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The Doctrine of Latent Copyrights: Protecting Generative AI Models through Representational Layers

Abstract

Generative artificial intelligence systems not only produce expressive outputs, but also provide rich latent spaces, i.e., mathematical objects that express the semantic relation among the training data. These unique representational strata represent creative associations and redefine the traditional limits of copyright law. The article introduces the concept of Latent Copyrights, which proposes the provision of copyright protection to intermediate representations of the products generated by AI. It examines the use of computational creativity for the purpose of copyright protection. Engaging in a comparative analysis of the copyright regimes of the U.S., U.K., and E.U., this study suggests a relative system to ensure the protection of innovation, interoperability, and responsibility. The aim is to streamline the Latent Copyright theory of intellectual property with the technicalities of machine learning by offering a paradigm that conceptualizes representational layers of an AI-generated product as a medium of Copyright.

Keywords: Latent Copyright, Generative AI, Intellectual Property, Trade Secrets, Computational Creativity

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The Doctrine of Latent Copyrights: Protecting Generative AI Models through Representational Layers

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Abstract

Generative artificial intelligence systems not only produce expressive outputs, but also provide rich latent spaces, i.e., mathematical objects that express the semantic relation among the training data. These unique representational strata represent creative associations and redefine the traditional limits of copyright law. The article introduces the concept of Latent Copyrights, which proposes the provision of copyright protection to intermediate representations of the products generated by AI. It examines the use of computational creativity for the purpose of copyright protection. Engaging in a comparative analysis of the copyright regimes of the U.S., U.K., and E.U., this study suggests a relative system to ensure the protection of innovation, interoperability, and responsibility. The aim is to streamline the Latent Copyright theory of intellectual property with the technicalities of machine learning by offering a paradigm that conceptualizes representational layers of an AI-generated product as a medium of Copyright.

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Keywords:

Latent Copyright, Generative AI, Intellectual Property, Trade Secrets, Computational Creativity

Introduction

Generative artificial intelligence (AI) has revolutionized the production of creative text, image, and music, but the most significant legal ramifications of the technology can be found in the latent spaces of the model representing meaning.

These multidimensional spaces generated by training neural networks are transcriptions of abstract relations, which are like an imaginary, digital (Goodfellow et al., 2016; Ramesh et al., 2022). They are the representational substrate of contemporary AI, which creates the boundary



between calculation and creativity that is invisible to the users.

The current copyright principles based on the authorship and fixation of the human being are not appropriate to such a kind of computational creativity. Latent layers are perceptible, and not intentionally expressive, but are an indication of human design in terms of data curation, architecture, and optimization (Samuelson, [2023](#); Gervais, [2022](#)). This discrepancy creates a regulatory gap: the developers secure the parameters as trade secrets, and the supporters of transparency demand openness so that the situation can be fair and accountable (WIPO, [2023](#)). Overprotection can also lead to monopolizing knowledge, and underprotection can discourage good innovation (Lemley and Casey, [2021](#)).

The main issue is, should these latent representations (that are between training data and expressive outputs) be the focus of copyright-like protection? In case they present the intellectual contribution of people, they can meet the originality requirements of the *Feist v. Rural Telephone Service* (499 U.S. 340, [1991](#)) or the own intellectual creation test of the EU (*Infopaq v.*). *Danske Dagblades Forening, C-5/08*). However, protection might also be a way of cementing opaqueness and impeding interoperability.

This article further develops a middle-ground Latent Copyright system which rewards representational creativity and avoids excess. It suggests a Technological Proportionality Model based on comparative copyright, trade-secret, and sui generis database doctrines that achieves protection based on established human creative control with fair-use and interoperability constraints. It redefines the concepts of fixation and authorship to the era of generative systems by linking the architecture of latent space and the architecture of rights, making innovation both incentivised and made available.

Theoretical Bases of Latent Representations

To realize latent representations of the legal meaning, it is necessary to have an appreciation of how generative-AI models internalize and reconstruct information. In modern machine learning, the term latent space describes a high-dimensional mathematical space in which input

data, such as text, images, or sounds, are transformed into small numerical representations that describe the key characteristics of the input data. Neural networks are trained to project the correlated features of large datasets to this representational space in order to allow the model to produce coherent and contextually consistent outputs during training (Goodfellow, Bengio, and Courville, 2016). The resulting latent vectors are not a direct copy of the training data but rather an abstracted relation of the data points, creating a structured topology of meaning.

