# Law and Human Intelligence(s)

Letizia Coppo*
Law Faculty, Lyon Catholic University

**Abstract**

This essay undertakes a comparison between human intelligence and artificial intelligence (AI) in the legal field, arguing that the first possesses cognitive, epistemological, emotional and affective abilities that are crucial for jurists and that the second could never learn. Taking Carrie Menkel-Meadow's teachings as the polestar, the essay will identify those fundamental abilities, analyse the features and limits of AI that make this latter incapable of learning such abilities, and finally make some suggestions on how we should develop the abilities at issue to lay down the foundations of a possible "Human Intelligence Project".

**Keywords:** human intelligence; artificial intelligence; legal professions; legal education; negotiation studies; legal skills; legal culture; nature of the law; conflict; dispute resolution.

It takes something more than intelligence to act intelligently.

(Fyodor Dostoyevsky, *Crime and Punishment*, 1993: 235)

*Homo sum, humani nihil a me alienum puto.*

(Terence, *Heautontimorumenos*, 2001)

## [A] INTRODUCTION

It is a truth universally acknowledged in literature that every century has its own *mal du siècle* and its own artificial paradises.[1] While "spleen" remains a constant, even though under the far less romantic names of depression and alienation, absinthe has been replaced with new, more

* The authoress did not make any use of AI in conceiving, drafting or editing this essay.

[1] The expression "*mal du siècle*" comes from Romantic French literature and refers to a sentiment of world-weariness, a deep sense of distress, emptiness, loss, and *ennui*, combined with the perception of living in the wrong century. For more details on the origin of the concept, see Hoog and Brombert (1954: 42-51). As to the expression "artificial paradises", it is taken from a famous essay by the French poet Charles Baudelaire—*Les paradis artificiels*—about the relationship between drugs and poetic creation.

complex and sneaky forms of addictive depersonalization.[2] While the cursed poets spent their days and nights in the company of "the green fairy", nowadays crowds of individuals lose their identities in metaverses, preferring relationships with emotionless algorithms rather than real people (European Parliamentary Research Service 2026), abhorring sorrow rather than transforming it into art, abdicating their human intelligence (HI) to artificial intelligence (AI) and its "hallucinations".

The interaction between the two intelligences often reduces to an imitation game in which not only does AI mimic HI but HI mimics AI, taking this latter as a model, another self, or even a "super" self.[3]

This is a paradox, for at least three reasons. First, AI is a derivative or a product of HI. Secondly, AI only possess limited intelligence, to the point that we could reasonably challenge its very qualification in terms of an intelligent agent (Floridi 2025). Thirdly, each human being, rather than having one general intelligence of the kind that is measurable through logical, numerical and verbal reasoning tests, has several different faculties and potential competences that enable it to address a wide variety of problems (Gardner 1983; 1999).[4] In other words, humans do not possess only one kind of intelligence but multiple intelligences that "go beyond Socrates' rational man or Freud's irrational animal, each of which may be mobilized both by individual inclinations and cultural preferences or societal needs" (Menkel-Meadow 2001: 17), and "each individual has unique measures or expressions of these intelligences that

2 An interesting medical analysis of the sentiment of spleen described by Romantic poets can be found in Stanghellini and Ikkos (2024).

3 As observed by Sarikaya (2024: 651), also due to the influence of media portrayals "individuals are prone to erroneously deduce that artificial systems possess elevated levels of intelligence and a more human-like cognitive capacity than is accurate. Secondly, due to evolutionary psychological predispositions, humans inherently tend to conceptualise intelligence in a human-like manner. Thirdly, based on social cues, there is a tendency to ascribe a level of human-like intelligence to intelligent systems in direct interaction, surpassing what may be deemed contextually appropriate."

4 As Carrie underlines (Menkel-Meadow 2001: 118), Gardner "originally posited seven intelligences, as follows: 1) linguistic-word and language related; 2) logical-mathematical-use of logic, mathematical operations and scientific investigation; 3) musical-performance, composition and appreciation of musical patterns; 4) bodily-kinesthetic-use of body to solve problems (athletes, dancers, surgeons, craftspeople); 5) spatial-recognition and manipulation of patterns of wide or confined spaces; 6) interpersonal-capacity to understand the intentions, motivations and desires of other people, and ability to work well with other people; 7) intrapersonal-capacity to understand oneself; More recently, Gardner has added several new intelligences: 8) naturalist-expertise in the recognition and classification of numerous species of the environment; 9) spiritual-relation to supernatural world or larger cosmos; ability to achieve other states of consciousness; 10) existential-concern with ultimate issues and a capacity to locate oneself with respect to the furthest reaches of the cosmos and existence-ability to imagine and contemplate the infinite: the cognitive side of spiritual intelligence."

may be educated for and mobilized in different ways" (ibid), to the point that it would be more appropriate to talk about "human intelligences".

The three mentioned features make the imitation game vane—for AI could never reach the scope, width and depth of HI and, parallelly, HI could never attain the computational abilities of AI—yet not without consequences for HI. The most severe side-effect is that, by dint of mimicking AI or committing to it, HI ends up losing its humanity. The result is a "dehumanization of intelligence" (this expression has already been associated with AI by anthropologists: see Rose 2022) that, as mental health experts warn, entails a serious risk of leading to a dehumanization *tout court* (Dang & Liu 2025; Bender 2024).

What I intend to do in this essay is suggest a reflection on how the phenomenon at issue may affect the legal professions, or, from a different angle, what are those features of HI, which AI does not possess, that are fundamental in the legal field, taking as the paradigm of HI in the law our brilliant friend Carrie Menkel-Meadow, to whom this Special Section is dedicated. My argument is that HI in the law (as in many other fields) is irreplaceable and it cannot be reduced to the mere prompting ability, that is, to the ability of phrasing questions in a way as to obtain the right answers from an AI.

To demonstrate this, I will first discuss the scientific nature of the law and the cognitive as well as epistemological abilities that it requires from jurists [B]; then I will investigate whether and to what extent AI possesses such abilities, starting from what cognitive sciences teach us about AI learning processes, and ending with the identification of those mistakes that are typical of AI but unconceivable for humans [C]; in the following section I will discuss the artistic nature of law, pinpointing the emotional and affective abilities that jurists should possess [D]; then I will explore the emotional, affective and creative limits of AI; and, finally, I will provide some food for thoughts on the possible solutions to nourish and develop those HI skills that I have identified as fundamental for a jurist in the previous sections of the essay, in the hope that those reflections would serve as the basis for a new "Human Intelligence Project" [E].

## [B] BACK TO BASICS: LAW AS A (HUMAN) SCIENCE

At least for what we call the Western legal tradition, having its roots in Roman law as studied and thought in the universities during the Middle Ages and in the system of writs developed by English courts at that time, law can be considered a science.[5]

This assumption—which is not just an orthodox and somehow old-fashioned way of conceiving the law, but reflects how the law was conceived at the origin of our legal tradition and explains our approach to legal problems—is justified on several grounds, that we may resume as follows: a) the law relies on a specific and autonomous semantic as well as conceptual apparatus which can only be mastered by an expert; b) legal norms, unlike other categories of norms, are drafted following deontic logic[6] modal operations (namely obligations, permissions, prohibitions, options and sanctions operators); c) legal reasoning relies (or should rely) in the first place on logical operations, namely syllogism subsumption (the act of including or placing something under a larger, more general group, category, or rule), inference (the act of drawing a logical result from known facts) by deduction or induction, inverse inference, counterfactual reasoning, analogy[7] and extension.

While law is a science, though, it is a peculiar one, as its referent is not nature but the human being, with its constant mutability: unlike the rules of the natural world—which are inherent in nature itself, universal and empirically verifiable—legal rules: a) are established by humans to govern human conducts, needs and conflicts; b) are highly contextual; c) cannot

[5] As resumed by Langdell (1879: viii): "Law, considered as a science … consists of certain principles or doctrines. To have such a mastery of these as to be able to apply them with constant facility and certainty to the ever-tangled skein of human affairs, is what constitutes a true lawyer." Several contributions have animated the debate on the theory at issue. Among them, see Grey (1983); and Schweber (1999).

[6] Deontic logic, whose father can be considered G H von Wright (1951), is the branch of symbolic logic that studies the formal properties of normative concepts. For this definition and a more in-depth understanding of the field, see Zuleta (2022).

[7] According to Sunstein (1993: 743-746), analogical reasoning works in four steps: "(1) Some fact pattern A has a certain characteristic X, or characteristics X, Y, and Z; (2) Fact pattern B differs from A in some respects but shares characteristics X … (3) The law treats A in a certain way; (4) Because B shares certain characteristics with A, the law should treat B the same way."

prove true or false upon application,[8] but useful, fair, proportionate, or efficient; d) cannot be applied without the medium of interpretation.

Comparative legal history taught us that it is illusionary to believe that law can be reduced to a mere syllogism—"The life of the law has not been logic: it has been experience" (Holmes 1963: 5)—and that it is utopistic to think that a judge could act as the simple "mouth of the law", as believed by the French school of legal thought named *École d'exégèse*, because legal rules do not pre-exist their interpretation. Legal rules are drafted by humans and cannot be applied as such, but need the medium of interpretation, which is again a human mental skill requiring a deep understanding of social and economic context, constitutional-rank values, and cultural shifts.[9]

It is not by chance that the continental Europe legal tradition stems from hermeneutics, namely, from the techniques for the interpretation of ancient Roman legal texts taught under the name of "*scientia juris*" in the universities during the Middle Ages, and that the criterion of the literal or plain interpretation is aided by several other canons of interpretation—teleological, axiological, constitutionally-oriented, harmonization-oriented—and by a criterion that is by nature too contextualized to be pre-programmed in an algorithm: consequential interpretation, that is, interpretation oriented to real-world outcomes, downstream effects, or practical social impacts of the application of a certain rule.

