne in mind from the outset, as it guards equally against the premature enthusiasm that declares AI creative and the reflexive rejection that denies it, *a priori*, any contribution. Yet however fluid the concept's boundaries, it cannot be abandoned: authentic scholarly progress presupposes the emergence of a genuine difference within a field of knowledge, and that difference ultimately bears the name of creativity.

The Fragile Criteria of Creativity: Novelty, Surprise, and Value. The literature has sought to capture creativity through the triad of novelty, surprise, and value¹¹. On this account, a creation is not merely different; it must also be

¹¹ Margaret A. Boden, "Creativity and Artificial Intelligence," *Artificial Intelligence* 103, nos. 1–2

surprising and possess value within a given field. Of the three criteria, value is undoubtedly the most difficult to establish. An idea may be novel yet irrelevant, or surprising yet wrong; its value is ultimately tested by its capacity to withstand criticism and materially alter the field in which it emerged.

Forms of Creativity: From Recombination to the Transformation of Conceptual Space. The literature on this question usually distinguishes three types: (a) combinational creativity, in which novelty emerges through the association of known elements; (b) exploratory creativity, in which the possibilities of a given conceptual space are investigated; and (c) transformational creativity, in which the conceptual space itself is modified, making possible ideas that no one could have formulated within the old framework¹². The distinction is not rigid—the boundaries between the three forms often overlap—but it provides a useful means of understanding what artificial intelligence does when it appears to create.

AI between Computation, Exploration, and Creativity. On the basis of this distinction, the picture becomes clearer: artificial intelligence performs remarkably well in the first two domains—combinational and exploratory creativity. It can combine disparate elements, generate variants, and traverse spaces of possibility that an individual human mind could not explore. Transformational creativity, which changes not merely the content but the very coordinates of a field, remains the most problematic domain. A further nuance is essential: even when AI appears to produce original results, that originality is debatable on closer inspection. A fluent text may seem novel while amounting to no more than an elegant reformulation of known sources.

AI Creativity in the Natural Sciences, Social Sciences, and Humanities. Recent examples from the natural sciences nonetheless show that the question cannot be answered by a simple denial. In these fields, many problems can be formalised and proposed solutions tested against precise criteria—experimental confirmation, proof, or predictive capacity. Under such conditions, computing power may become decisive. The history of science includes problems that challenged the scholarly community for decades, not for lack of ingenuity but because their solution required computational capacity beyond that of the unaided human mind. Artificial intelligence now intervenes precisely in such areas.

The 2024 Nobel Prize in Chemistry, awarded in part to Demis Hassabis

(1998): 347–56, [https://doi.org/10.1016/S0004-3702\(98\)00055-1](https://doi.org/10.1016/S0004-3702(98)00055-1); Caterina Moruzzi, “Artificial Intelligence and Creativity,” *Philosophy Compass* 20, no. 3 (2025): e70030, <https://doi.org/10.1111/phc3.70030>.

¹² Boden, “Creativity and Artificial Intelligence,” 347–48. Boden also distinguishes P-creativity (psychological creativity, relative to the individual mind) from H-creativity (historical creativity, relative to the history of humankind). See also Zhuohao Wu et al., “AI Creativity and the Human-AI Co-creation Model,” in *Human-Computer Interaction: Theory, Methods and Tools*, ed. Masaaki Kurosu, Lecture Notes in Computer Science 12762 (Cham: Springer, 2021), 171–90, https://doi.org/10.1007/978-3-030-78462-1_13.

and John Jumper for protein-structure prediction using the AlphaFold model, presents one of the most challenging contemporary examples. Artificial intelligence contributed decisively to addressing a problem that had occupied the scientific community for decades¹³. Yet the structure of the achievement is telling: humans formulated the problem, developed and trained the model, and established the criteria by which its output could be evaluated; AI enabled the exploration of a space of possibilities whose complexity is inaccessible to ordinary human calculation. Is this AI creativity or human creativity assisted by AI? The answer is unclear, and that ambiguity may itself be significant: in some fields, the boundary between advanced computation, computational exploration, and creativity is difficult to draw.