From Data to Representation

Generative models like DALL-E 2 by OpenAI, Stable Diffusion, and GPT-4 are encoder-decoder-based models that encode and decode observed material into latent embeddings before re-creating it in novel forms of expression (Ramesh et al., [2022](#); Rombach et al., [2022](#); Munir et. al., [2025](#)). The encoder will reduce the high-dimensional data to latent variables, and the decoder will use the latent variables to create new combinations in line with the learned statistical patterns. It is a kind of parallel to the cognitive concept of conceptual abstraction: the network learns to find out correlations and hierarchies that enable it to learn style, composition, or syntax without programming it (Abbasi, et. al., [2025](#)).

The latent space is the engine of the system, which is the creativity. Every point in this multidimensional space corresponds to a set of semantic or aesthetic features, and, therefore, it is possible to interpolate between them to obtain a coherent transition, e.g., a transition between styles or objects. As an example, between vectors of violin and guitar, a trained diffusion model can interpolate to make instruments with identifiable musical characteristics. This mechanism is important because it is generative: it does not generate representations that are either direct copies of the training examples or stochastic inventions. They represent what Margoni and Kretschmer (2023) refer to as computational creativity, which is the result of statistical inference through human-reported goals.

Architecture and Learning Dynamics

Latent representations are technically learned by optimizing model parameters through iteration,

i.e., millions or billions of weights that express the way neurons are connected and affect each other. Self-attention mechanisms are used in transformer architectures to allow the model to distill the contextual dependencies of lengthy sequences of tokens or pixels, and diffusion models are trained to increasingly deny random inputs into structured images, in a probabilistic sequence (Kingma and Welling, 2013; Ho et al., 2020). These structures result in the creation of a layered hierarchy of abstraction: lower levels encode simple patterns, e.g., edges or phonemes, and the deeper levels encode more complex semantics, e.g., mood, genre, or narrative cohesion.

Legally speaking, such a hierarchical character makes the concepts of fixation and originality difficult. The layers add value of partial creativity, none of which is a classic work. The result of the representational process, the latent embedding, is dynamic and deterministic at the same time: it varies during retraining, but it is stable mathematically enough to generate similar outputs. Such duality provokes the issue concerning the possibility of understanding such forms of computation as an expressive form, similar to sketches or drafts in a creative process.

Latent Space Creative Function

Latent space is not a neutral technical phenomenon; it is a product of a number of human creative choices. The aesthetic inclinations of a model are the crucial element of the choices that depend on the training data choices, preprocessing, loss functions, and building restrictions. According to Elgammal (2020), these design processes introduce intended intent through proxy, that is, human conceptual input in the form of mathematical formalization. When an artificial intelligence model has been trained to imitate the brushwork of Impressionists or the harmony of Baroque, it does so within the constraints of the curatorial and algorithmic decisions of its developer. In this regard, latent representations generated by these models are human authorship at a systemic and not individual level.

In addition, latent representations enable some sort of representational remixing. They make the model jump and intersect conceptual spaces- mix architectural styles, musical genres, or linguistic registers in ways that reflect but even surpass

human creativity. According to recent computational neuroscience research, latent-space navigation is more similar to associative thought processes in the human brain (Caucheteux & King, 2022). These results support the claim that latent vectors have a cognitive-like form of creativity, which once again disputes the belief that creativity needs to be consciously deliberate in order to be innovative.

Analysis of the Implications

The latent space is legally a mid-level representation- neither raw data nor final expression. Similar questions had been previously faced by courts when dealing with reproductions of temporary RAM and copies of cache. In *MAI Systems Corp. v. Peak Computer Inc.* (991 F.2d 511 (9th Cir. 1993)), it was determined that loading software into RAM was a fixed copy that lasted more than a transitory period. Likewise, in *Perfect 10 v. The court* (Amazon.com Inc. 508 F.3d 1146 9th Circ. 2007) made a distinction between the temporary reproductions that are technical and the expressive fixation. In a sense, analogy Latent embeddings might be considered as computational fixations, stable enough to generate expressive work but different from the work per se.

This comparison puts latent space in a developing body of technologizing-fixation jurisprudence that applies old ideas to new media. The understanding of the creative and useful purpose of latent representations is a doctrinal basis of the concept of Latent Copyright that comes later in this paper. The knowledge of the underlying architecture is therefore not a technical digression but a requirement for the clear expression of a consistent legal framework that can help to deal with the unseen but constitutive layer of generative creativity.

