Advance online publication https://doi.org/10.5204/lthj.3972

(Pre)Configured and (Pre)Ordered: The Challenge of Human–AI Constructs Through Patent Law's Inventor

David Tilt
Tokyo College, University of Tokyo, Japan

Abstract

At some point in the technological development of artificial intelligence (AI), a human–AI construct will reach the point at which it could be recognised as an inventor for the purposes of patent law. Yet this task of ordering, of establishing precise relationships between entities on a spectrum, overlooks the more radical challenge that human–AI constructs pose to both intellectual property and law more generally. Would the human–AI construct attain the status of inventor through its capacity (inventiveness) or through its humanity? Does the answer to this question shift how we order the human–AI construct in the context of patent law? Seeking to partially dissolve (rather than resolve) the question of appropriate ordering, this article suggests that AI has the potential to fundamentally obliterate the order itself by exposing how law relies on the temptation of an imagined – and distinctly human – sovereignty. It demonstrates this by analysing human–AI constructs in intellectual property through the concept of phantasm drawn from the work of Derrida and Butler. While the article focuses specifically on an intellectual property setting, and the concept of 'inventor' in particular, the conclusions are likely to apply to law more generally.

Keywords: Patents; inventor; phantasm; human; AI.

1. Introduction

In the realm of artificial intelligence (AI), human–AI constructs fundamentally break several assumptions in intellectual property law, undermining stable interpretations of 'originality', 'inventiveness' and even 'inventor'. From this perspective, the task would appear to be simple: to develop a more precise, more discerning definition of these elements of intellectual property to understand where exactly the human–AI construct fits in relation to both humans and AI. Particularly in a patent law context, decisions in multiple jurisdictions have confirmed that AI cannot be listed as the inventor of a patent.[1] Yet a human–AI construct raises profound questions about the relationship between personhood and inventorship. At this stage, it is important to recognise that AI inventors are unlikely to ever be recognised by the patent system, in part because its normative challenges can easily be sidestepped. An invention created by an AI must still be filed by a human, who could, if not aiming to engage in lengthy cases, simply input their own name as the inventor. Yet an AI system that is integrated in a human subject presents a different way of interpreting what is being protected by the patent system: the inventive conduct. Would a human–AI construct attain the status of inventor through its technical capacity or through a threshold percentage of humanity? Does the answer to this question shift how we order the human–AI construct in the context of patent law? This is a particularly important perspective from which to interpret patent law in 2025 because proximity to human conduct has become central to the patentability of AI-generated or AI-assisted inventions.[2] Seeking to partially dissolve (rather than resolve) the question of

[1] *Thaler v Comptroller-General of Patents, Designs and Trademarks (DABUS)*.
[2] USPTO, "Inventorship Guidance."

appropriate ordering, the article suggests that AI has the potential to fundamentally obliterate the order itself by exposing the way in which law relies on the temptation of an imagined – and distinctly human – sovereignty. The article demonstrates this by analysing human–AI constructs in intellectual property through the concept of phantasm drawn from the work of Derrida and Butler. While other work has investigated the role of AI as inventor from a legal perspective,[3] the language of phantasm provides an important reframing of the issue and highlights the nuanced relationship between invention, AI and humanity.

The phantasm transforms an 'as if' into an 'as so',[4] which is fundamentally an exercise of sovereignty, power and ordering. For Derrida, this is the essence of the phantasm: it is the myth of a unified self,[5] the illusion that the self is sovereign. The distinction between discovery and invention in patent law can actually be seen as the manifestation of this illusion of sovereignty, a mastery not only over oneself but a mastery over nature. The phantasm of patent law is not simply that it presents patents as if they were property or that 'inventiveness' really exists. It is not even that a human–AI construct could be capable of doing 'inventiveness' under the right circumstances, but something altogether more fundamental. The illusion at the heart of patent law is not only that there is a legitimate ordering between humans, nature and AI, but that each of those represents natural or objective categories to begin with. The language of phantasm exposes that, in the current approach to AI inventors, the label of 'inventor' essentially collapses into meaning 'the thing that people are'. 'Inventiveness' is simply 'the thing that people do'. This is because the phantasm of sovereignty embodies a number of idealised myths of human endeavour.[6] Sovereignty is the power to rework nature as a person sees fit; it is the mastery of technology; it is the illusion that humans are unique in their capacity not only to create but to impose order on the world. From this perspective, it is natural that 'invention' and 'inventiveness' are seen as categories that represent extensions of humanity, or what it means to be human. Yet challenging these concealed assumptions in patent law, how it constructs 'inventor' in relation to nature and humanity reveals a more dynamic way of conceptualising the ordering of the human–AI construct.

Part 2 of this article explores how patent law can be understood in terms of phantasm and how ordering, and 'objective order' in particular, complicates our understanding of human–AI constructs. Patent law occupies a particular position in this discussion because it is a direct emanation of the sovereign phantasm, a delegated expression of state power. Part 3 applies the work of Judith Butler to human–AI constructs to further question the stability of any spectrum that establishes an authoritative order between humans, AI and human–AI constructs. In particular, this section discusses how concepts such as inventiveness or even AI are pre-ordered or preconfigured, and therefore shape how we can even imagine the conceptual relationships between them. This is then linked to a discussion of how phantasms are sustained and the future of human–AI constructs. Finally, a brief conclusion is presented.

