



Research Article

Beyond the Prompt: Rethinking Authorship and Originality in AI-Assisted Graphic Design

Bahaa Mustafa^{1,*} , Abeer Ibrahim² 

¹Department of Graphic and Multimedia Technology, Arab Open University-Jordan, Amman, Jordan

²Department of Graphic Design, Al Zaytoonah University of Jordan, Amman, Jordan

Abstract

Only several years after their introduction, generative AI-based image generation tools like Midjourney, DALL-E, or Stable Diffusion became an integral component in the routine design process of graphic designers, raising anew an age-old question: who authors a graphic work, and what is its originality? This paper is a conceptual and critical synthesis of relevant literature rather than an empirical study. No original data collection was conducted here; the paper synthesizes legal cases, guidelines, scholarship produced by practitioners and in design education, and experimental research on generative model biases in order to trace how GenAI is altering the understanding of authorship and originality in graphic design through copyright law, professional practices, visual aesthetics, and design education. GenAI does not render human authorship irrelevant, as was claimed by many in the early discussion of the topic. Rather, it becomes relative depending on how specific the human input in terms of creative direction is, how deep the post-generation editing is and how effectively a designer is able to justify the design choices. Copyright law authorities in the US, UK, and EU reach the consensus on the principle of protecting only works created with demonstrable human authorial input; however, each one uses its own criteria to measure this input. According to practitioner research, the function of designers changes from the creator of visuals to curators and editors of the machine output. On the other hand, experimental research of generative models demonstrates homogenization of styles and representational bias inherited from training data, but also improvements in efficiency and positive evaluation by audiences of GenAI-assisted graphics. The field where these issues are addressed is design education. The paper concludes by using the existing control-based legal scholarship to develop a multi-dimensional framework which can be used by practitioners, educators, and reviewers to describe GenAI-assisted works.

Keywords

Generative Artificial Intelligence, Authorship, Originality, Graphic Design, Copyright Law, Human-AI Co-Creation

1. Introduction

Since the development of image generation from text technology in 2022, these technologies have advanced from demonstrations to real-world tools that are used by designers to generate mood boards, concepts, marketing materials, and

even finished designs within seconds after typing out a description. The advancements in this field have come at such a pace that the professional language of the design industry has not been able to catch up yet.

*Correspondence: Bahaa Mustafa (b_mustafa@aou.edu.jo)

Received: 5 July 2026; Accepted: 20 July 2026; Published: 10 August 2026



Copyright: © The Author(s), 2026. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

The profession of graphic design has been traditionally structured around a specific human origin: a designer with the skill and judgment to conceive an idea and translate it into visual form, which he or she can be credited for, legally and professionally responsible for, and paid for. Generative artificial intelligence challenges all of these assumptions and relationships. A prompt cannot really be said to be an idea in the classical sense. The output of a diffusion model cannot really be called a translation of that idea via the skills and judgement of the creator. And the resulting image may incorporate patterns and motifs drawn from millions of training images that are never individually attributed. In the age of GenAI, the authorship of a design is therefore a central rather than marginal question. This paper does not seek to answer that question experimentally, via fresh fieldwork. Rather, it will synthesize existing law, practice, and pedagogy scholarship to construct a conceptual model for the renegotiation of authorship and originality in graphic design. Consistent with this framing, the analysis that follows is offered throughout as a conceptual and critical synthesis of existing literature, not as an empirical study of graphic designers themselves. Much of the authorship framework described herein is domain-neutral, and the novelty here lies less in raising a unique set of concerns for graphic design and more in applying an existing framework to design practice: a survey study on the use of AI technology for fictional writing found, for instance, that AI assistance impacted notions of authorship and authorial responsibility independent of the domain of production [1], a result which is confirmed by the design-specific research cited herein rather than contradicted. What does vary by domain is the importance of the stakes involved, and the craft markers available to a reviewer or client, where the domain-specific account can help. This paper is organized into four analytical movements. First, it will place the current debate within the context of critical theory of authorship, especially the poststructuralists' anticipation of a de-centered, distributed author long before generative models had been imagined. Second, it will look at how copyright authorities in different jurisdictions have begun to stake out lines for GenAI-assisted works not on the basis of whether GenAI was used at all, but on whether there is demonstrable human creative control in play. Third, it will look at the practice-based research on the way that design experts and scholars have adapted to GenAI, as well as the cost in aesthetics, stylistic uniformity, and representation bias, that has resulted. Fourth, it will turn to design education and the adaptation of established control-based frameworks from copyright scholarship to the specifics of graphic design practice.