Limitations of the existing framework of Copyright Law

Existing copyright laws are based on the appreciation of creative expression that is original and in a tangible form. These two pillars of originality and fixation have long been used to define the parameters of what can be considered under copyrightable subject matter, whereby it is only works that have a low threshold of human creativity and are sufficiently fixed to be perceived,

reproduced, or communicated. However, the existence of latent representations in generative artificial intelligence (AI) makes both requirements questionable. Latent spaces are not perceivable, and do not constitute intentional human expression, as it is traditionally understood. They, however, summarize human-influenced, structured representations that establish the shape and content of machine-generated work. This tension makes it questionable whether such computational intermediaries could fall within the existing or would require adjusting the legal conception of a work in the copyright law.

Foundations of U.S. Copyright Framework: Originality and Fixation

According to the U.S. copyright law, the work is considered to have protection once it fulfils two conditions of originality and fixation as defined by 17 U.S.C. SS 102(a). The Supreme Court, in *Feist Publications, Inc. v. Rural Telephone Service Co.* (499 U.S.340, 1991), made clear that originality simply requires a minimum of ingenuity and originality by a writer. This low threshold, which, as it seems, is friendly, assumes the use of creative judgment by a human agent. The policy changes by the U.S. Copyright Office (2023) also provide support to this presumption by stating that there are no registrable works that were produced without the creative input or any interventions of a human author. The decision in *Thaler v. The human authorship* was further codified into doctrine when *Perlmutter* (2023), where the D.C. District Court denied copyright on an image generated autonomously by the AI system DABUS, affirmed the system as such (Irfan, et. al., 2024).

The fixation requirement, which a work be embodied in a tangible form, thus capable of being perceived, reproduced, or otherwise communicated, was construed broadly in *MAI Systems Corp. v. Peak Computer, Inc.* (991 F.2d 511 (9th Cir. 1993)). The court determined that fixation was met because the loading of software into the RAM of a computer was temporary, but sufficiently long to be viewed and duplicated. On the same note, delegisimilar in *Cartoon Network LP v. As CSC Holdings Inc.* (536 F.3d 121 (2d Cir. 2008)), the Second Circuit also made a distinction between transitory and durable embodiments, stating that fixation depends on the temporal persistence.

These examples point to the fact that fixation can be trained to be sensitive to intangible digital forms, but latent-space embeddings vary in some important ways: they are not fixed manifestations of human will, but dynamic aggregates of mathematical weights, which are trained by training.

However, it can be said that the parameters of architecture and training sets for these representations are sufficiently human creative to meet the originality requirement of *Feist*. During the creation of loss functions, choice of data, or optimization of model hyperparameters, developers make a judgment that determines the meaning encoding properties of latent representations (Samuelson, 2023). In this respect, it is not the embedding but the structure of the system that is an authored artifact of the creative act. Therefore, computational latent representations might be taken to be by-products of authorship in form, and they deserve only minimal attention within a refined doctrine of fixations.

Latent Space: a Representation Layer of Creativity

The emergence of latent-space architectures is making a reassessment of what may be considered as expression in copyright legislation. In neural networks, the latent layer represents a transitional point between raw data and sensory output by encoding numerical abstractions into the creative potential through color, rhythm, or tone and then actually bringing them out into visible form. The legal interpretation of this process is similar to that of preparatory works, which may be protectable even though unfinished (sketches or drafts). However, due to latent vectors being algorithmic and invisible, their placement in the conventional copyright is questionable.

The Way of Expression to Representation

Copyright safeguards expression, as opposed to idea or method, although latent space exists somewhere in the middle, somewhere between a representation of expression and a representation of idea, somewhere between a signifier and a signified. Although ideas and systems are not a part of SS102(b) of the U.S copyright act, preparatory materials representing a creative choice could qualify. In *Rogers v. In Koons* (960 F.2d 301 (2d Cir. 1992), conceptual sketches were held out as being

protectable as an expression of artistic intention. Likewise, creative decision-making through calculation may be manifested in the architecture of a latent space of human-crafted objectives, loss functions, and data selection. Latent embeddings can be treated as computer equivalents of artistic sketches, processing information into an organized sense by human-designed algorithms, like an underdrawing behind the final artwork by a painter.