2. Patent Law as Phantasm: The Fundamentals

2.1 What is the Phantasm Really?

Patent law can be interpreted as a phantasm through the language of Derrida to understand how patent law's embodied normative perspectives have been concealed through the language of regulation and trade. Although discussed more extensively below, the phantasm is essentially the presentation of contingent concepts as natural, organic and unchanging.[7] For Derrida, this centred specifically on phantasm as an illusion of sovereignty[8] – which starts with the illusion of self-sovereignty, the idea that there exists a true self which one speaks to (and with).[9] Applying these concepts, of course, involves a bold reframing of patent law and requires a complex deconstruction to make sense of the connections between these seemingly unrelated areas. Specifically in terms of human–AI constructs, the central element of sovereignty helps to further elaborate what exactly 'ordering' between different entities could mean and the extent to which law is used to 'enunciate' the configuration.[10]

For Derrida, the phantasm is the illusion of sovereignty: it is the spectre of power, which is made real precisely because it is not (or cannot) be real.[11] The phantasm turns an 'as if' into an 'as so',[12] rendering something real precisely on the basis that it is unreal. For Derrida, this has the specific context of sovereignty and, where we approach the world *as if* there was a unified

[3] Thaler, "AI Inventorship," 1.
[4] Naas, Derrida from Now On, 188.
[5] Derrida, Monolingualism of the Other, 25.
[6] Specifically on human reason and progress as ultimately in the service of general happiness, see Kant, Critique of Pure Reason, 701.
[7] Naas, Derrida from Now On, 200.
[8] Derrida, Beast and Sovereign Vol 2, 78.
[9] Derrida, Monolingualism of the Other, 25.
[10] Pottage, "The Materiality of What?," 173.
[11] Naas, Derrida from Now On, 192.
[12] Naas, Derrida from Now On, 188.

self, a sovereign self.[13] In patent law, however, there are two distinct ways in which the 'as if' of the phantasm could be understood. The first is the property element of patent rights. The phantasm of patent law renders patents as if they were real property, with borders and integrity and a wholeness. The physical language and the evoking of physicality itself are not limited to patent law and discussions of the 'technological frontier', however. The copyright warnings in the early 2000s represent the ontological shift that the phantasm attempts to sustain – provocatively addressing the viewer, stating 'you wouldn't steal a car, you wouldn't steal a handbag … you wouldn't steal a movie'[14] – although an important distinction can be made in this physical language. Physical property is stolen in the sense that its owner is permanently deprived of it, whereas intellectual property is infringed and represents the use of a non-rivalrous good.[15] So, while patents may not be stolen in the legal or physical sense, patent law still presents the illusion of property that encourages you to treat abstract information as if it were physical property with physical qualities. Patent law is perhaps the closest in this sense because there is a slippage between what is actually protected (the technical solution) and its embodiment (the actual property), which in practice are not separate. But fundamental to this concealment, and key to the phantasm, is the evocation of property itself and its embedded cultural character. The study of property is the discussion of personhood itself;[16] the recourse to the language and imagery of property is a resilient way of framing patents because property is so central to how we understand what it means to be a human.

The second 'as if' effected by the phantasm of patent law builds on this and relates to the categories it produces. Patent law creates classes or types of personhood through the language of 'inventor', presenting them as natural extensions of the broader category of 'human'. In this sense, the inventor-human is simply a reconfiguration of the more fundamental human–other distinction.[17] The human–AI hybrid is challenging for the conventional understanding of monster – in Foucault and beyond – because it embodies both a hybridity *and* a blurry mix of the organic and non-organic.[18] Law (as 'legal labyrinth') is the fundamental force through which these categories are produced,[19] whether this is in service of a distinction between human and non-human or a more transgressive human and other. In many ways, AI considered in hybrid form reflects many of the inherent tensions in how law distinguishes the legitimate category of human from the monstrous other. Law creates this category other by positioning the subject as somehow at once a violation of legitimate bounds and yet experienced as a fundamental undecidability (where the breach itself is constitutive of the category).[20] Although it is discussed later, the lack of ability of AI to hold rights and property are the constitutive qualities of the non-human. By considering it in hybrid form, imagining it conjoined, somewhere within the human body, it is not only the narrow category of inventor that is questioned, but human more generally. The bringing of a non-human element into the human body is the same type of core transgression, in nature and by extension in law,[21] that establishes the other for Foucault's monsters. The very idea of a human–AI seems to align with Foucault's explicit centring of a 'mixture of forms' and 'the transgression of natural limits'.[22] The proportion of AI to human adjusts not just the capability of the entity, as tool or as a technologically advanced mind, but the extent to which it is alien or surpasses and thus transgresses the fundamental legal category of 'human'.

It is precisely the assumption that 'inventor' and 'human' are related categories that is unsettled by the prospect of a human–AI construct. Fundamentally, patent law as phantasm conceals the constructed nature of 'inventor' as a type of person by attempting to render it as a natural and objective concept – a person who invents things. The phantasm of patent law is therefore not only the illusion of sovereignty over oneself, but the extension of that illusory sovereignty to other things and the world itself. In this, patent law as phantasm contains many of the existential anxieties and conceptual uncertainties that are inherent to modern society and rapid shifts in technology. Patent law stabilises them, again with the temptation of belief, with the intuition that technological development not only exists, but is possible. Patent law sustains the illusion that invention exists as a discrete, real category or type of artefact, and stabilises a number of related concerns. In many ways, this is fundamentally linked to the spectre of divine sovereignty discussed by Derrida.[23] In recognising that invention (and therefore advancement, a wielding of sovereignty) is really objectively possible, patent law brings into the present the Enlightenment ideals.[24] It refracts the idea of individual human value, of a distinct spark of creativity that is unique to each person.[25] This is in complete contrast

[13] Naas, Derrida from Now On, 199.
[14] Loughlan, "You Wouldn't Steal a Car," 401.
[15] Though with some disagreement about how complete this understanding actually is: Gruner, "Dispelling the Myth," 4.
[16] Allen, "Property's More-Than-Human Personhood," 2, 3.
[17] Sharpe, "Foucault's Monsters," 384.
[18] Sharpe, "Foucault's Monsters," 385.
[19] Foucault, "Abnormal," 63.
[20] Sharpe, "Foucault's Monsters," 387.
[21] Foucault, "Abnormal," 63
[22] Foucault, "Abnormal," 63
[23] Derrida, Beast and Sovereign Vol 1, 44.
[24] Nickles, "Enlightenment versus Romantic Models," 277.
[25] Fuentes, "The Creative Spark," 1.

