Rethinking Copyright Legitimacy:AI-Generated Content and Distributive Justice under the Instrumental Approach

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Abstract—The proliferation of AI-generated content (over 15 billion algorithmically created images in 2022–2023) has destabilized traditional copyright frameworks rooted in the labor theory of property, the personality theory, and the incentive theory. These theories fail to address AI's disruption of human algorithm co-creation. This study adopts the instrumental approach, reconceptualizing copyright as a governance tool to promote knowledge sharing and public welfare. Through legal-philosophical critiques, the paper exposes historical flaws in classic theories, including their anthropocentric biases and systemic erosion of the public domain. Comparative analysis of international cases (eg, US, China, EU) reveals divergent judicial standards for AI-generated content. By integrating three principles — the principle of attribution to organizers (rights allocation), prioritizing the least advantaged stakeholders (distributive justice), and safeguarding the public domain (dynamic protection terms) — the study proposes a practice-oriented regulatory pathway to balance innovation incentives, equitable access, and sustainable knowledge ecosystems in the AI era.

Index Terms—AI-Generated Content, Copyright Legitimacy, Legitimacy Theory, Distributive Justice, Instrumentalist approach .

1. INTRODUCTION

The labor theory of property lays the moral foundation for copyright, the personality theory affirms the intrinsic value of the author, and the incentive theory seeks to stimulate creative production. Together, these three theories have traditionally provided normative support for the legitimacy of copyright law from distinct perspectives. However, the explosive proliferation of generative artificial intelligence is reshaping the creative ecosystem at an exponential pace. From 2022 to 2023, the total number of images generated by text-to-image algorithms such as Stable Diffusion and Midjourney has surpassed 15 billion[1]. This technological shift fundamentally challenges the explanatory power of the labor theory of property, personality theory, and incentive theory in addressing the concept of "machine creativity". The controversy reached a new high when the U.S. Copyright Office refused to register Théâtre D'opéra Spatial[2]. The debate over whether machines can truly create has thus been pushed to the forefront. This controversy exposes both the systemic flaws of traditional theories in rights allocation, interest balancing, and safeguarding the public domain and a deeper paradox: when machines generate content by applying algorithms to existing data to form new combinations[3] that mimic human creation, has the legal definition of originality been reduced to mere technological romanticism?

Existing reform proposals have yet to address the core institutional defect. The introduction of a "human necessary intervention clause"[4]is only a compromise with the personality theory, packaging minimal human contribution as an original expression to solve immediate concerns without considering subsequent developments. At a deeper level, this clause fails to escape the personality theory's limit on the creative subject, largely because traditional theories define creative activity narrowly and ignore the changes brought about by technological progress. Establishing new neighboring rights[5]merely eases the problem of protecting investors but does nothing to resolve the crisis of a shrinking public domain. Copyright has long been called an artificial "monopoly", and the legitimacy of the system depends largely on delineating the scope of exclusive rights while reserving space for the public domain. Ignoring the public domain issue cannot reconstruct the legitimacy of copyright to meet the challenge of AI-generated content. Attempts to include AI-generated content

[1] Valyaeva A, 'AI Image Statistics: How Much Content Was Created by AI' [2023] Everypixel Journal https://www.everypixel.com/blog/ai-image-statistics.

[2] U.S. Copyright Office, 'Re: Second Request for Reconsideration for Refusal to Register Théâtre D'opéra Spatial (SR # 1-11743923581; Correspondence ID: 1-5T5320R)' https://www.copyright.gov/rulings-filings/review-board/docs/Theatre-Dopera-Spatial.pdf accessed 14 March 2025.

[3] Aslan B, 'Reflections of the Concepts of Creativity, Originality and Characteristic on the Generative Autonomous AI Systems with an Analysis of Copyright Perspective' (2024) 10 Journal of Commercial and Intellectual Property Law 3.

[4] Wu HD, 'On the Copyrightability of AI-Generated Content: Practice, Legal Theory, and Institutional Considerations' [2024] China Law Review 113.

[5] Lemley MA and Casey B, 'Fair Learning' (2021) 99 Texas Law Review 74.

under intellectual property protection through the work-for-hire model[6]have broken the deadlock in one sense: they successfully confirm organizers'rights but exclude algorithm contributors'interests from the benefits framework. By simply expanding the existing system to cover new cases, they fall into shortsightedness, addressing only immediate problems and overlooking future circumstances. Although these theoretical adjustments show limited effectiveness against the specific challenges posed by AI-generated content in the copyright domain, their utility remains constrained by the narrow boundaries of the problems they presume. Judicial outcomes guided by traditional theory remain divided. In Getty Images v. Stability AI[7]in the United States, the court found that the unauthorized use of twelve million images constituted infringement yet adopted an ambiguous standard for the legality of AI training data. In China's "Chunfengtu" case[8], the court treated prompts as creative acts, sparking academic debate over whether the threshold for human intervention is too low. In Italy's RAI Radiotelevisione v. Chiara Biancheri[9], the court confirmed that creative tools alone do not deprive a work of copyrightability and upheld human creative contribution as the core criterion, but has not systematically addressed whether generated content qualifies as a work. Similar reasoning appeared in the Czech cases S. Š. v. TAUBEL LEGAL and advokátní kancelář s.r.o.[10], where the plaintiff's failure to meet their burden of proof on authorship and creative requirements led the court to conclude that the images did not reflect a natural person's intellectual creativity and thus did not meet the elements of a work under copyright law. These divergent decisions across jurisdictions highlight the absence of a unified global standard on this issue.

To fundamentally resolve the ongoing deconstruction of copyright legitimacy by AI-generated content, we must undertake a paradigm critique of the foundational theories themselves. Only by recalibrating our epistemology can we build a normative framework with the reach to encompass both current and future forms of AI generated content. Thus, AI-generated content copyright research must move beyond debates over copyrightability and shift to a distributive justice approach grounded in instrumentalism, treating copyright as a tool to promote knowledge sharing and public welfare. Drawing on the principle of attribution to organizers, the principle of prioritizing the least advantaged stakeholders, and the principle of safeguarding the public domain, this framework offers a dynamic, multi-layered, and quantifiable method for allocating rights. It transcends the limits of existing theories and provides a fairer, more adaptive system for addressing the complexity of AI-generated content.

This paper proposes shifting from metaphysical accounts of authorship to an instrumental approach that treats copyright as a governance tool for regulating knowledge production and access. Legitimacy, under this framework, is not determined by who creates but by how rights are allocated, who benefits from protection, and whether public interests are served. To address the legitimacy crisis posed by AI-generated content, the paper proposes a distributive justice model grounded in three principles: attributing rights to the organizers of creative activity, prioritizing the least advantaged in benefit sharing, and dynamically safeguarding the public domain. The discussion unfolds in four parts: Section 2 critiques the foundational flaws of traditional theories, Section 3 examines how AI exacerbates these shortcomings, Section 4 outlines the proposed framework and its practical implications, and the conclusion explores implementation pathways for future reform.

2. EXTENSION OF THE LONG-STANDING ISSUES IN TRADITIONAL JUSTIFICATION THEORIES

The legitimacy crisis of the copyright regime did not begin in the AI era. From the privileged press licenses of 16th-century Europe to the "authorial turn" embodied in the Statute of Anne in 1710, even though the Statute of Anne effected a shift from a publisher-centric to an author-centric model, its legislative impetus was still to balance the interests of the Stationers' Company against those of the emerging printers rather than to genuinely establish a system of authorial rights. This orientation meant that the three traditional legitimacy theories were, from the start, inherently flawed-they were turned into rhetorical instruments for institutional validation rather than serving as a true philosophical foundation for guiding rights allocation.

2.1. HISTORICAL ORIGINS OF THE EXPLANATORY FAILURE OF TRADITIONAL JUSTIFICATION THEORIES

The emergence of sixteenth-century European printing privileges coincided with the copyright system's uneasy swing between private rights and the public domain, and long before AI appeared, it had already laid bare the historical limits of the Labor Theory of Property. The modern social order provided both the material conditions and the ideological framework for copyright's birth.[11] Although the Statute of Anne of 1710 is credited with establishing authorial rights, those rights were granted not out of altruistic concern for creators but because printers sought a stable, marketable entitlement that authors, unlike royal grantees, offered a socially acceptable starting point. [12]

At its core, the Labor Theory of Property assumes that

[6] Wang G, 'On the Copyright Protection of Computer-Generated Works' (2016) 29 Journal of Yunnan University (Law Edition) 20.

[7] District Court, D. Delaware, 'Getty Images (US), Inc. v. Stability AI, Inc.' https://www.courtlistener.com/docket/66788385/getty-images-us-inc-v-stability-ai-inc/ accessed 14 March 2025.