The situation changes, however, when we move from the natural sciences to the social sciences and humanities. In law, philosophy, and sociology, creativity has a different structure: it consists not in finding an efficient solution but in producing meaning, formulating an interpretation, adopting a position, and persuading a scholarly community of its validity.

Creativity in Legal Science. A new contribution does not necessarily result from processing, recombining, and synthesising a greater volume of sources. It emerges when the researcher identifies a previously overlooked problem, criticises an established solution, proposes a conceptual distinction, reinterprets an institution, or advances *de lege ferenda* proposals. Recent literature rightly emphasises a further point: for the jurist, writing is itself a form of thinking. Through the iterative process of drafting, the researcher discovers gaps in the argument, recognises the need for further research, and refines the thesis¹⁴. This heuristic function of writing is compromised when drafting is outsourced to AI. Legal creativity therefore cannot be reduced to the recombination of existing texts.

The conclusion must therefore remain nuanced. Creativity is a concept whose boundaries resist fixation, and artificial intelligence is still young; future systems will undoubtedly acquire capabilities that cannot yet be foreseen. At present, however, creativity in law, as throughout the social sciences and humanities, consists not in solving a formalisable problem but in producing normative meaning and assuming responsibility for it before a scholarly community. These operations differ in kind from the recombination, however elegant, of existing sources. Whether AI tools will evolve sufficiently to overcome this limitation cannot be settled at the current stage of research. For now, the distinction remains

¹³ Ben Li and Stephen Gilbert, “Artificial Intelligence Awarded Two Nobel Prizes for Innovations That Will Shape the Future of Medicine,” *npj Digital Medicine* 7 (2024): article 336, <https://doi.org/10.1038/s41746-024-01345-9>; Nobel Prize Outreach, “Press Release: The Nobel Prize in Chemistry 2024,” October 9, 2024, <https://www.nobelprize.org/prizes/chemistry/2024/press-release/>.

¹⁴ S. Sean Tu, Amy Cyphert, and Samuel J. Perl, “Artificial Intelligence: Legal Reasoning, Legal Research and Legal Writing,” *Minnesota Journal of Law, Science & Technology* 25 (2024): 123–25, <https://doi.org/10.24926/15529541.3898>.

important between combinational and exploratory creativity, in which AI performs remarkably well, and transformational creativity, through which a field of knowledge is genuinely altered. In the present technological configuration, the human mind alone can assume the creative responsibility required to advance legal knowledge.

5. Methodological Risks and Limits of AI-Assisted Legal Research

The integration of artificial intelligence into legal research undoubtedly offers notable benefits, but it also introduces a series of risks. The problem runs deeper than isolated inaccuracies: for the first time, the researcher interacts not only with sources and raw information but also with results that have already been processed, organised, and formulated in an apparently argumentative form. The principal risk is therefore the alteration of the researcher's relationship with research method itself. The discussion that follows distinguishes six levels of risk, progressing from factual matters to questions of substance.

Hallucinations. The most visible limitation of generative systems is hallucination: the production of nonexistent information or references, formulated so fluently and convincingly that they appear authentic. Experience confirms the breadth of these inventions: entirely fabricated judicial decisions complete with case numbers, panels, and reasoned passages; nonexistent statutory texts or real provisions cited under incorrect numbering; ideas attributed to real authors who never expressed them; quotations from scholarly articles that do not exist; and invented facts or events presented as real. *Mata v. Avianca*, in which two US attorneys filed a brief containing six precedents fabricated by ChatGPT and were sanctioned, has become an emblematic example of the problem¹⁵.

What makes hallucinations especially dangerous is that the error appears without its usual outward signs: it is written in a scholarly register, plausible at first reading.

