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Naberezhnyev S.S.[1], Shonay A.A.[2]

[1] Master of Laws, Lecturer, Department of International Law, Sorbonne–Kazakhstan Institute, Abai Kazakh National Pedagogical University, Almaty, Republic of Kazakhstan

[2] Master of Laws, Lecturer, Department of International Law, Sorbonne–Kazakhstan Institute, Abai Kazakh National Pedagogical University, Almaty, Republic of Kazakhstan

HUMAN AUTHORSHIP AND COPYRIGHT PROTECTION IN THE AGE OF GENERATIVE ARTIFICIAL INTELLIGENCE: A COMPARATIVE ANALYSIS OF KAZAKHSTAN, THE UNITED STATES AND THE EUROPEAN UNION

Abstract

The rapid development of generative artificial intelligence has made copyright protection dependent on distinctions that traditional doctrine did not need to articulate with the same precision: the status of human contributions to an output, the legal character of a prompt, and the permissibility of using existing works for model training. This article examines these questions through a comparative legal analysis of Kazakhstan, the United States and the European Union, with particular attention to Article 23 of Kazakhstan's Law on Artificial Intelligence of 17 November 2025. The methodology combines doctrinal interpretation, functional comparison of legal instruments and analysis of official guidance and judicial decisions. The research finds that the jurisdictions share an emphasis on human creativity in the protection of outputs but differ in their treatment of creative prompts, training-related uses and rightsholder reservations. Kazakhstan expressly addresses both human contribution and machine-readable prohibitions on training; United States practice differentiates human-authored elements from autonomously generated content; European Union legislation combines text-and-data-mining rules with transparency and copyright-compliance obligations for general-purpose AI providers. The article proposes a three-part compliance framework covering proof of human creative choices, provenance of training material and interoperable recording of rights reservations. It argues that these questions must be assessed separately to avoid conflating copyright ownership in outputs with permission to use inputs.

Keywords: generative artificial intelligence; copyright; human authorship; creative contribution; prompts; text and data mining; machine-readable opt-out; Kazakhstan; European Union; United States.

С.С. Набережнев[1], А.А. Шонай[2]
[1] Заң ғылымдарының магистрі, Абай атындағы ҚазҰПУ Сорбонна–Қазақстан институты халықаралық құқық кафедрасының оқытушысы, Алматы, Қазақстан Республикасы
[2] Заң ғылымдарының магистрі, Абай атындағы ҚазҰПУ Сорбонна–Қазақстан институты халықаралық құқық кафедрасының оқытушысы, Алматы, Қазақстан Республикасы

ГЕНЕРАТИВТІ ЖАСАНДЫ ИНТЕЛЛЕКТ ДӘУІРІНДЕГІ АДАМ АВТОРЛЫҒЫ ЖӘНЕ АВТОРЛЫҚ ҚҰҚЫҚТЫ ҚОРҒАУ: ҚАЗАҚСТАН, АҚШ ЖӘНЕ ЕУРОПАЛЫҚ ОДАҚТЫҢ САЛЫСТЫРМАЛЫ ТАЛДАУЫ