2. Conceptual Approach and Literature Selection

This paper is best classified as an integrative narrative review combined with conceptual synthesis, rather than a systematic review in the PRISMA sense: its purpose is to build a

cross-disciplinary conceptual argument rather than to exhaustively catalogue every study on the topic, and the label "systematic" used in earlier drafts of this manuscript has been withdrawn accordingly. Even so, the underlying search process followed a structured protocol, reported here for transparency.

Searches were conducted in Google Scholar, Scopus, Web of Science, the Consensus academic search engine, and the arXiv preprint server between late 2025 and June 2026, using combinations of the terms ("generative AI" OR "generative artificial intelligence" OR "text-to-image") AND ("graphic design" OR "visual design" OR "design practice") AND (authorship OR originality OR copyright OR "design education"). This literature search process was complemented by additional searching through the legal literature, namely United States Copyright Office decision papers as well as Congressional Research Service reports. In addition, an examination of publishers' and journal websites was conducted in order to check the bibliographic information. The initial search resulted in the discovery of approximately 70 papers. After eliminating duplicate entries and screening the title/abstract against the inclusion/exclusion criteria stated below, 42 papers were selected for full text screening, resulting in 29 papers being included in the synthesis along with further citation chaining from sources deemed relevant.

The inclusion criteria were as follows: peer reviewed journals and conference proceedings; legal and governmental sources (national copyright office documents, court decisions, legislative research papers); and preprints from known repository (arXiv, SSRN), which were used only when there was no available peer-reviewed literature on the subject matter due to the nature of the field. The exclusion criteria include: blog posts, marketing material, and sources that had no verifiable venue or affiliation of the author; lawyer's client alert was excluded from the synthesis unless there was no source dealing with the issue of law in question. Screening proceeded in two stages: an initial relevance screen against the topic of authorship, originality, or design practice, followed by a full-text assessment for verifiability of publication details and redundancy with sources already retained.

Of the 29 references in the final synthesis, 20 are peer-reviewed journal articles or peer-reviewed conference proceedings, 6 are preprints from arXiv, 1 is an official government or legislative document, and 2 are professional legal-practice publications; claims drawn from the latter three categories are flagged in the text as preliminary, official, or practitioner commentary respectively, rather than treated as equivalent in evidentiary weight to peer-reviewed findings. Preferred sources were those published between 2023 and 2026, supplemented with foundational critical-theory papers on authorship that preceded the technological advances discussed here but that remain widely cited by recent commentators.

This method obviously has limitations. There are no primary sources interviews, surveys, or design experiments --

conducted specifically with graphic designers, and the empirical data used comes predominantly from adjacent creative fields -- user experience design, game design, and architecture -- which are more advanced than graphic design in terms of the empirical examination of GenAI. When the current paper makes extrapolations from the results of studies of other fields to the field of graphic design, it explicitly acknowledges the hypothesis status of such extensions, and Section 4.2 discusses the specific conditions under which such transfers are, and are not, warranted.