Fluency as False Authority. This observation leads to a related but subtler risk. Generative models generally produce well-structured, coherent, and persuasive text, inviting the researcher to confuse the form of an argument with its validity. A researcher may trust a conclusion not because it has been rigorously verified but because it is expressed convincingly. The fundamental methodological problem is that AI can err persuasively.

¹⁵ *Mata v. Avianca, Inc.*, 678 F. Supp. 3d 443, 466–67 (S.D.N.Y. 2023) (imposing a single \$5,000 penalty jointly and severally); Damien Charlotin, *AI Hallucination Cases Database*, accessed August 27, 2026, <https://www.damiencharlotin.com/hallucinations/>; Jonathan Stempel, “Ex-Trump Fixer Michael Cohen Says AI Created Fake Cases in Court Filing,” Reuters, December 29, 2023, <https://www.reuters.com/legal/ex-trump-fixer-michael-cohen-says-ai-created-fake-cases-court-filing-2023-12-29/>; Varun Magesh et al., “Hallucination-Free? Assessing the Reliability of Leading AI Legal Research Tools,” *Journal of Empirical Legal Studies* 22, no. 2 (2025): 216–42, <https://doi.org/10.1111/jels.12413>.

Methodological Dependence. Legal research presupposes an independent intellectual process, and AI can alter that process in several ways.

The first limitation, which has received less attention in recent literature, concerns the raw material presented to the researcher. Scholarly research usually begins with a bibliographic exploration intended to establish the state of knowledge in the field. AI search results are inevitably shaped and constrained by the model's training, including the nature of the materials used and the training method. The system may therefore privilege texts in the dominant languages of its training data, widely cited authors, and generally accepted perspectives. Researchers using AI risk slipping unnoticed into the algorithm's bibliographic inertia — a narrowing of the research horizon that is all the more difficult to correct because it remains largely invisible.

The second concerns the very process of idea-formation. Sometimes it is precisely slow reading, the difficulty of interpretation, the contradictions between sources, and the effort of organising the material that constitute the conditions for an authentic idea to arise. If artificial intelligence shortens this difficulty excessively, there is a risk that the researcher will “outsource” not only the mechanical operations of research but the idea-forming process itself.

The third stems from the dialogical nature of generative systems: when the researcher formulates a hypothesis, AI usually tends to develop and support it rather than subject it to genuine criticism. A fragile hypothesis can thus be turned into a fluent and seemingly convincing text without its foundation becoming any sounder. AI risks substituting itself not only for the researcher's work but also for the methodological adversary that any research needs.

The intellectual comfort that follows may lead, over time, to an atrophy of critical reflection — in law, a diminished capacity to discern what is truly new, significant, or problematic in case law or doctrine¹⁶.

Failure under Complexity. AI performs well when a problem is relatively clear. Genuine legal complexity, however — large cases with many variables, interacting norms, overlapping substantive and procedural law, and arguments that must be traced through multiple stages of adjudication — frequently exceeds AI's current capabilities. In these circumstances, the tool may deliver plainly incorrect answers, revealing its lack of deep understanding of complex legal problems.

What makes this limit serious is the way it manifests: the answer is delivered with the same confidence and in the same fluent language as for simple problems. The researcher who has not yet mastered the field, the one most in need of competent help, is paradoxically the least equipped to detect the error.

Every legal field may be said to have a threshold of complexity below

¹⁶ Tu, Cyphert, and Perl, “Artificial Intelligence,” 119–24; Harry Surden, “Artificial Intelligence and Law: An Overview,” *Georgia State University Law Review* 35, no. 4 (2019): 1305–38, <https://readingroom.law.gsu.edu/gsulr/vol35/iss4/8/>.

which AI can be used productively, but above which even advanced tools become unreliable. Partial safeguards exist, but no complete technical solution is currently available: problems of this kind still require human legal judgement, even when assisted by AI.