Аңдатпа

Генеративті жасанды интеллектінің қарқынды дамуы авторлық құқық саласында бірнеше мәселені өзектендірді: адам шығармашылық үлесінің дәрежесін айқындау, мәтіндік сұраулардың құқықтық мәртебесін бағалау және бұрыннан бар туындыларды жасанды интеллект модельдерін оқыту үшін пайдаланудың заңдылығын анықтау. Мақалада осы мәселелер Қазақстан, Америка Құрама Штаттары және Еуропалық Одақ құқықтары тұрғысынан салыстырмалы түрде талданады. Негізгі назар Қазақстан Республикасының 2025 жылғы 17 қарашадағы «Жасанды интеллект туралы» Заңының 23-бабына аударылады. Зерттеуде формальды-құқықтық талдау, салыстырмалы-құқықтық әдіс және ресми құжаттар мен сот шешімдерін зерделеу қолданылды. Нәтижелер көрсеткендей, аталған құқықтық жүйелерде адамның шығармашылық еңбегінің маңызы ортақ қағида болғанымен, шығармашылық мәтіндік сұрауларды қорғау, модельдерді оқыту және құқық иелерінің тыйым салу тәсілдері әртүрлі реттеледі. Қазақстан заңнамасы адамның шығармашылық үлесін және машина оқи алатын нысандағы тыйымды тікелей көздейді; АҚШ тәжірибесі адам жасаған элементтерді дербес генерацияланған мазмұннан ажыратады; ЕО заңнамасы мәтіндер мен деректерді талдау ережелерін ашықтық міндеттерімен ұштастырады. Мақалада авторлық үлесті тіркеу, оқыту деректерінің шығу тегін қадағалау және құқық иелерінің тыйымдарын белгілеу негізіндегі үш құрамдасты тәсіл ұсынылады.

Түйін сөздер: генеративті жасанды интеллект; авторлық құқық; авторлық; шығармашылық үлес; мәтіндік сұраулар; деректерді талдау; машина оқи алатын тыйым; Қазақстан; Еуропалық Одақ; АҚШ.

Набережнев С.С.[1], Шонай А.А.[2]
[1] Магистр юридических наук, преподаватель кафедры международного права Института Сорбонна–Казахстан КазНПУ имени Абая, Алматы, Республика Казахстан
[2] Магистр юридических наук, преподаватель кафедры международного права Института Сорбонна–Казахстан КазНПУ имени Абая, Алматы, Республика Казахстан

ЧЕЛОВЕЧЕСКОЕ АВТОРСТВО И ЗАЩИТА АВТОРСКИХ ПРАВ В ЭПОХУ ГЕНЕРАТИВНОГО ИСКУССТВЕННОГО ИНТЕЛЛЕКТА: СРАВНИТЕЛЬНЫЙ АНАЛИЗ КАЗАХСТАНА, США И ЕВРОПЕЙСКОГО СОЮЗА

Аннотация

Стремительное развитие генеративного искусственного интеллекта обострило три самостоятельных вопроса авторского права: установление творческого вклада человека в созданный результат, определение правового статуса текстового запроса и допустимость использования охраняемых произведений для обучения моделей. Статья посвящена сравнительному правовому анализу подходов Казахстана, США и Европейского союза с особым вниманием к статье 23 Закона Республики Казахстан «Об искусственном интеллекте» от 17 ноября 2025 года. Методологическую основу составляют формально-юридический и сравнительно-правовой методы, а также исследование нормативных актов, официальных разъяснений и судебной практики. Установлено, что указанные правопорядки признают значение человеческого творчества для охраны результата, однако различаются в вопросах защиты творческих запросов, использования произведений при обучении моделей и фиксации запретов правообладателей. Законодательство Казахстана прямо предусматривает творческий вклад человека и запрет на обучение в машиночитаемой форме; практика США разграничивает авторские элементы и автономно сформированный контент; законодательство ЕС сочетает правила анализа текстов и данных с обязанностями поставщиков моделей по соблюдению авторского права и прозрачности. Предлагается трёхкомпонентный подход, объединяющий фиксацию творческих решений человека, документирование происхождения обучающих материалов и учёт правообладательских ограничений. Обосновывается необходимость раздельно оценивать охрану результата и законность использования исходных материалов.

Ключевые слова: генеративный искусственный интеллект; авторское право; авторство; творческий вклад; промпты; анализ текстов и данных; машиночитаемый запрет; Казахстан; Европейский союз; США.