3. Theoretical Background: Authorship from Print to Prompt

The idea that a design object has a single, essential human author is a relatively modern, Western notion rooted in Romantic and early copyright-era ideas of the solitary genius. Decades before generative AI, poststructuralist critics such as Barthes (1967) and Foucault (1969) had already argued that authorship is less an originating consciousness than a construct assigned by readers and discourses [2, 3]. Recent commentary extends this argument to GenAI, sometimes via an analogy to the medical redefinition of death after mechanical ventilation separated circulation from brain function: once a single criterion could no longer settle the question, death had to be reassessed by degree and context rather than as a binary [2]. For the question of authorship, this means that GenAI is decomposing tasks - concept generation, implementation, and assessment - that traditionally were performed by a human participant in the form of a package and does so not as a sign of disappearance of authorship but as a decomposition of varying degree, which is discussed in section 5 of this paper [2, 3].

In order to analyze the issue of GenAI-assisted authorship, this paper uses a functional and distributed definition of authorship: the focus is on how much of the identifiable creative control derives from a human decision-making process, and not on whether there exists an author as such in some absolute sense.

4. Results and Discussion

4.1. Legal Redefinition: Human Creative Control as the New Originality Test

Protection of copyright rights in the United States, United Kingdom, and other jurisdictions hinges on a piece of work being an "original" product of human authorship a criterion that predates generative AI but one which the emergence of GenAI has compelled regulators to interpret in unprecedented circumstances [4]. Registration decisions by the US Copyright Office have outlined the contours of what appears to be emerging doctrine. Specifically, the 2023 decision in the

Zarya of the Dawn case denied protection to individually generated images by the Midjourney platform, but upheld copyright protection for the human-authored text and applicant's selection and arrangement of images and text to form the narrative [5, 6].

Another 2023 decision, with respect to artwork Théâtre D'Opéra Spatial, has refused copyright protection, but for different reasons unrelated to the human-authorship inquiry of the Zarya case: the applicant had made manual changes to an AI-generated image, but had failed to disclaim the parts of the artwork that were AI-generated an obligation under the guidelines of the Office [5]. Thus, the decision highlights a procedural mistake rather than any substantive originality consideration and cannot be equated to the SURYAST decision below, where protection was denied due to lack of sufficient human control over AI output.

The third case, relating to the artwork titled SURYAST and consisting of an applicant's original photograph and an AI-generated artistic style inspired by Vincent Van Gogh's *The Starry Night*, was also denied, for the same lack of adequate human control of the AI system's contribution [5].

In essence, the rulings in both cases have not found any basis to disqualify a claim for copyright protection because of the use of GenAI technology alone. Disqualification will arise where there are no discernible elements of human authorship in the final output, and there is also a lack of disclaimer of such elements [4-6].

It is crucial to realize that the copyright criteria in the United States, the United Kingdom, and the European Union are not the same, notwithstanding that all of them have adopted a criterion of human authorship in order to protect works. In the United Kingdom, "author's own intellectual creation" is a judge-made doctrine tested in each case on its merit. The EU commentary on the matter is premised mainly on the doctrine of originality established by the Court of Justice of the European Union (CJEU).

In the United Kingdom, a comparable requirement applies through the concept of a work being the "author's own intellectual creation," which is difficult to satisfy for outputs with no clear human author, but which leaves room for protection where a human uses a GenAI system merely as a tool within a more extended and specific creative process, rather than as the source of a single simple prompt [4]. Commentary on European Union case law suggests a similar orientation toward the depth and specificity of human creative involvement rather than the binary presence of AI in the toolchain [4]. Unlike many areas of intellectual property, this area of doctrine is currently a work in progress and varies between jurisdictions; the explanation provided is up to date as of mid-2026, and any reader wishing to apply it to a real-world situation should check the current status of the law in their jurisdiction.

It shows in the legal literature that there is an ongoing discussion regarding the way this doctrine should be operationalized: proposals vary from the use of three-factor tests fo-

cused on assessing the human's expressive control over the design during its conception, generation and post-generation modification [7] to progressive protections based on verifiable creative input and expressive intent [8] and multi-indicator threshold approaches accounting for prompt design, parameter selection, and curatorial decision-making. The only thing that scholars agree on is the notion that human control should decide whether the protection should be granted or not; what remains unknown is how to measure human control – this is what Section 5 seeks to address in the context of graphic design.