Ethical Problems. These methodological risks are accompanied by distinct ethical concerns. Generative models raise serious questions of algorithmic bias because they learn from corpora that inevitably reflect political, philosophical, or ideological orientations. Additional concerns include the opacity of decision-making processes — the much-debated black-box problem — the confidentiality of user-supplied data, and the difficulty of assigning responsibility for automatically generated results. In the legal field, these questions have moved beyond speculation: the American Bar Association’s Formal Opinion 512 (2024) and judicial guidance issued in various jurisdictions demonstrate that AI-related risks are now treated as matters of professional responsibility¹⁷. These issues carry particular weight for legal researchers because legal research demands not only accuracy but also intellectual ownership and professional accountability.

From Method–Instrument Confusion to Scholarly Stagnation. In our view, these six levels of risk can be reduced to one: the substitution of method by the instrument intended to serve it. AI is an instrument, not a method—a distinction that becomes extraordinarily difficult to preserve. When the researcher abandons the effort required by the method and yields its place to the instrument, the proper relationship between them is reversed: what was meant to serve begins to command.

By its very architecture, artificial intelligence elegantly recombines existing knowledge, producing polished, coherent, scholarly-looking texts that do not necessarily add anything new. Recombination is not intrinsically harmful; the problem arises when it becomes pervasive, fuelling the proliferation of academic texts already visible in contemporary universities. The ultimate risk of AI in legal research is that, by readily offering polished answers, it may encourage an intellectual complacency from which scholarly creativity no longer emerges. Scholarly stagnation is a genuine risk and a foreseeable consequence of progressively delegating intellectual effort.

¹⁷ American Bar Association Standing Committee on Ethics and Professional Responsibility, *Formal Opinion 512: Generative Artificial Intelligence Tools* (July 29, 2024), https://www.americanbar.org/content/dam/aba/administrative/professional_responsibility/aba-formal-opinion-512.pdf.

6. Artificial Intelligence as a Cognitive Instrument of Legal Research: Toward a Hybrid Methodology

6.1. The Documentary Function: Mapping the State of Knowledge and Broadening the Research Horizon

The first major use of artificial intelligence in legal research lies in the documentary domain. The challenge is twofold: identifying specialised literature on a given subject and filtering genuinely valuable material from an ever-expanding volume of information. Legislation, case law, doctrine, and institutional documents now form an informational space that traditional methods can scarcely cover in full. In this context, artificial intelligence can serve as an instrument of orientation, mapping, and preliminary synthesis by identifying sources, doctrinal currents, judicial approaches, and connections between seemingly distant themes¹⁸.

The distinctive value of this instrument lies both in the speed of the search and in its capacity to organise material intelligibly: grouping opinions, comparing schools of thought, extracting recurring ideas, and signalling differences between legal systems. AI thus helps assemble the raw material of research and offers an initial map of a vast doctrinal or jurisprudential field.

Broadening the Documentary Horizon. The legal researcher is inevitably situated within a particular linguistic, doctrinal, and institutional setting; access to foreign literature remains selective, depending on the languages known, the databases available, and the reference points provided by one's training. Artificial intelligence can mitigate this limitation by directing research toward authors, debates, and solutions beyond the usual circle. From this perspective, AI can help broaden the geographical and intellectual scope of legal research.

Active Participation by the Human Researcher. This broadening does not occur automatically. When used passively, artificial intelligence delivers an average, convenient result shaped by the limits of its training, dominant sources, and the initial formulation of the query. A researcher who accepts the first generated response may remain unknowingly confined within an incomplete synthesis. AI-assisted documentation therefore cannot be separated from the researcher's own efforts: independent searching, direct reading of sources, verification of generated information, and attention to what the response omits.