The Digital Fixation and Intermediate Copies

Courts have struggled to deal with intangible electronic copies. In *MAI Systems Corp.*

v. Peak Computer Inc. (991 F.2d 511 (9th Cir. 1993)), the software in the RAM was considered to be a fixed copy. *A&M Records Inc. vs. Napster Inc.* (239 F.3d 1004 (9th Cir. 2001)) and *Perfect 10 vs. Amazon.com Inc.* (508 F.3d 1146 (9th Cir. 2007)) also accepted the intangible reproductions as involving copyright in case they hold creative character. Latent representations fulfill this requirement: they are not visible, but can be represented mathematically and reproduced, and serve as intermediate states of expression that are part of the generative process. This supports what has been mentioned in the previous section about computational fixation: embeddings represent an ongoing process of conversion between data consumption and the articulation of expression.

Derivative Works and Transformative Recombination

In 17 U.S.C. §101, the derivative works recast or transform existing materials. Latent spaces are designed in a way that they change data, dimensionality-reduction, and re-express relationships to create new compositions. This is the process being in concurrence with *Campbell v. Acuff-Rose Music Inc.* (510 U.S. 569 (1994)) that focused on change with the help of a new meaning or message. Latent transformation, though not conscious, is like the collage or montage in that creativity consists of the choice and arrangement (Guadamuz, 2023). The artistic agency of AI is found in the architectural and dataset-curation decision-making -human interventions that introduce will into the representational system.

European Views of Intermediate Representations

Infopaq C-5/08 (2009) held that transient reproductions may be considered partial copies in case they are a reflection of intellectual creation, whereas *Football Association Premier League v. QC Leisure* (C-403/08 [2011]) did not allow functional reproductions. In this way, it is only under the condition of the inclusion of creative human choice that latent embeddings should be under protection, and Bently and Sherman (2022) recommend the proportional-authorship approach. The CDPA 1988, §9(3) of the U.K. assigns the authorship of computer-generated works to the individual by whom the arrangements leading to the work are made, which is potentially but may be a restricted foundation as to being the basis of attribution of rights to latent forms. This recognition should, though, strike some balance against the EU objectives of interoperability and open innovation in digital policies.

Introduction to a Theory of Representational Creativity

Creativity may exist in its representation as well as in its expression. Latent space is a repository of the possible, a repository of the potential expression, that is co-produced by human beings and machines. According to Burk and Lemley (2023), generative AI signifies a transition to work systems, which spreads out creative agency through the ranks of abstraction. Human creativity, therefore, manifests itself in creating architectures that can recombine and interpret data independently. A policy such as the Latent Copyright would put legal protection in line with this factual locus of creative work. Such recognition must, however, be commensurate: excessive protection is likely to hamper openness and repeatability. Accompanied by research, interoperability, and fair-use exceptions to the rule, recognizing representational creativity would help to fulfill the constitutional role of copyright, which is to encourage the advancement of science and the useful arts, by compensating innovation without closing off access to the informational baseline of creativity.

Overlapping Principles: Trade Secrets, Databases, and Model Weights

Although copyright is the main protection system of creative expression, the latent representation in

systems of generative-AI works exists in a network of overlapping jurisdictions. Trade secrets and database protection are frequently used by developers to protect model weights, training data, and representational architectures. However, these systems place a value on secrecy and investment, and not on innovation and sharing, putting the equilibrium between innovation and access, the aim of intellectual-property law, at risk.

Trade-Secret Protection and Algorithmic Opacity

According to the U.S. Defend Trade Secrets Act (2016) and state Uniform Trade Secrets Acts, information is considered eligible for protection in case it has economic value based on secrecy and is reasonably protected. When not made public, model weights and latent representations, which are represented as numerical matrices, fit this definition. In *Waymo LLC v. Uber Technologies Inc.* (2018), machine-learning parameters were considered to be actionable trade secrets when stolen.

Nevertheless, protection of trade secrets disappears as soon as the information leaks, which contradicts the increasing expectations of transparency of algorithms (Pasquale, 2015). The secrecy as a principle makes the black-box opaque (Burrell, 2016) and hinders reproducibility because trade-secret law does not have counterbalancing principles like fair use. Taking it too far in the context of AI may suffocate teamwork and control. One solution to this gap would be a Latent Copyright model, which acknowledges representational creation design, but allows it to be revealed using structured exceptions- saving innovation without requiring secrecy.