[8] Beijing Internet Court, 'AI-Generated Image (AI Painting) Copyright Infringement Dispute' https://www.iphouse.cn/cases/detail/xdgoy9e5pzwm6o3rgnm63rq4vkn81027.html accessed 7 April 2025.

[9] Chiara Biancheri v. Rai-Radiotelevisione Italiana S.p.A. Law No. 633 of

1941 Art 1, 'RAI Radiotelevisione v. Chiara Biancheri' (2024) 55 IIC - International Review of Intellectual Property and Competition Law 470.

[10] The Municipal Court in Prague, S. Š. v TAUBEL LEGAL, advokátní kancelář s.r.o., No 10 C 13/2023-16, 11 October 2023, https://mediareport.nl/wp-content/uploads/2024/04/praag-en.pdf accessed 1 May 2025.

[11] Li C, A Critique of the Fundamental Theories of Copyright (Intellectual Property Publishing House 2013) 16.

[12] Li C, A Critique of the Fundamental Theories of Copyright (Intellectual Property Publishing House 2013) 70.

property initially belongs to all humankind and that by mixing one's labor with something held in common, one transforms it into private property.[13] Yet this dual presumption- common ownership of knowledge plus privatization by labor- was devised to justify private property for specific social classes, thereby undermining the theory's persuasive power.[14]

As industrialization and capital expansion accelerated, the US Copyright Act of 1790[15] extended protection from "maps, charts, and books" to musical compositions and photographs. This doctrinal shift-from labor value toward safeguarding commercial investment-intensified the theory's internal contradictions. What began as a rationale for individual labor to privatize shared knowledge gradually morphed into a tool for legitimizing capital accumulation.

Likewise, the two constraints embedded in the theory-"sufficient reservation" and "prohibition of waste"-were whittled away by the capitalist enclosure of the public domain. The tension between knowledge's inherently shareable nature and its privatization grew ever more acute. Then came the advent of AI, when artificial intelligence companies systematically scraped copyright-protected image data for training purposes (as in Getty Images v. Stability AI[16]), engaging in "large-scale predatory use" that utterly dismantled the ethical foundations of the existing constraints.

2.2. PHILOSOPHICAL AND STRUCTURAL WEAKNESSES OF PERSONALITY AND INCENTIVE THEORIES

The philosophical foundations of the Personality Theory have gradually crumbled under successive technological iterations. Grounded in natural rights, the Personality Theory constructs a justification for property rights along the categories of will, personality, and property.[17] It holds that property is the manifestation of personality, [18]or in other words, concrete property embodies abstract personality; only through property can a person's personality and rationality be revealed.[19] Accordingly, literary or musical works become the natural vessels of personality.[20]

This assertion presupposes the inseparable unity of the creative act and personality expression. Tracing its origins, even the Statute of Anne just granted authors a fourteen-year term of exclusive rights, and France's 1777 printing decree treated works as tradeable chattels-demonstrating that early copyright laws functioned primarily as tools to regulate the publishing industry.[21]

Whether in the common law copyright systems of England and the United States or the author-centric regimes of France and Germany, initial protections conferred no real rights on authors; subsequent recognition of author rights was merely a concession by publishers,[22]revealing from the outset the fragility of the will personality property relation. As history advanced-especially with industrialization, digitization, and the ongoing impact of AI technology, fragility became ever more pronounced. The traditional standard for originality that relied on human intellectual input has steadily shifted toward judgments based solely on technical operations. [23]

As early as 1884, in Burrow-Giles Lithographic Co. v Sarony[24], the US Supreme Court held that photographs could receive copyright protection, applying the Personality Theory to mechanically reproduced products for the first time and marking the shift of the originality standard from intellectual creation to technical choice. This transformation has continuously weakened the connection between creative individuality and personality expression. Advances in technology and algorithmic intervention have extended claims to works from human authors to machines or algorithms, rendering the original personality-based justification unable to accommodate a new mode of production in which the algorithm itself serves as the creative agent, and thereby intensifying the theory's internal contradiction between creation and personality.

Utilitarianism regards the maximization of individual happiness or social welfare as its ultimate value.[25] The incentive theory, as the utilitarian paradigm for justifying the copyright system and as an effective motivational strategy, argues that exclusive rights stimulate creative activity. However, its core "economic rational actor" assumption has been refuted by behavioral economics. [26]Although the copyright system proclaims that it "promotes cultural prosperity", in practice, it often becomes a tool for capital appreciation. For example, the nineteenth-century European coexistence of a speculative patent bubble with knowledge enclosure exposed the incentive theory's systematic neglect of the public interest.

Moreover, the incentive mechanism based on the presumed "innate singularity and scarcity" of intellectual property-namely, that non-replicability makes knowledge inherently scarce and thus justifies exclusivity[27], has long been questioned. Many creators are motivated not by economic gain but by reputation, self-expression, or the public good.

[13] Drahos P, A Philosophy of Intellectual Property (Z Lin tr, The Commercial Press 2017). p.70.

[14] Xiang B, 'A Critical Analysis of the Legitimacy of Intellectual Property: Perspectives on Conflicting Interests' (2015) 36 Law Science Magazine 93.

[15] U.S. Copyright Office, Copyright Law of the United States (U.S. Copyright Office 2025) https://www.copyright.gov/about/1790-copyright-act.html accessed 14 March 2025.

[16] District Court, D. Delaware, 'Getty Images (US), Inc. v. Stability AI, Inc.' https://www.courtlistener.com/docket/66788385/getty-images-us-inc-v-stability-ai-inc/ accessed 14 March 2025.

[17] Wu HD, 'Philosophical Interpretations of Intellectual Property Law by Legal Philosophers' [2003] Law Science Magazine 77.

[18] Hegel GWF, Elements of the Philosophy of Right (Fan Yang and Zhang Qitai trs, The Commercial Press 1961) 59.

[19] Hegel GWF, Elements of the Philosophy of Right (Fan Yang and Zhang Qitai trs, The Commercial Press 1961) 59.

[20] Hughes J, 'The Philosophy of Intellectual Property' (1988) 77 Georgetown Law Journal 287.

[21] Hesse, C., 'Enlightenment Epistemology and the Laws of Authorship in Revolutionary France, 1777-1793' (1990) Representations, 30.

[22] Feng XQ and Hu MY, Copyright Law in Dynamic Balance: A Study on Private Copying and Related Copyright Issues (China University of Political Science and Law Press 2011).

[23] Wu HD, 'On the Copyrightability of AI-Generated Content: Practice, Legal Theory, and Institutional Considerations' [2024] China Law Review 113.

[24] Burrow-Giles Lithographic Company v. Sarony, 111 U.S. 53 (1884) https://supreme.justia.com/cases/federal/us/111/53/ accessed 30 April 2025.

[25] He QH, Xifang Falü Sixiangshi (A History of Western Legal Thought) (Fudan University Press 2005).

[26] Zeng S, 'The Limits of Copyright Incentives and the Improvement of the Copyright System: An Analysis Based on Behavioral Economics' [2020] Journal of Guizhou Normal University (Social Science Edition) 131.

[27] Yang S and Chen X, 'Will the Intellectual Property Legal System End? — A Commentary on The Paradigm Shift: Reflections on Intellectual Property Theory' [2016] China Intellectual Property 3.

Similar to ancient China, which lacked a formal copyright regime yet nonetheless generated an extraordinarily rich body of literature and fiction through market forces and political-cultural customs[28], the digital era- and especially the rise of AI technology made this issue even more pronounced. AI's generation processes are not driven by emotion, and its incentive-effect chain extends far beyond traditional timelines. Its operational model, therefore, depends on alternative institutional arrangements, rendering the classic economic rational-actor assumption inadequate. Over time, the incentive theory's model of spurring creation through exclusive rights has increasingly revealed its limitations and its internal contradictions have deepened.

2.3. THE PARADIGM CRISIS OF ANTHROPOCENTRISM

While each theory offers insights, their common foundation is anthropocentric. All three assume that human effort, intention, or reward is central to the justification of rights. This assumption is deeply rooted in Enlightenment humanism, in which the individual author stands at the center of knowledge production. As AI challenges this paradigm, these theories no longer provide a coherent or adequate foundation for regulating creative activity.

