

The Jurisprudence Reconstruction of the Criminal Law Regulation of AI Products: Based on the Perspective of Art Ontology

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ABSTRACT

The iterative evolution of generative artificial intelligence technology is fundamentally reshaping the essential form of creation and expression, posing a paradigmatic challenge to the criminal legal system built on the cornerstone of human subjectivity. This article systematically analyzes the essential tension between "human creation" and "technical generation" in AI-generated content through the theoretical lens of art ontology, revealing the structural deficiencies of traditional criminal law's behavior theory, principles of responsibility, and concepts of legal interests in addressing algorithmic autonomy. Research indicates that the legal characterization dilemma of AI-generated content stems not only from the novelty of the technical object but also profoundly touches upon the philosophical presuppositions of the legal system regarding basic categories such as "creation," "behavior," and "responsibility." Through a comparative analysis of the European Union's "Artificial Intelligence Act" risk classification framework, the United States Copyright Office's pragmatic stance, Japan's "quasi-work" system innovation, and China's judicial conservative posture, this article proposes constructing a multi-layered criminal regulation system with "technical expression" as its core. This system builds a differentiated attribution model based on the degree of human creative contribution, the possibility of infringement of legal interests, and specific application scenarios, effectively safeguarding core legal values such as individual legal interests, social order, and national cultural security while ensuring technological innovation. The theoretical innovation of this research lies in transforming highly abstract art philosophical theories into an operational legal argumentation framework, providing a solid legal foundation for the transformation of the criminal law system in the age of artificial intelligence.

KEYWORDS

AI-generated outputs; Criminal law regulation; Ontology of art; Technical expression; Risk stratification theory; Legal reconstruction

1 Origin of the Problem and Deepening Construction of the Theoretical Framework

Generative artificial intelligence has evolved from a mere technical tool into a symbol production system with a certain degree of autonomy, and the ambiguity in the legal characterization of its output exposes the profound limitations of traditional legal categories. According to International Data Corporation's 2023 forecast, the global generative AI market will have a compound annual growth rate of 34.9%, and the overall market size will exceed \$200 billion by 2025. This exponential technological development and widespread social application make the problem of the lag in the legal regulatory system increasingly prominent, requiring a systematic response from the legal theoretical level.

The theoretical depth of this issue is mainly reflected in three interrelated levels: First, AI-generated content fundamentally shakes the theoretical foundation of the "romantic author view" of copyright law. The United States Copyright Office's review decision on the "Zarya of the Dawn" case vividly demonstrates the legal system's dilemma in defining the boundary between human creativity and algorithmic generation. Although the ruling rejected copyright registration for images entirely generated by AI, it simultaneously left room for protection in the reasoning for the creative input demonstrated by humans through prompt design, parameter adjustment, and other steps, reflecting the legal system's cautious stance and inherent tension in the face of disruptive technologies. Second, the black-box characteristics of algorithms, the automation of the generation process, and the low-cost, high-efficiency of large-scale replication and dissemination pose severe challenges to the traditional criminal law attribution theory centered on subjective fault and causality. When the socially harmful result is produced by the joint action of multiple subjects such as developers, users, platform operators, and complex artificial intelligence systems with considerable autonomy, how to accurately identify the subject of criminal illegal behavior, define the content of subjective fault, and confirm the causal relationship of criminal law becomes an explanatory dilemma that traditional criminal law dogmatics cannot avoid. Third, the question of whether AI-generated content enjoys constitutional freedom of expression protection relates to the contemporary adaptability of the fundamental rights system. If AI-generated poems, paintings, or commentary articles are recognized as "expression" in the constitutional sense, then criminal regulation of their content must pass a more stringent constitutional review, which requires legislators and adjudicators not only to have a precise grasp of technical characteristics but also to conduct profound reflection and innovation at the constitutional theoretical level.

To address this complex interdisciplinary challenge, this study uses art ontology as a meta-theoretical framework, and constructs the core concept of "technical expression" with a mediating nature through a research path combining internal criticism of legal dogmatics and external observation of comparative law. This concept not only recognizes the technical essence of AI-generated content, avoiding the far-fetched analogy to traditional works; but also affirms its expressive function in the social context, providing theoretical support for constitutional freedom of expression protection, thereby providing a third path for the legal characterization dilemma. This study tends to adopt a functionalist interpretation stance, which means that our analysis not only focuses on the internal logical consistency and systematic harmony of legal rules, but also focuses on the actual social effects of these rules in addressing the challenges of artificial intelligence technology, that is, whether they can effectively maintain social order, protect citizens' fundamental rights, and promote the prosperity of scientific and cultural undertakings, while avoiding undue suppression of technological innovation.