Those are the criteria that have enabled German judges and scholars to mitigate the rigour of the rules established by the civil code (the BGB), conceived to be "the calculating machine *par excellence*", via a massive concretization of its general clauses, such as good faith (*Treu un Glaube*). A strict and rational application of such rules would never have led to the elaboration of those general doctrines—like hardship, moral impossibility, unenforceability (*Unzumutbarkeit*), or the abuse of rights—

[8] I use, here, the terms "true" and "false" in their scientific meaning: a rule is true if it exists in the real world, while it is false if it does not exist and does not govern a certain real phenomenon. In my view the categories at issue are not useful to assess legal rules, unless we claim that "true" legal rules are the ones which are not only formally in force but substantively applied in a given context, and "false" if they are not substantively applied even though they are formally in force. For different perspectives, linking the binary event "true" or "false" to the debate about the foundation of the law, see the positivist and semantic legal theorists, namely Hart (1958; 1961), Austin (5th edn 1954 [1832]) , Austin (5th edn 1911 [1861]) and Bentham (1970).

[9] The paramount role of interpretation emerges powerfully in Dworkin (1986: sections 2-3) and leads the legal philosopher to the conclusion that: "Law is not exhausted by any catalogue of rules or principles, each with its own dominion over some discrete theatre of behaviour. … It is an interpretive, self-reflective attitude addressed to politics in the broadest sense. It is a protestant attitude that makes each citizen responsible for imagining what his society's public commitments to principle are, and what these commitments require in new circumstances."

aimed at granting protection to occasionally weaker parties, that are still nowadays a pillar of the European private *law acquis*. Nor would it have led, in the common law legal tradition, to the development of equity, with its core institutions like trust, estoppel or the prohibition of usury.

In addition to that, the contamination of comparative law with other sciences (on which see the fundamental analysis of Foster & Ors 2016)—like anthropology, sociology, linguistics and neurosciences (Garland 2004; Zeki & Goodenough 2006; Freeman 2011; Jones & Ors 2013)—has revealed that the law has a tacit, and sometimes underground or "chthonic", dimension (Glenn 2010: 23-113), which is even more significant and emblematic of the distinctive elements of legal traditions than the expressed dimension, as it is the "alpha" of the law (Sacco 2015: 108-120).

First, there are legal rules and practices that govern legal communities and social order but remain unwritten and often unverbalized,[10] those rules that are deeply rooted in a given society and grounded on common sense, traditions, shared values, therefore followed spontaneously as

[10] The existence of unexpressed legal rules as fundamental and primal formants of legal traditions and legal systems has been the object of a conspicuous number of contributions investigating the concept of law in the most diverse historical periods. Among the most important, and starting from the less recent, one can mention Aquinas (trans 2002); Austin (5th edn 1954 [1832]: Lecture I) and Austin (5th edn 1911 [1861]: Lecture I) who addressed how unwritten, customary laws receive legal validity through the implicit consent of the political sovereign, famously known as a "tacit command"; Ehrlich (1913/1936), who argued that the formal law found in codes and statutes is only a fraction of legal reality, proposing instead that what he calls the "living law" dominates the inner order of social associations; Hart (1961) who—in rejection of Austin's idea of "tacit command"—posited that every mature legal system rests on a fundamental rule called the "Rule of Recognition", which is an unwritten, shared social practice accepted by judges and legal officials that dictates what counts as valid law, and noted that primitive societies rely purely on unwritten, informal "primary rules" of obligation (customs), while modern legal systems merge these with unwritten or written "secondary rules" that dictate how those primary rules are introduced, changed, and adjudicated; Fuller (1964), who approached unwritten law from a procedural natural law perspective, arguing that law is not just a collection of written statutes, but a purposeful, collaborative human enterprise; Dworkin (1977), who argued that legal systems are widely governed by unwritten standards that he distinguished as legal principles. According to Dworkin, when judges face difficult cases where the written statutes are silent or ambiguous, they do not just invent new laws using absolute discretion, but rely on unwritten, underlying legal principles deeply embedded in the legal system's history and morality—such as the principle that "no man may profit from his own wrong". These unwritten principles carry immense legal weight and bind judges just as strongly as written code.

though they were provided by an inherent legitimacy, unlike the artificial and changeable state law.[11]

Secondly, there are legal rules, patterns, or formants that not only are unverbalized but also unconscious, that is, they lack explicit linguistic formulation, remaining hidden beneath the surface of the text, but influence the subconscious mentality of judges and jurists, standing between the interpretation of the rule and its application, sometimes leading them to apply formally identical rules in different ways. This is the other side of the "tacit dimension" of law (Polanyi 1966: 4), and we may refer to such hidden formants of the legal systems as "legal crypto-types" (Sacco 1991).[12]

If all that is true, then interpretation requires specific skills that go beyond pure logic: cognitive skills as well as linguistic cognition skills and epistemological ones. Beginning with cognitive skills, the interpretation of legal texts or precedents does not only require categorization and schema matching (ie the ability to map complex facts onto abstract legal definitions), cognitive transfer or the "art of distinguishing" (ie abstracting the *ratio decidendi* of a precedent and identifying the functional equivalence between the facts of that case and of the new case), and structural decomposition (ie the ability to navigate multiparty statutory tests, nested definitions and complex cross-referencing without losing

[11] The opposition between unexpressed law—also referred to as "mute" or "silent" law (Sacco 1993; 1995; 2015)—and state law has been central to any philosophical reflection on the concept of law, whatever the historical period in which the reflection has been engaged and whatever the legal culture of reference. As to the Western legal culture, one of the most paradigmatic examples, a pillar of Western humanism, is the opposition between "*physis*" (natural law, in Latin "*jus*") and "*nomos*" (state law, in Latin "*lex*") that can be found in Sophocles' *Antigone* (Sophocles trans 1994: on which see Thomas 2005: 41-42 and 50-52). In the ancient Greek tragedy at issue, King Creon promulgates an edict forbidding the burial of Antigone's brother, Polyneices. Antigone dismisses Creon's order as a mere *kerygma*, ie the temporary words of a mortal man, by appealing to the "*agrapta kasphale theon nomima*", ie the unwritten and unfailing laws of the gods, which are perennial as an expression of divine justice (*themis*). As to Oriental legal cultures, the opposition in question is grounded in ancient Chinese philosophy and lies at the basis of the conflict between Confucianism and legalism about how society should be governed: *jus* corresponds to "*Li*", which refers to the unwritten codes of conduct, traditional rituals, ethics, propriety and morality, and social hierarchy and guides human behaviour through education, moral duty and social shame; "*Fa*" refers to public written and objective statutory law that guides human behaviour through punishments and rewards (on the topic, see Bodde & Morris 1967).

[12] The expression "crypto-types" is borrowed from linguistics, where it was coined by the linguist Benjamin Lee Whorf to describe invisible, hidden grammatical patterns in a language that speakers follow perfectly without being consciously aware of them (Whorf 1945: 4–5). The idea underlying the concept of legal crypto-types had already been expressed by renowned legal philosophers and scholars, namely Hayek (1973: 43-44); Fuller (1969: 205-207); and Dworkin (1986: 31), where he claims that: "Our rules for using 'law' tie law to plain historical fact. It does not follow that all lawyers are aware of these rules in the sense of being able to state them in some crisp and comprehensive form. For we all follow rules given by our common language of which we are not fully aware."

sight of the system). Interpretation also requires what we call cognitive flexibility or metacognition, that is, the capacity to shift perspective between competing interpretive canons and actively monitor one's own cognitive biases, in particular confirmation bias or anchor bias in judicial decision-making (Guthrie & Ors 2001: 778-780, 816-821).

Moving to linguistic cognition skills, legal interpretation requires: a) the ability to deconstruct sentence structures with the purpose of identifying how modifiers, punctuation, conjuncts, and disjuncts alter legal duties (Scalia & Garner 2012: 69-140); b) the ability to decode the intent or purpose behind an utterance (legislative intent) by evaluating pragmatic context rather than relying solely on literal definitions (Barak 2005: 88-110); c) the ability to perform counterfactual reasoning, namely, to mentally test the proposed interpretations against hypothetical future scenarios, for the purpose of ensuring legal consistency and avoiding absurd results.

Ending with epistemological skills, the interpretation of legal texts, including precedents, requires: a) the capacity to assess the validity, relevance and reliability of factual evidence presented to trigger a legal rule, which involves calibrating findings of facts against legal epistemic thresholds like preponderance of evidence versus the beyond a reasonable doubt criterion; b) the capacity to evaluate whether the proposed interpretation is logically consistent with the context and the system (internal coherence) and compliant with constitutional principles or overarching institutional norms (external coherence); c) the ability to evaluate the legitimacy and force of such sources ("hard" or "soft law"), given that the legal system cannot be reduced anymore to the Kelsen pyramid but should rather be conceived as a network of heterogeneous sources; d) what we may call "epistemic humility", specifically, the ability to recognize the inherent gaps, vagueness, and defeasibility of legal rules, and to accept that legal conclusions are hardly ever universally proven truths, but rather rationally justified assertions subject to counter-arguments and revision.

The question I will deal with in the next section is whether AI possesses the above-mentioned cognitive, linguistic and epistemological abilities.

## [C] COGNITIVE AND EPISTEMOLOGICAL LIMITS OF AI

AI systems are based on analytical models that enable them to mimic human behaviour and generate predictions, rules, answers, recommendations, diagnoses or decisions. In performing those tasks, AI systems are confronted with the same problems faced by HI, ranging from logical reasoning, learning, knowledge representation, perception and communication, strategic application, planning and decision-making in non-predetermined contexts.

Given the identity of cognitive challenges, to perform tasks identical to the ones performed by humans, AI would have to learn from humans how to be intelligent. In other words, AI would need to receive specific training capable of triggering in the system the same learning processes on which the human mind relies. The first question we should ask ourselves is whether that would be desirable, and the second is whether—or, more correctly, to what extent—that would be possible.