Personality theory presupposes that personality is-and can only be-unique to human beings.[29] Accordingly, copyright rights rest on the subjectivity of a natural person. Since personality theory is itself founded on anthropocentrism and regards personality as the basis of property rights[30] the justification for granting authors copyright assumes that a work is either independently created by an individual or closely tied to their expression. Yet this effectively binds personality to the work and casts copyright as a form of personality right, leaving personality theory unable to explain the transfer of copyright or the allocation of rights in functional or commissioned works. As an automated program, AI generates content independently and creatively. Even when outputs are flawed-whether infringing others' rights or fabricating facts-they still count as independently created works.

Hence the question of whether AI should enjoy copyright becomes urgent.[31] In China's first AI-generated article dispute (the Tencent Dreamwriter case[32]), the court recognized the copyrightability of AI-generated content but held that any rights must vest in the developer rather than in the AI itself, exposing the dilemma of rights allocation under ʺpersonality vacancyʺ. When generated content falls entirely outside direct human control, the symbolic link between work and personality is severed, plunging personality theory into the logical paradox of "no subject to attach to".

Not only The Personality Theory but also The Labor Theory of Property and The Incentive Theory ground their logic in the natural person. Traditional Labor Theory of Property holds that by mixing physical or intellectual labor into an object, the laborer infuses their will and thereby acquires moral justification for property rights. With the advent of the era of machine-based mass industry, this process has been partly reconfigured. On one hand, machines as fixed capital have replaced portions of physical labor, complicating the relationship between direct labor practices and value creation; on the other hand, the laborer's subjectivity in production has been weakened, and the fruits of their labor can no longer be enjoyed directly by the individual worker, causing the practical effect of ʺlabor mixingʺ to shift from the individual to the collective social labor. Nevertheless, this technological shift has not negated the core of labor mixing: although machine intervention has further refined the division of labor, value creation still depends on human labor activating the means of production. Even as twentieth-century information technology accelerated the fragmentation of labor, the labor-mixing framework retained its explanatory power-by treating complex tasks such as operating automated equipment as an intensification of simple labor and preserving the theory's force through internal adaptation.

The evolution of labor forms-from handicraft to machine-based mass industry to the information age-has diversified the concrete manifestations of labor mixing, but the theory's kernel has always remained the creation of value through human living labor until breakthroughs in AI technology prompted a qualitative transformation in both subjectivity and the source of value. AI technology automatically generates content through algorithmic models, so that the production of the final output depends far more on indirect labor-algorithm design, data training, and parameter adjustment-making it difficult to define what degree of labor input constitutes "labor mixing" sufficient to confer property rights.

Moreover, the creative chain of AI-generated content is now segmented into discrete stages-data collection, model training, and generation/application-each involving different labor subjects whose combined contributions produce the result, thus breaking the traditional one-to-one correspondence between a single laborer and their product and rendering it impossible to attribute rights or benefits to any single subject.[33]。

Before the advent of artificial intelligence, the Incentive Theory had already been partially destabilized by technological mediation and the rise of collaborative innovation models. Collective creation in the industrial era compelled legal regimes to transfer rights from individuals to capital or collectives via a "deemed-author" rule, signaling that the locus of incentives was

[28] Alford WP, 'Don't Stop Thinking About Yesterday: Why There Was No Indigenous Counterpart to Intellectual Property Law in Imperial China' (1993) 7 Journal of Chinese Law 3.

[29] Damich EJ, 'The Right of Personality: Common-Law Basis for the Protection of the Moral Rights of Authors' (1988) 23 Georgia Law Review 1.

[30] Hegel GWF, Elements of the Philosophy of Right (Fan Yang and Zhang Qitai trs, The Commercial Press 1961) 41.

[31] Yanisky-Ravid S, ʹGenerating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A Era: The Human-Like Authors Are Already Here: New Modelʹ [2017] Michigan State Law Review 659.

[32] Shenzhen Nanshan District Peopleʹs Court, ʹShenzhen Tencent Computer System Co., Ltd. v. Shanghai Yingxun Technology Co., Ltd. (Copyright Infringement Dispute)ʹ https://www.chinajusticeobserver.com/law/x/2019-yue-0305-min-chu-14010 accessed 14 March 2025.

[33] Zhu H and Li X, 'Rethinking the Legitimacy of Copyright in the Context of ChatGPT' (2024) 46 Global Media Journal 92.

already shifting toward organized production. The widespread adoption of digital technologies further deconstructed the assumption that "original expression necessarily derives from independent human intellectual activity". As scholars[34] have noted, the penetration of tools into the creative process has gradually shifted originality assessments from " direct expression of human intellect" to "tool usage and parameter selection". While this technological infiltration undermines human agency, it also dilutes the purity of "individual human creativity".

At the same time, the open source movement empirically demonstrated that innovation can flourish through collaborative sharing, independent of proprietary incentives-exposing the traditional theories' overly narrow view of human motivation. Together, these technological and social practices have laid the groundwork for the theoretical crisis we face in the AI era.

2.4. The Systemic Erosion of the Public Domain

The Labor Theory of Property begins with the premise of common ownership, holding that all property initially belongs to humankind as a whole. This view rests on an underlying assumption-that individuals possess a high degree of self-awareness. According to the theory, labor functions like a certificate of property ownership[35], validating labor as the legitimate basis for creating property and justifying private claims on what was once part of the public domain. But where, then, does one draw the boundary of "labor mixing"? Why may an individual, through labor, appropriate an entire object rather than only the portion added by their effort? The theory offers no coherent response.

When AI transforms millennia of accumulated cultural data into training inputs, Locke's Principle of Sufficient Reservation collapses. Each act of AI-generated content irreversibly depletes the reservoir of public knowledge without leaving future generations an equally ample or equally valuable commons.

In the field of copyright, personality theory holds that a work is an extension of its author's personality-an externalization of their thoughts, emotions, and spirit. [36] Accordingly, to safeguard individual personality and to permit the public domain to cede a defined portion of its scope to private rights, the establishment of the right of integrity is entirely reasonable. However, even before the advent of AI, the very mode of creative production had undergone a fundamental transformation. The convergence of copyright and information technology across multiple domains has increasingly undermined the premise that "a work necessarily embodies its author's personality." The right of integrity-by restricting adaptations (for example, fan fiction [37])-has in practice prevented the public domain from making lawful, reasonable use of knowledge materials, thereby calling the very legitimacy of that right into question. At the same time, the large-scale,

low-marginal-cost generation of AI-generated content has accelerated the privatization of knowledge and the erosion of the public domain. The Google Books scanning litigation[38] not only ignited debate over whether AI technologies were excessively harvesting public resources, fueling concerns about "knowledge enclosure", but also exerted a paradigm-shifting influence on the copyright governance of AI-generated content. That case demonstrated how powerful privatization can distort property rights-transforming them from safeguards of personality development into instruments of technological monopoly and distributive imbalance, in direct contradiction to the original intent of personality theory. It serves as a strong warning to legislators to reexamine the current copyright system's incentive structures and public-domain protections and to strive for a balanced framework that both sustains creative activity and preserves the free flow of knowledge.

2.5. Comparative Summary: Limitations of Traditional Theories in the AI Era

TABLE I
COMPARATIVE ANALYSIS OF INTELLECTUAL PROPERTY THEORIES

Theory	Core Premise	AI-Era Challenge	Public Domain Impact
Labor Theory of Property	Ownership justified by human effort	Difficult to define algorithmic "labor" or collective inputs	Blurs boundary between private rights and commons
Personality Theory	Work reflects human personality	AI lacks subjectivity; attribution becomes symbolic	Expands moral rights, restricts transformation
Incentive Theory	Exclusivity drives innovation	AI not motivated by reward; creation is decentralized	Risks monopolization; weakens open collaboration

3. New Issues Arising from AI-Generated Content

The emergence of AI-generated content not only perpetuates the longstanding issues embedded in traditional theories of copyright justification but also gives rise to new, technology-driven challenges. These novel issues can be

[34] Lawrence L, Code 2.0: Law in Cyberspace (X Li and W Shen trs, Revised Edition, Tsinghua University Press 2018).

[35] Drahos P, A Philosophy of Intellectual Property (Z Lin tr, The Commercial Press 2017) 70.

[36] Damich EJ, 'The Right of Personality: Common-Law Basis for the Protection of the Moral Rights of Authors' (1988) 23 Georgia Law Review 1.

[37] Stendell L, 'Fanfic and Fan Fact: How Current Copyright Law Ignores the Reality of Copyright Owner and Consumer Interests in Fan Fiction' (2005) 58 SMU Law Review 1551.