To illustrate the practical value of the proposed doctrine it is necessary to go beyond the registration case law and focus on the ordinary graphic design process instead. For instance, a graphic design studio creating a brand identity of a client by means of dozens of exploratory logo designs created with the help of AI finds itself in a very different originality position compared to another studio creating just a single poster design using the unedited output generated by AI and delivering it to the client. The same goes for typo-graphic posters created based on the rework of the AI-generated mood boards into vector form by a graphic designer, as opposed to mere rearrangement of the unedited AI-generated imagery around the text of the client's choice. A parallel and legally distinct battle concerns the data used to train generative models rather than the status of their outputs. Litigation such as the dispute between Getty Images and Stability AI, in which Getty alleged that millions of copyrighted photographs were used without authorization to train a diffusion model, illustrates that designers and design firms now face exposure on two fronts: uncertainty about whether they own the outputs their GenAI tools produce, and exposure to claims that the tools themselves were built on unlicensed use of other creators' work [9]. Legal scholarship on this period argues that generative AI is not so much erasing the concept of the individual creator as it is exposing how much of the language of authorship, "co-piloting," "collaboration," "companion," now used by AI developers already assumes a human-in-the-loop model of production, with important but still unsettled implications for how courts assign rights and responsibilities [10]. Some legal analysis goes further, arguing from a personality-theory account of authorship that a designer's use of GenAI tools within a considered creative process can itself be a form of self-expression deserving of protection, provided that the resulting work reflects the kind of creative contribution long required for originality, even when much of the underlying visual material is machine-generated [11].

For working graphic designers, the practical stakes of this doctrine are considerable. Client contracts, portfolio ownership, licensing terms, and the very question of what a designer is being paid for all depend on a stable answer to who controls the expressive content of a GenAI-assisted deliverable, an answer that current law supplies only unevenly and jurisdiction by jurisdiction [4, 12].

4.2. The Practitioner's Perspective: From Maker to Curator

Empirical research on how creative professionals use GenAI tools complicates any narrative in which designers are simply being replaced or rendered passive. Interviews with twenty user experience designers found that experienced practitioners remained confident in the value of their own originality, creativity, and capacity for empathic judgment, and characterized GenAI's role as assistive rather than authorial [13]. A collective autoethnographic study of five design academics who are also practicing professionals, working across graphic design, web design, advertising, and visual effects, found that generative tools were reliable for producing volume and variety but not for producing meaning on their own: the systems generated large numbers of plausible-looking options quickly, yet participants still had to repeatedly translate strategic intent into machine-actionable constraints, then diagnose and repair the cultural, semantic, typographic, and compositional breakdowns that followed [14]. Rather than disappearing, the study argues, expertise becomes newly visible in this repair-and-translation work, even as it becomes less visible to clients who see only a finished image. The same study describes a broader shift in professional workflow, away from mastery of a single tool such as Photoshop and toward orchestrating multiple GenAI subsystems, one for text, another for imagery, another for voice, before assembling the results in traditional software [14].

Because most of this evidence is drawn from UX design, architecture, and product design rather than graphic design itself, its transfer to commercial graphic-design practice is conditional rather than automatic. The transfer is most plausible where the underlying task resembles graphic design's own workflow -- iterative visual exploration followed by manual refinement, as in the UX and product-design studies -- and least plausible where a study's findings depend on features graphic design does not share, such as architecture's reliance on structural and spatial constraints. Findings on repair-and-translation labor and on the shift from maker to curator [13, 14] transfer reasonably well because they concern visual, client-facing creative work; findings tied to specific interaction modalities, such as spatial-model critique in architectural design [15], are considered to be suggestive but not directly generalizable to the worlds of typography, brand, or editorial design until testing with actual graphic designers.