The emergence of generative artificial intelligence (AI) has transformed the production of texts, illustrations, software, music and other expressive materials. A user can now obtain a plausible finished product by issuing an instruction to a model trained on large collections of data. The resulting work may appear indistinguishable

from a conventional human creation, even though the process of generating its individual expressive elements differs substantially. For copyright law, the decisive question is therefore not whether technology participated in the creative process, but whether and to what extent protectable expression can be attributed to human choices. At the same time, the development of such systems requires access to pre-existing material that may itself be protected by copyright. These input and output questions are related in practice but legally distinct.

The Berne Convention establishes a broad international structure for protecting literary and artistic works and securing national treatment, while leaving domestic legal systems significant discretion over the interpretation of authorship and relevant exceptions [1]. The conventional copyright model assumes that an author makes creative choices, holds rights in the resulting expression and may control specified uses of that expression. Generative AI complicates each element of this sequence: a user directs the model without necessarily controlling the precise expressive details; the model provider selects and processes training material; a rightsholder may object to extraction of protected works; and a downstream user may publish an output that resembles material in the training corpus.

The problem is particularly important for Kazakhstan because its legal framework has changed substantially. The Law of the Republic of Kazakhstan 'On Artificial Intelligence' of 17 November 2025 No. 230-VIII contains a dedicated Article 23 on copyright [3]. It provides a basis for evaluating human creative contributions, protecting qualifying textual prompts and determining whether model training may proceed in the absence of a machine-readable prohibition. These provisions invite comparison with the United States, where the Copyright Office and courts have clarified human-authorship requirements, and the European Union, where text-and-data-mining exceptions are combined with copyright compliance and transparency duties under the AI Act [4–9]. An overview by the Library of Congress also identifies human creative input and machine-readable prohibitions as central elements of Kazakhstan's reform [10].

The aim of the study is to identify the legal conditions under which generative AI may be used in the creation of copyright-protected works, and to develop a coherent framework for evaluating rights in AI-related production and model training. Three questions guide the analysis: which human actions may amount to authorship; how should law distinguish rights in a prompt from rights in a generated output; and under what conditions may copyrighted inputs be used to train models? The object of the study is the legal relationship arising between authors, rightsholders, developers and users of generative AI systems. Its subject is the normative regulation of copyright eligibility, lawful training and rights-management obligations.

The research applies a doctrinal and comparative methodology. Primary materials include the Berne Convention, Kazakhstan's Copyright Law of 10 June 1996 and Law on Artificial Intelligence of 2025, the U.S. Copyright Office's reports on AI copyrightability and training, the U.S. appellate judgment in Thaler v. Perlmutter, Directive (EU) 2019/790 and Regulation (EU) 2024/1689 [1–9]. The comparative

method is functional rather than purely terminological: each jurisdiction is examined according to the specific problem that its rules seek to resolve. Official institutional explanations are used to clarify regulatory practice, but are distinguished from binding legal provisions and judgments. The study is confined to documentary sources available as of 27 October 2026; it does not report interviews, technical experiments or empirical surveys.

A useful starting point is to separate the process of generative AI into three stages. The first is the input stage, at which existing text, images and other data may be collected, copied, converted or analysed for model training. The second is the interaction stage, involving human prompts, iterative selection of generated versions and possible editing. The third is the output stage, when content is published, licensed, incorporated into another work or otherwise exploited. These stages should not be treated as one undifferentiated act of 'AI creation'. A lawful use at the training stage cannot automatically establish copyright protection for the resulting output; similarly, a protectable human-authored passage incorporated in an output does not retrospectively authorize the use of a third party's work in training.

Under Kazakhstan's Copyright Law, an author is a natural person whose creative work produces a protected literary, scientific or artistic expression [2]. Copyright arises from creation, rather than mandatory registration, while the distinction between a protected form of expression and an unprotected idea remains fundamental. Article 23(1) of the 2025 Law on Artificial Intelligence develops this approach by stipulating that works created with the use of AI systems receive copyright protection only where a human creative contribution is present [3]. The rule does not equate the presence of a human user with authorship. It requires an assessment of what creative decisions that person actually contributed to the output.