[38] United States Court of Appeals for the Second Circuit, 'Authors Guild v. Google, Inc.' https://cases.justia.com/federal/appellate-courts/ca2/13-4829/13-4829-2015-10-16.pdf accessed 14 March 2025.

broadly categorized into two types. First, AI introduces an even more pronounced dehumanization of the creative process, further obscuring the connection between labor and rights-more so than any previous mode of creation. Second, AI-generated content necessitates a redefinition of the originality standard, making it increasingly difficult to apply this standard accurately in determining copyright infringement. This, in turn, threatens the very foundation of the traditional legal framework.

3.1. CONTROVERSIES ARISING FROM FURTHER DEHUMANIZATION

AI "creation" is fundamentally driven by algorithmic processes, relying on large-scale pre-training combined with small-scale fine-tuning.[39] In natural language processing tasks, the need for extensive manual parameter adjustments has largely been eliminated. Human labor involved in AI activity is now minimal-limited primarily to algorithm design and data training-resulting in the diminishing significance of the human element in the creative process.[40]

When Zarya of the Dawn[41]sought copyright registration, the U.S. Copyright Office repeatedly emphasized the importance of human involvement in the creation process. While users can influence the output by inputting prompts, they cannot control the final content with certainty. This disconnection between user and outcome exposes a logical rupture in the traditional copyright framework regarding authorship attribution. In the United States and Europe, judicial practice typically centers its examination on the degree of human control exerted over the creative result, treating the personality theory as the indispensable requirement for a work's existence and steadfastly maintaining a subjectivist standard of originality. This approach is firmly rooted in the traditions of the personality theory and the labor theory of property, which emphasize that a work must bear the author's personal imprint and the fruits of their labor. Accordingly, when assessing the copyrightability of AI-generated content, courts demand rigorous proof of a substantive human contribution to the work's formation.

By contrast, China has gradually shifted toward an objective standard of originality, attenuating the absolute constraint of the personality theory on a work's attributes and instead measuring originality by the "social value of intellectual labor". For example, in the China's "Chunfengtu" case[42], the court held that a user's adjustment of prompt parameters and other operations sufficed to produce a personalized expression and thus met the originality requirement. This line of reasoning reflects a utilitarian tendency within China's copyright regime: as long as the result promotes the public interest or creative flourishing, it may be brought within the scope of copyright protection. This perspective aligns with the views of some Chinese scholars[43] and has been cited in subsequent similar disputes[44].

It should be noted, however, that China's current judicial stance on AI-generated content still involves theoretical compromise. Academic circles widely question the logical rigor of simply treating AI as a tool, warning that an overly broad grant of copyright could unbalance rights protection. [45] In future judicial practice, standards may well evolve alongside technological developments, and their stability will require the test of time.

The existing legal frameworks exhibit structural lag when confronted with the further dehumanization brought about by AI-generated content.

Although China's Interim Measures for the Administration of Generative Artificial Intelligence Services establishes a principle of classified and tiered regulation, its mechanisms-such as "algorithm registration" and "data labeling review"-still reflect a linear regulatory mindset rooted in the industrial era.

The European Union's Artificial Intelligence Act attempts to build a regulatory framework based on a classification of "high-risk systems," but it struggles to address the immense pressure of rights adjudication arising from the exponential growth of AI-generated content. For instance, at Stable Diffusion's rate of producing approximately 95 million images per day, traditional infringement determination mechanisms have become entirely ineffective.

The root cause of this regulatory failure lies in the fact that once AI creation surpasses the "anthropocentric" cognitive framework, the legal system-founded on the binary structure of "author–work"-inevitably falls into a crisis of interpretation.

3.2. THE RECONSTRUCTION OF THE STANDARD OF ORIGINALITY

The labor theory of property traditionally establishes a direct connection between labor and the object upon which labor is exerted. However, in the realm of intellectual creation, the relationship between the labor outcome (i.e., the intellectual work) and the object of labor (i.e., existing knowledge) is far more complex. Intellectual creation often builds upon pre-existing knowledge, and the resulting new work is rarely completely independent from the existing body of knowledge. Therefore, in the construction of copyright systems, a central criterion for the grant of rights has been established-originality.

[39] Ding L, Generative Artificial Intelligence: The Logic and Applications of AIGC (CITIC Press Group 2024).

[40] United States Congress Office of Technology Assessment, 'Intellectual Property Rights in an Age of Electronics and Information' https://www.princeton.edu/~ota/disk2/1986/8610/861001.PDF accessed 7 April 2025.

[41] United States Copyright Office, 'Re: Zarya of the Dawn (Registration # VAu001480196)' https://copyright.gov/docs/zarya-of-the-dawn.pdf accessed 7 April 2025.

[42] Hegel GWF, Elements of the Philosophy of Right (Fan Yang and Zhang Qitai trs, The Commercial Press 1961) 59.

[43] Wu HD, 'On the Copyrightability of AI-Generated Content: Practice, Legal Theory, and Institutional Considerations' [2024] China Law Review 113.

[44] People's Court of Wuhan East Lake New Technology Development Zone, Hubei Province, 'Wuhan AI Image Copyright Infringement Case' https://www.ciplawyer.cn/articles/155985.html accessed 7 April 2025.

[45] Wang Qian, 'The Legal Nature of Content Generated by Artificial Intelligence in Copyright Law' [2024] Studies in Law and Business 41(03).

Only works that exhibit originality are eligible for legal protection.

AI-generated content has begun to disrupt the cognitive foundations of the copyright regime by necessitating a reconstruction of this originality standard. The traditional standard of "intellectual input" has, in the context of AI-generated scenarios, been transformed into a "technical operability-based attribution"[46]. Within the framework of AI-generated content, this new attribution standard seeks to determine whether the content qualifies as a protectable work by evaluating the algorithmic processes involved in its generation, including algorithm execution, parameter configuration, and data processing. This emerging approach requires that the technical operations during the generation process yield results that are unique and possess aesthetic or practical value.

Moreover, the generated output must not be a mere reproduction or imitation of preexisting works. Even scholars inclined to recognize AI-generated content as copyrightable works remain highly cautious in their assessments. In China's "Chunfengtu" case[47], the court affirmed the requirement of "intellectual achievement" by highlighting the non-replicability of the prompt-parameter combinations used to generate the image. This judicial technique effectively transformed technical operations into observable evidence of human intent, aligning with the guiding principle[48] that the use of prompt parameters is positively correlated with the criterion of intellectual input. Although this approach does not abandon formalistic standards, it does mark a paradigm shift in judicial cognition—from anthropocentrism to a technology-centered model. Consequently, human creators are compelled to adapt to a form of symbolic labor (non-expressive data curation, e.g., prompt engineering) known as "prompt engineering," which reduces their role from that of content producers to algorithmic parameter adjusters. This shift represents a fundamental transformation in the model of knowledge production.

The challenges facing the copyright system extend beyond the increasing difficulty of applying the traditional "access + substantial similarity" test for infringement. They strike at the very core of the doctrinal framework governing infringement determination. [49]Artificial intelligence systems are trained using massive amounts of general-purpose data through pre-training to obtain model parameters. This process involves a form of "non-explicit" [50]use of data, characterized by "new intertextuality" [51]. Such a latent learning mechanism means that even if developers train their AI models on vast datasets, it is nearly impossible for the rights holders of specific works to trace their creations within that data corpus and prove that the model had "actual access" to their works. When users fine-tune models to generate content in a specific style, the causal chain between the model developer's training activities and the final output becomes significantly diluted, resulting in a discontinuity in the attribution of subjective fault. Japan's Copyright Act[52]incorporates the use of training data for AI into the scope of fair use, acknowledging the technologically neutral nature of such processes while allowing the institutional tension between technological neutrality and potential infringement to persist unresolved.

In practice, the content generated by AI through continuous data learning is neither a mechanical reproduction of the original work nor a traditional derivative creation. Rather, it is a style-based recomposition driven by statistical modeling. This fundamentally alters the criteria for determining infringement: infringing acts may now dynamically evolve alongside real-time updates in data streams, thereby undermining the jurisprudential foundation of traditional copyright law, which anchors infringement analysis to static points in time. Moreover, because AI models continuously adjust their outputs based on user interaction, the similarity between AI-generated outputs and human-created works is often ambiguous-rarely identical, frequently resembling. Even a side-by-side comparison of two outputs may only yield a conclusion that is "plausible yet inconclusive", exposing the inadequacy of traditional infringement standards in the AI era.