Structured Information and Database Rights

The European Union, under Directive 96/9/EC provides *sui generis* rights to databases representing a significant investment in data acquisition or verification. Latent spaces, which are mathematical but not discrete collections, are a reflection of this relational logic, of the encoding of correlations between data in structured representational structures. According to Rosati (2021), the structures generated by algorithms

might be eligible to do so provided that they have independent value and can be retrieved.

However, the CJEU in *British Horseracing Board v. The inclusion of protection to human-created or verified datasets* was limited to *William Hill Organization Ltd.* C-203/02 [2004]. Latent embeddings are formed automatically, which means that they can be outside this framework. In addition to this, database rights do not focus on originality, but only on investment, which may diminish creative representations of industrial products. The recent U.K. consultations (IPO, 2022) suggest the introduction of hybrid solutions, i.e., granting limited rights to AI-edited datasets but maintaining the research and interoperability exceptions. These reforms could be incorporated in a calibrated Latent Copyright and safeguard the structuring guided by humans without monopolizing the facts.

Model Weights and Algorithms Parametrization

The model weights, which are the numeric values that are used to govern the behavior of a model, are even more complex. They are both creative and practical, even though they are treated as trade secrets. Surden (2020) compares their set-up to the brushwork of the artist: there is technicality to it, but the manner of expression is also stylistic. In the AI Liability Directive by the European Commission (2023), weights are considered functional artifacts, which are guided by safety and accountability, and not by creativity.

Limited copyright of the representational layers would be a complement to bridging this gap, while preserving the human design impact on the work and permitting free re-engineering. This would provide a protection of creative structure without being an obstacle to interoperability, a latent architecture as a semi-public privilege - recognizing design skill without constituting a monopoly.

Balancing Accessibility with Innovation

The overlapping of trade-secret, database, and model-weight principles emphasizes the imbalance in the structure of AI legislation: secrecy is overprotective, functionalism underprotective. Latent representations are manifestations of this tension of fusing creativity with technicality. Proportional and disclosure-compatible Latent

Copyright would bring back the equilibrium - permitting some proprietary rights but making certain that the informational foundation of AI is open to research and social development.

Enforcement and Proprietary Problems

Despite the latent representations receiving some level of copyright protection, there would still be a great deal of challenges in terms of authorship, enforcement, and ownership. These are not only the doctrinal but also the evidentiary and technological challenges. The latent spaces arise as a result of the work of the developers, data curators, model trainers, and the enormous pool of data subjects whose works are presented in the training sets. Claiming ownership and securing rights in this distributed setting necessitates reconsidering the assumptions of copyright in regards to individual authorship, identifiable infringement, and physical evidence.

The Problem of Attribution

The copyright law assumes that it has an identifiable creator with an exercise of creativity. With generativist AI, the creativity is distributed among the various agents: engineers, data scientists, artists, as well as among the model itself. According to the U.S Copyright Office (2023), the authorship has to be human, excluding an autonomous-generation-only claim. In line with this, authorship in latent copyright should be found in human agency in the designing of models and not algorithmic output.

One of the possible resolutions is the work-for-hire doctrine contained in 17 U.S.C. §101, which attributes authorship to the party that controls the creative process. This is like the production of films; this is similar to the U.K. CDPA 1988 §9(3) that characterizes the author as the individual who made the required creative arrangements. Nonetheless, participative involvement makes attribution rogue. Craig and Turcotte (2021) suggest a networked authorship model that includes distributed creative agency. This may be included in a Latent Copyright regime where the responsibility of structuring representational space in a creative manner is attributed to architectural authorship, and the responsibility of providing training material to this structure is attributed to data authorship.

Evidentiary Barrier and Proof of Infringement

The enforcement presents acute evidentiary problems. Latent embeddings are abstract, not human-readable, and probabilistic, which makes it impossible to use traditional substantial similarity tests (Lemley and Casey, 2021). The infringement would be detected by demonstrating that the representational configuration of one model was recreated by another one. The new technologies, like model watermarking and fingerprinting (Kirchenbauer et al., 2023), are potential solutions but are technically weak and unexplained in the courts. The case of *Daubert v. Merrell Dow Pharmaceuticals* (509 U.S. 579 (1993)) may require courts to be adjusted accordingly.