It follows, in the authors' interpretation, that three situations should be distinguished. In the first, a human prepares an original text and uses AI solely for spelling suggestions, translation assistance or routine correction. The pre-existing human expression remains the relevant subject of copyright, although any third-party interests in translated or incorporated material must still be considered. In the second, a human combines AI-generated fragments with original writing, editing, sequencing or composition. Copyright may attach to the qualifying human-authored elements and to sufficiently creative selection or arrangement; the degree of protection depends on the contribution established in the specific work. In the third, an individual enters a broad instruction and accepts the result without meaningful control over its expressive features. Describing that individual as the copyright author of every generated detail would overstate the creative contribution and undermine the distinction established by Article 23(1).

An additional feature of Kazakhstan's law is Article 23(2), under which textual prompts sent to AI systems may themselves qualify as copyright objects where they result from intellectual creative activity [3]. This provision deserves careful interpretation. A prompt can be a linguistic work with original expressive elements, particularly when it includes an elaborate fictional narrative, distinctive literary

composition or other original text. However, protection of such a prompt does not logically entail ownership of every independent output that a model may produce in response to it. The relevant rights attach to the expression of the prompt, while the output requires a separate assessment of the user's contribution. The mere fact that a complex prompt triggers computation cannot replace the legal test for authorship in the final work.

This distinction is also important for educational institutions, marketing agencies and publishers. A teaching assignment might involve students producing their own outlines and using AI to draft examples. An academic journal might receive a manuscript edited with language tools. A design agency might iteratively instruct a model and then substantially redraw its images. These settings cannot be evaluated by the single question 'Was AI used?' A more accurate inquiry examines whether the person selected the message, composition and expressive elements in the final product, and whether that human contribution can be identified independently of automatically generated material.

The United States offers a comparable but not identical approach. In January 2025, the U.S. Copyright Office issued Part 2 of its report Copyright and Artificial Intelligence, focusing on the copyrightability of outputs [4]. The Office concluded that the assistance of AI does not disqualify a human-authored work and that copyright may extend to perceptible human expression, creative modifications and original selection, coordination or arrangement. It also concluded that prompts alone, with the functioning of generally available systems considered in the report, ordinarily do not provide the human control needed to claim authorship in a generated output. The Office's position concerns the copyrightability of the output, not a universal denial that an independently original prompt could be protected as text.

Judicial interpretation in the United States reinforced the principle in Thaler v. Perlmutter. On 18 March 2025, the U.S. Court of Appeals for the District of Columbia Circuit affirmed the refusal to register an image for which an AI system had been identified as the sole author [5]. The court held that an AI machine cannot be recognized as the author of a copyrighted work under the relevant United States legislation. Importantly, the appeal presented a narrowly framed case concerning machine-only authorship. It did not decide all possible claims concerning works created through substantive human guidance, revision or collaboration with technological tools. On 2 March 2026, the U.S. Supreme Court declined to review the dispute, leaving the appellate judgment undisturbed but not transforming the denial of review into a new substantive ruling [6].

Comparing the United States with Kazakhstan reveals an important point of convergence: neither approach supports an automatic transfer of full copyright authorship to a machine or to the person who merely operates it. Both examine the role of human creativity. A difference appears in legislative formulation. Kazakhstan has expressly addressed the possibility that creative prompts are protected works, whereas the United States report primarily explains why issuing prompts does not, by itself, demonstrate sufficient authorship of output. These propositions are compatible because

they answer different questions. A legally precise analysis must separately identify the prompt, the original elements inserted or modified by a person, and the generated content that remains outside the person's demonstrated contribution.