Documentation as a Hybrid Process. Documentation becomes hybrid from the outset. It involves a circular process: AI proposes a preliminary map of the topic; the researcher verifies, selects, and completes that map through independent effort; and, on the basis of that understanding, the researcher returns to the instrument and asks it to explore areas initially overlooked. Researchers can

¹⁸ Riffat Shahzady, "The Transformation of Legal Research with Artificial Intelligence," *International Journal of Law and Policy* 3, no. 8 (2025): 1–11, <https://doi.org/10.59022/ijlp.354>.

ask AI to broaden the horizon only if they already possess a horizon broad enough to recognise the limits of the initial result. The quality of documentation therefore depends neither solely on the instrument's performance nor solely on the researcher's intuition, but on how the two are combined.

6.2. The Heuristic Function: AI as a Partner in Dialogue and Critical Testing

If the documentary function concerns assembling the raw material of research, the heuristic function concerns how that material may be transformed into hypotheses, questions, comparisons, and lines of analysis. Legal research advances not merely by reordering existing knowledge but by producing new knowledge. At this stage, artificial intelligence may serve a distinct function: that of a heuristic partner.

By "heuristic partner," we mean neither an autonomous research subject nor a coauthor in the proper sense. AI has no legal consciousness or scholarly intent and assumes no responsibility for the conclusions it produces. It can, however, function as a cognitive interlocutor capable of stimulating the researcher's reflection through answers, objections, reformulations, and alternative perspectives. AI does not necessarily produce a new idea, but it can accelerate that idea's emergence in the researcher's mind; it does not replace thought but may provoke it.

This function is all the more important in that scholarly reflection often has a dialogical structure. The researcher clarifies their ideas by confronting them with real or imagined objections: a hypothesis becomes more precise when attacked, a conceptual distinction becomes more solid when tested, a conclusion becomes more credible when it withstands serious counter-arguments. AI can simulate precisely this dialogical environment: it can be asked what objections might be raised against a thesis, what alternative solutions exist, what consequences a given interpretation would produce, what analogies may be found in other branches of law or in other legal systems¹⁹.

Three Directions of Heuristic Use. First, in hypothesis generation, AI may use a theme or doctrinal fragment to propose lines of analysis the researcher had not initially considered; some may be commonplace or irrelevant, but others, if critically filtered, may open a useful path. Second, in hypothesis testing, the researcher can ask the instrument to identify weaknesses in an argument, formulate the opposing position, or indicate which premises remain unproven. Third, in comparative and analogical analysis, AI may suggest correspondences between legal institutions, normative systems, or concepts from different fields.

¹⁹ Tu, Cyphert, and Perl, "Artificial Intelligence," 105–25.

This interaction may be described as intellectual “ping-pong”: the researcher formulates an idea; AI reformulates, challenges, or develops it; the researcher selects, rejects, and redirects; AI proposes new variants; and the researcher returns to the problem with a clearer understanding. The result is neither the exclusive product of AI nor the outcome of solitary reflection; it arises from a dynamic of mutual stimulation in which the generative instrument accelerates thought and provides methodological provocation²⁰.

Transposed into legal research, this idea must be formulated with caution. Law is not a space of free creation but a domain of normative meaning, argumentation, and justification. AI can generate variants, but it cannot, properly speaking, decide their legal value.

The heuristic use of AI therefore demands a more severe intellectual discipline than its documentary use. At the heuristic stage, the risk of error is subtle. A weak idea may, through AI, receive an elegant formulation. The heuristic function becomes fertile only when the researcher uses AI against their own intellectual comfort: the instrument should be asked not so much how a thesis can be supported, but above all how it can be criticised.

6.3. Toward a Hybrid Human – AI Methodology: Collaboration without Substitution

The documentary and heuristic functions show that the relationship between researcher and artificial intelligence cannot be adequately described either through the idea of mere technical use or through that of intellectual substitution. At the same time, AI can no longer be treated as a passive instrument, external to the thinking process, since it intervenes in operations that traditionally belong to intellectual activity: documenting, synthesising, comparing, reformulating, generating hypotheses, testing arguments.