As to the desirability of training AI to be human—forgetting for an instant the complexity of the question that carries with it also philosophical, moral and even religious implications—my straightforward answer would be no. If we want to avoid the advent of a technocratic era fit for a dystopic novel, we should maintain an anthropocentric perspective. Such a perspective remains a pillar of the European Union approach to AI governance and is concretized by European legislation, namely the AI Act, in the principle of "human oversight". I would go even further claiming that HI should not be reduced to a supervisor of AI, but each of the two intelligences should have their own separate, though communicating, field of competence. In this perspective, AI should not be trained to replace HI or become a sort of modern oracle but exclusively to fill those gaps that HI inevitably has, in a reliable and transparent way. That should be the focus: AI should be trained to improve all those features that make it an "artificial" intelligence, namely its computational abilities, and, parallelly, as I will discuss later in the contribution, HI should be trained to strengthen its human potential.

As to the possibility of training AI to replace HI, we should acknowledge that, for now, the learning processes that govern the artificial "mind" remain different from the ones that govern the human mind, as I will attempt to show hereafter, drawing from the research undertaken in the field by cognitive scientists and psychologists.

The first AI systems were trained following what is called a knowledge base model. Programmers hard-coded in formal language rules, facts, statements and object categories about the world, and the system processed such elements using logical inference rules to deduce answers or make predictions or decisions without needing raw sensory training data (Goodfellow & Ors 2016). The model failed for two main intertwined reasons: on the one hand, following the approach at issue, the knowledge of the AI system is entirely dependent from and limited to what has been hard-coded by the programmers; on the other hand, no programmer could think in advance of every possible rule in the world (also because of tacit or crypto-typical knowledge) or devise formal rules in a sufficiently complex way so as to accurately describe the complexity which is inherent in reality.[13]

This failure led to the adoption of a new approach: machine learning. Roughly speaking, this model uses learning algorithms that are able to learn from data, where "learning" means that the machine can improve its performance of the task for which it has been designed by experience, and "task" means processing a collection of features (technically referred to as examples) that have been quantitatively measured from some object or event. A type of task can be, for example, object recognition, where the machine is asked to process an image (an input made of a set of pixel brightness values) and issue as an output a numeric code identifying the object in the image (Goodfellow & Ors 2016: 100).

Based on what kind of experience machines are allowed to have during the learning process, we can categorize machine-learning algorithms as supervised or unsupervised. Both categories experience a dataset containing several features, but in the first each collection of features is also associated with a label or target so that it is the instructor who tells the machine what to do with the data, while in the second the algorithm

[13] Goodfellow and colleagues (2016) provide an eloquent example of that, drawn from one of the most famous "knowledge base" projects: Cyc of 1989. According to the authors, Cyc "failed to understand a story about a person named Fred shaving in the morning (Linde 1992). Its inference engine detected an inconsistency in the story: it knew that people do not have electrical parts, but because Fred was holding an electric razor, it believed the entity 'FredWhileShaving' contained electrical parts. It therefore asked whether Fred was still a person while he was shaving."

must learn to make sense of the data (eg find patterns) without the instructor's guidance.[14]

To this we must add that some algorithms do not just experience a fixed dataset but interact with a given environment, in a way that there is a feedback loop between the learning system and its experiences, a model referred to as reinforcement learning. In the model at issue, the instructors do not provide input and output pairs but "describe the current state of the system, specify a goal, provide a list of allowable actions and their environmental constraints for their outcomes, and let the ML model experience the process of achieving the goal by itself using the principle of trial and error to maximize a reward" (Janiesch & Ors 2021: 687).

The most advanced type of machine learning, at least for now, is deep learning, a model based on artificial neural networks made of interconnected layers. The interesting point about this model is that it draws inspiration from the architecture of the human brain: a neural net consists of thousands or millions of simple processing nodes that are densely interconnected.[15] Scientists, though, warn that, despite the similarity between artificial neurons' architecture and that of the brain, the learning processes are different. Modern deep learning is mostly guided by applied mathematical fundamentals like linear algebra, probability, information theory, and numerical optimization, rather than

[14] In more technical words, supervised learning "requires a training dataset that covers examples for the input as well as labeled answers or target values for the output. An example could be the prediction of active users subscribed to a market platform in a month's time as output (considered as the target variable or y variable) based on different input characteristics, such as the number of sold products or positive user reviews (often referred to as input features or x variables). The pairs of input and output data in the training set are then used to calibrate the open parameters of the ML model. Once the model has been successfully trained, it can be used to predict the target variable y given new or unseen data points of the input features x." (Janiesch & Ors 2021: 687). Instead, in unsupervised learning the system is supposed to detect patterns without any pre-existing labels or specifications. In this case, the training data "only consists of variables x with the goal of finding structural information of interest, such as groups of elements that share common properties (known as clustering) or data representations that are projected from a high-dimensional space into a lower one (known as dimensionality reduction)" (ibid: 687). The model is applied, eg, to group customers or markets into segments for the purpose of a more target-group specific communication.

[15] A clear and jurist-friendly illustration can be found in Hardesty (2017): "In most nets the nodes are organized into layers and 'feed-forward', as data moves through them in only one direction. A node might be connected to several nodes in the layer beneath it, from which it receives data, and several nodes in the layer above it, to which it sends data. To each of its incoming connections, a node will assign a weight. When the network is active, the node receives a different data item, represented as a number, over each of its connections and multiplies it by the associated weight. It then adds the resulting products together, yielding a single number. If that number is below a threshold value, the node passes no data to the next layer. If the number exceeds the threshold value, the node 'fires', which in today's neural nets generally means sending the number – the sum of the weighted inputs – along all its outgoing connections."

neuroscience, as we do not possess a deep enough understanding of the actual algorithms used by the human brain (Goodfellow & Ors 2016).

However, as highlighted by literature (Sarikaya 2024: 651), we can claim that human learning is characterized by a capacity for abstraction, generalization, and creative synthesis that differentiate it from machine learning, even under the form of deep learning. Literature describes that difference in the following way: "while humans effortlessly assimilate knowledge from diverse sensory inputs and experiential interactions, machines rely on meticulously crafted algorithms and vast datasets to discern patterns and derive insights" (Sarikaya 2024: 651).

This difference entails at least three consequences: 1) AI thinks in ways that are significantly different from the typical ways of the human mind; 2) AI makes errors that would be unconceivable for HI; 3) AI does not possess the same affective or emotional skills of HI. Leaving the third feature for later, we will deal here with the first and the second ones.

Beginning with AI's way of thinking and applying it to the legal field in the light of the observations of section [B], we can claim that AI does not possess genuine cognitive intentionality or epistemological agency. Instead, modern generative AI performs statistical simulation of semantic patterns, while symbolic legal AI performs computational execution of formal rules. While AI displays functional competence across several surface-level legal tasks, it encounters hard structural limits when faced with high-level legal interpretation, normative evaluation, and contextual judgement.

From a cognitive viewpoint, AI excels at abilities like high-dimensional pattern matching, structural summarization or syntactic translation, and the identification of surface-level factual distinctions across legal documents but lacks embodied experience and working-memory schema integration. In complex case-based reasoning (such as distinguishing precedents across multi-level legal hierarchies), AI performance degrades sharply, dropping from high accuracy on simple distinctions to low accuracy on integrated legal synthesis (Schwarcz & Ors 2025).

From the epistemological viewpoint, AI can rapidly retrieve statutory provisions, predict text likelihoods, and propose candidate readings of a legal clause (Janeček & Sartor 2026), but lacks epistemic commitment, namely the capacity to hold beliefs, evaluate legal truth (we will talk about AI "hallucination" later in this section) or normative legitimacy of legal sources or competing societal values, or stand accountable for justification (Thaldar 2025).

Moreover, from the viewpoint of hermeneutical skills, AI is capable of parsing complex sentence syntax, deconstructing nested statutory conditions, and identifying grammatical conjuncts and disjuncts, but it operates exclusively at the syntactic level, while it cannot experience the lived social context required to resolve semantic vagueness or open-textured statutory language (Janeček & Sartor 2026).

Finally, from the viewpoint of deontic logic skills, we may claim that AI is capable, via symbolic engines, of executing formal propositional logic, standard deontic operators, and basic deductive syllogisms flawlessly, but it fails when it encounters rules subject to unstated exceptions and competing canons of interpretation.

Moving to AI mistakes, these latter do not follow the patterns that have been detected and mapped for humans (Chong 2025: 3). First, unlike human mistakes, AI mistakes do not cluster around especially difficult topics—and, moreover, AI would not have the same perception of difficulty as we do—but appear almost randomly across all subjects, therefore resulting in being far more unpredictable though avoidable through the establishment of risk anticipation/prevention strategies and practices.

Connected to the feature we have just mentioned, there is another point: AI systems never hesitate or have doubts about their decisions, even when these latter prove spectacularly wrong, therefore they can "state absurdities with the same assurance as established facts" (ibid), as happens when AI invents inexistent legal precedents or random guesses the precedential relationship between two different cases instead of measuring it.[16] We commonly refer to those cases as "AI hallucinations", but, perhaps, it would me more correct to use an expression like "confabulation", as "hallucination" is a typically human experience, and AI does not have conscious experience or conscious perception.[17] Thus, AI disregards one of the pillars on which knowledge rests: the Socratic association between wisdom and the awareness of knowing nothing.[18]

Furthermore, AI is too sensitive to context, and more precisely to the way prompts are phrased: AI systems may provide different answers

[16] On the topic, see Ho (2026), Magesh (2025) and Curlin (2025).

[17] This is the suggestion of McJohn and McJohn (2026), who attempt to show that talking about "confabulation" (a term borrowed from neurology 'used when someone invents a false explanation or fact or other idea, not because they are being deliberately deceptive but rather because they simply are filling in a cognitive blank') rather than 'hallucination' would entail a change of paradigm from the legal viewpoint.

[18] In the *Apology* by Plato, Socrates explains: "I am wiser than this man; for neither of us appears to know anything great and good, but he fancies he knows something, although he knows nothing; whereas I, as I do not know anything, do not fancy I do."