to the numerous international decisions that have emerged from Thaler's patent for food containers, which claims the DABUS AI system as its inventor.[26] The recent publication of the Japanese Intellectual Property High Court (IPHC) now means that the major patent jurisdictions have all rejected AI inventors.[27] These decisions confirm, as a technical matter of patent law, that the inventor listed on a patent specification must be a natural person, drawing AI systems into the same category as corporations or other non-human entities ineligible for inventorship.[28] Yet they also have a normative effect in that they essentially shift the fundamental objectives of the patent system. If an AI system 'invents' an invention but cannot be recognised as such (and the human owner is substituted in the application), then the patent system does not prioritise the accurate recording of innovation. A patent system that can only understand AI as a tool wielded by a human inventor is compressing or narrowing the behaviours that can fall within the label of 'inventive'. Approaching patent law as a phantasm brings into question the fundamental values of inventiveness and novelty, and exposes them as concealed contingent fictions presented as objective truths. Yet, in doing so, the fundamental categories – or essential tentpoles of the order – also collapse. If 'inventiveness' does not describe the inherent qualities of an artefact or behaviour, but instead produces them in legal form, then what does this mean for 'inventor'? Or even 'human–AI constructs'?

The potential of a human–AI construct therefore raises a number of questions about how the spectrum (of human to AI) produces relationships between different entities and the category of 'inventor' in patent law. Sovereignty is essential to this task of ordering not simply because it is an ordering implemented through law (and the evident sovereign effect of legal power), but because patent law is fundamentally connected to human achievement. This human proximity is reflected in the recent USPTO guidelines specifically on the positioning of AI systems as inventors.[29] As Aboy discusses, this guidance has the potential to create situations in which an innovation (for the purposes of the patent system) has no inventor and therefore is excluded from patent protection.[30] The very evocative example given is that of a low-capability AI system and a very advanced AI system[31] – the low-capability system would produce an invention that would require significant human intervention to work (and therefore be patentable through the application of human labour), while the advanced AI could create the same invention fully formed and be excluded from the patent system as having no inventor.[32] This again brings us to the *purpose* of the patent system: the exclusion of AI systems as inventors is not just a narrow issue of AI inventors, but a broader restriction of how we understand invention itself. Guidance such as the USPTO guidelines can only ever represent a temporary ordering of AI within the patent system because of the rapid pace of technological development. Whether this is in terms of prompts, or subject matter, or compute power, the distinction between a low-capacity and high-capacity AI system will shift radically in the coming years and challenge any of these principles that centre the application of human labour to render something patentable.

The essence of technological development is an exercise of sovereignty over oneself, over nature, over others in a way that itself represents authoritative ordering. The sovereignty that is fundamental to the phantasm not only produces the relationships between entities on that spectrum but makes it possible for them to be created or sustained at all. It is also important to recognise that phantasm, as the illusion of sovereignty, does not discount the real effects of these frameworks.[33] Patent law or sovereignty may be interpreted as illusions – as real precisely because they are not real[34] but the effect of the phantasm as experienced by those in society is legitimate.[35]

The example that will be returned to throughout this article is of the inventor. Patent law in most jurisdictions around the world currently recognises that only humans may be registered as inventors, and therefore excludes the potential for AI inventors.[36] The presence of an AI element, whether this is as a human–AI construct or other form of hybrid, could also be interpreted as detracting from that uniquely human striving, the effort, the sacrifice that technological development is implied to have (and perhaps requires).[37] Is the inventor a more heroic figure if they have become a human–AI hybrid, or are their inventions devalued through a sense of 'quickness', of 'cheating'? Or, more fundamentally, would they have ceased to be an inventor at all? Again, we return to the question raised at the very beginning of this article: producing a spectrum of inventor in terms of human–AI constructs presupposes that there would be a point on that scale at which the AI element becomes so prominent that

[26] *Thaler v Comptroller-General of Patents, Designs and Trademarks (DABUS)*.
[27] Case No. 2024 (*Gyo-ko*) No. 10006.
[28] As highlighted by Tamura, "Copyright Issues," 16.
[29] USPTO, "Inventorship Guidance."
[30] Aboy et al, "Inventorship," 5.
[31] Aboy et al, "Inventorship," 6.
[32] Aboy et al, "Inventorship," 6.
[33] Such as racism: Naas, Derrida from Now On, 198.
[34] With discussion of 'absence as presence': Santiago, "Brief Hystery," 200.
[35] Naas, Derrida from Now On, 198.
[36] *Thaler v Comptroller-General of Patents, Designs and Trademarks (DABUS)*.
[37] Sontag, "Imagination of Disaster," 218.

it loses the presumption of humanity required to be considered an inventor and is instead rendered as a tool. The purity or authoritative position of the scientist would then appear to not just be found in their work,[38] but fundamentally connected to their humanity. Indeed, science fiction has no shortage of villainous scientists who become consumed by uncontrollable technologies,[39] envisioning a point at which the closeness to technology (or lack of appropriate distance) entails a loss of humanity. Viewed differently, the task of ordering is not just between the extremes of the spectrum (human to AI), but considers the relationships between entities and their use or proximity to technology. The potential of a human–AI construct is that it works to further interrogate the current approach to AI inventors which centres human intervention. In a paradigm that understands AI-generated or AI-assisted inventions in terms of their proximity to human intervention, does a human–AI construct become an inventor through humanity or intervention?

2.2 Two Applications of the Phantasm to Patent Law

There are two ways of interpreting patent law in this way, the first of which is to argue that patent law represents a distinct vision or experience of phantasm, a sub-type or sub-species of Derrida's broader concept. From this perspective, the impact of patent law is limited, as it presents concepts such as 'inventor' or 'invention' as objective, real things with a legitimate and natural existence. This approach questions whether 'inventiveness' or 'inventor' can be described objectively. The fact that novelty and invention both have intensely spatial and temporal dimensions to them which can modulate their conceptual content would suggest that they are not objective qualities.