The trade-secret and privacy limitations further make proof more difficult. It may not be possible to reveal model architecture by the plaintiff without losing protection, or for the defendants to have independent access to verify it. Balance, including discovery practices in patent litigation, might be provided by procedural reforms, including protective-disclosure orders, which allow limited inspection by experts (Contreras, 2021). Without the mechanisms, latent copyright would be a right to a remedy.

Fragmentation of Ownership and Complexity of Licensing

Latent representations have dangers of fragmentation of ownership, even when the rights are enforced. One model can consist of millions of interrelated features that are conditioned through various sources of data, and it generates micro-rights and orphan-works issues that are unmanageable (Hargreaves, 2011). This could be constrained by collective licensing or safe-harbor systems, which are based on ASCAP or Creative Commons. In these kinds of regimes, the model developers may submit architectural designs to a central repository that administers the license of derivative use of representational layers to improve transparency, minimize transaction costs, and maintain the incentive to innovate.

Transparency vs. Proprietary Control

One last conflict is between transparency and proprietary interests. The responsibility legislation, such as the EU Artificial Intelligence Act (2024) and the U.S. Algorithmic Accountability Act (2022), is raising the requirement of disclosing the functionality of models. But frankness can destroy the confidentiality on which business relies. The conditional exclusivity would be a balanced solution: protection would be conditional on adherence to transparency mechanisms, e.g., auditing or restricted disclosure. This reciprocity holds true to the constitutional intent behind copyright, which is to encourage social development and not privacy, so that AI governance is not in a vacuum, but still encourages creative and technical innovation.

Latent Copyrights: The Proposed Framework

The analysis above reveals that the existing intellectual-property regimes are not able to reflect the creative and economic worth of latent representations of generative-AI systems. The copyright law excludes non-human processes, whereas trade-secret and database protection focus on confidentiality and investment rather than creativity. As a way to eliminate these gaps, the section suggests a more restricted, proportionate, and transparency-compatible Latent Copyright framework of acknowledging human-directed creativity in the form of computational representations.

Conceptual Definition

Latent Copyright can be described as a property right that a machine-learning model has, a restricted intellectual-property right in the case where it represents provable human creative effort. It safeguards human input to architecture, parameterization, and data curation, which identify how models encode and create meaning. It would protect the creative architecture of generative systems, rather than protect perceptible expression, as is the case with conventional copyright.

That right would not apply to the algorithmic process per se (not also subject to the 17 U.S.C. § 102 (b)) or even to raw training data, but only to human-made design decisions- objective setting, dataset selection, loss-function tuning, and

aesthetic calibration. It consequently transforms authorship into a visible manifestation of representational intent, where creativity lies in design and not production.

Eligibility Criteria

An effective regime must have effective tests of creative representation and technical functionality. There are four cumulative conditions that determine eligibility: (1) Human Creative Control--the presence of substantial human effort in the design or curation which affects creative outputs, which is consistent with the U.S Copyright Office (2023), and Infopaq (C-5/o8 [2009]) (2) Representation Originality - the presence of distinctive selection or arrangement that impacts on the creative outputs, which echoes Feist Publications v. Rural Telephone Service Co. (499 U.S.340(1991)) and Directive 96/9/EC;(3)ComputationalFixation-sufficient structural stability to give consistent results, similar to MAI Systems Corp. v. Peak Computer, Inc. (991 F.2d511 (9th Cir.1993)); and (4)Transparency Compatibility-disclosure of significant metadata to regulators or auditors. These thresholds are only guaranteed to protect those systems mediated by humans and accountable, and not fully autonomous or opaque models.

Scope and Duration of Rights

Latent Copyright would have less scope than the traditional copyright, namely the unauthorized duplication or exploitation of representational architectures that would contain original design without excluding the rights to autonomous development, interoperability, and scholarship. It would cover direct appropriation (e.g., the reuse of trained weights) but not cover the reuse of concepts or data in the public domain. The term may be based on the 15-year lifespan of design rights or EU database rights, which compares the incentive to fast technological obsolescence.

Public-Interest Protection

Latent Copyright should be limited in order to keep the proportion: research and educational applications; fair use and transformative use (Campbell v.). Acuff-Rose Music Inc., 510 U.S. 569 (1994); accountability clauses of the EU Digital Single Market framework, which require protection

to be accompanied by transparency as in the EU AI Act (2024), or the U.S. Algorithmic Accountability Act (2022); and exemptions to interoperability and standardization as in the EU Digital Single Market framework. These protection clauses have guaranteed that the doctrine amplifies and does not constrain democratic accountability and scientific advancement.