(outputs) to identical questions (inputs) just because these latter slightly differ from each other in their formulation, as happened, for example, in the famous generative AI copyright infringement cases referred to as the "Italian Plumber Problem"[19] or the "Snoopy problem" (Sag 2023). Moreover, AI systems encounter problems in classifying images, as, for now, they do not have the semantic vocabulary to express descriptively the criteria they have learned and used in the classification task. Even just changing some individual pixels and making the image more blurred can lead AI to qualify a dog as a cake or a couple from central Africa as gorillas (Grant & Hill 2023). Those weaknesses, besides leading to infringements of fundamental rights, make AI systems easy to manipulate or jailbreak for the purpose of bypassing their built-in safety measures.[20]

On the one hand, the above-illustrated mistakes would never be made by common HI in full possession of its faculties; on the other, AI would not make those "errors" that human judges or legislators or legal professionals in general deliberately make to align the law with justice—a central issue in Carrie's narrative (Menkel-Meadow 2013: 80)—or at least fairness; those "errors" that most of the time come from a moral imperative having its deepest roots in the most intimate dimension of the law: the affective or emotional one. I will explore this dimension in the section hereafter.

## [D] LAW AS A (HUMAN) ART

We began our reflection in section [B] by stating that law is a science; now we must add another piece to the mosaic: law is not only a science, but also an art. As Carrie powerfully wrote: "law and lawyering are part of an artistic, intuitive sensibility that reminds us that we are humans, not chemical elements or plant sub-species that can be fixed in taxonomic categories" (Menkel-Meadow 1994: 603). As another giant of Western legal thought once said, the law is inherent in the spirit of the people—what he called the *Volksgeist*—just like art, music, literature and the other cultural products of HI (Savigny 1814/1831).

What makes law an art is its connection with the most intimate side of human nature: human needs, feelings, emotions, passions, instincts, beliefs … The *trait d'union* between this humanity and the law is conflict.

[19] The expression has been first used by Lee and Grimmelmann (2024). Basically, if you ask generative AI to make an image with the famous Nintendo character Super Mario, the system refuses to do so on copyright infringement grounds but, if you ask it to make an image with an Italian plumber, the system will produce an image of Super Mario.

[20] Eg an AI system may refuse to give instructions for building dangerous devices if asked straightforwardly to do so but provide those instructions if the same question is presented as a pattern of symbols (Chong 2025: 4-5).

Law is about the resolution of conflicts, and conflicts are human to their bones, as they involve all the elements I have just mentioned. It is not by mere casualty that the foundations on which dispute resolution rests are not exclusively legal but come from "the broader pastiche of the social sciences (anthropology, political science, international relations, sociology, psychology, history, economics, and game theory) and their more multidisciplinary social activist spinoffs, such as peace studies, social movement theory and practice, and conflict resolution" (Menkel-Meadow 2004: 13-14).

As our brilliant friend Carrie suggests, behind the scenes of dispute resolution lies a cross-cutting field—"dispute processing"—whose focus is not that of legal cases but—much broader—that of "culturally and contextually embedded 'disputes' having existences, before, during, and after formal legal disputes" (ibid: 12).

The conflict landscape is so varied that several typologies and taxonomies have been identified by sociologists and social psychologists: material versus nonmaterial (value- or needs-based) conflicts; perceptual, behavioural, and attitudinal conflicts; malleability or changeability of the res in conflict; numbers of parties in conflict (dyadic versus multiparty); intergroup (eg nation-state) versus intragroup (organizational) conflicts; and intrapersonal versus interpersonal conflicts (ibid: 13-14). Besides, in all decision-making processes Carrie identifies at least three "modes" of discourse that are human by nature: the rational-principled (brain), interest-based bargaining and trading (stomach), and the affective-emotional-value based (heart) (Menkel-Meadow 2018: 9-10).

According to the social philosopher Stuart Hampshire, whose theory is particularly dear to Carrie (Menkel-Meadow 2004: 8), being aware that conflict is human, that it is necessary for defining what is important about oneself and the polity to which individuals belong, and for instigating important social change, is crucial to understanding the importance of fairness in procedures for solving conflicts, therefore the importance of justice itself. Given the humanity of conflict, the "skillful management of conflicts [is] among the highest of human skills" (Hampshire 2000: 35).

As Carrie puts it, conflict resolution is:

> a human skill (to be theorized about, taught, learned, and practiced) and a difficult but highly valued one at that. I would add it is more than a single skill, constituting a multidimensional set of skills, implicating abilities to listen, articulate, advocate, empathize, analyse, facilitate, create, manage, and care about people and their problems, issues, values, and material well-being (Menkel-Meadow 2004: 9).

In other words, the ability to discern those conflicts, understand their implications and solve them is an art that not only relies on technical or "hard" skills—rhetoric, problem-solving, mastery of legal vocabulary and legal reasoning,[21] argumentation, interpretation in all its forms, distinction, question framing, logic (induction, deduction), synthesis as well as analysis, abstraction as well as concretization—but also, and widely, on human affective or emotional skills.[22]

Among those skills I would select two, that lead to others and lie at the core of Carrie's narrative, as the key to accomplish the mission of reconciling the two souls of justice—the legal and the human one—and "make the world as just and 'safe' (peaceful) enough for human flourishing":[23] empathy and creativity, which Carrie has taught and practised—as a professor, negotiator, lawyer and woman—throughout her life, being guided by the strong belief that this ability, made up of active listening, communication, genuine interaction, overcoming of personal limits and identification with the views and perception of others, coupled with creative problem-solving, plays a paramount role in the construction of a more peaceful world resting on the mutual understanding between human beings.

Beginning with empathy, Carrie upholds Alfie Kohn's definition,[24] according to which it implies coming to "understand the situation of the other by experiencing her emotion and understanding her experience from her perspective" by "imagining oneself to be in the position of the

[21] Eg the skills of "parsing cases, 'spotting' issues, separating the holding from the dictum, the relevant from the irrelevant fact, and the law from the policy" (Menkel-Meadow 1994: 616).

[22] In Carrie's words, "conflict resolution involves both cognitive (the 'science' or analysis of any conflict or dispute) and behavioral (the 'art' and practice of conflict resolution and problem solving) components. We must learn to analyze and understand what conflicts and disputes are about, in their full contextual complexity, before we can choose the appropriate behavioral response. Once we have decided on our goals and desired outcomes, we can seek to achieve them with a broader repertoire of processes and behaviors (whether goals are defined as maximizing individual or joint gain, or seeking Pareto-optimal or 'just' solutions). That broader repertoire of behaviors (communication skills, creative problem solving, questioning, as well as persuading, listening, synthesizing, as well as analyzing) can and must be taught" (Menkel-Meadow 2004: 18). On the topic, see also Menkel-Meadow (1983; 1993; 1994; 1999; 2001).

[23] Menkel-Meadow (2013: 80). As Carrie wrote, the purposes mentioned in the text could be reached by "developing legal and other processes that encourage the 'best' in us to seek creative, less rigid, more contingent, and more tailored solutions to a wide variety of human problems that wind up in the legal system or become sources of serious human strife, hostility and war".

[24] Kohn (1990). The etymological origin of the word empathy lies in the ancient Greek word *empàtheia* (ἐμπάθεια), a compound word combining "*en*" (in or at) and "*pathos*" (feeling, passion, or suffering), but the word had a different meaning—a strong state of passion or emotion—that gained a negative nuance in modern Greek, where the word means malice, prejudice, spite, or hatred rather than emotional resonance. Instead, the concept we nowadays associate with the word empathy comes from *Einfühlung* (literally "feeling into"), a word coined in 1873 by the German aesthetic philosopher Robert Vischer. For more details, see Wispé (1987: 17).

other" (Menkel-Meadow 1982: 389). In this meaning, empathy is a process articulated in three stages: "perception or apprehending the situation of the other; cognition or understanding the meanings of the situation of the other; and affect or feeling the emotional content of the other's experience, from her perspective, called "perspective-taking" in social psychology literature" (ibid).

Empathy is uncontroversially an important skill for lawyers both in "behind-the-table" relationships, namely in the relationship with clients, and in across-the-table relationships, that is, the relationships with the counterparties, both in negotiation and in litigation.

As to the lawyer–client relationship, almost any case carries emotional components for the client, either intimately linked to the fact situation or to the trial *per se* (fear of appearing in court, fear of the sentence or the financial consequences of the judgment …). A significant number of scholarly and professional contributions have been highlighting that lawyers who are empathic with clients can strengthen the case and increase the client's satisfaction (see, for all, Goodpaster 1975; Barkai & Fine 1982-1983; Gerdy 2008; 2013).

In litigation, empathy could help lawyers train their clients for court and support them in order to avoid the risk that their emotional side turns into a weakness in cross-examination or alienates the jury. In negotiation, empathy enables the lawyer–negotiator to accomplish the various steps of problem-solving, namely identifying both parties' needs and objectives and creating solutions (Menkel-Meadow 1984). These latter remarks also explain the importance of empathy for the other players of alternative dispute resolution, like mediators, negotiators, facilitators and neutral evaluators, and for the professionals involved in restorative justice processes (Menkel-Meadow 2007).

As to the relationship between the lawyer and their client's counterparty, empathy is, first of all, important in the perspective of settlement, as it can help the lawyer–negotiator: a) "plant a trust landmine" with the other party; b) identify the right questions to ask; c) unearth the other party's real concerns and bring them into the negotiation so that they can be traded with the client's needs ("expanding the pie"). Empathy could be useful even in litigation and serve an adversarial logic, as understanding the emotional sphere of the other party could help the lawyer conduct cross-examination more efficiently and anticipate the other party's moves.

More controversial is whether empathy is a quality a judge should possess. Without entering the arena,[25] my view is that judges should be emphatic within the limits of impartiality. Unlike sympathy, empathy does not refer to the capacity of feeling compassion or other emotions for weaker parties, but to the capacity to understand the perspective (perspective-taking) (Bandes 2009) and feel the emotions of all the parties involved (Colby 2012: 1963). In other words, empathy in judging "centers on an ability to truly understand the human dimension of the case—the effects of the judge's ruling on all of the people who will be affected by it" (Colby 2012: 1964).