Yet there is also a more straightforward application of the phantasmic language to patent law, which reflects the origin of the fundamental ordering that patent law produces. Patents as legal artefacts are produced through the exercise of delegated state power through the patent office – a legal origin that is often disguised by the focus on the objectives of patent law, as economic tools essential incentive for the patent bargain.[40] Just as with the phantasm, state power is not incidental to the order it produces, but is in fact the condition upon which that order is built. For patent law, this can be demonstrated by looking at the legal effect it produces and possible alternatives. Patents are valid only within the specific jurisdiction in which they are granted, although with sufficient planning and resources this effect could also be achieved through contract law. Yet it is the dimension of enforcement that illustrates the fundamental connection to state power and the essence of phantasm. Patent law prevents the unauthorised use, sale or reproduction of the patented technology by third parties with whom the inventor has no prior legal relationship. This effect cannot be replicated through private law means. With this central role of state power, the phantasm of patent law is then not a unique expression of Derrida's broader construction but in fact the same as it. Patent law itself *is* the illusion of sovereignty that expresses contingent concepts as objective truths, giving the appearance of concrete form to both invention and inventor. From this, the challenge of both AI and human–AI constructs is particularly clear because they make unstable not just our (implicit) understanding of what an inventor is for the purposes of patent law, but threaten to obliterate the ability to produce order between entities. Returning to the issue of purity discussed earlier, understanding patent law as an emanation of phantasmic state sovereignty recasts the question of inventorship as a more fundamental tension. Rather than simply analysing how we order or otherwise distinguish between entities that are inventive and those that are not, the legal power of the state is producing enforceable visions of what sovereignty means and who can exercise it. The vision of a legitimate inventor within patent law is then also a negotiation or refraction of the conceptual boundaries of 'human' itself as the state sees them.

3. Phantasms, Pointing and the Preconfigured Real

3.1 Pointing to Invention: (Re)presentation or Referent?

For Butler, the phantasm is fundamental to the production of the real.[41] The concealment of the phantasm operates not simply as an obscuring of the phantasmic origin of the artefact, but renders it as real and as a disavowal of the phantasm.[42] The phantasm, again, provides the boundaries between that which is legitimate (though still within the phantasm) and the illegitimate, the unreal.[43] In terms of ordering, the sovereignty at the core of phantasm enables two distinct changes in the experience of reality: it enables a determination of both what is real or unreal and what *can be* real or unreal. Understood in a patent context, the phantasm of patent law (of a sovereignty over oneself, of nature) is essentially the production of an ordering between values and concepts, which is then concealed and presented as the result of legitimate objective distinctions. There is

[38] Sontag, "Imagination of Disaster," 218.
[39] Hark, "Mad Science," 301, 302.
[40] Aboy, "Sufficiency of Disclosure," 845.
[41] Butler, "Force of Fantasy," 106.
[42] Butler, "Force of Fantasy," 106.
[43] Butler, "Force of Fantasy," 107.

a slippage here when specifically considering the spectrum of human and human–AI inventors, which is implicit in much of the discussion. Butler highlights a similar tension in the use of 'pointing' to the real in a political setting[44] – where simply identifying the thing itself is sufficient to designate it as the real.[45] There need to be sufficiently entrenched (exclusionary) conventions about the parameters of the real to enable this pointing,[46] this identification, and successfully join it with the implicit 'pre-given' expectation of the real.[47] This process of pointing highlights the tensions in three distinct contexts in patent law and helps to further elaborate the difficulties encountered when engaging in the ordering of human–AI constructs.

There is first the double revelation of the phantasm – the recognition that 'invention' or 'inventiveness' as descriptors of human behaviour are contingent concepts being passed off as real also exposes the more fundamental categories, the subjects of those qualities, as equally constructed. 'Invention' represents a distinct legal encoding of behaviour that exists separately from its physical embodiment and exposes the way in which pointing, or identification, is used in place of real ordering. In much the same way as the autoimmune challenge of patent law is brought by the fundamental characteristics of the patent system, or of a popular will of the people,[48] the immediate temptation when questioning how objective the term 'inventor' can be is to work towards a more complete, more accurate ordering between the relevant classes. The prospect of a human–AI construct that is just inventive enough to not be considered a purely AI entity encourages us to deconstruct the spectrum further, to establish more nuanced and more specific distinctions in the relationships between different types of entities. This is also implicit in the current discussions around AI inventors, the international *Thaler* decisions and the extent to which human intervention works to include an innovation within the patent system. While Abbott's excellent work discusses the impact of AI system that can identify the structure and function of antibodies,[49] it represents this type of increasingly precise taxonomy to deal with the challenges of AI. Yet this type of system – without the human component – can instead be interpreted as expanding our understanding of nature and therefore rendering these antibodies and their interactions as discoveries. Taken in context, the distinction between inventor and non-inventor operates intersectionally as the entanglement of patent law's most fundamental principles – of natural/invented, in human/non-human and obvious/non-obvious. The point at which the output of a human–AI construct becomes patentable – that is, an invention and not a discovery – is indeed a theoretical question of the future. Yet the framing that it enables demonstrates or highlights some of the competing tensions that are masked by blanket exclusions of AI from inventorship.