4. PRINCIPLE OF DISTRIBUTIVE JUSTICE: A NEW LEGITIMACY FOUNDATION FROM THE STANDPOINT OF THE INSTRUMENTAL APPROACH

As one of the oldest and most fundamental components of the intellectual property system, copyright law derives its legitimacy from the paradigm of natural rights. However, as the underlying assumptions and positions shared by the three major traditional theories are further undermined by artificial intelligence, the legitimacy crisis of the copyright regime has evolved from isolated doubts into a structural challenge. The question of whether copyright law is truly compatible with AI continues to provoke extensive debate. Nevertheless, the necessity for the continued existence of the copyright system in the age of AI lies in its irreplaceable role as a regulator of knowledge production relations. Even though AI-generated content disrupts the traditional models envisioned by the system, the ongoing need for a mechanism to allocate rights, balance interests, and safeguard cultural heritage suggests that copyright law should not be abandoned. On the contrary, it must evolve and be upgraded to meet the demands of the AI era.

4.1. OPPOSING THE DOCTRINE OF EXCLUSIVITY AND ADVOCATING FOR THE INSTRUMENTAL APPROACH

Before constructing a new foundation for legitimacy, we

[46] Wu HD, 'On the Copyrightability of AI-Generated Content: Practice, Legal Theory, and Institutional Considerations' [2024] China Law Review 113.

[47] Beijing Internet Court, 'AI-Generated Image (AI Painting) Copyright Infringement Dispute' https://www.iphouse.cn/cases/detail/xdgoy9e5pzwm6o3rgnm63rq4vkn81027.html accessed 7 April 2025.

[48] Supreme People's Procuratorate of the People's Republic of China, 'The Key to Determining the Attributes of AI-Generated Content Lies in Originality' https://www.spp.gov.cn/spp/llyj/202401/t20240126_641459.shtml accessed 7 April 2025.

[49] Damich EJ, 'The Right of Personality: Common-Law Basis for the Protection of the Moral Rights of Authors' (1988) 23 Georgia Law Review 1.

[50] Si X, 'The Arrival of the Singularity: Where Is Copyright Law Heading in the ChatGPT Era—A Response to Related Arguments' [2023] Exploration and Debate 79.

[51] Zhou S, 'New Intertextuality: The Textual Connotations, Structure, and Representations of Generative Artificial Intelligence' (2023) 31 Journalism 39.

[52] Japan Agency for Culture Affairs, 'Amendments to the Copyright Law' (2018) https://www.bunka.go.jp/seisaku/chosakuken/hokaisei/h30_hokaisei/pdf/r1406693_04.pdf accessed 7 April 2025, Article 30-4.

need to shift to a more reasonable theoretical position-the instrumental approach. This views copyright as a tool, emphasizing its role in stimulating knowledge dissemination, creation, and innovation, and thus allows us to regard AI-generated content copyright protection as a means of achieving positive societal outcomes.

From the exclusivity theory's perspective, "property interests themselves are granted moral supremacy, strongly linked to individualism"[53]. The main characteristic of exclusivity theory is that it assigns a fundamental, solid position to property rights, giving property rights a priority above other rights and interests. [54] In the context of copyright, by organizing legal language and techniques, knowledge property is detached from its original intangible state, and we can assume that works, as a form of knowledge product, can function like tangible property-becoming the primary basis for defining the boundaries of property rights.

Exclusivity theory also supports the notion of works as abstract items within personal property, holding the same sacred and inviolable status as tangible property, with unauthorized use defined as "theft". Since knowledge property is assumed to be calculable, the explanations and results derived from this assumption must change according to the conditions of the assumption. The exclusivity theory implicitly promotes ever-expanding ownership, with knowledge property constantly being pointed toward the collective term "rights".

Like real and personal property rights, copyright falls within the category of individual rights; however, copyright also possesses policy attributes that transcend individual interests and address public concerns. Copyright is determined by social relationships between people, not by the exclusive relationship between individuals and works. Creating a new work with original expression inevitably involves borrowing or reshaping materials from existing works, adding new, original expression after borrowing or reshaping.[55] In the creative process, the individual plays dual roles: both as a creator and innovator contributing intellectual labor and as a borrower and copier of prior knowledge and information, embodying two opposing roles.[56]

Property rights should serve morality, not dominate it, and their legitimacy depends on whether they promote knowledge dissemination and public welfare. By shifting the foundation of legitimacy from the exclusivity theory to the instrumental approach, the shackles of "rights-based" thinking can be broken.

This shift in perspective brings about three significant changes: first, the reconstruction of ethical foundations, moving from "natural rights" to "social contract," which acknowledges that generated knowledge inevitably originates from public resources, thus the exercise of rights should be constrained by the public interest; second, a functional shift in the position of rights protection, which moves the focus from "ensuring absolute control for creators" to "balancing the innovation ecosystem"; and third, an enhancement of institutional flexibility, which allows for mechanisms such as statutory licenses and compulsory open clauses[57] to create sufficient institutional space to curb the intensifying phenomenon of "knowledge enclosure" and to maintain the regenerative capacity of the public knowledge pool.

4.2. CHOOSING THE RIGHT "INSTRUMENTAL APPROACH"

An alternative to the "monopoly theory" is the advocacy of technological determinism (hereafter referred to as determinism). Proponents of determinism argue that technological development follows an inherent logic, and legal systems can only passively adapt to the inevitable trends of technological change. This viewpoint manifests in the field of AI copyright in two extremes: one either advocates the complete abolition of the copyright system[58] or supports the full relinquishment of technological dominance in rights allocation[59].

However, determinism overlooks the shaping role that institutions play in technological development and undermines the value judgment function of the law. Compared to determinism, the instrumental approach offers three theoretical advantages.

First, at the epistemological level, the instrumental approach acknowledges the bidirectional construction of technology and social institutions, countering the determinists' view that law is merely a "satellite" of technology.

Second, at the methodological level, the instrumental approach emphasizes the active adaptive role of institutions, as exemplified by China's Interim Measures for the Administration of Generative Artificial Intelligence Services[60], which balances technological governance and rights protection through an algorithm filing system.

Lastly, at the axiological level, the instrumental approach insists on the ethical constraints law imposes on technological development: Germany's Industry 4.0 strategy[61] encodes co-determination between labor and capital into intelligent-factory systems, demonstrating that technology can actively embody institutional values.

[53] Drahos P, A Philosophy of Intellectual Property (Z Lin tr, The Commercial Press 2017) 209-211.

[54] Drahos P, A Philosophy of Intellectual Property (Z Lin tr, The Commercial Press 2017) 278.

[55] Landes WM and Posner RA, The Economic Structure of Intellectual Property Law (JH Jin tr, Peking University Press 2005).

[56] Drahos P, A Philosophy of Intellectual Property (Z Lin tr, The Commercial Press 2017) 70.

[57] World Intellectual Property Organization, 'WIPO Copyright Treaty' https://www.wipo.int/wipolex/en/text/295166.

[58] Lawrence L, Code 2.0: Law in Cyberspace (X Li and W Shen trs, Revised Edition, Tsinghua University Press 2018).

[59] McPherson MS, 'The Economics of Justice' (1983) 2 Law and Philosophy 129.

[60] Cyberspace Administration of China (CAC), 'Interim Measures for the Management of Generative Artificial Intelligence Services' https://www.gov.cn/zhengce/zhengceku/202307/content_6891752.htm accessed 7 April 2025.

[61] Promotorengruppe Kommunikation der Forschungsunion Wirtschaft - Wissenschaft, acatech, 'Securing the Future of German Manufacturing Industry: Recommendations for Implementing the Strategic Initiative INDUSTRIE 4.0: Final Report of the Industrie 4.0 Working Group' https://www.acatech.de/publikation/umsetzungsempfehlungen-fuer-das-zukunftsprojekt-industrie-4-0-abschlussbericht-des-arbeitskreises-industrie-4-0/ accessed 7 April 2025.

4.3. THE PRINCIPLE OF DISTRIBUTIVE JUSTICE

Once the shift in theoretical stance is successfully achieved, the legitimacy of the copyright system, from the perspective of the instrumental approach, must be reconstructed in a way that ensures individuals remain actively engaged in innovation while respecting original authorship. At the same time, it should promote the expansion and sharing of the public knowledge commons, meet the developmental needs of individuals, and ultimately foster the advancement and flourishing of social and cultural life.

4.3.1. THE PRINCIPLE OF DISTRIBUTIVE JUSTICE: ITS CONTENT

The principle of distributive justice, grounded in the instrumental approach, positions the copyright system as a tool of social governance aimed at the equitable distribution of knowledge resources, with its legitimacy hinging on the fairness of such distribution. It emphasizes that the primary task of copyright law is to ensure the just allocation of intellectual achievements, prioritizing fairness-an orientation that aligns with the moral demands of the instrumental approach, namely that "justice considerations not only surround or transcend private property rights but are embedded within the very structure of those rights." [62]

By contrast, the incentive theory places greater emphasis on efficiency as its paramount value. Therefore, applying the principle of distributive justice to the copyright system-using it as a guiding tool for the allocation of benefits, and stressing a functional balance between innovation incentives and the dissemination and use of knowledge-is both reasonable and necessary. However, distributive justice cannot serve as a perfect substitute for traditional theories. Its role should instead be understood as a guiding principle-a new member within the foundational structure of copyright's legitimacy.