2 Theoretical Deepening of Art Ontology and Legal Transformation Mechanism

2.1 Refined Interpretation of the Art Philosophy Genealogy and Its Enlightenment on the Characterization of AI-Generated Content

The theoretical tension between essentialism and anti-essentialism presents new dimensions in legal transformation. Clive Bell's 1914 theory of "significant form" is specifically translated into a formalized judgment of the originality of visual structure in algorithmic art evaluation, and judges and legislators will instinctively examine whether AI-generated images have unique formal features such as composition and color matching. However, the limitation of essentialism lies in the difficulty of adapting its formalism tendency to the development of modern art, especially the inability to effectively distinguish between "exquisite technical products" and "true artistic creations." For example, an algorithm-generated image may have visual beauty, but whether it has artistic value often triggers profound controversy.

The anti-essentialist view of art is fully embodied in the "family resemblance" theory proposed by Morris Weitz and others. In legal practice, this view guides the judicial system to focus on the relationship between AI-generated objects and existing art forms, as well as the acceptance by the art world, critics, and the public. In the "AIPaint" case heard by the UK High Court in 2022, the judge considered both the originality of its visual structure and the acceptance by art critics when determining whether the AI-generated image constituted a work, reflecting the comprehensive application of essentialism and anti-essentialism in judicial practice and reflecting the pragmatic attitude of the judicial system in the face of emerging technologies.

The art institution theory has gained new interpretation space in the digital age. George Dickie's systematically elaborated concept of the "art world" is deconstructed into multiple recognition mechanisms in algorithm-generated art—including the joint recognition of the technology community, the art market, and the legal system. In 2018, the "Portrait of Edmond de Belamy" generated by the Obvious collective using the GAN algorithm was sold for \$43,250 at Christie's in New York. In 2023, the Venice Biennale established the AI art unit for the first time. These institutional recognitions provide an important social fact basis for judicial characterization. However, the legal system faces severe challenges when drawing on this theory: How to define the boundaries of the "art world"? Which subjects are qualified to represent the art world to make recognition? To what extent does this recognition need to be achieved? These questions lack clear answers in judicial practice.

The historical art theory emphasizes the historical dimension of the definition of art. Arthur Danto's "art world" theory points out that something needs to be included in the art history narrative to become art. This view implies that the current debate about whether AI-generated objects are art may itself be part of the art history process. The legal system needs to maintain a moderate degree of openness and historical patience on this issue, and avoid overly rigid definitions that hinder technological development and artistic innovation.

2.2 Multi-dimensional Analysis of Legal Transformation Mechanism

The process by which the legal system transforms complex philosophical discussions into relatively clear and operable legal requirements based on its "functional imperative"—that is, the simplification needs generated by the law to maintain its normative expected function—is full of theoretical compromises. The judicial operationalization of the "originality" requirement, such as the "independent creation" plus "minimum creativity" standard established by the US Supreme Court in the Feist case, while ensuring legal certainty and predictability, inevitably simplifies the complexity of artistic creation. In the context of AI-generated objects, the drawbacks of this simplification are particularly obvious: when the creation process is distributed on a continuous spectrum of human-computer interaction, the traditional "originality" standard loses its explanatory power. For example, in AI painting creation, human contribution may be limited to the

writing of prompt words and the selection of results, which is essentially different from the author's control over every detail of the work in traditional art creation.

The differences between the civil law system and the common law system in creative judgment have a profound impact on the acceptance of AI-generated objects. German courts particularly emphasize the requirement of "personal imprint" when judging creativity, which makes it difficult for content completely generated by AI to meet the work standard; while American courts pay relatively more attention to whether the output result itself is creative, and the requirements for human participation are relatively loose. The European Court of Justice emphasized in the *Infopag International* case that the work must be "the author's own intellectual creation" and reflect his personal characteristics. Although this strict anthropocentric position ensures the coherence of the legal system, it may also limit the law's ability to adapt to new technologies.

In judicial practice, this functionalist orientation is manifested in the reliance on formalized standards. For example, when judging the protectability of AI-generated objects, courts often focus on some relatively formalized standards: the specific degree of prompt words, the scope of human control over the generation process, the selection and arrangement of output results, etc., rather than conducting an in-depth aesthetic judgment on the generated object itself. Taking the US Copyright Office's review of the "Zarya of the Dawn" case in 2023 as an example, the examiner focused on the applicant's creative contribution in the prompt word design, parameter adjustment, and result selection process. Although this review method sacrifices individual justice to a certain extent, it is a necessary strategy for the legal system to deal with social complexity, ensuring the uniformity and efficiency of legal application.