An immediate question that emerges is whether the order being produced between these entities is one of creativity or humanity. Is there a human–AI construct, or even AI alone, that would be considered inventive enough to clear this bar and be considered an inventor for the purposes of patent law? Or, concealed beneath the task of an ever more precise spectrum between human and AI, do we instead conclude that 'human' is being used synonymously with 'inventor'? When considering the potential of an AI, human or human–AI construct to be 'inventive', is the patent system engaging in an ordering of entities based on creativity, problem-solving and technical solutions or on the percentage of humanity in the entity? Is patent law focused on requiring a technical level of inventiveness or creativity that AI in its current form is simply unable to achieve? The phantasm of patent law and its emanation from the state starts to unravel this because the DABUS case was not centred on the creative behaviour of an AI system.[50] The concealed rhetoric of unique human creativity and value renders the spectrum of humanity *as if* it were a spectrum of inventiveness. This is reflected in many of the international judgments, but is particularly prominent in the recent Japanese Intellectual Property High Court appeal. The fact that AI cannot hold rights, the legal distinction between inventor, employee and corporation,[51] and the positioning of AI as a tool all raise questions not about creativity but rather about (legal) humanity. As discussed by Nakayama,[52] recognising AI as an inventor is not a decision that can be limited to a patent law context. It would involve significant reform in areas such as civil procedure and a fundamental reconsideration of the justifications of the patent system[53] – requiring a level of intervention that can only be appropriately realised by a legislator and highlighted by the Japanese courts.[54] If the question of recognising AI as an inventor were about creativity, or creativity alone, then this level of reform would not be necessary. Inventorship in this context is thereby the construction of a broader class of human that is masked by a claim of narrow technicality.

[44] Butler, "Force of Fantasy," 107.
[45] Butler, "Force of Fantasy," 107.
[46] Butler, "Force of Fantasy," 107.
[47] Butler, "Force of Fantasy," 107.
[48] Derrida, "Autoimmunity," 92.
[49] Abbott, "I Think," 1118.
[50] *Thaler v Comptroller-General of Patents, Designs and Trademarks (DABUS)*.
[51] Tamura, "Copyright Issues," 16.
[52] Nakayama, "Can AI be an Inventor?," 10.
[53] Nakayama, "Can AI be an Inventor?," 26.
[54] Tamura, "Copyright Issues," 17.

This tension of what the task of the patent system is bleeds into both the phantasm more generally and the use of representation and pointing as calls to authority within the phantasm. This involves the 'pointing' to an element of the phantasm that presents (and represents) the illusion of a natural and stable concept that is self-evident. Just as with Butler's discussion of pointing,[55] the fundamental elements of patent law are presented *as if* they are self-evident – they are so clear in their conceptual scope that they function as extensions of the self, the mastery of the world. In addition, in many jurisdictions 'invention' is not defined explicitly but rather through a series of legal conditions.[56] Although this initially appears to be a technical approach to defining invention, as linked to the physical qualities of a technology, a broader approach reveals that even at the legislative level, invention is a contingent and socially inflected concept. The exclusion of specific subject matter, whether this is software or the development of nuclear weapons,[57] demonstrates clearly that invention carries with it a normative dimension. A technology that produces a more efficient atomic bomb is undoubtedly an invention – yet it is excluded from the legitimate scope of patent law in a number of jurisdictions through the mechanism of *l'ordre public*.[58] While this can certainly be understood as simply removing a technology from the patent system – that is, preventing it from enjoying exclusive rights – in itself this is a normative decision. Excluding autonomous weapons or atomic bombs from patentability is a statement about the bounds of invention and the extent to which these technologies can operate within the patent system to support non-economic (that is, 'personal, professional, social, and cultural connections' objectives.[59] This has obvious consequences for our human–AI inventor and further emphasises the conceptual collapse of quality and entity that occurs when concepts are embraced as objective.

3.2 Defining Through the Use of an 'Other'

There is also a slippage between invention and inventor in the function of the penumbra in patent law. The patent specification outlines the invention and is filed with the patent office and, when successful and granted, demonstrates that the invention is both patented and capable of being patented. On some level, this process also establishes the reverse: it presents indications about what may not be patentable, what may not be inventive. Applied to the issue of ordering between human and AI entities, the DABUS judgments are important because they incorporate this aspect of penumbral expansion. By deciding that only humans can be registered as the inventor of a patent specification, the patent office signals that the conceptual scope of 'inventor' does not extend to AI systems. Again, we return to the complex position of the human–AI construct – at what stage would such a construct be considered to legitimately be within the scope of inventor? The rejection of behaviour in the international cases about the DABUS inventor indicates that,[60] as highlighted above, the issue is not one of an AI system adequately demonstrating the inventiveness of its actions. Indeed, Abbott's excellent discussion of AI invention examines how this these systems are already performing invention (or it is claimed that they are doing it).[61] Thaler's claims since before the DABUS cases have been that patents that have been obtained were actually developed by AI[62] – further highlighting the difficulty (or not) of AI inventors within the patent system. The ease with which a patent applicant could simply use their own name renders the concept of an AI inventor a thoroughly optional concern. Yet it is precisely this marginal character that highlights the fundamental stakes of AI inventors in the patent system. Do we want a patent system that pretends AI can never functionally occupy the same position as an inventor, or a patent system that accurately records the conditions from which an invention emerges?

Rather, the phantasm of patent law conceals the contingent nature of inventor and sustains the collapse of 'inventor' and 'human'. Specifically in the *Thaler* cases, the rejection also involved discussion of how robots or AI cannot hold rights as a fundamental element in this reasoning.[63] The slippage that the temptation to believe in mastery supports works to blur, or make indistinct, the boundaries between 'human' and 'non-human'. The ability to hold property or rights is taken as the essence of being a human, the thing that distinguishes us from all else and is the crux of control and sovereignty. This emphasis on holding rights, as well as the relationships this supports, such as employment,[64] is prominent in the *Thaler* judgments. Yet, as a legal concept, personhood does not passively record reality and reproduce it in legal form. In this, invention can be understood through the language employed by Pottage – law as the exemplary form of enunciation, as a pure form of self-description.[65] The advocacy that has supported the personhood of rivers or mountains, and corporate personhood in general, demonstrates