Institutional Mechanisms

Administrative infrastructure that would be required to implement would be the same as that of design and database rights. An optional registration of representational architectures with confidential documentation, authorship releases, and model versioning data could be voluntarily registered in a Latent Works Registry in the U.S. Copyright Office or EUIPO. WIPO would also help to harmonize the rules across different jurisdictions and provide uniformity on a cross-regional basis.

Policy Rationale and Doctrinal Integration

Latent Copyright is not a radical thesis, but a doctrinal development that is in accordance with the law entailing algorithmic creativity. It represents the policy reason of *Mazer v. Stein* (347 U.S.201 (1954))--that personal gain is the best method of encouraging individual effort to benefit the common good. The modern-day AI era has placed such personalized work in the realms of architectural design, data curation, and representational modeling. Latent Copyright therefore fulfills the constitutional role of copyright: by protecting these types of human creativity, Latent Copyright also fulfills the task of fostering advancements in science and the useful arts, making innovation remain transparent, responsible, and open.

Policy and Doctrinal Reform: the Need of the Hour

Generative AI Latent-space architectures demonstrate underlying weaknesses in the intellectual-property systems of the twentieth century. The old copyright and patent law, which was designed to protect physical objects, does not fit the algorithmic system whereby creativity has a statistical expression. Since AI models will become engines of cultural and economic production, the absence of the legal recognition of the

representational design will pose a threat to both innovation and liability. In the absence of reform, there will be secrecy instead of transparency, and the benefit of privatization will be chosen over the good of the people.

Latent Copyright is an intermediary solution-Rewarding the human effort in the design of AI systems and protecting openness and access. It offers a legal system that is responsive to technological change based on proportionality and adaptability. The subsections below provide possible reform directions in the United States, the European Union, and even internationally, through a regime like WIPO.

U.S. Legislative Integration

Digital expression is already available in the U.S. Copyright Act of 1976, which safeguards original works of authorship that are fixed in any tangible medium. Courts have deemed the term tangible to be liberal and have determined that code and RAM copy would be considered tangible (*MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511 (9th Cir. 1993)). Therefore, representational architectures, which are encoded as numerical parameters, fall into this definition; the obstacle is interpretation, rather than statute.

It may also be clarified by the U.S. Copyright Office that a latent configuration, under the circumstances that it represents human creativity, is a protectable arrangement of data and parameters after its AI-generated works circular of May 2023. The pilot in the Algorithmic Accountability Act of 2022 (H.R. 6580) is a possible Latent Works Registration Program whereby the confidential submission of technical documentation demonstrating human involvement and adherence to the standards of an algorithmic audit could be required by Congress.

This approach would be codified by minor statutory reform: amending 17 U.S.C. §101 to add to the definition of works of authorship the term representational architecture. The Copyright Royalty Board may establish a collective-licensing program of non-commercial research use, with the Federal Rules of Evidence accepting as authentic forensic comparison in infringement cases, acknowledging so-called algorithmic provenance records, which may be made under Rule 901(b).

The European Union and the Principle of Proportional Creativity.

In the EU, Latent Copyright is in line with the civil-law emphasis on proportional authorship and personal touch, which are known as such in *Infopaq* (C-5/08 [2009]) and *Painer v. Standard Verlags GmbH* (C-145/10 [2011]). Architectures that are the products of human design that have reached this threshold, but must be aligned to the collective authorship of AI, are termed latent architectures.

The Database Directive (96/9/EC) or the Digital Single Market Directive (2019/790/EU) could be reformed to encompass algorithmically designed relational systems in cases where human creativity is noticeable. A proportional creativity test would be able to gauge how much human control compared to automation, and the extent of protection would be adjusted.

The EUIPO, on the administrative level, may introduce the Latent Design Register, where ethical-AI compliance should be disclosed according to the EU Artificial Intelligence Act (2024). The regime may also require Algorithmic Impact Statements (AIS) of bias testing per year, provenance of data, and social impact--the accountability principle of GDPR. This would render the EU the first jurisdiction to codify copyright associated with moral and technological proportionality.

Global Standardization- WIPO.

Latent Copyright may be introduced worldwide by way of interpretation as opposed to new conventions. Scientific creations. The representational architectures may fall within the scope of Article 2(1) of the Berne Convention (1886) to the effect that it covers each production in the literary, scientific, and artistic domain. WIPO may take a Joint Recommendation on the Algorithmic Works to direct the member states to protect identifiable human input latent architectures.