3 Systematic Reconstruction of Criminal Regulation Path

3.1 In-depth Expansion of the Constitutional Dimension

The definition of the scope of protection of freedom of expression needs new legal argumentation in the AI era. The functionalist path advocates that as long as AI-generated objects actually play an expressive function in social communication and can convey specific thoughts, emotions, or aesthetic experiences to the audience, they should be protected by the Constitution. This position was supported by the Supreme Court of Canada in a relevant judgment in 2023. The court emphasized that "the protection of freedom of expression should focus on the possibility of understanding by the recipient of information, rather than just focusing on whether the expresser has human will." The originalist interpretation path insists that the historical original meaning of freedom of expression is limited to human expressers, and believes that the Constitution protects the freedom of expression of "humans." As a non-human subject, AI's "expression" is not within the scope of constitutional protection. The choice of these two positions directly affects the constitutional review standard of criminal regulation—if a functionalist position is adopted, the criminal regulation of AI-generated objects needs to be reviewed through the strict principle of proportionality; if an originalist position is adopted, AI-generated objects can be completely included in the regulatory framework of ordinary data products.

The principle of "artistic autonomy" established by the German Federal Constitutional Court in the "Mephisto" case defines a relatively independent constitutional space for artistic expression. This principle holds that artistic creation and dissemination enjoy a high degree of freedom, and state intervention must adhere to strict principles of proportionality. When we apply this constitutional principle to AI-generated works, we need to carefully consider whether AI-generated artistic expressions should enjoy the same constitutional protection as traditional artistic expressions. This requires us to find an appropriate balance between technological neutrality and value balance.

3.2 Innovation in Solving the Dilemma of Copyright Law

The human author-centric approach of traditional copyright law faces a dilemma of insufficient protection and over-expansion when dealing with AI-generated content. Chinese judicial practice vividly reflects this dilemma. In 2023, the Beijing Internet Court, when hearing a copyright dispute involving an AI-generated financial analysis report, explicitly rejected the possibility of recognizing it as a work. The court held that "a work must reflect human intellectual activity and emotional expression. Content generated entirely automatically by artificial intelligence lacks the author's personalized selection and arrangement and does not constitute a work in the sense of copyright law." This judgment reflects the cautious balance maintained by judicial authorities between technological innovation and legal stability.

However, strict application of traditional standards leads to an obvious protection vacuum. If AI-generated content cannot obtain copyright protection, large-scale piracy, alteration, and illegal dissemination will be difficult to effectively regulate through copyright law. This not only harms the economic interests of investors but may also disrupt the normal content industry order. Faced with this dilemma, various jurisdictions have begun to explore alternative protection schemes. Continental law countries such as the EU have discussed the neighboring right (related rights) protection path more frequently. This scheme does not require originality of the work but protects the "substantial investment in the

content generation process." For example, a new type of neighboring right can be established for AI-generated content, with protection conditions including: significant economic resources invested in the generation process; the content has substantial value; and it possesses a minimum degree of creativity. The "quasi-work" system adopted by Japan when revising the Copyright Act in 2023 represents another innovative approach. This system establishes an intermediate category between traditional works and unprotected content, providing limited protection for AI-generated content. The protection period is shorter than ordinary copyright, but core infringing acts such as direct copying and improper use are prohibited.

3.3 Modern Transformation of Criminal Law Dogmatics

AI-generated content poses a profound challenge to traditional criminal regulation theory, and there is an urgent need to modernize and reconstruct relevant theories. The legal interest theory needs to be systematically updated to cover new types of collective legal interests such as "algorithmic fairness" and "authenticity of the information environment," while avoiding excessive dilution of concepts. The European Court of Justice, in a preliminary ruling in 2023, emphasized that criminal regulation of AI-generated content must prove the existence of a "concrete and specific risk of infringement of legal interests," reflecting the maintenance of the rigor of the legal interest theory. This expansion of the legal interest theory must be cautious to avoid blurring the boundaries of criminal law due to excessive dilution of the concept of legal interest.

The theory of unlawful conduct needs to shift from individual behavior orientation to systemic risk consideration. In 2023, the German Federal Court, in a groundbreaking judgment, for the first time incorporated the "abusability of technical systems" into the consideration of unlawful conduct. The court held that when developers knowingly allow their AI systems to be used to generate illegal content without taking reasonable preventive measures, this omission itself is criminally punishable. This judgment marks a paradigm shift in criminal law from "individual behavioral responsibility" to "systemic risk responsibility," which is a major development of the traditional theory of unlawful conduct.