Generative systems have been observed to critique an existing design more effectively than they have generated a compelling one from scratch; the authors note this particularity to the Barthesian concept of how the diminished importance of the author in favor of reception and evaluation applies [15]. In interaction-design research on tools intended for use by designers specifically utilizing GenAI technology, there have been efforts made to create interfaces in which the design intention is broken up into discrete elements, like color palette, inspiration, and keywords, to leave a record of decisions made

by a human as opposed to an entire action being left to a black-box prompt [16]. The very existence of such interface research indicates that the maintenance of a clear human authorship is understood to be a design challenge as well as a legal and philosophical one. The closest existing work to this paper's own topic reaches a similar conclusion by different routes. A systematic review of AI specifically within graphic design proposes a "hybrid intelligence" framework distinguishing conditions under which AI supports designer agency from conditions under which template-driven tools standardize output and de-professionalize authorship, a distinction this paper's practitioner-to-curator account largely supports and extends into copyright and pedagogical terms [17]. A theoretical study of authorship and ownership in AI-generated visual art across six jurisdictions similarly finds that authorship is increasingly viewed as distributed, with primary responsibility resting on human users through prompt design, selection, and interpretation, while noting that audiences still rate art known to be human-made more favorably than AI-attributed equivalents [18]. Interview-based work with practicing AI artists reaches the same relational and distributed characterization of authorship from the artists' own accounts of working with data and algorithms [19]. None of these three sources is specific to graphic design's commercial, client-driven context, which is the gap this paper's practitioner and pedagogical sections address.

A recent scoping review synthesizing fifty-seven studies published between 2022 and 2025 across visual art and design, writing, performing arts, and spatial design identifies a consistent cross-domain pattern: a shift from creation to curation and meta-creation, alongside the emergence of new professional literacies such as prompt engineering and the critical evaluation of AI output [20]. The same review finds that career stage shapes how practitioners experience this shift, with entry-level professionals more often treating GenAI as a natural extension of their existing workflow, while more senior practitioners report greater caution about what the tools obscure or displace [20]. Reviews specific to graphic design report a similar pattern of efficiency gains concentrated in repetitive production tasks such as image correction and asset resizing for packaging and editorial layouts, alongside less-resolved gains in brand-defining or campaign-defining work such as logotype design and advertising concepts, where stylistic uniformity risks are highest [12].

4.3. The Aesthetic Cost: Homogenization, Bias, and the Myth of the Neutral Tool

These phenomena are discussed together in one context but are quite different from each other and are thus distinguished. Training-data bias is the issue of unbalanced or biased source material present in a model before the user interaction. Representation bias is the under-representation or misrepresentation of some groups or aesthetics due to the training data. Stylistic homogenization means the decrease in the variety of images or the variety in the works created by designers who use the

same tool. Output convergence is the issue in usage logs when the prompts chosen by the user cluster around certain popular keywords and styles. The phenomenon of mode collapse is when the generative models lose diversity of outputs irrespective of the input provided in successive training stages. The following studies address all the abovementioned aspects separately and should not be considered as the same evidence for one problem.