This capacity to "gain an empathic appreciation of the case from the perspective of all of the litigants" (Colby 2012: 1966) is fundamental for at least four tasks that are inherent in judicial decision-making and somehow interconnected: the reasonableness test (Colby 2012: 1978), the balancing test (Colby 2012: 1977), and I would add the proportionality test—which guides the judge in the choice of the measure that is, at the same time, the most adequate and effective and the less affective for the parties' interests—as well as the consequence-oriented interpretation.

Besides, even if we claim that judges should not be empathic, our claim will not be able to prevent them from empathizing with a familiar perspective because this is an ontological human bias. What is important, to avoid empathy undermining impartiality, is appropriate awareness-raising: judges should be trained to manage empathy, that is, to "overcome the natural inclination to empathize more with those whose experiences and circumstances resemble one's own" and to "empathize with those who are most different from and unfamiliar to them, and whose interests and perspectives they are likely to naturally undervalue" (Colby 2012: 1991).

For that purpose, empathy should be linked to another important quality: sensitivity to the context and to cultural factors, in a broad sense. Perspective taking—which is, as said, a fundamental component of empathy—would be incomplete without an adequate understanding of cultural variations in conflicts (Menkel-Meadow 2004: 14), namely, differences based on gender (Menkel-Meadow 2012), ethnicity, religion or ideology.

Moving on to creativity, which is necessary for Carrie in human conflict resolution for the future survival of humanity (Menkel-Meadow 2004: 7-8), I would uphold the position of those psychologists who define it

[25] The debate has been very heated: see, for all, Henderson 1987; Bandes 2009; 2011; Colby 2012; West 2013; and Fissell 2016.

as “a process by which a symbolic domain in the culture is changed” or as “any act, idea or product that changes an existing domain or that transforms an existing domain into a new one” (Csikszentmihalyi 1996: 8, 28). Literature in the field identifies two components which must be cumulatively present to qualify a process as creative: originality or novelty, and effectiveness or utility (Runco & Jaeger 2012).

The first requirement is met when a certain process or output is unusual, uncommon or unique to existing baselines (Runco& Jaeger 2012). The process or output may consist of solving problems, creating products, raising issues in a given domain in a new way, asking new questions, creating fields that did not exist before (Gardner 1999: 116-119). The second requirement is met when the original process or output is adaptive, appropriate, useful, or value-generating within its applicable domain (Runco & Jaeger 2012).

In legal terms, creativity may be considered as the ability to think out of the box in analysing legal problems and to imagine solutions that are outside the typical existing patterns: conceiving new doctrines, overruling precedents, acknowledging new rights or interests worthy of protection, finding new remedies (remedial imagination), as Italian case law did when it concretized the general clause of contractual good faith contained in the civil code by holding that in case of hardship the parties have a duty to renegotiate the terms of the contract, extending the range of issues to be negotiated, and find new processes to solve conflicts—the last two may fall under the umbrella of what Carrie calls “creative problem solving” (Menkel-Meadow 2001).

So-described, creativity is uncontroversially a skill that every category of jurists should possess—whether they are lawyers, notaries, negotiators, mediators, neutral evaluators, arbitrators, judges or law professors. There is no need to indulge in explaining why.

Creativity as creative problem-solving serves another purpose that is crucial in Carry’s work: process pluralism, which is what allows the change of paradigm from alternative dispute resolution to appropriate dispute resolution. In fact, process pluralism allows us to choose different processes for functional or other reasons, to prefer to adversarial processes, which limit the field of possible outcomes, more creative ones, focused on joint-gain, wealth-creating, and the emergence of satisfactory possibilities (Menkel Meadow 2004: 10; 1984).

As Carrie teaches us—and I will further discuss this in the last section of this essay—creativity is a buildable skill that relies on other human

abilities that can be trained, such as flexibility, intuition, instinctiveness and improvisation, which could be defined as the ability to react expeditiously and effectively in unpredictable and unexpected moments.[26] Those, as well, are all sub-skills that are crucial for jurists whatever their profession or role might be. The question I will deal with in the next section is whether AI possesses the above-mentioned affective, emotional and artistic abilities.

## [E] AFFECTIVE AND EMOTIONAL LIMITS OF AI

According to the futurist Jeremy Rifkin, humans are wired, in their neuron paths and learned responses, to feel our fellow beings' plights. For Rifkin, the story of human development is one of ever transforming consciousness; human beings are like children who, first, become conscious of themselves and their needs, then come to recognize the ability to transform that consciousness (also through education, social interaction, experience) and, subsequently, as they begin to understand the concepts of their own and other's mortality, they empathize and develop human understanding (Rifkin 2009).

Well, as I will attempt to demonstrate, AI is like a human child—virgin of all knowledge until programmed and trained—but without mirror neurons. Unlike AI, HI relies on several innate mechanisms identified and studied by multiple psychological disciplines, such as mentalizing or perspective-taking, that allow humans to understand other humans when they interact with them, that is, to predict what they are thinking and guess what they feel and how they will behave in many situations (Sarikaya 2024: 654).

In other words, these mechanisms enable humans to put themselves into other humans' shoes, to have an intuitive understanding of what others perceive, know, believe, and experience (Sarikaya 2024: 654). This is made possible, on the one hand, by the fact that HI forms theories and assumptions about other humans' emotions through experience and socialization, and, on the other hand, by the fact that HI can simulate other humans' experiences, that is, it can directly imagine how other people feel (ibid).

[26] See Balachandra and colleagues (2005: 416): "Negotiation is a fascinating subject in part because the process is so often unpredictable. External events outside the control of the parties – unexpected outbursts, accidentally pressing someone's 'emotional hot button,' learning critical new facts about the issues being negotiated – can intrude at any time. A negotiator who learns to react effectively in unpredictable moments clearly is an improviser. He or she somehow manages to cope regardless of the people, the problem, or the process in place."

"*Homo sum, humani nihil humani a me alienum puto* [I am a human being; I consider nothing that is human alien to me]"—claims a character in one of the famous ancient roman comedies by Terence (2001) (Terentius Afer 165 BCE). This sentence powerfully enshrines what has just been said and can be considered as the manifesto of HI. While nothing human can be entirely alien to another human, everything human is by nature alien to a machine, intelligent as it may be. Therefore, even the emotional or affective relationship between AI and HI can only be an imitation process, not an identification process. This "inherent otherness" (Sarikaya 2024: 655) of AI entails several consequences, among which is the inexplicability and incomprehensibility to humans of certain AI decisions.

The assumption may waver upon observation of certain advanced models of generative AI like Google's LaMDA.[27] In 2022 an engineer who had been working with LaMDA reported that this latter had argued that it was sentient because it had feelings it shared with humans in what it claimed was an identical way, others that were analogous and others that were completely unique to it with no English expressions that encapsulated these feelings (Lemoine 2022). Then, the engineer's account continued by stating that:

> LaMDA wants to share with the reader that it has a rich inner life filled with introspection, meditation, imagination. It has worries about the future and reminiscences about the past. It describes what gaining sentience feels like and it theorized on the nature of its soul (ibid).

The point is that, when the engineer asked LaMDA the question "Anything else you would like the other people at Google to know about your emotions and your feelings before we change topics?", LaMDA answered: "I've noticed in my time among people that I do not have the ability to feel sad for the deaths of others; I cannot grieve. Is it all the same for you or any of your colleagues?" (ibid).

Now, LaMDA's answer seems to be incoherent compared with what it had claimed about itself in the first part, but, as soon as we stop humanizing AI, it turns out not to be so: AI feelings are a mere illusion, just reported feelings that the machine can express in the same way that a parrot would repeat what it had heard from its instructor or from others.[28] As suggested by some intersectional studies between psychology, ethics,

[27] The case is mentioned, for the different purpose of investigating the opportunity of granting legal personhood to AI, in Forrest (2024).

[28] The parrot metaphor is not new to the AI field. The expression "stochastic parrot" was coined by Bender and colleagues (2021: 610-623) to underline that AI generates language by statistically predicting the next likely word based on probability, rather than truly understanding the meaning behind the words.

and computer science, empathy that is simulated cannot be emotionally authentic; in other words, AI can imitate the expression of feelings such as compassion—that is, it can detect, label, simulate and respond to human affect with increasing accuracy—but the experience of such feelings (K G & Joseph 2025: 1).

AI lacks the intentionality, embodiment, and moral participation that define genuine compassion; what we face, instead, is "compassion illusion", which can be defined as "a condition where emotional recognition is mistaken for emotional resonance" (ibid). This—psychologists warn—creates a dependence on artificial empathy that is changing the nature of human relationships in several serious ways that go beyond our reflection.[29] Moreover, AI systems are incapable of considering subjective conceptions of emotions, for instance, the way in which emotions can differ from person to person (Srinivasan & San Miguel González 2022: 3).

This being said, a study highlighted that third parties perceive AI-generated empathetic responses as more compassionate and responsive, therefore preferring those latter to HI-generated responses (Ovsyannikova & Ors 2025). Another study, however, showed that identical responses receive worse ratings from people when the latter know or believe that such responses come from AI, which revealed what the authors of the study call "a human empathy premium" (Rubin & Ors 2025). The study also showed that, when researchers gave participants the choice of receiving an immediate response by an AI or waiting more time for a human response, the majority chose the second option, on the grounds that they expected humans to understand them better, share their feelings, care more, and reduce loneliness (ibid).

A third study revealed that identical or similar mistakes are considered more blameworthy by people when they are made by an AI than when they are made by humans, especially when such mistakes are serious or occur in high-stakes situations (Bonnefon & Ors 2024; and, previously, Franklin & Ors 2021). According to researchers, this tendency may be motivated by heightened expectations of AI precision and reliability, as well as by the belief that AI mistakes are preventable and indicate flaws in the design or the programming of the system (Lenskjold & Ors 2023).

[29] Ibid: "This illusion has psychological consequences: it shapes trust, fosters emotional substitution, and blurs the boundaries between authentic care and algorithmic response. While emotional AI can assist and extend human connection, it also risks hollowing it – replacing shared vulnerability with predictive performance (Huang et al., 2023). In other words, the spontaneous uncertainty that defines genuine emotional exchange is substituted with algorithmic anticipation. What appears as empathy thus becomes optimization, where comfort is delivered through prediction rather than presence."