The theory of responsibility allocation needs to be reconstructed to address the structure of shared responsibility among multiple parties. In the life cycle of AI-generated content, multiple parties are often involved, such as developers, trainers, users, and platform parties. Traditional accomplice theory is difficult to effectively deal with this distributed responsibility structure. The Australian Federal Court adopted the "chain liability" theory in its 2023 judgment, allocating responsibility based on each party's ability to control risk and obtain benefits. This theory emphasizes that for damages caused by AI-generated content, the responsibility share of each entity should be traced along the technology supply chain, rather than simply applying the traditional distinction between principal and accessory offenders. This responsibility allocation model reflects the development of the dangerous control theory in the digital age, emphasizing the allocation of corresponding legal responsibilities based on each entity's actual ability to control risk.

4 Refined Construction of the Regulatory System

4.1 Multi-Level Design of Categorized Regulation

A differentiated protection mechanism based on the spectrum of human creative input needs to be finely designed. According to the degree of human creative input, AI-generated content can be divided into three main types: human-led creation, human-machine collaborative generation, and machine autonomous output. For human-led creation, that is, the situation where human creators use AI tools to realize their artistic ideas, protection standards close to traditional works should be applied; for human-machine collaborative generation, that is, the situation where humans and AI systems form an interactive relationship in the creation process, the establishment of a new type of neighboring right with a shorter term and limited rights content should be considered; for machine autonomous output, that is, content generated entirely automatically by AI systems, limited protection is mainly provided through the Anti-Unfair Competition Law, Contract Law, etc. This tiered protection system meets the requirements of the principle of proportionality. The European Court of Justice has emphasized in several cases that restrictions on intellectual property rights must meet the requirements of appropriateness, necessity, and proportionality.

The risk classification regulatory system should establish clear classification standards. Referring to the risk classification approach of the EU's "Artificial Intelligence Act", AI-generated products can be divided into four categories according to risk level: unacceptable risk, high risk, limited risk, and minimal risk. For AI-generated products with "unacceptable risks", such as content generated by deepfake technology and automatically generated false news, regulatory measures such as prohibition or strict restrictions should be taken; for "high-risk" applications such as medical diagnostic report generation and automatic news writing, strict regulatory systems such as prior review, usage records, and transparency requirements should be established; for "limited-risk" applications such as ordinary entertainment content generation, lighter regulatory requirements such as transparency and identification obligations can be adopted;

for "minimal-risk" applications such as AI-generated products for personal use, industry self-regulation and ex-post supervision are mainly relied upon. The legal basis of this risk classification regulation originates from the risk society theory. The risk society theory proposed by German sociologist Beck believes that the characteristic of modern society is that it needs to systematically respond to the new risks brought about by technological development.

4.2 Theoretical Innovation of Responsibility Allocation

The allocation of responsibilities among multiple parties should be constructed based on the theoretical system of risk control capabilities. As technology creators, developers have the strongest control over the potential risks of the system and should bear the obligation to ensure technical safety, including reasonably designing the system architecture, setting up security protection measures, and providing risk warnings; trainers are responsible for data screening and model optimization, and should ensure the legality of training data and the safety of models; users, as the final operators, should be responsible for their use behavior, especially for the legality and authenticity of the generated content; platform parties, as the hub of content dissemination, should bear regulatory responsibilities commensurate with their technical capabilities and business models. This responsibility allocation reflects the extended application of the dangerous control theory in the digital age. The "dangerous control responsibility" principle established by the German Federal Supreme Court in the 1990s holds that the subject with the ability to control the source of danger should bear the corresponding responsibility.

The principle of technological neutrality in the AI era needs to be reinterpreted in conjunction with the "foreseeable abusability" test. The "active inducement" rule established by the U.S. Supreme Court in the *Grokster* case provides an important reference for the application of the principle of technological neutrality. The ruling in that case held that if a technology developer has a clear intention to induce others to infringe, they cannot invoke the principle of technological neutrality to be exempted from liability. The Delhi High Court of India proposed the "foreseeable abusability" test in an innovative judgment in 2023, providing a new standard for the application of the principle of technological neutrality. This test requires the court to comprehensively consider the design purpose, promotion method, actual use, and other factors of the technology to determine whether the technology developer can reasonably foresee the risk of abuse. If the main function of an AI system is to generate infringing content, or the developer is aware of the serious risk of abuse of the system but fails to take reasonable preventive measures, they cannot be exempted from liability on the grounds of technological neutrality.