This situation gives rise to the need for a hybrid methodology. In our view, such a methodology should be understood neither as a fusion of researcher and instrument nor as a delegation of research to AI, but as the critical organisation of collaboration between human and artificial intelligence. Initiative and responsibility must remain with the human researcher, who may nevertheless draw on AI’s capacity to extend the field of documentation, accelerate preliminary operations, propose hypotheses, and subject arguments to critical testing.

The Iterative Character. The iterative character of this methodology is essential. Research unfolds through successive returns: the researcher formulates the problem; AI helps map the documentary field; the researcher verifies and selects; AI proposes hypotheses and counterarguments; the researcher critiques and reformulates; AI tests the coherence of the revised argumentative structure; and

²⁰ Wu et al., “AI Creativity and the Human-AI Co-creation Model,” 171–90.

the researcher integrates the result into an original doctrinal construction. In this cycle, AI does not determine the direction of the research, but it can alter the path toward the conclusion.

Human Control as the Central Element. The researcher must retain control over the decisive stages of research — the formulation of the problem, choice of method, delimitation of relevant sources, verification of information, interpretation of norms, evaluation of arguments, and responsibility for the conclusion. AI may intervene at each stage, but it cannot replace the act of judgement that gives the process legal meaning. A crucial distinction arises between research assisted by AI and research dominated by AI. The former uses the instrument to extend and intensify the researcher's thinking; the latter passively accepts generated output, risking a final text that reproduces a convenient, fluent synthesis devoid of genuine originality.

A hybrid methodology does not displace the traditional methods of legal research; rather, it reactivates them in a new environment. The logical method remains necessary for verifying the coherence of an argument; the hermeneutic method remains indispensable for establishing the meaning of a norm; the historical method enables an understanding of an institution's genesis; and the comparative method becomes even more important because AI can facilitate access to solutions across diverse legal systems. The sociological and quantitative methods may likewise be supported by processing large volumes of data. AI replaces none of these methods. What changes is the environment in which they are applied and the researcher's capacity to combine them more rapidly and flexibly. AI does not eliminate the demands of method; it makes them more visible. A weak prompt produces a weak result, a general question produces a general synthesis, and an uncritical query favours conventional answers. The quality of the result depends largely on the quality of the thinking that solicits it.

A hybrid methodology must therefore follow several ***minimum rules***. AI must not replace direct engagement with primary sources: the researcher must read and verify normative texts, relevant case law, and major doctrinal works. Any synthesis produced by AI must be treated as a working hypothesis, not a validated result. The instrument must be used not only to confirm an intuition but also to test it critically. Finally, AI's contribution must be integrated into an original scholarly endeavour in which the structure, argument, and conclusion belong to the human author. Without these rules, the hybrid methodology becomes merely an appearance of method, and the research risks becoming an elegant recombination of materials that have not been sufficiently understood.

At present, a hybrid methodology does not diminish the researcher's role; it extends and intensifies human capacities. AI can accelerate, organise, compare, provoke, and suggest; the researcher must select, judge, interpret, assume responsibility, and formulate. Only through collaboration without substitution can artificial intelligence become a genuine factor in methodological progress rather than

merely a producer of coherent and seductive texts.

7. Conclusions

Artificial intelligence is now a reality of legal research, shaping how researchers access information, organise doctrinal material, and construct arguments. The fundamental question concerns the nature of this transformation and how far it can proceed without altering the essence of legal knowledge. The analysis indicates that AI is transforming legal methodology, but with results that vary according to the rigour and competence of the human researcher. It is simultaneously a technical development and an epistemological challenge, depending on whether the researcher can master it.

Artificial intelligence remains, by its nature, an auxiliary cognitive instrument of legal research, capable of facilitating documentation, accelerating certain intellectual operations, and supporting doctrinal exploration. The central error is to confuse this instrument with the method itself.