The WIPO Standing Committee on Copyright and Related Rights (SCCR) might provide the clarification that fixation is also defined as being an algorithmic representation that has been stored in a machine-readable format. Normative consistency between IP, ethics, and human rights would be guaranteed by coordination with the Recommendation on the Ethics of Artificial Intelligence (2021) of UNESCO. WIPO might also introduce AI-specific panels to resolve cross-border

algorithm-based IP cases by the Arbitration and Mediation Center.

Institutional Architecture for Enforcement

The solution to this problem is reform that involves cross-domain coordination between courts, regulators, and auditors. The courts would evaluate originality by evaluating based on the expertise of model architectures, and agencies like the NIST (2019) and the European AI Office would provide the criteria for certification of transparency and documentation. Provenance metadata and cryptographic watermarking are examples of tools used to enforce the provenance of models (Kirchenbauer et al., 2023) and must be required to track the flow of model evolution without violating privacy policies.

The Civil Society and the Role of Public Institutions

Latent Copyright should make a lot of sense by ensuring that the transparency of the public institutions is boosted, not to strengthen corporate control. AI projects funded by grants might need to open representational architectures in open repositories so that they can be scrutinized by academics and civil society. Neutral auditors of fairness and disclosure requirements could be universities and research laboratories.

Similar to the environmental-impact statements, algorithmic-impact statements may institutionalize civic oversight by restating the old saying that Justice Brandeis referred to, that sunlight is the best disinfectant. Integrating transparency in the algorithmic governance would make innovation and democratic responsibility consistent.

Lessons in Comparison and Global Perspective

U.S. pragmatism is focused on flexibility; EU proportionality is focused on normative coherence. Latent Copyright is a combination of the two--they reward creation of architecture and, at the same time, guard against ethical protection. This model may help to avoid technological colonialism with the support of WIPO and UNESCO (2021, as the diversity of cultures and ethical values can be incorporated in the global IP management. It could be experimented on in pilot programs to determine

its effect on open-source collaboration and small-scale innovation, which would induce data-driven improvements on future policy.

The idea of Algorithmic Creativity as a Novel Contract

Finally, the Latent Copyright is a new social contract of the algorithmic era of creativity. It recognizes imagination as going by systems as well as by art. It makes the intellectual-property law more transparent, more accountable, and more proportional, which would fulfill the constitutional role of copyright, balancing the self-interest of privacy with the common good. Adopting distributed creativity is not resisting automation but rather finding a balance between law and architecture so that all layers of intelligence can be responsible for the human values that created it.

Conclusion

The concept of Latent Copyrights marks a significant development in the field of Intellectual Property laws as it aims to confront the most critical challenge posed by Intelligent Systems and Computational Creativity. It recognizes the displacement of the locus of human creativity, not only to concrete works of art and literature but also to the invisible structures of representation that give machine creativity its power. Such latent structures are not just the objects of technological functionality but of human invention, which encode aesthetic, conceptual, and ethical choices in structures that the artificial intelligence reads and generates meaning.

Latent Copyright maintains the original values of authorship and adapts them to the algorithmic

era by providing protection in situations where it can be proven that the human intention, originality, and transparency are involved. It does not displace the human author but instead redefines authorship as an array of creative engagement, shared out at levels of design, data, and conceptualization. This subtle awareness will guarantee that legal protection is commensurate - that true creative contribution is rewarded, but that it does not lead to monopolization of the informational commons underlying such contribution.

Meanwhile, the model balances conflicting policy priorities: creativity and responsibility, secrecy and transparency, personal motivation and government control. It transforms the copyright into a democratic technological governance tool by identifying exclusivity with transparency. This kind of change brings law into line with modern ethical requirements and anchors in it the principles of explainability, fairness, and shared progress.

Finally, Latent Copyright brings new life to the constitutional role of copyright, to facilitate the advancement of science and the useful arts, and under this maxim, grants copyright protection to the invisible but invaluable levels of human creativity in machine learning. It holds the ethos of human intellect, ethical responsibility, and accountability to the general ideals of knowledge, justice, and innovation embedded in the invisible architecture of AI creation. This equilibrium between man and machine is the key to a future in which creativity, however disguised and veiled, is nonetheless purely human in its essence and democratic in its mission.

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