[55] Butler, "Force of Fantasy," 107.
[56] Article 54 (Novelty); 56 (Inventiveness) *European Patent Convention.*
[57] Article 52, *European Patent Convention*.
[58] Article, 27, TRIPS Agreement.
[59] Swanson, "Beyond the Progress," 371.
[60] *J 0008/20 (Designation of inventor/DABUS) 21-12-2021,* para 27.
[61] Abbott, "I Think," 1085.
[62] Abbott, "I Think," 1085.
[63] *J 0008/20 (Designation of inventor/DABUS) 21-12-2021,* 11; para 2.
[64] Case no. 2024 (*Gyo-ko*) No. 10006, 7.
[65] Pottage, "The Materiality of What?," 173.

how there is variety even within the legal conception of 'person'. Yet the foundation is a fundamentally anthropocentric vision of existence,[66] where corporations or systems are articulated in terms of how closely (or not) they imitate the features or capabilities of a 'real' person. Crucial to this spectrum of 'person' for the purposes of law, rights and property is the task of ordering: in terms of legal personhood, what exactly distinguishes a human being from the river? There is an intuitive distinction – a fairly obvious one, but one that nevertheless resists exact description. This also speaks to the extent of reform that would be required to recognise AI inventors and the ease with which the current situation can be avoided. The ability to hold rights and the specific way employees are constructed in a patent law–inventor setting touch on a number of other fundamental areas of law.[67]

Just as 'human' would appear to have a stable conceptual boundary, patent law and the objective of ordering between that which is natural and that which is not natural does not have an intuitive stability. Yet the phantasm, as the spectre of power rather than power itself,[68] presents 'nature' in a similarly ahistorical way. This presentation of nature as something unchanging, as a concept with an ahistorical origin,[69] is at the heart of patent law's distinction between discovery and invention.[70] The phantasm of nature (which is an extension of the more fundamental illusion of sovereignty) crystallises a series of dyads that not only shape the task of ordering (establishing legitimate relationships between entities and concepts) but condition the very possibility of ordering itself. 'Nature', deployed as a concrete rather than contingent concept, fixes the boundary line between natural–artificial, invention–discovery and human-AI. Again, the framework and machinery of law are hidden as the categories present themselves as self-evident and simply the enunciation (and articulation) of reality.[71]

This fundamentally masks a conceptual fluidity that is inherent to both nature as a concept deployed in patent law and of patent law concepts more generally. The conceptual scope of 'nature' is necessarily constrained both spatially and temporally – inventions from a century ago would connect with a number of assumptions that later scientific research has shown to be inaccurate or incomplete.[72] A more modern illustration of this could be imagined with developments in plastic-eating bacteria.[73] Suppose that in 50 years, due to our lifestyles, a bacterium naturally emerges in power plants that consumes radioactive waste. Our understanding of what is firmly natural or human-made then shifts, contracts and expands over time, to accommodate. 'Nature' as deployed in a patent context is then a dynamic concept rather than an objective element through which the task of ordering invention is interpreted. Code that generates revisions to itself and creates a unique entity would similarly question the human-centred assumptions of what is natural and what is not. This expansion and contraction of what is natural in patent law has a profound impact in the context of AI and, in particular, the recent USPTO patent office guidelines. Taken together with Abbott's discussion of antibodies and invention,[74] these guidelines have been discussed as presenting a fundamental tension as they centre human intervention as the distinguishing factor.[75] The contradictory tension of the patentability of AI output does not just shift the bounds of patentability but also expands the bounds of discovery. Without human intervention, the complex AI is not 'inventing' when it outputs information, but simply presenting the factual components of a technical solution to a technical problem. Invention is thus contracted while nature, or discovery, expands.

Taken together, Butler's emphasis on the way the 'real' can be exposed as contingent immediately brings into question the assumptions around 'invention' in patent law.[76] The patent represents the exact type of 'gliding' between an ontological claim and the representation that features so prominently in gender.[77] The patent as a legal artefact contains the slippage between the technology as it exists in the everyday world and the legal (re)presentation of that technology in the patent specification. The technology described in the patent specification not only legally encodes a technical solution to a technical problem, but is the strategic repositioning of that information. More than a passive encoding of an invention,[78] the patent becomes its own representation of the technology – the representation of the real that confirms its own authority and correctness. The patent, through its technical character, is perhaps an even clearer example of the self-describing posture of law.[79] Even here, the

[66] Edirisinghe and Suchet-Pearson, "Nature as a Sentient Being," 230.
[67] Tamura, "Copyright Issues," 16.
[68] Naas, Derrida from Now On, 192.
[69] Naas, Derrida from Now On, 200.
[70] McKenna, "Patentable Discovery," 1242.
[71] Pottage, "The Materiality of What?," 173.
[72] Like the waning of the 'nascent state' of chemical reactions: Jensen, "Whatever Happened?," 1, 2.
[73] *The Guardian*, "Plastic-Eating Bacteria."
[74] Abbott, "I Think," 1118.
[75] USPTO, "Inventorship Guidance."
[76] Butler, "Force of Fantasy," 106.
[77] Butler, "Force of Fantasy," 106.
[78] Gittelman, "Indicators of Innovation," 21.
[79] Pottage, "The Materiality of What?," 173.

undercurrent of ordering shapes every element of this process. The patent specification supplants the technology as it exists in practice as the real, the thing that exists both 'before and after its representation' where the 'representation becomes a moment of the reproduction and consolidation of the real'.[80] Fundamental to this shift and what enables the (re)ordering between inventor-technology-patent is legal power. In some ways, the role of legal power in making authoritative and enforceable statements about its own validity is a feature of law more generally. Legal provisions necessarily have a dual nature as both a statement ('this act is illegal') and the confirmation (enforceability) of their reality ('that statement of illegality is in force and valid').