The principle of distributive justice, as a foundational justification for the copyright system, is operationalized through three sub-principles, the first of which is the Principle of Attribution to Organizers. This principle emphasizes that the distribution of resources or benefits should primarily be allocated to those individuals or entities capable of organizing, managing, or creating the structures for such distribution. In the context of copyright, it implies that rights should be attributed to the organizers responsible for the creative activities that lead to the production of a work. Traditionally, copyright has been presumed to belong to the individual creator, a notion rooted in historical contexts that emphasize the centrality of the human author. However, with the advent of artificial intelligence, the notion of authorship as belonging solely to human creators can no longer consistently account for copyright ownership, often causing practical confusion and disrupting normal economic and transactional order. Thus, assigning copyright to the organizer appears more reasonable

and aligned with the demands of our time. Even in cases where individuals work independently, their dual role as both creator and executor means they may be considered the sole organizer, and therefore eligible to hold exclusive copyright.

Moreover, the Principle of Attribution to Organizers seeks to ensure the effectiveness of the distribution system, arguing that rights allocation should efficiently coordinate the distribution of resources and needs, embodying the principle of "those who invest shall benefit". This helps to avoid incentive failures that may arise when the significant investment in AI development is decoupled from the allocation of corresponding rights.

The second sub-principle is The Principle of Prioritizing the Least Advantaged Stakeholders. This principle asserts that the basic structure of society is only legitimate if it simultaneously improves the situation of those who are in the most disadvantaged positions. [63] In terms of distributing resources or benefits, it means that priority should be given to the least advantaged groups to maximize the improvement of their conditions. In other words, according to this principle, while the copyright system protects the interests of groups such as literary authors, it must also ensure that their works benefit the least advantaged members of society, rather than exacerbating their marginalization. John Rawls argues that natural talent is largely the result of genetic luck rather than personal effort, and thus the benefits derived from talent are not morally deserved.[64] Those individuals or entities with creative capabilities do not, by their talent alone, possess inherent moral justification for their advantages. Therefore, the distribution of benefits must be morally justified by strong ethical reasoning.

In this view, the legitimacy of the copyright system lies in its ability to enable authors, enterprises, and academic institutions to gain rewards from their creative labor or investment in knowledge production, while simultaneously allowing the public at large to share in those benefits. Conversely, if the system worsens the plight of the least advantaged, its legitimacy would rightfully be called into question. However, the principle of prioritizing the least advantaged must be carefully distinguished from egalitarianism. Those endowed with natural talents may retain benefits beyond an equal share, but only to the extent that such retention ultimately works to improve the situation of the disadvantaged. This privilege is permissible strictly within the scope of contributing to the betterment of the least advantaged.[65]

The third sub-principle is The Principle of Safeguarding the Public Domain. The public domain is a widely recognized concept in intellectual property law, though it is often overlooked by various legal regulations. [66] At its core, the public domain asserts that knowledge, as a foundational

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[62] Merges RP, Justifying Intellectual Property (JH Jin and others trs, The Commercial Press 2023) 248.

[63] Rawls, J, A Theory of Justice (H. He and others trs, China Social Sciences Press 2001) 302.

[64] Gong, Q, Rawls' Political Philosophy (The Commercial Press 2006) 174-175.

[65] Merges RP, Justifying Intellectual Property (JH Jin and others trs, The Commercial Press 2023) 256.

[66] Oddi AS, 'The Tragicomedy of the Public Domain in Intellectual Property Law' (2002) 25 Hastings Communications and Entertainment Law Journal 1.

resource for social innovation, should circulate freely within a reasonable timeframe to promote the public interest. In other words, the public domain must be protected to ensure that the public can access and use knowledge and resources equally, without being overly restricted by excessive private ownership rights. Under the exclusivist approach, the personality theory and the incentive theory support granting creators exclusive rights as a means to stimulate innovation. However, this approach also results in the long-term privatization and monopolization of knowledge, which hampers the efficiency of public dissemination. Therefore, after shifting the foundation of legitimacy to the instrumental approach, and under the framework of distributive justice, it becomes both necessary and reasonable to safeguard knowledge dissemination, foster innovation, and protect public interests.

This can be achieved through mechanisms such as dynamic protection periods-for example, shortening the copyright protection term for AI-generated content to 3-5 years. Some scholars even argue that AI-generated content should immediately enter the public domain [67] and be subject to obligations such as data source transparency[68], thereby ensuring the eventual return of knowledge to the public domain. Such reforms are crucial to resolving the inherent conflict between the monopoly rights granted by copyright and the overarching goal of promoting public welfare.This tripartite allocation mechanism manifests concretely in resolving contemporary disputes over AI-generated artwork.When applying the Principle of Attribution to Organizers to cases involving foundational models (as in Getty Images v. Stability AI[69]) or user-generated outputs exemplified by China's "Chunfengtu" case[70], rights distribution operates through a layered framework: algorithm developers bear technological risks to claim copyright for core models, data providers secure revenue rights through training contributions, and end-users obtain usage rights via creative prompting. This operationalization directly resolves the ownership dilemmas identified in Section 3.1 while preserving essential innovation incentives.

Within the framework of distributive justice, the Principle of Attribution to Organizers, the Principle of Prioritizing the Least Advantaged Stakeholders, and the Principle of Safeguarding the Public Domain together form a three-dimensional "incentivization-balance-sharing" system that reconstructs the normative foundation of the copyright regime. The Principle of Attribution to Organizers clarifies the rights and responsibilities of parties involved in the generation of AI-generated content by allocating rights accordingly, thereby resolving ownership dilemmas. The Principle of Prioritizing the Least Advantaged Stakeholders functions as a corrective mechanism that regulates the flow of knowledge

resources through redistribution. While protecting the rights of creators, it reinforces the system's social compensation role by curbing the expansion of the knowledge gap through mandatory benefit-sharing mechanisms, thus safeguarding the basic interests of marginalized groups amid technological advancement.

Meanwhile, the Principle of Safeguarding the Public Domain serves as a fallback mechanism, using dynamic protection rules and transparency requirements to dismantle entrenched knowledge monopolies. Its openness directly reduces the cost of access to knowledge for disadvantaged groups. Furthermore, it complements the Principle of Prioritizing the Least Advantaged Stakeholders-while the former breaks down access barriers, the latter addresses imbalances in distribution. This progressive institutional design avoids the monopolistic pitfalls of the traditional Doctrine of Exclusivity while overcoming the incentive limitations of a purely public-interest model, ultimately achieving dynamic justice in the production, distribution, and reuse of knowledge.

4.3.2. THE COMPATIBILITY OF THE PRINCIPLE OF DISTRIBUTIVE JUSTICE WITH AI-GENERATED CONTENT

AI production relations exhibit new characteristics defined by "algorithmic dominance, data-driven processes, and human-machine collaboration". As a result, the traditional copyright system is facing structural failure in key areas such as rights attribution, interest balancing, and the safeguarding of the public domain. Rooted in the instrumental approach, the principle of distributive justice offers a dynamic adjustment mechanism that effectively addresses the three core tensions brought about by AI-generated content.

The first is the rational reconstruction of rights attribution. As the creative process of AI becomes increasingly detached from direct human control, any theory of copyright legitimacy that fails to adequately address the logical dilemmas caused by the "absence of humans" in the age of artificial intelligence will face insurmountable challenges. The instrumental approach positions copyright as a governance tool for regulating knowledge production relations, with its core function being to establish a rights allocation mechanism that aligns with technological characteristics. Based on the "Attribution to Organizers Principle", a dynamic rights distribution model can be developed-algorithm developers bear the risks of technological development and can obtain copyrights for the foundational model; data providers contribute training materials and can enjoy revenue distribution rights for derivative works; and end users, by offering creative prompts, can acquire usage rights for specific scenarios. This approach extends the rights holders from

[67] Palace VM, 'What If Artificial Intelligence Wrote This: Artificial Intelligence and Copyright Law' (2019) 71 Florida Law Review 217.

[68] GOV.UK., 'Guidance Artificial Intelligence Playbook for the UK Government' https://www.gov.uk/government/publications/ai-playbook-for-the-uk-government/artificial-intelligence-playbook-for-the-uk-government-html accessed 7 April 2025.