The next question concerns the materials used to train generative systems. Unlike the creation of an output, training may involve large-scale operations on existing protected works. The United States has not adopted one general statutory rule that makes every such operation lawful. Instead, the U.S. Copyright Office's May 2025 pre-publication Part 3 report analyses stages of copying and the potential application of fair use, while discussing licensing solutions [7]. Its analysis does not determine the outcome of specific litigation and should not be presented as if all training on copyrighted data were either automatically permitted or uniformly prohibited. Purpose, the character of the material, the amount used and possible market effects require context-specific examination within the relevant U.S. legal framework.

The European Union has developed a more explicit statutory approach to text and data mining. Article 3 of Directive (EU) 2019/790 requires an exception for eligible research organisations and cultural heritage institutions conducting scientific research on works to which they have lawful access [8]. Article 4 introduces a broader text-and-data-mining exception for lawfully accessible works, subject to an appropriate express reservation of rights by the rightsholder. For publicly available online content, machine-readable means are expressly identified as an example of a suitable form of reservation. Article 4 does not erase the distinct research provision in Article 3. These different scopes matter: a non-commercial research project and a commercial model-development pipeline may operate under different conditions.

The European Union AI Act adds obligations concerning the behaviour of providers of general-purpose AI models, rather than conferring authorship on such models. Article 53(1)(c) requires providers to adopt a policy for compliance with European Union copyright and related-rights law, particularly the identification and observance of rightsholders' reservations under Article 4(3) of Directive (EU) 2019/790 [9]. Article 53(1)(d) requires a sufficiently detailed public summary of the content used for training according to a template set by the AI Office. These obligations aim to improve accountability across the model supply chain. A training-data summary, however, should not be confused with a title deed to the works listed or an individualized adjudication of every rightsholder's claim.

Article 23(3)–(5) of Kazakhstan's Law on Artificial Intelligence addresses analogous issues through its own wording [3]. Paragraph 3 expressly provides that use of works for model training is not treated as free use under educational or scientific exceptions in Kazakhstan's copyright law. Paragraph 4 states that use for model training does not amount to use of works in forms relating to the author's personal and exclusive economic rights, including the enumerated acts. Paragraph 5 permits such training use only in the absence of a prohibition issued by the author or rightsholder in machine-readable form. These provisions create an identifiable legal architecture for training and opt-outs. Their application must be read together, rather than inferring

from any isolated clause that every act of obtaining copyrighted material becomes automatically lawful.

An interpretive tension nevertheless requires clarification. Paragraph 3 excludes reliance on educational or scientific free-use provisions, while paragraph 4 draws a specific distinction between training and conventional exclusive-right uses. Paragraph 5 then places legal importance on an identifiable machine-readable prohibition. The interaction raises practical questions: what counts as a sufficiently unambiguous reservation; how a provider should respond if reservations change during dataset collection; whether a technical measure also gives adequate notice; and how a rightsholder can demonstrate that prohibited material was incorporated after notice. The statute recognizes machine-readable restrictions, but successful implementation also depends on reliable administrative and technical procedures. These are matters for further regulatory interpretation, not a basis to declare the legislation internally invalid.

A comparative overview is presented in Table 1. It illustrates why treating ‘copyright and AI’ as a single issue obscures significant regulatory differences. The table concerns relevant legal approaches as of October 2026 and does not claim that judicial interpretation or implementation is complete in any jurisdiction.

Table 1. Comparative treatment of AI-related copyright questions

Issue	Kazakhstan	United States	European Union
Protection of output	Creative human contribution is required (AI Law, Art. 23(1)).	Human expressive authorship is required; AI assistance is compatible with protection.	Copyright eligibility follows the applicable authorship and originality rules; AI Act does not assign authorship.
Text prompts	Qualifying creative text prompts may themselves be protected (Art. 23(2)).	Prompting alone does not normally establish authorship of generated output.	No general AI Act rule assigning copyright in prompts or their outputs.
Training use	Art. 23(3)–(5) establishes specific treatment of training and machine-readable prohibitions.	Fair-use and licensing questions require contextual assessment.	Directive 2019/790, Arts. 3–4, provides distinct TDM exceptions; Art. 4 permits opt-out.
Provider duties	Effectiveness depends on implementation of machine-readable reservations.	Copyright law and evolving institutional guidance govern relevant disputes.	AI Act, Art. 53, requires copyright-compliance policy and training-content summary.