Yet the consideration of legal power in the context of patent law is further complicated precisely because of its position as an exercise of delegated state power, as discussed in Part 2 of this article. The legal ordering that patent law supports between the technology, its representation, the inventor and the broader community is not an exercise in private ordering.[81] Rather, it is due to both the subject matter and the origin of its authority, tied to the spectre of theological or divine sovereignty that is central to the phantasm of patent law.[82] Returning to this element of mastery and the temptation to believe in the stability of concepts, the ordering here slips further – patent law is not establishing or outlining the appropriate relationship between the technology being claimed, the inventor and the state, but is instead creating the order between humanity, nature and the state as legal concepts. It is here that human–AI constructs highlight the tensions in this task of ordering. In this context, 'inventor' is not being used in its ordinary meaning, but is instead being deployed to mean a specific kind of legal actor. As a legal actor, much like legal concepts, the class itself is not natural or self-sustaining, but the tool through which specific social objectives are realised and therefore open to reinterpretation.[83]

4. Conclusion

The concept of human–AI constructs presents a variety of challenges to the way in which we currently understand law and the categories it produces. Given the broad scope of entities that this encompasses, this article has focused more specifically on human–AI constructs in the context of inventorship and patent law more broadly. Fundamentally, looking at conventional (naturalised) elements of patent law, such as inventor or inventiveness, through the lens of human–AI constructs reveals the double task inherent to ordering. The first aspect is that, for patent law, the current exclusion of AI from being registered as an inventor presents an immediate tension for entities which move beyond the binary of human–AI. Technological advancement will eventually force patent law to reinterpret the legal category of 'inventor' as a spectrum rather than a binary. The obvious question in this setting concerns the degree of human–AI blending that would be sufficient to augment the inventive behaviour but still remain an inventor for the purposes of patent law.

Yet, even beneath this, the human–AI construct demonstrates that patent law is not a reflection of reality as we experience it – patent law is the illusion that 'inventiveness' has a real justification for how it conditions legal relations and ordering, the temptation to believe that scientific development proceeds objectively and is only described by the legal frameworks. The exclusion of AI inventors, and the inevitable confusion that human–AI constructs will present, illustrates how patent law currently treats 'inventor' as essentially meaning 'the thing that people are'. The language of phantasm helps to understand how subjective and contingent qualities or concepts are presented as objective. The human element of 'inventor' is implicit in its conceptual scope, yet is not simply incidental to it. Still, all this reifies the spectrum of inventor and inventiveness itself – it is not a radical questioning of the relationships between entities that it supports and facilitates, but suggests the importance of *more specific* ordering. From the perspective of phantasms as applied to the narrow patent law context, the response to human–AI constructs would be to develop an ever more specific taxonomy of 'inventor'. This would inevitably produce a spectrum that envisions an inventor who, at a certain percentage or presence of AI, would cease to be an inventor (the category produced through assumptions of humanity) and be rendered a tool.

Taken more generally, approaching patent law through the language of phantasm suggests that human–AI constructs do not require greater or more specific ordering, but instead obliterate the order itself. If the fundamental concepts of patent law are simply contingent concepts being passed off as ahistorical and objective – even those such as 'nature' or 'novelty' – then why would 'human' be exempt from this? Patent law is the resilient preconfiguration of concepts, where we all enter a society from birth in which the conceptual scope of 'invention' and 'inventor' has already been established. As with gender,[84] we enter a society and encounter 'inventor' not as a new phenomenon but one that is already in progress and therefore provides a

[80] Butler, "Force of Fantasy," 106.
[81] See Sagy, "What's So Private?," 1033.
[82] Derrida, Beast and Sovereign, 44.
[83] Samek, "Performative Utterances," 207.
[84] Butler, "Performative Acts," 522.

preordered experience of its relationship to the self and others. Patent law as phantasm reveals the fundamentally human assumption that propels it, the cultural, legal and theological understanding that humans are uniquely capable and uniquely creative. From this perspective, the challenge of human–AI constructs is not simply that it questions what it means to be 'inventive' or an 'inventor' for the purposes of patent law; rather, human–AI constructs present a challenge to the assumed natural order of the world – one in which the position of the human is taken as objective, as natural, and from which all ordering takes place. Taken together, the emphasis on state power reveals that patent law deals with questions not of inventiveness or novelty, but of humanity.

Bibliography

Aboy, Mateo, Kathleen Liddell and Aparajita Lath. "Inventorship in the Age of AI: Examining the USPTO Guidance on AI-Assisted Inventions." *Journal of Intellectual Property Law & Practice* 20, no 7 (2025):495–502. https://doi.org/10.1093/jiplp/jpaf019.

Aboy, Mateo., Nicholson Price, Seth Raker and Kathleen Liddell. "The Sufficiency of Disclosure of Medical Artificial Intelligence (AI) Patents." *Nature Biotechnology* 42, no 6 (2024): 839–845. https://doi.org/10.1038/s41587-024-02270-8.

Allen, Jessie. "Property's More-than-Human Personhood." *Houston Law Review* 62 (2024): 1–25. https://houstonlawreview.org/article/126273-property-s-more-than-human-personhood.

Buranyi, Stephen. "We are Just Getting Started: The Plastic-Eating Bacteria that Could Change the World." *The Guardian*, September 28, 2023. https://www.theguardian.com/environment/2023/sep/28/plastic-eating-bacteria-enzyme-recycling-waste.

Butler, Judith. "The Force of Fantasy: Feminism, Mapplethorpe, and Discursive Excess." *Differences* 2, no 2 (1990): 105–125.

Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity*. London: Routledge, 1990.

Butler, Judith. "Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory." *Theatre Journal* 40, no 4 (1988): 519–531. https://doi.org/10.2307/3207893.

Derrida, Jacques. "Autoimmunity: Real and Symbolic Suicides." In *Philosophy in a Time of Terror: Dialogues with Jürgen Habermas and Jacques Derrida*, edited by Giovanna Borradori, 85–136. Chicago: University of Chicago Press, 2003.