[69] District Court, D. Delaware, 'Getty Images (US), Inc. v. Stability AI, Inc.' https://www.courtlistener.com/docket/66788385/getty-images-us-inc-v-stability-ai-inc/ accessed 14 March 2025.

[70] Beijing Internet Court, 'AI-Generated Image (AI Painting) Copyright Infringement Dispute' https://www.iphouse.cn/cases/detail/xdgoy9e5pzwm6o3rgnm63rq4vkn81027.html accessed 7 April 2025.

"natural person creators" to a triadic subject of "research and development-investment-application", thereby avoiding the rule arbitrage caused by ambiguous subjects in practice, and enabling the implementation of the "Categorized and Classified Supervision" framework established in Article 7 of the Interim Measures for the Administration of Generative Artificial Intelligence Services[71].

The second is the correction mechanism for knowledge monopolies. It is important to recognize that only by granting copyright protection to AI-generated content can we ensure that the costs invested by relevant parties in AI technology research and industrial development are reasonably compensated, thus stimulating investment enthusiasm in the field of AI technology and its generated products.[72] Based on these two principles, it is also feasible to inject part of the revenue from AI-generated content into a public knowledge fund, directly improving the ability of disadvantaged groups to access knowledge. On the other hand, for the public domain and public users, the Principle of Safeguarding the Public Domain can be applied to establish ethical constraints on technology, regulating AI owners to prevent a few individuals from using AI to manipulate copyright, infringing upon others' rights, and public information security.

Finally, the paradigm shift in institutional function. The traditional copyright system, under the monopoly theory framework, lacks a proactive response to technological ethics. The instrumental approach, however, emphasizes the role of law in shaping technological development, upgrading the system by embedding ethical requirements into its design. According to the instrumental approach, we can require the integration of technological ethics into institutional design, such as prohibiting the use of artificial intelligence to reorganize public knowledge to claim new rights,[73] thereby curbing "pseudo-innovation" (outputs mimicking human creativity without original intent) behaviors at the source and ensuring that the copyright system serves as a guardian of technological ethics rather than a conspirator. The operation of the traditional copyright system relies on fixed protection periods and rules of rights allocation, while the creation chain of AI-generated content involves multiple stakeholders, including algorithm developers, data providers, and end users. Based on the Principle of Attribution to Organizers, a contribution quantification mechanism can be established to dynamically allocate rights based on each party's contributions (such as algorithm development costs, data quality weights, etc.). This would help avoid a crude adjudication of AI-generated content ownership and achieve a more refined rights allocation.

4.3.3. THE POSSIBILITY OF THE PRINCIPLE OF DISTRIBUTIVE JUSTICE IN PRACTICE

The principle of distributive justice, through its composite framework of "rights reconstruction-resource redistribution-ethical constraints", supports the construction of a collaborative governance framework,[74] allowing the copyright system to shift from "protecting creators" to "regulating technological power". This not only continues the instrumental approach's pursuit of social benefits but also transforms the copyright system from a passive rights-confirmation tool to an active governance platform, effectively curbing the erosion of knowledge ecology by technological rights. This framework aligns with ongoing international harmonization efforts,notably WIPO's copyright treaty[75] provisions addressing digital challenges,while accommodating diverse jurisdictional approaches.

Within the framework of distributive justice, a tripartite operational mechanism of "assessment, allocation, and oversight" can be established. For the protection of algorithm developers' rights, a qualified third-party institution should establish a dynamic evaluation system. Based on quantifiable indicators such as model iteration frequency and training-data scale, it would define tiered standards for copyright recognition. Developers whose parameters exceed specified thresholds must submit training logs and data-processing records for technical verification, ensuring compliance with data-sharing rules. Data provider' remuneration would rely on a contribution-quantification model that integrates factors like data retention rate and domain scarcity to construct a graduated revenue-distribution scheme.

To guarantee transaction credibility, a cross-disciplinary Oversight Committee comprising regulatory authorities, technical experts, and legal advisors should be convened. Using blockchain-based timestamping and provenance tracking, the committee would enable end-to-end traceability of both the circulation of AI-generated content and the flow of attendant revenues.

At the platform level, operators bear a transparency obligation, publicly disclosing the logic of their revenue-distribution algorithms and submitting to societal scrutiny. Together, technical verification and institutional constraints provide a dual safeguard that fuels innovation while maintaining an equitable balance of rights.

5. CONCLUSION

The legitimacy crisis of traditional copyright theory essentially represents the technical manifestation of its inherent flaws. The original paradox of "shared private

[71] Cyberspace Administration of China (CAC), 'Interim Measures for the Management of Generative Artificial Intelligence Services' https://www.gov.cn/zhengce/zhengceku/202307/content_6891752.htm accessed 7 April 2025.

[72] Lord Holmes of Richmond, 'Guidance Artificial Intelligence Playbook for the UK Government' https://bills.parliament.uk/publications/59353/documents/6094 accessed 7 April 2025.

[73] Directive (EU), 'DIRECTIVE (EU) 2019/790 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 April 2019 on Copyright and Related Rights in the Digital Single Market and Amending Directives 96/9/EC and 2001/29/EC (Text with EEA Relevance' https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019L0790 accessed 7 April 2025.

[74] Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, Guidelines for the Utilization of Generative AI in Elementary and Secondary Education (Elementary and Secondary Education Bureau 2024) https://www.mext.go.jp/content/20241226-mxt_shuukyo02-000030823_001.pdf accessed 7 April 2025.

[75] World Intellectual Property Organization, 'WIPO Copyright Treaty' https://www.wipo.int/wipolex/en/text/295166.

ownership" in the labor theory of property, the philosophical disconnect between "personality and property" in the personality theory, and the structural contradiction of "imbalance between public and private" in the incentive theory have all led to institutional alienation in the industrial age. AI-generated content further dehumanizes the creative process and severely undermines the originality standard, catalyzing the historical afflictions of the copyright system into a systemic collapse.

It is important to note that the proposal of the principle of distributive justice is not merely a temporary response to new technological challenges, but a paradigm reconstruction of the essence of the copyright system. The principle of distributive justice breaks free from the constraints of traditional theories, offering a fresh approach and methodology for constructing a more equitable and rational copyright system. The aim is to shift the system's position from the "monopoly theory" to the "instrumental approach", using the principle of attribution to organizers to solve the puzzle of copyright ownership, applying the principle of prioritizing the least advantaged stakeholders to correct distortions in the copyright incentive chain, and using the principle of safeguarding the public domain to curb the potential or existing monopolies of technology. This framework would construct a dynamic governance model integrating rights allocation, interest correction, and domain maintenance. This not only provides a quantifiable path for the configuration of AI-generated content's copyright but also aims to restore the imbalances in the legacy knowledge production relations and reshape the justice benchmark of the innovation ecosystem through technological ethics constraints and contribution evaluation mechanisms.

Unfortunately, the principle of distributive justice in copyright governance still suffers from a split between theory and practice. To date, its feasibility has been tested only through theoretical deduction, and it urgently requires validation via policy pilots and a technology-ethics perspective to confirm its dynamic balancing of creators' rights, platform responsibilities, and public-domain interests. In practice, three core tensions arise. First, the technical investment required for algorithm development, the weighting of data contributions, and the commensurability of value in user-generated prompts resist standardization within a single measurement framework. Second, policy effectiveness is constrained by the maturity of each jurisdiction's copyright regime and its ethical traditions. The absence of clear data-attribution norms risks rendering transparency mechanisms ineffective. Third, overcoming anthropocentrism demands reconciling the civil-law doctrine of "natural-person authorship" with the common-law tendency toward expansive rights grants. Nonetheless, it should be recognized that by deepening research on the adaptability of institutions across legal systems, constructing a quantitative indicator framework grounded in judicial consensus, exploring transnational dispute-resolution mechanisms, and coupling these efforts with sustained empirical validation, a truly dynamic governance framework can emerge. Such a framework would secure the rights of diverse stakeholders through a technical attribution mechanism and leverage a knowledge-sharing

ecosystem to dismantle innovation barriers, ultimately achieving a multidimensional balance among creator incentives, public-interest protection, and technological development.