Source: compiled by the authors from the legal instruments and institutional materials cited in [2–9].

A hypothetical cross-border publication illustrates the separation of these legal questions. Consider a researcher based in Kazakhstan who prepares a substantial original analysis, uses a European AI service to improve phrasing and publishes the finished text through a platform accessible in the United States. The researcher may possess copyright in the original analysis even though some automatically suggested phrases are not independently attributable to human expression. The European provider's obligations regarding training-data sources remain an issue for that provider under applicable law. A third party's later unauthorized reproduction of the author's protected paragraphs would raise yet another copyright question. The place of the user, provider or server alone cannot decide all of these issues. Relevant territorial

legislation, the acts complained of and any binding agreements would need individual assessment.

The difference between similarity and copying deserves equal attention. Generative systems may produce works that resemble existing styles, themes or genres without reproducing protected expressive features. Copyright generally protects original expression rather than abstract ideas or styles as such [1, 2]. Conversely, an output that reproduces a sufficiently distinctive portion of a protected work may raise infringement concerns even if the user did not intentionally seek duplication. A legal assessment requires identification of the allegedly protected elements, the relevant act of exploitation, and applicable exceptions or licenses. The mere existence of AI involvement is neither conclusive proof of infringement nor an automatic defense. For authors, this suggests maintaining ordinary editorial checks for quotations and substantive similarities alongside any technical AI-detection methods.

Finally, a functional comparison must distinguish the legal status of binding rules from recommendations, institutional reports and scholarly proposals. The U.S. Copyright Office reports provide detailed and influential interpretations, yet they are not congressional enactments; their discussion of fair use does not predetermine court outcomes in training disputes [4, 7]. The EU AI Act is binding legislation, but its obligations to adopt a copyright policy and publish a training-content summary do not eliminate the need to apply substantive copyright exceptions and contractual rights [8, 9]. Kazakhstan's Article 23 supplies specific rules but requires practical coordination with existing copyright legislation and implementation mechanisms [2, 3]. Recognizing these differences prevents comparisons from giving identical legal weight to fundamentally different instruments.

The comparison demonstrates that output eligibility, prompt rights and training permissions must be placed in distinct legal categories. A model developer who observes a machine-readable reservation may still generate material whose ownership is uncertain. Conversely, a user may create an original arrangement of machine-generated elements while using a model whose training practices remain disputed. A copyright decision concerning one layer does not dispose of the other. This conclusion applies to individual creators and also to universities, publishers and public agencies that commission or circulate AI-assisted materials.

The first challenge of practical application is evidentiary. When a person claims copyright in a work produced with technological assistance, proof of the human contribution may be more important than the mere disclosure that AI was used. A credible record may include independently drafted text, revision history, dated sketches, version comparisons, editor comments and other documentation of expressive decisions. Neither the Kazakhstan statute nor the United States materials require that every creator keep a particular technical log for all purposes; nevertheless, such records may assist in demonstrating which elements resulted from intellectual creative labour. A simple archive of prompts, without records of substantive editing or creative direction, may be insufficient to establish ownership of the entire result.

The second challenge is the allocation of responsibilities across the development chain. The rightsholder, dataset aggregator, model developer, downstream distributor and end user frequently operate in different legal environments. Territorial copyright rules and contractual terms can therefore interact with the location of data collection, model deployment and publication. An AI provider may possess a lawful license for some materials but lack information about others. A user may have authority to publish a particular output without acquiring rights to the underlying model or its training corpus. These uncertainties support the use of explicit contractual terms and auditable records; they do not justify assigning every risk automatically to the first person who publishes an output.