It would nevertheless be inaccurate to reduce artificial intelligence to a merely passive instrument. Unlike traditional databases or the search engines of the 1990s, which transformed only the research infrastructure, generative AI processes information in ways that a researcher may perceive as analogous to thinking — through syntheses, comparisons, hypotheses, demonstrations, counterarguments, and articulated formulations. It thus intervenes in operations that, until recently, belonged almost exclusively to the researcher's intellectual activity, compelling legal methodology to clarify and reconfigure the environment in which traditional methods are applied, combined, and controlled.

This observation resolves the apparent contradiction between AI's status as an instrument and the idea of a hybrid methodology. A hybrid methodology is a framework that combines established legal methods, new instruments, and the researcher's control over the entire process of inquiry. Traditional methods are preserved, but they are practised in a new intellectual environment characterised by accelerated access to information, enhanced capacity for synthesis, and an unprecedented heuristic relationship between researcher and instrument.

In the social sciences and humanities, creativity presupposes the creation of meaning within a human order — meaning perceived and intuited by the human mind before it is conceptually articulated. It depends on intellectual subtlety and sensitivity that resist complete formalisation. Legal research belongs to this domain but has its own specificity: legal meaning is constituted at the intersection of logical rigour, axiological judgement, and the realities and needs of the community. Legal creativity therefore exceeds the recombination of existing knowledge. Identifying a genuine problem, constructing a conceptual distinction, reinterpreting an institution, or criticising an established solution presupposes judgement, legal culture, doctrinal intuition, and personal responsibility for the

conclusions reached.

In this context, the gravest risk is an illusion of scholarly progress. Through a sophisticated *ars recombination*²¹, artificial intelligence can generate coherent, elegant, and seemingly original texts without making a genuine contribution to legal knowledge. The principal danger is the multiplication of formally correct academic outputs that lack authentic novelty — research that becomes increasingly fluent in expression and increasingly impoverished in ideas.

This danger extends to the researcher's relationship with method. Excessive dependence on AI weakens direct engagement with sources, invisibly narrows the bibliographic horizon, and gradually substitutes the instrument's convenience for methodological effort. The researcher thereby ceases to follow the method, and the instrument begins to command the process it was intended only to serve.

Used critically and under human control, artificial intelligence can facilitate rapid mapping of the state of knowledge, broaden the comparative horizon, and extend legal research beyond the researcher's linguistic and institutional limits through access to unfamiliar doctrine, case law, and debate. Its heuristic value is most fully realised when AI is used as a methodological adversary rather than an ally of intellectual comfort: the instrument should first be asked how a thesis can be criticised and only then how it can be defended. Only in this role does AI become an agent of critical rigour.

The proposed hybrid methodology therefore requires the critical organisation of collaboration between researcher and instrument, not the delegation of research to the latter. Only the researcher can select the relevant problem, verify sources, interpret the norm, construct the doctrinal argument, and assume responsibility for the scholarly conclusion. The future of AI-assisted legal research ultimately depends on the researcher's capacity to integrate new instruments into a more rigorous methodological discipline. Artificial intelligence is here to stay. It must therefore be used methodically — subjected to discipline, integrated judiciously into the researcher's toolkit, and confined to its proper role as an instrument. Only then can it contribute to genuine methodological progress; without such discipline, it will produce only speed and the elegant recycling of existing knowledge.

²¹ On the combinatorial tradition associated with Ramon Llull and Gottfried Wilhelm Leibniz, see Anthony Bonner, *The Art and Logic of Ramon Llull: A User's Guide* (Leiden: Brill, 2007); and Gottfried Wilhelm Leibniz, *Dissertation on Combinatorial Art*, ed. and trans. Massimo Mugnai, Han van Ruler, and Martin Wilson (Oxford: Oxford University Press, 2020). The term *ars recombination* is used here as a critical wordplay to describe AI's capacity to generate coherent and apparently original texts through sophisticated recombination without necessarily advancing knowledge.

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