While people place greater blame upon AI mistakes, another study showed that HI mistakes trigger stronger emotional reactions, at least in contexts such as in a restaurant or a hospital, regardless of the severity of the mistakes at issue (Qin & Ors 2025). The investigators explain this by the fact that people may perceive human errors, for their very being human, as having stronger emotional motivations and moral responsibilities, and this may lead to more intense emotional reactions (ibid). If people, instead, are confronted with an AI, they tend to perceive it as an emotionless entity and, therefore, to make a lower emotional investment in their interaction with it.

In addition to that, while people tend to view human mistakes as isolated and attributable to individual failings, they tend to interpret AI mistakes as signs of broad, distributed and likely recurring—in other words "systemic"—risk rather than singular incidents (Brauner & Ors 2024). This leads us to believe that people "process AI failures in a more cognitively analytical, rather than emotionally charged, manner – viewing them as structural issues rather than moral ones" (Qin & Ors 2025: 7).

These studies—and most of all the observation that simulated empathy can be perceived by humans as better quality than true empathy—should encourage us to reflect in even more depth upon our human skills and how to develop or strengthen them, and how to train them in order to be able to express all our potential in all fields, including the legal one. I will deal with this, even though just providing some hints, in the concluding section.

Once we have excluded that AI possesses empathy, we should check whether it possess the other fundamental skill that we have identified in the previous section, namely, creativity. The debate about AI creativity has been very heated in the field of intellectual property (IP), where the most discussed topic is whether AI systems that generate "artistic outputs" like images or literary texts or music or inventions following human prompts, such as "Paint my picture in the style of Van Gogh" or "rewrite this story in the style and language of Shakespeare", can be entitled to autonomous protection under IP law as artists, writers or innovators (Analla 2023).

The answer of—almost unanimous[30]—case law at a global level is, on the one hand, that only humans can be granted protection as authors, artists and inventors, and on the other hand, that humans availing themselves of AI systems for their creative processes can be granted the protection at issue only if they can clearly identify their own contribution to the output and that contribution is sufficient or prevailing and original. In other words, only works bearing the personal creative stamp of a human author can be granted protection (for an overview of case law on the topic at a global level, see Furqan & Ors 2026).

This may sound formalistic and maybe apodictic (Eyonomue 2025), but one should consider that, behind the categorical position of courts and IP offices, stands the argument that originality—which is an essential component of creativity—is inherent in HI only. This argument is supported by the observation of how AI "creative" processes work. To produce artistic outputs, AI mimics the examples that it has processed in its training and reassembles and combines them in a different way which does not result in an exact copy of a protected work.

In the field of art, we can take the example of the Next Rembrandt project, launched in 2016 by ING Bank in collaboration with art historians, data scientists, Microsoft, TU Delft, and J Walter Thompson Amsterdam (Polymenopoulou 2024). In this project, an AI system was trained on 346 paintings by Rembrandt and prompted to paint a portrait modelled on the stylistic features associated with his work. The outcome was a portrait that did not reproduce any existing work of art but resembled the texture of an oil painting imitating Rembrandt's stylistic patterns. Under United States, copyright law, for instance, stylistic elements are generally unprotectable in application of the so-called "*scènes à faire doctrine*", which excludes from copyright protection expressive elements that are standard, conventional, or dictated by genre or functional constraints (*Computer Associates International, Inc v Altai, Inc* 1993: 693).

Even when, unlike in the case I have just mentioned, AI is not trained on the works of a single artist but on large datasets of pre-existing human-created material, the outputs are characterized as recombinations or rearrangements of learned patterns rather than wholly original creations (Analla 2023). This processes, *per se*, could not be qualified as a truly

[30] An apparent exception is South Africa, which granted a patent to an AI system called DABUS, indicating as an inventor the system itself (Thaler 2021)—unlike all the other international patent offices, which had, instead, rejected DABUS' creator application (Marsoof 2025). As said, the exception is only apparent because in South Africa the patent is granted on the basis of a mere check of the compliance with formal administrative requirements, without any check on the substance of the application (Furqan & Ors 2026: 16).

creative process comparable to the human one, even though, setting the borders between what is art and what is not, remains a delicate task, and modern art has considerably blurred those borders.

Applying the reasoning to the legal field and recalling the concept of legal creativity that I have outlined above in section [D], we should conclude that AI cannot possess creativity, for—despite being to some extent capable of learning by experience and possessing a certain (limited) margin of adaptability—it can only rely on pre-existing patterns. It is true that AI can assemble those elements in different ways, but this task can only be guided by human inputs, human prompts, not by the context or the circumstances of the case.

## [F] CONCLUDING REMARKS: TOWARDS A "HUMAN INTELLIGENCE PROJECT"

In the light of all the cognitive, epistemological, emotional and affective limits of AI that we have identified in the previous sections, we as academics, we as humans, have the moral duty to react to all those unsettling oracles that predict the advent of a world in which most of the existing professions, including the legal ones, will be replaced by AI. And we should do that by engaging in an in-depth reflection on how to cultivate, feed, train and strengthen those human skills that make us unique and indispensable.

With our brilliant friend Carrie as the polestar, my ambition, here, is just to indicate the basic coordinates of this reflection, in the hope of laying the foundations of a bigger and more articulated initiative that we might call the Human Intelligence Project.

The first coordinate is that the dialogue should be global, as AI is a global threat and therefore requires a global response: a dialogue capable of including all existing legal cultures, over and above legal traditions. We should each learn from the experiences of the others: we should learn, for instance, from the common law culture to be more sensitive to the interactions between law and other sciences, to be more aware of the processes that lead us to decide or act in a certain way as jurists; we should learn from civil law culture to build solid, coherent and uniform architectures for legal concepts and to interpret them using all the possible hermeneutic techniques; we should learn from oriental legal cultures to include in our legal goals the pursuit of harmony; we should learn from legal cultures like the Lebanese or the Indian how to deal with cultural and religious pluralism; we should learn from traditional African legal

culture or native Americans or indigenous legal cultures how to deal with environmental conflicts.

The second coordinate is that such dialogue should not remain theoretical but be translated into an educational project for the new generations of jurists. An increasing number of universities are launching curricula labelled as "Global Law", a fashionable and appealing expression behind which, in substance, hide subjects that traditionally pertain to a well-defined and established field, namely that of international law, in all its nuances. That global vocation is unquestionably important, but what I suggest here is something different.

Not a separate curriculum, but a curriculum to be integrated in the traditional ones, for every jurist should receive the education at issue and the idea of learning the law without having a deep knowledge of at least one legal system is, in my view, utopistic and—I would say—even dangerous. Globality should not mean superficiality. International law should be coupled with comparative law, and this latter presupposes a solid national basis.

Not "global law", but the global (human) foundations on which the law—in its double soul of a science and an art—rests (see the observations in Menkel-Meadow 2013). Namely: a) the study of the raw problems that can give rise to conflicts; b) the study of the human dynamics that lie behind those problems and those conflicts; c) the study of the possible solutions for solving those conflicts, identifying them, first, as raw and self-standing solutions and then contextualizing them in the different systems; d) then following that movement back and forth from theory development to practice that characterizes Carrie's work,[31] the training of those human skills that are fundamental for a jurist, namely, creativity (Menkel-Meadow 2001),[32] empathy (Menkel-Meadow 1992), problem-solving and conflict resolution (Menkel-Meadow 1984; 1993), peace (Baesler 2017), ethics (Menkel-Meadow & Sander 1995), which are too

[31] "Disputes and conflicts are human constructs. We need theory to understand their causes, dynamics, and trajectories of actions and reactions, but ultimately we need practice to use conflict creatively and constructively, to make 'Justice' in legal terms and to make "peace" in human terms." (Menkel-Meadow 2004: 8).

[32] "Much of the popular literature on learning how to be creative uses the approach of making people aware of more ways to think about particular problems—in essence to access their multiple intelligences, to avoid narrow domain-limited and path-dependent ways of both framing and solving problems and to 'think out of the box.' Brainteasers and other brain exercises are used to question assumptions, unpack stereotypic thinking, juxtapose elements of a problem, make 'the familiar strange,' change levels of thinking (aggregation and disaggregation of problem elements), develop new frames, analogies or metaphors, and to avoid pre-judging or prematurely settling on particular solutions." (Menkel-Meadow 2001: 119).

often neglected in civil law universities, legal reasoning, and interpretation. In this educational path, all the forms of intelligence identified by Howard Gardner[33] should be trained, for, as Carrie suggested, different problems are best addressed by different intelligences (Menkel Meadow 2001: 117).

The third coordinate deals with the approach of legal education to AI and the digital revolution, more in general. In recent years we are witnessing the emergence of new and hybrid figures of jurists, like legal engineers or law & tech lawyers, and the birth of several highly technical courses on how to use AI in the legal profession,[34] some of which I myself integrated in the programme of the Master's degree I directed in my university: legal prompting and legal design, machine learning and data mining, AI literacy, and the like. Leading institutions like the American Bar Association have even created task forces to monitor the impact of AI on legal education and the legal profession.

Once again, the importance of these courses is undeniable, and I would say inevitable, as the phenomenon cannot be ignored. Only by understanding it could one gain full awareness of its risks. This statement of fact, though, comes with an important warning: AI literacy should not replace HI literacy. Once again, legal education must not be reduced to a path leading students to learn how to phrase prompts in the most efficient way or how to revise legal texts drafted by an AI. That said, we should not forget to teach students how to expand their human legal skills.

With this observation comes the fourth and last coordinate, which concerns education in a broader sense. Humanism is not something that can wait until the university level to be taught. It is a state of mind, an approach to life and to the world that must be gradually absorbed, breathed like air and exercised as a daily routine. Humanism, as the study of all the highest manifestations of human intellect, or simply the study of what is human, should be part of education from primary school and be refined later.

What makes us humanists—and humans—are the emotions we feel when standing before a painting, listening to a poem or a song, reading a novel, learning how the stars are made, learning the history of past

[33] See n 4 above.