The third challenge is the operational meaning of an opt-out. Machine-readable reservations may take different technical forms, and their effect depends on discoverability and consistent processing. A system capable of recognizing a reservation should also be capable of recording when it was discovered and which dataset version was affected. Rightsholders, in turn, benefit from transparent and stable expressions of their preferences. Because Kazakhstan's legislation expressly links training permission to the absence of a machine-readable prohibition, implementation guidance should explain acceptable notice formats, processes for updating reservations and methods of resolving conflicts between a website's statement, a contractual license and a technical signal. These proposals concern implementation and should not be represented as procedures already prescribed by Article 23 itself.

A fourth challenge concerns academic publishing. Copyright eligibility and research integrity are overlapping but separate issues. A paragraph may be legally protectable because it contains human intellectual creativity, yet its publication may still require accurate citations and disclosure of relevant editorial assistance. Conversely, a legitimate use of a language model to improve grammar is not equivalent to handing over responsibility for legal arguments, sources or conclusions. Journal editors and researchers should therefore distinguish attribution of copyright authorship, acknowledgement of technological assistance and accountability for factual accuracy. Listing a researcher as a co-author is appropriate only where that individual has made and approved a genuine scholarly contribution under the publication's authorship rules.

To address these problems, the article proposes a three-layer framework of contribution, provenance and permission. The contribution layer identifies the human decisions that shaped expressive features of the finished work. It calls for a short description of original drafting, selection, editing and final approval, with supporting records proportionate to the nature of the project. The provenance layer identifies the sources and legal status of materials used for model development or for direct incorporation into outputs. It recommends keeping dataset inventories and version information, distinguishing licensed, openly available and disputed sources where data are available. The permission layer captures rights reservations and authorizations associated with particular uses, including machine-readable opt-outs and contractual licenses. Each layer addresses a separate question: who created protectable expression, where materials came from, and which uses were authorized.

Applied to Kazakhstan, this model would provide administrative clarity without abandoning the human-centred approach of Article 23. At the output stage, the contribution record would help courts and editors assess whether the threshold of intellectual creative activity has been crossed. At the training stage, provenance records would help developers identify relevant rightsholders and evaluate restrictions. At the permission stage, machine-readable reservations could be documented with timestamps and associated dataset versions. Model providers operating across borders would benefit from interoperable standards for processing reservations consistent with Kazakhstan's law and the European Union's text-and-data-mining framework. The approach is not offered as a substitute for binding legislation or a complete answer to cross-border jurisdictional conflicts; it is an operational structure for organizing decisions required under existing rules.

Several legislative and institutional recommendations follow. First, Kazakhstan's competent authorities could clarify by subordinate guidance how a machine-readable prohibition under Article 23(5) should be expressed, detected, recorded and updated, ensuring that the mechanism remains accessible to individual creators and small cultural institutions. Second, model developers and content platforms should be encouraged to separate information about source material, training practices and the authorship status of published outputs. Third, copyright-related education for universities, journalists and creative professionals should explain that a protectable prompt and a protectable output are not interchangeable legal objects. Fourth, publication contracts may specify the responsibilities of parties for accurate disclosure of human work and for respecting licenses and reservations in materials supplied to a project.

Fifth, international coordination should avoid reducing the policy choice to a binary opposition between unrestricted AI training and complete prohibition. The Berne framework accommodates national differences, and the EU and Kazakhstan already recognize meaningful distinctions between eligible uses and rights reservations [1, 3, 8]. Responsible harmonization may instead focus on reliable notice mechanisms, recordkeeping practices, licensing solutions where needed, and procedural safeguards that respect creators while allowing socially valuable research and innovation. Any such approach should preserve the ability of the law to protect human expression without creating unsupported assumptions that either models or their users hold comprehensive rights in everything generated.