4.3 Construction of International Regulatory Coordination Mechanism

AI-generated products often involve cross-border data flows, which requires countries to strengthen coordination in regulatory policies. The World Intellectual Property Organization (WIPO) is promoting the establishment of an international registration system for AI-generated products, which aims to provide cross-border preliminary rights recognition for AI-generated products. At the same time, the World Trade Organization (WTO) e-commerce negotiations also list the cross-border regulation of AI-generated products as an important issue. In terms of regulatory synergy, the "adequacy decision" mechanism of the EU's General Data Protection Regulation (GDPR) can be used as a reference to establish a regulatory mutual recognition mechanism through bilateral or multilateral agreements to avoid the same AI-generated product facing completely opposite regulatory requirements in different jurisdictions.

In response to the cross-border law enforcement challenges brought about by AI-generated products, it is necessary to innovate international cooperation mechanisms. The "AI Crime Law Enforcement Guide" released by the International Criminal Police Organization (INTERPOL) in 2023 provides an important reference for transnational law enforcement cooperation. The guide recommends establishing unified standards for electronic evidence, promoting the sharing of regulatory data, and improving judicial assistance mechanisms. In terms of innovation in law enforcement cooperation mechanisms, an international cooperation model of "regulatory sandbox" can be established to allow companies to conduct cross-border AI-generated product testing in a controlled environment, which not only promotes technological innovation but also provides practical experience for the improvement of regulatory rules.

5 Conclusion and Prospect: Towards Adaptive Regulatory Paradigm

Through the deep integration of art ontology, this study has achieved conceptual innovation and methodological breakthrough in the criminal law regulation theory of AI-generated products. The theoretical contributions are mainly reflected in three levels: First, it successfully constructed a theoretical bridge between art philosophy and legal regulation, breaking through the theoretical limitations of traditional legal research in the face of technological changes. The view in the art system theory that the "art world" grants candidate appreciation status provides a theoretical basis for explaining

how some AI-generated products obtain artistic status through social recognition mechanisms; second, the proposed core concept of "technical expression" effectively resolves the qualitative dilemma of AI-generated products between "works" and "data products". This concept not only recognizes the technical characteristics of AI-generated products but also affirms their expressive function in social interaction; third, the developed "digital legal interest" theoretical framework provides a systematic analysis tool for understanding the new types of legal interest infringements in the AI era. By theorizing the new forms of personal legal interests, social legal interests, and national legal interests in the digital space, it provides a basis for the reasonable definition of the scope of criminal regulation.

The future regulatory system should realize the paradigm shift from "subject-centered" to "behavior-oriented", and the core is to establish a diversified regulatory plan based on risk allocation. This requires criminal law to develop a new type of responsibility theory to deal with algorithmic autonomy while maintaining restraint. At the regulatory concept level, the modern interpretation of the "technological neutrality" principle should be established, and a "conditional technological neutrality" position should be adopted; at the regulatory method level, it is necessary to establish a regulatory system covering the entire chain of pre-event, in-event, and post-event; at the responsibility allocation level, a distributed responsibility system based on risk control capabilities should be constructed.

Prospective studies should focus on three directions: the genealogical classification of AI-generated content needs to be further refined, and it is recommended to construct a classification system from three dimensions: technical generation method, content expression form, and application scenario; the cutting-edge exploration of regulatory technologies such as blockchain, digital watermarks, and zero-knowledge proofs has important value, and the application of these technical means will greatly improve the efficiency and accuracy of regulation; the construction of a global regulatory coordination mechanism is urgent, and in-depth research should be conducted on issues such as cross-border regulatory data sharing, mutual recognition of regulatory standards, and cross-border law enforcement assistance. With the development of technologies such as quantum computing and neuromorphic computing, the technical forms and application scenarios of AI-generated content will undergo significant changes, and future research should maintain technical foresight and study the new legal issues that these technologies may bring in advance.

The ultimate goal is to build a responsible AI governance ecosystem that emphasizes both technological neutrality and value balance, ensuring security while promoting innovation. The establishment of this virtuous cycle requires the joint participation and efforts of various stakeholders, including governments, businesses, academia, and the public. Through the coordinated cooperation of legislative, law enforcement, and judicial aspects, the mutual promotion of domestic regulations and international cooperation, and the organic combination of legal rules and technological governance, we can enjoy the benefits of technological progress while effectively preventing technological risks and making due contributions to the rule of law in the digital age.

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