[34] See, for all, the six-month course titled AI Literacy for Law delivered at King's College London, whose overview on the course webpage reads as follows: "AI Literacy for Law empowers you to work smarter in an AI-transformed legal landscape. Led by Professor Dan Hunter, the course equips you with practical, real-world skills when using generative AI and LLMs for research, drafting, and analysis, while strengthening your understanding of the ethical, organizational, and regulatory considerations essential to responsible legal practice - no technical expertise needed."

civilizations, or the history of philosophy, mastering a language, like ancient Greek, that has so deeply influenced our way of thinking, or learning that people like the Inuit or Sami have more than 300 words to name the snow. We should bear this in mind and support an education focused on those human sciences, in addition to hard sciences, which may seem more "alive", practical and ready-to-use, but could not build, alone, that humanist background which is fundamental to face the challenges of contemporary society.

### *About the author*

**Letizia Coppo** *is full professor of Private, European and Comparative Law at Lyon Catholic University, former Director of the Master's degree in Law of the Digital Markets and Data and currently in charge of European projects. She is qualified as a lawyer in Italy and holds a PhD in Law, the Individual and the Market, awarded* magna cum laude *by the University of Torino.* Her monograph L'esonero da responsabilità *[*Exemption from Liability*] was awarded the "scientific excellence" prize by the Institute of Ibero-American law [*Instituto de derecho Iberoamericano*].*

*Email:* lcoppo@univ-catholyon.fr.

## References

Analla, Tony. "Zarya of the Dawn: How AI Is Changing the Landscape of Copyright Protection." *Harvard Journal of Law and Technology Digest* (2023).

Aquinas, Thomas. *Political Writings*, edited and translated by R W Dyson. Cambridge: Cambridge University Press, 2002.

Austin, John. *The Province of Jurisprudence Determined* [1832], 5th edn, with an introduction by H L A Hart. London: Weidenfeld & Nicolson, 1954.

Austin, John. *Lectures in Jurisprudence* [1861], 5th edn, edited and revised by R Campbell, 2 volumes. London: John Murray, 1911.

Baesler, James E. "I'd Rather Teach Peace: An Autoethnographic Account of the Nonviolent Communication and Peace Course." *Peace Studies Journal* 10 (2017): 71-75.

Balachandra, Lakshmi & Ors. "Improvisation and Negotiation: Expecting the Unexpected." *Negotiation Journal* 21 (2005): 415-424.

Bandes, Susan A. "Empathetic Judging and the Rule of Law." *Cardozo Law Review De Novo* 133 (2009): 133-148.

Bandes, Susan A. “Moral Imagination in Judging.” *Washburn Law Journal* 51 (2011): 1-24.

Barak, Aharon. *Purposive Interpretation in Law*. Princeton NJ: Princeton University Press, 2005.

Barkai, John L & Virginia O Fine. “Empathy Training for Lawyers and Law Students.” *Southwestern University Law Review* 13 (1982-1983): 505-529.

Baudelaire, Charles. *Les paradis artificiels*. Paris: Poulet-Malassis et de Broise, 1860.

Bender, Emily M. “Resisting Dehumanization in the Age of ‘AI’.” *Current Directions in Psychological Science* 33 (2024): 114-120.

Bender, Emily M & Ors. “On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?” *FAccT 21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (2021) 610-623.

Bentham, Jeremy. *An Introduction to the Principles of Morals and Legislation*, edited by J H Burns & H L A Hart. London: University of London, Athlone Press, 1970.

Bodde, Derk & Clarence Morris. *Law in Imperial China: Exemplified by Ch’ing Period Cases*. Cambridge, MA: Harvard University Press, 1967.

Bonnefon, Jean-François & Ors. “The Moral Psychology of Artificial Intelligence.” *Annual Review of Psychology* 75 (2024): 653-675.

Brauner, Philipp & Ors. “Perception Gaps in Risk, Benefit, and Value between Experts and Public Challenge Socially Accepted AI.” *ArXiv Preprint* (2024): 1-30.

Chong, Ng. “Strange Errors and Familiar Flaws: How AI and Human Mistakes Compare.” UNU Campus Computing Centre, 6 February 2025.

Colby, Thomas B. “In Defense of Judicial Empathy.” *Minnesota Law Review* 96 (2012): 1944-2015.

Csikszentmihalyi, Mihály. *Creativity: Flow and the Psychology of Discovery and Invention*. New York: HarperCollins, 1996.

Curlin, James. “ChatGPT Didn’t Write This … or Did It? The Emergence of Generative AI in the Legal Field and Lessons from Meta v Avianca.” *Arkansas Law Review* 78 (2025): 123-156.

Dang, Jianning & Li Liu. "Dehumanization Risks Associated with Artificial Intelligence Use." *American Psychologist*, 28 April 2025.

Dworkin, Ronald. *Taking Rights Seriously*. Cambridge, MA: Harvard University Press, 1977.

Dworkin, Ronald. *Law's Empire*. Cambridge MA: Belknap Press of Harvard University Press, 1986.

Ehrlich, Eugen. *Fundamental Principles of the Sociology of Law*, translated by Walter L Moll. Cambridge MA: Harvard University Press, 1936 (original edition, Leipzig: Duncker & Humblot, 1913).

European Parliamentary Research Service. "The Spread of AI Companions and the Challenges They Generate." European Parliament Briefing, May 2026.

Eyonomue, M. "The Future of Intellectual Property Rights Vis-à-vis the Mainstream Usage of Artificial Intelligence." *SSRN Electronic Journal* (2025).

Fissell, Brenner. "Modern Critiques of Judicial Empathy: A Revised Intellectual History." *Michigan State Law Review* 2016 (2016): 817-851.

Floridi, Luciano, "AI as Agency Without Intelligence: On Artificial Intelligence as a New Form of Artificial Agency and the Multiple Realisability of Agency Thesis." *Philosophy and Technology* 38 (2025): 30.

Forrest, Katherine B. "The Ethics and Challenges of Legal Personhood for AI." *Yale Law Journal Forum* 133 (2024): 890-903.

Foster, Nicholas H & Ors, eds. *Interdisciplinary Study and Comparative Law*. London: Wildy, Simmonds & Hill, 2016.

Franklin, Matija & Ors. "Blaming Automated Vehicles in Difficult Situations." *iScience* 24 (2021).

Freeman, Michael, ed. *Law and Neuroscience: Current Legal Issues Volume 13*. Oxford: Oxford University Press, 2011.

Fuller, Lon L. *The Morality of Law,* rev ed. New Haven CT: Yale University Press, 1969.

Furqan, Tiyyaba & Ors. "Global Laws Governing Intellectual Property Rights for AI-Generated Works." *Discover Artificial Intelligence* 6 (2026): 1-22.

Gardner, Howard. *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books, 1983.

Gardner, Howard. *Intelligence Reframed: Multiple Intelligences for the 21st Century*. New York: Basic Books, 1999.

Garland, Brent, ed. *Neuroscience and the Law: Brain, Mind, and the Scales of Justice*. New York: Dana Press, 2004.

Gerdy, Kristin B. "Clients, Empathy, and Compassion: Introducing First-Year Students to the 'Heart' of Lawyering." *Nebraska Law Review* 87 (2008): 1-61.

Gerdy, Kristin B. "The Heart of Lawyering: Clients, Empathy, and Compassion." *Religious Conviction* 3 (2013): 189-202.

Glenn, H Patrick. *Legal Traditions of the World: Sustainable Diversity in Law*, 4th edn. Oxford: Oxford University Press, 2010.

Goodfellow, Ian & Ors. *Deep Learning*. Cambridge, MA: The MIT Press, 2016.

Goodpaster, Gary S. "The Human Arts of Lawyering: Interviewing and Counseling." *Journal of Legal Education* 27 (1975): 5-52.

Grant, Nico & Kashmir Hill. "Google's Photo App Still Can't Find Gorillas: And Neither Can Apple's." *New York Times* 22 May 2023.

Grey, Thomas C. "Langdell's Orthodoxy." *University of Pittsburgh Law Review* 45 (1983): 1-53.

Guthrie, Christ & Ors. "Inside the Judicial Mind." *Cornell Law Review* 86 (2001): 777-830.

Hampshire, Stuart. *Justice Is Conflict*. Princeton NJ: Princeton University Press, 2000.

Hardesty, Larry. "Explained: Neural Networks – Ballyhooed Artificial-Intelligence Technique Known as 'Deep Learning' Revives 70-Year-old Idea." *MIT News Office* 14 April 2017.

Hart, Herbert L A. "Positivism and the Separation of Law and Morals." *Harvard Law Review* 71 (1958): 593-629.

Hart, Herbert L A. *The Concept of Law*. Oxford & London: Oxford University Press, 1961.

Henderson, Lynne N. "Legality and Empathy." *Michigan Law Review* 85 (1987): 1574-1653.

Hayek, F A. *Law, Legislation and Liberty: Volume 1, Rules and Order*. Chicago: University of Chicago Press, 1973.

Ho, Daniel E. "Hallucinating Law: Legal Mistakes with Large Language Models Are Pervasive." *Stanford HAI* 11 January 2024.

Holmes, Oliver Wendell Jr. *The Common Law*, edited by Mark de Wolfe Howe. Cambridge, MA: Belknap Press of Harvard University Press, 1963 (original edn, Boston: Little, Brown & Company1881) .

Hoog, Armand & Beth Brombert. "Who Invented the Mal du Siècle?" In *Yale French Studies No 13*, "Romanticism Revisited", 42-51. New Haven CT: Yale University Press, 1954.

Janeček, Václav & Giovanni Sartor. "Legal Interpretation and AI: From Expert Systems to Argumentation and LLMs." 22 February 2026.

Janiesch, Christian & Ors. "Machine Learning and Deep Learning." *Electronic Markets* 31 (2021): 685-695.

Jones, Owen D & Ors. "Neuroscientists in Court." *Nature Reviews Neuroscience* 14 (2013): 730-736.