The results of this doctrinal comparison support five conclusions. First, human intellectual creativity remains the most defensible foundation of copyright authorship in AI-assisted works. Kazakhstan's Article 23(1), American institutional guidance and the Thaler decision converge on the need to identify a human creative contribution, although they use different legal instruments [3–5]. Second, the independent protection of a sufficiently creative prompt does not confer automatic authorship in the model's output. Third, the lawful use of copyright-protected material for training is a separate issue that cannot be resolved through output authorship alone. Fourth, machine-readable reservations and transparent compliance processes are emerging as central tools, particularly in Kazakhstan and the European Union. Fifth, documentation of

contribution, provenance and permission can improve legal certainty without equating technical assistance with machine authorship.

The proposed framework has limits. It rests on normative texts, judicial materials and published administrative guidance, rather than observation of how courts and regulators will apply Kazakhstan's new legislation over time. Machine-readable opt-outs may also present technical and enforcement difficulties not resolved by legal drafting alone. Future research should analyse case law applying Article 23, compare the effectiveness of different reservation formats and examine contractual practices among local publishers, universities and AI developers. Such empirical inquiry could test whether the framework supports authors' interests and legal predictability while preserving the potential of responsible technological development.

References

1. *World Intellectual Property Organization. Berne Convention for the Protection of Literary and Artistic Works (1886, as revised). Official treaty page. URL: https://www.wipo.int/en/web/treaties/ip/berne/index (accessed 27 October 2026).*
2. *Republic of Kazakhstan. Law No. 6-I of 10 June 1996 'On Copyright and Related Rights' (as amended). Adilet Legal Information System. URL: https://www.adilet.zan.kz/rus/docs/Z960000006_ (accessed 27 October 2026).*
3. *Republic of Kazakhstan. Law No. 230-VIII of 17 November 2025 'On Artificial Intelligence', Article 23 (as amended). Adilet Legal Information System, unofficial English translation. URL: https://old.adilet.zan.kz/eng/docs/Z2500000230 (accessed 27 October 2026).*
4. *United States Copyright Office. Copyright and Artificial Intelligence, Part 2: Copyrightability. Washington, D.C., 29 January 2025. URL: https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf (accessed 27 October 2026).*
5. *Thaler v. Perlmutter, No. 23-5233, United States Court of Appeals for the District of Columbia Circuit, 18 March 2025. URL: https://law.justia.com/cases/federal/appellate-courts/cadc/23-5233/23-5233-2025-03-18.html (accessed 27 October 2026).*
6. *Reuters. 'US Supreme Court declines to hear dispute over copyrights for AI-generated material.' 2 March 2026. URL: https://www.reuters.com/legal/government/us-supreme-court-declines-hear-dispute-over-copyrights-ai-generated-material-2026-03-02/ (accessed 27 October 2026).*
7. *United States Copyright Office. Copyright and Artificial Intelligence, Part 3: Generative AI Training (Pre-Publication Version). Washington, D.C., 9 May 2025. URL: https://www.copyright.gov/ai/ (accessed 27 October 2026).*
8. *European Parliament and Council. Directive (EU) 2019/790 of 17 April 2019 on Copyright and Related Rights in the Digital Single Market, Articles 3–4. EUR-Lex. URL: https://eur-lex.europa.eu/eli/dir/2019/790/oj (accessed 27 October 2026).*

9. *European Parliament and Council. Regulation (EU) 2024/1689 of 13 June 2024 Laying Down Harmonised Rules on Artificial Intelligence, Article 53 (consolidated text). EUR-Lex. URL: https://eur-lex.europa.eu/eli/reg/2024/1689 (accessed 27 October 2026).*
10. *Library of Congress. 'Kazakhstan: New Law Introduces Rules for AI Systems Operating in the Country.' Global Legal Monitor, 12 January 2026. URL: https://www.loc.gov/item/global-legal-monitor/2026-01-12/kazakhstan-new-law-introduces-rules-for-ai-systems-operating-in-the-country/ (accessed 27 October 2026).*