References

[1] Alford WP, 'Don't Stop Thinking About Yesterday: Why There Was No Indigenous Counterpart to Intellectual Property Law in Imperial China' (1993) 7 Journal of Chinese Law 3

[2] Aslan B, 'Reflections of the Concepts of Creativity, Originality and Characteristic on the Generative Autonomous AI Systems with an Analysis of Copyright Perspective' (2024) 10 Journal of Commercial and Intellectual Property Law 3

[3] Beijing Internet Court, 'AI-Generated Image (AI Painting) Copyright Infringement Dispute' <https://www.iphouse.cn/cases/detail/xdgoy9e5pzwm6o3rgnm63rq4vkn81027.html> accessed 7 April 2025

[4] Chiara Biancheri v. Rai-Radiotelevisione Italiana S.p.A. Law No. 633 of 1941 Art 1, 'RAI Radiotelevisione v. Chiara Biancheri' (2024) 55 IIC - International Review of Intellectual Property and Competition Law 470

[5] Cyberspace Administration of China (CAC), 'Interim Measures for the Management of Generative Artificial Intelligence Services' <https://www.gov.cn/zhengce/zhengceku/202307/content_6891752.htm> accessed 7 April 2025

[6] Damich EJ, 'The Right of Personality: Common-Law Basis for the Protection of the Moral Rights of Authors' (1988) 23 Georgia Law Review 1

[7] Ding L, Generative Artificial Intelligence: The Logic and Applications of AIGC (CITIC Press Group 2024)

[8] Directive (EU), 'DIRECTIVE (EU) 2019/790 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 April 2019 on Copyright and Related Rights in the Digital Single Market and Amending Directives 96/9/EC and 2001/29/EC (Text with EEA Relevance' <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019L0790> accessed 7 April 2025

[9] District Court, D. Delaware, 'Getty Images (US), Inc. v. Stability AI, Inc.' <https://www.courtlistener.com/docket/66788385/getty-images-us-inc-v-stability-ai-inc/> accessed 14 March 2025

[10] Drahos P, A Philosophy of Intellectual Property (Z Lin tr, The Commercial Press 2017)

[11] European Union, 'Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 Laying down Harmonised Rules on Artificial Intelligence and Amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (Text with EEA Relevance)' <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689> accessed 7 April 2025

[12] Feng XQ and Hu MY, Copyright Law in Dynamic Balance: A Study on Private Copying and Related Copyright Issues (China University of Political Science and Law Press 2011)

[13] GOV.UK., 'Guidance Artificial Intelligence Playbook for the UK Government' <https://www.gov.uk/government/publications/ai-playbook-for-the-uk-government/artificial-intelligence-playbook-for-the-uk-government-html> accessed 7 April 2025

[14] He QH, Xifang Falü Sixiangshi (A History of Western Legal Thought) (Fudan University Press 2005)

[15] Hegel GWF, Elements of the Philosophy of Right (Fan Yang and Zhang Qitai trs, The Commercial Press 1961)

[16] Hughes J, 'The Philosophy of Intellectual Property' (1988) 77 Georgetown Law Journal 287

[17] Landes WM and Posner RA, The Economic Structure of Intellectual Property Law (JH Jin tr, Peking University Press 2005)

[18] Lawrence L, Code 2.0: Law in Cyberspace (X Li and W Shen trs, Revised Edition, Tsinghua University Press 2018)

[19] Lemley MA and Casey B, 'Fair Learning' (2021) 99 Texas Law Review 743

[20] Li C, A Critique of the Fundamental Theories of Copyright (Intellectual Property Publishing House 2013)

[21] Lord Holmes of Richmond, 'Guidance Artificial Intelligence Playbook for the UK Government' <https://bills.parliament.uk/publications/59353/documents/6094> accessed 7 April 2025

[22] McPherson MS, 'The Economics of Justice' (1983) 2 Law and Philosophy 129

[23] Merges RP, Justifying Intellectual Property (JH Jin and others trs, The Commercial Press 2023)

[24] Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, Guidelines for the Utilization of Generative AI in Elementary and Secondary Education (Elementary and Secondary Education Bureau 2024) <https://www.mext.go.jp/content/20241226-mxt_shuukyo02-000030823_001.pdf> accessed 7 April 2025

[25] Oddi AS, 'The Tragicomedy of the Public Domain in Intellectual Property Law' (2002) 25 Hastings Communications and Entertainment Law Journal 1

[26] Palace VM, 'What If Artificial Intelligence Wrote This: Artificial Intelligence and Copyright Law' (2019) 71 Florida Law Review 217

[27] People's Court of Wuhan East Lake New Technology Development Zone, Hubei Province, 'Wuhan AI Image Copyright Infringement Case' <https://www.ciplawyer.cn/articles/155985.html> accessed 7 April 2025

[28] Promotorengruppe Kommunikation der Forschungsunion Wirtschaft - Wissenschaft, acatech, 'Securing the Future of German Manufacturing Industry: Recommendations for Implementing the Strategic Initiative INDUSTRIE 4.0: Final Report of the Industrie 4.0 Working Group' <https://www.acatech.de/publikation/umsetzungsempfehlungen-fuer-das-zukunftsprojekt-industrie-4-0-abschlussbericht-des-arbeitskreises-industrie-4-0/> accessed 7 April 2025

[29] Shenzhen Nanshan District People's Court, 'Shenzhen Tencent Computer System Co., Ltd. v. Shanghai Yingxun Technology Co., Ltd. (Copyright Infringement Dispute)' <https://www.chinajusticeobserver.com/law/x/2019-yue-0305-min-chu-14010> accessed 14 March 2025

[30] Si X, 'The Arrival of the Singularity: Where Is Copyright Law Heading in the ChatGPT Era—A Response to Related Arguments' [2023] Exploration and Debate 79

[31] Stendell L, 'Fanfic and Fan Fact: How Current Copyright Law Ignores the Reality of Copyright Owner and Consumer Interests in Fan Fiction' (2005) 58 SMU Law Review 1551

[32] Supreme People's Procuratorate of the People's Republic of China, 'The Key to Determining the Attributes of AI-Generated Content Lies in Originality' <https://www.spp.gov.cn/spp/llyj/202401/t20240126_641459.shtml> accessed 7 April 2025

[33] United States Congress Office of Technology Assessment, 'Intellectual Property Rights in an Age of Electronics and Information' <https://www.princeton.edu/~ota/disk2/1986/8610/861001.PDF> accessed 7 April 2025

[34] United States Copyright Office, 'Re: Zarya of the Dawn (Registration # VAu001480196)' <https://copyright.gov/docs/zarya-of-the-dawn.pdf> accessed 7 April 2025

[35] United States Court of Appeals for the Second Circuit, 'Authors Guild v. Google, Inc.' <https://cases.justia.com/federal/appellate-courts/ca2/13-4829/13-4829-2015-10-16.pdf> accessed 14 March 2025

[36] U.S. Copyright Office, 'Re: Second Request for Reconsideration for Refusal to Register Théâtre D'opéra Spatial (SR # 1-11743923581; Correspondence ID: 1-5T5320R)' <https://www.copyright.gov/rulings-filings/review-board/docs/Theatre-Dopera-Spatial.pdf> accessed 14 March 2025

[37] Valyaeva A, 'AI Image Statistics: How Much Content Was Created by AI' [2023] Everypixel Journal <https://www.everypixel.com/blog/ai-image-statistics>

[38] Wang G, 'On the Copyright Protection of Computer-Generated Works' (2016) 29 Journal of Yunnan University (Law Edition) 20

[39] World Intellectual Property Organization, 'WIPO Copyright Treaty' <https://www.wipo.int/wipolex/en/text/295166>

[40] Wu HD, 'Philosophical Interpretations of Intellectual Property Law by Legal Philosophers' [2003] Law Science Magazine 77

[41] ——, 'On the Copyrightability of AI-Generated Content: Practice, Legal Theory, and Institutional Considerations' [2024] China Law Review 113

[42] Xiang B, 'A Critical Analysis of the Legitimacy of Intellectual Property: Perspectives on Conflicting Interests' (2015) 36 Law Science Magazine 93

[43] Yang S and Chen X, 'Will the Intellectual Property Legal System End? — A Commentary on The Paradigm Shift: Reflections on Intellectual Property Theory' [2016] China Intellectual Property 3

[44] Yanisky-Ravid S, 'Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A Era: The Human-Like Authors Are Already Here: New Model' [2017] Michigan State Law Review 659

[45] Zeng S, 'The Limits of Copyright Incentives and the Improvement of the Copyright System: An Analysis Based on Behavioral Economics' [2020] Journal of Guizhou Normal University (Social Science Edition) 131

[46] Zhou S, 'New Intertextuality: The Textual Connotations, Structure, and Representations of Generative Artificial Intelligence' (2023) 31 Journalism 39

[47] Zhu H and Li X, 'Rethinking the Legitimacy of Copyright in the Context of ChatGPT' (2024) 46 Global Media Journal 92

[48] Zhu M, 'Feasibility Study on Copyright Protection for AI-Generated Works' (2019) 27 Publishing Journal 53