Derrida, Jacques. *The Beast and the Sovereign, Volume 1*. Ed Michel Lisse, Marie-Louise Mallet and Ginette Michaud; trans Geoffrey Bennington. Chicago: University of Chicago Press, 2009.

Derrida, Jacques. *Monolingualism of the Other; or, the Prosthesis of Origin*. Trans Patrick Mensah. Stanford, CA: Stanford University Press, 1998.

Edirisinghe, Asanka and Sandie Suchet-Pearson. "Nature as a Sentient Being: Can Rivers Be Legal Persons?" *Review of European, Comparative & International Environmental Law* 33, no 2 (2024): 153–341. https://doi.org/10.1111/reel.12529.

Foucault, Michel *Abnormal: Lectures at the Collège de France 1974–1975*. Eds Valerio Marchetti and Antonella Salomoni; trans Graham Burchell. London: Picador, 2003.

Fuentes, Agustin. *The Creative Spark: How Imagination Made Humans Exceptional*. Boston: E. P. Dutton, 2017.

Gittelman, M. "A Note on the Value of Patents as Indicators of Innovation: Implications for Management Research." *Academy of Management Perspectives* 22, no 3 (2008): 21-27. https://doi.org/10.5465/AMP.2008.34587992.

Gruner, Richard S. "Dispelling the Myth of Patents as Non-Rivalrous Property: Patents as Tools for Allocating Scarce Labor and Resources." *Science and Technology Law Review* 13, no 1 (2012): 1–70. https://doi.org/10.7916/stlr.v13i1.3955.

Hark, Ina Ray "Crazy Like a Prof: Mad Science and the Transgressions of the Rational." In *Bad: Infamy, Darkness, Evil, and Slime on Screen*, edited by Murray Pomerance, 301–314. Albany, NY: SUNY Press, 2003.

Jensen, W. B. "Whatever Happened to the Nascent State?" *Bulletin for the History of Chemistry* 6 (1990): 26–36. https://acshist.scs.illinois.edu/bulletin_open_access/FullIssues/bhc1990n06f.pdf.

Lemley, Mark A. "The Myth of the Sole Inventor." *Michigan Law Review* 110, no 5 (2012): 709–754.

Lewenstein, Bruce "Magazine Publishing and Popular Science After World War II: How Magazine Publishers Tried to Capitalize on the Public's Interest in Science and Technology." *American Journalism* 6, no 4 (1989): 218–234. https://doi.org/10.1080/08821127.1989.10731208.

Loughlan, Patricia Louise. "You Wouldn't Steal a Car: Intellectual Property and the Language of Theft." *European Intellectual Property Review* 29, no 10 (2007): 401–405.

McKenna, Stephen. "Patentable Discovery." *San Diego Law Review* 33, no 3 (1996): 1241–1280.

Naas, Michael. *Derrida from Now On*. New York: Fordham University Press, 2008.

Nakayama, Ichiro. "Can AI Be an Inventor? Issues Over Statutory Interpretation and Legislation." *Patent Studies* 78, no 9 (2024): 6–29.

Nickles, Thomas. "Enlightenment versus Romantic Models of Creativity in Science – and Beyond." *AI & Society* 8, no 3 (1994): 277–314. https://doi.org/10.1080/10400419409534535.

Pottage, Alain. "The Materiality of What?" *Journal of Law and Society* 39, no 1 (2012): 167–183. https://www.jstor.org/stable/41350304.

Sagy, Tehila. "What's So Private about Private Ordering?" *Law & Society Review* 45, no 4 (2011): 1027–1061. https://doi.org/10.1111/j.1540-5893.2011.00461.x.

Samek, Robert. "Performative Utterances and the Concept of Contract." *Australasian Journal of Philosophy* 43, no 2 (1965): 196–210. https://doi.org/10.1080/00048406512341171.

Santiago, Christopher. "A Brief Hystery of the Phantasm." *Anthropology of Consciousness* 34, no 1 (2023): 181–228. https://doi.org/10.1111/anoc.12148.

Sariola, Salla. "Intellectual Property Rights Need to Be Subverted to Ensure Global Vaccine Access." *BMJ Global Health* 6, no 4 (2021): 1–3. https://doi.org/10.1136/bmjgh-2021-005656.
Sharpe, Andrew. "Foucault's Monsters, the Abnormal Individual and the Challenge of English Law." *Journal of Historical Sociology* 20, no 3 (2007): 384–403. https://doi.org/10.1111/j.1467-6443.2007.00316.x.
Sontag, Susan. *Against Interpretation and Other Essays*. New York: Farrar, Straus & Giroux, 1966.
Tamura, Y. "Copyright Law Issues Surrounding Generative AI." *Research on Intellectual Property Law Policy* 70 (2025): 13–102. https://eprints.lib.hokudai.ac.jp/dspace/bitstream/2115/95536/1/70-02_Tamura.pdf.
Tansey, Geoff. "Patenting Our Food Future: Intellectual Property Rights and the Global Food System." *Development* 36, no 6 (2002): 575–592. https://doi.org/10.1111/1467-9515.00305.
Thaldar, Donrich and Meshandren Naidoo. "AI Inventorship: The Right Decision?" *South African Journal of Science* 117, nos 11/12 (2021). https://doi.org/10.17159/sajs.2021/12509.
Watanabe, Yosuke. "I, Inventor: Patent Inventorship for Artificial Intelligence Systems." *Idaho Law Review* 57, no 2 (2021): 473–500.

Cases

Case No. 2024 (*Gyo-ko*) No 10006.
Thaler v Comptroller-General of Patents, Designs and Trade Marks [2021] UKSC 40.

Legislation

European Patent Convention.
Japan Patent Act 1959.
TRIPS Agreement, Article 27.

Other

United States Patent and Trademark Office, *Inventorship Guidance for AI-Assisted Inventions*, 89 Fed Reg 10043 (13 February 2024).