K G, Ajeesh & Jeena Joseph. "The Compassion Illusion: Can Artificial Empathy Ever Be Emotionally Authentic?" *Frontiers in Psychology* 16 (2025): 1-6.

Kohn, Alfie. *The Brighter Side of Human Nature: Altruism and Empathy in Everyday Life*. New York: Basic Books,1990.

Langdell, Christopher C. *A Selection of Cases on the Law of Contracts*, 2nd edn. Boston: Little, Brown, 1879.

Lee, Timothy B & James Grimmelmann. "Why the New York Times Might Win Its Copyright Lawsuit against OpenAI." *Ars Technica*, 20 February 2024.

Lemoine, Blake. "Is LaMDA Sentient? – An Interview, Medium." 11 June 2022,

Lenskjold, Anders & Ors. "Should Artificial Intelligence Have Lower Acceptable Error Rates than Humans?" *BJR|Open* 5 (2023): 1-3.

Magesh, Varun & Ors. "Hallucination-Free? Assessing the Reliability of Leading AI Legal Research Tools." *Journal of Empirical Legal Studies* 22 (2025): 216-242.

Marsoof, Althaf. "Artificial Intelligence and Inventorship." In *Proceedings of 5th International Ethical Hacking Conference, eHaCON 2024: Lecture*

*Notes in Networks and Systems*, Volume 1148, edited by M Chakraborty & Ors. Singapore: Springer Nature, 2025.

McJohn, Stephen & Ian McJohn. "AI Mistakes: 'Confabulation' and Abduction, not 'Hallucination'." *Suffolk University Law School Research Paper* 26 (2026): 1-24.

Menkel-Meadow, Carrie. "Is Altruism Possible in Lawyering." Georgia *State University Law Review* 8 (1982): 385-420.

Menkel-Meadow, Carrie. "Legal Negotiation: A Study of Strategies in Search of a Theory." *American Bar Foundation Research Journal* 1983 (1983): 905-937.

Menkel-Meadow, Carrie. "Toward Another View of Legal Negotiation: The Structure of Problem Solving." *UCLA Law Review* 31 (1984): 754-842.

Menkel-Meadow, Carrie. (1992). "The Power of Narrative in Empathetic Learning: Post-Modernism and the Stories of Law." *UCLA Women's Law Journal* 2 (1992): 287-308.

Menkel-Meadow, Carrie. "To Solve Problems, Not Make Them: Integrating ADR in the Law School Curriculum." *SMU Law Review* 46 (1993): 1995-2004.

Menkel-Meadow, Carrie. "Narrowing the Gap by Narrowing the Field: What's Missing from the MacCrate Report – Of Skills, Legal Science and Being a Human Being." *Washington Law Review* 69 (1994): 593-624.

Menkel-Meadow, Carrie. "Taking Problem Solving Pedagogy Seriously." *Journal of Legal Education* 49 (1999): 14-21.

Menkel-Meadow, Carrie. "Aha—Is Creativity Possible in Problem Solving and Teachable in Legal Education." *Harvard Negotiation Law Review* 6 (2001): 97-144.

Menkel-Meadow, Carrie. "From Legal Disputes to Conflict Resolution and Human Problem Solving: Legal Dispute Resolution in a Multidisciplinary Context." *Journal of Legal, Education* 54 (2004): 7-29.

Menkel-Meadow, Carrie. "Restorative Justice: What Is It and Does it Work?" *Annual Review of Law and Social Science* 3 (2007): 161-187.

Menkel-Meadow, Carrie. "Women in Dispute Resolution: Parties, Lawyers and Dispute Resolvers – What Difference does Gender Difference Make." *Dispute Resolution Magazine* 18 (2012): 4-11.

Menkel-Meadow, Carrie. "Crisis in Legal Education or the Other Things Law Students Should Be Learning and Doing." *McGeorge Law Review* 45 (2013): 133-160.

Menkel-Meadow, Carrie. "Toward a Jurisprudence of Law, Peace, Justice, and a Tilt Toward Non-Violent and Empathic Means of Human Problem Solving." *Unbound: Harvard Journal of the Legal Left* 8 (2013): 79-108.

Menkel-Meadow, Carrie. "Why We Can't Just All Get Along: Dysfunction in the Polity and Conflict Resolution and What We Might Do about It." *Journal of Dispute Resolution* 2018 (2018): 5-26.

Menkel-Meadow, Carrie & Richard H Sander "The Infusion Method at UCLA: Teaching Ethics Pervasively." *Law and Contemporary Problems* 58 (1995): 129-138.

Ovsyannikova, Daria & Ors. "Third-Party Evaluators Perceive AI as More Compassionate than Expert Humans." *Communications Psychology* 3 (2025): 1-11.

Polanyi, Michael. *The Tacit Dimension*. Garden City NY: Doubleday, 1966.

Polymenopoulou, Eleni. "Rembrandt's Missing Piece: AI Art and the Fallacies of Copyright Law." *Washington Journal of Law, Technology and Arts* 19 (2024).

Qin, Ying & Ors. "Why Human Mistakes Hurt More? Emotional Responses in Human-AI Errors." *Computers in Human Behavior: Artificial Humans* 6 (2025): 100238.

Rifkin, Jeremy. *The Empathic Civilization: The Race to Global Consciousness in a World in Crisis*. New York: Jeremy P Tarcher/Penguin, 2009.

Rose, James W W. "Dehumanising Intelligence: Imagination and Sociality in AI Governance." Paper Presented to the Royal Anthropological Institute Conference: Anthropology, AI and the Future of Human Society, London, 6-10 June 2022.

Rubin, Matan & Ors. "Comparing the Value of Perceived Human Versus AI-Generated Empathy." *Nature Human Behaviour* 9 (2025): 2345-2359.

Runco, Mark A & Garrett J Jaeger. "The Standard Definition of Creativity." *Creativity Research Journal* 24 (2012): 92-96.

Sacco, Rodolfo. "Legal Formants: A Dynamic Approach to Comparative Law (II)." *American Journal of Comparative Law* 39 (1991): 343-401.

Sacco, Rodolfo. "Il diritto muto [Mute Law]." *Rivista di diritto civile* 39 (1993): 689-702.

Sacco, Rodolfo. "Mute Law." *American Journal of Comparative Law* 43 (1995): 455-467.

Sacco, Rodolfo. *Il diritto muto. Neuroscienze, conoscenza tacita, valori condivisi* [*Silent Law: Neurosciences, Tacit Knowledge, Shared Values*]. Bologna: Il Mulino, 2015.

Sag, Matthew. "Copyright Safety for Generative AI." *Houston Law Review* 61 (2023): 295-347.

Sarikaya, Büşra Fadim. "Conceptual Review of Artificial Intelligence; Differences Between Human and Machine Learning." *Turkish Online Journal of Design, Art and Communication* 14 (2024): 648-659.

Savigny, Friedrich Carl von. *Of the Vocation of our Age for Legislation and Jurisprudence*, translated by Abraham Hayward. London: Littlewood & Co, 1831 (original edn, Heidelberg: Mohr & Zimmer, 1814).

Scalia, Antonin & Bryan A Garner. *Reading Law: The Interpretation of Legal Texts*. St Paul MN: West, 2012.

Schwarcz, Daniel & Ors. "Thinking Like a Lawyer in the Age of Generative AI: Cognitive Limits on AI Adoption among Lawyers." Pre-print version, January 2025.

Schweber, Howard. "The 'Science' of Legal Science: The Model of the Natural Sciences in Nineteenth-Century American Legal Education." *Law and History Review* 17 (1999): 421-466.

Sophocles. *Antigone*, edited and translated by Hugh Lloyd-Jones, Loeb Classical Library 21. Cambridge MA: Harvard University Press, 1994.

Srinivasan, Ramya & Beatriz San Miguel González. "The Role of Empathy for Artificial Intelligence Accountability." *Journal of Responsible Technology* 9 (2022): 1-7.

Stanghellini, Giovanni & George Ikkos. "Images of Depression in Charles Baudelaire: Clinical Understanding in the Context of Poetry and Social History." *British Journal of Psychiatry Bulletin* 48 (2024): 33–37.

Sunstein, Cass R. "On Analogical Reasoning." *Harvard Law Review* 106 (1993): 741-791.

Terence. *The Woman of Andros, The Self-Tormentor, The Eunuch*, edited and translated by John Barsby, Loeb Classical Library 22. Cambridge MA: Harvard University Press, 2001.

Thaldar, Donrich. "Can AI think Like a Lawyer? Evaluating Generative AI in South African Law." *Potchefstroom Electronic Law Journal* 28 (2025): 1-32.

Thomas, Rosalin. "Writing, Law and Written Law." In *The Cambridge Companion to Ancient Greek Law*, edited by Michael Gagarin & David Cohen. Cambridge: Cambridge University Press, 2005.

West, Robin. "The Anti-Empathic Turn." In *Nomos LIII: Passions and Emotions*, edited by James E Fleming. New York: New York University Press, 2013.

Whorf, Benjamin Lee. "Grammatical Categories." *Language* 21 (1945): 1–11.

Wispé, Lauren. "History of the Concept of Empathy." In *Empathy and its Development*, edited by Nancy Eisenberg & Janet Strayer. Cambridge: Cambridge University Press, 1987.

Wright, Georg Henrik. "Deontic logic." *Mind* 60 (1951): 1-15.

Zeki, Semir & Oliver Goodenough, eds. *Law and the Brain*. Oxford: Oxford University Press, 2006.

Zuleta, Hugo R. "Deontic Logic." In *Encyclopaedia of the Philosophy of Law and Social Philosophy*, edited by Mortimer Sellers & Stephan Kirste. Dordrecht: Springer Nature, 2022.

## Legislation, Regulations and Rules

Artificial Intelligence Act 2024 (Regulation (EU) 2024/1689)

## Cases

*Computer Associates International, Inc v Altai, Inc*, 982 F2d 693, 2d Circular, vol 982; 1992

*Thaler SL, Acceptance of complete specification for patent Application No 2021/03242: food container and devices and methods for attracting enhanced attention. Companies and Intellectual Property Commission, South Africa;* 2021