Although human curation allows preserving a space for human designer judgement even in the case of usage of AI tools, the underlying models possess aesthetic preferences depending on the training material they have been trained on. There is evidence of such preferences being preserved despite purely curatorial attitude to AI tools. Studies of AI-based interface and visual design show that the predominant style conventions of predominantly English and Western training corpora tend to be reproduced by the generative models, which leads to worries about the GenAI design potentially narrowing the range of visual cultures represented in commercial output [21]. The analysis of user prompts in the public logs of text-to-image system shows that users themselves are guided by the most common keywords and popular style conventions [22]. Indeed, this pattern fits into the definition of mode collapse as described above: successive generations of a single model become increasingly homogenous and converge to an increasingly statistically typical style, as seen not only in image-producing generative adversarial networks (GANs) and diffusion models but also in large language models which gradually homogenize the generated writing [23]. While this description becomes more complicated, not refuted, by the largest empirical study conducted on the same topic to date – the analysis of more than four million AI-assisted artworks demonstrated that text-to-image tools boosted creative productivity by about a quarter and made the artworks more likely to be favorited, while peak novelty for both subjects and visual styles could increase over time even as the average novelty decreased, resulting in an increasing but uneven idea space rather than homogeneity across the board [24] – for graphic design, where the whole distribution of client deliverables must be unique and not just the best product, this distinction is important: homogenization of the average level may go hand-in-hand with improvement at the frontier.

But the impact of the average trend goes beyond merely aesthetic homogeneity. Research on synthetic face generation using diffusion models has found systematic associations between perceived attractiveness and other positive attributes, along with reduced and distorted representation of non-white and female subjects relative to already imbalanced training data, findings the authors describe as a form of algorithmic lookism operating through supposedly neutral image-generation tools [25].

For a client-facing profession whose commercial value rests on differentiating one brand, campaign, or message from its competitors, these tendencies are not only an aesthetic concern but a client-trust concern. A brand identity or advertising

campaign that converges toward the same statistically dominant visual conventions as a competitor's GenAI-assisted work undermines the basic premise of the design brief, and a design agency that cannot demonstrate how it counteracted a tool's default tendencies may struggle to justify its fee or defend the campaign's originality to the client. Cultural specificity is especially at risk where training corpora are Western-centric and a brand's visual identity depends on region-specific cultural referents that the tool underrepresents [21]. This is because originality, through the use of GenAI, is not something which happens passively as a result of the introduction of a new technology, but something which needs to be fought for against the grain of the technology, and this has important consequences for design education.

4.4. Pedagogical Implications: Preparing Designers for Distributed Authorship

Design education is the setting in which the legal, professional, and aesthetic tensions described above must be translated into teachable practice, since students are simultaneously acquiring foundational craft skills and encountering industry-standard GenAI tools already embedded in professional workflows. A closely related study of generative AI in product design education, a discipline immediately adjacent to graphic design, reaches a matching conclusion from a different angle: it recommends introducing AI as one tool among many in the designer's toolkit, used as a process aid rather than for generating final deliverables, precisely so that students retain the kind of iterative creative control this paper's framework treats as central to authorship [26]. A study of graphic design workshops structured around a Technology Pedagogical Content Knowledge (TPACK) framework had students use Midjourney and DALL-E to create posters based on design-history briefs, and found that effective pedagogy required a shift in educational goals toward what the authors call AI visual literacy: the ability to translate design intent into effective prompts, critically evaluate the resulting output, and integrate AI-generated content with traditional visual media skills, rather than treating tool operation as sufficient training on its own [27]. A corresponding reflective study conducted among second-year visual communication design students reported constant anxiety among educators regarding the potential commodification of the creative process due to the use of GenAI, and recommended the adoption of a pedagogical approach in which GenAI would be seen as one component of the whole design process [28].

The implementation of this pedagogical approach would involve making the GenAI-enabled graphic design course include the submission of a small process file containing: the list of prompts used and their evolution through iterations; the set

of outputs that were rejected/rejected and the reason for rejection; the record of any manual editing, redrawing, or recombination performed after generation; reflection on how these actions contributed to the communication goals in the brief; and design rationale of the student's expressive choices. These criteria make use of the previously mentioned three criteria direction, transformation, and explainability discussed in Section 5 and give the instructor grounds for evaluation that do not prohibit the use of GenAI and accept only the unedited output as student work.

Overall surveys of the incorporation of GenAI in design curricula indicate that creative gains made using GenAI appear to be more noticeable in terms of textual and ideational fluency than visual originality [29]. All these studies come to the same conclusion: design education should see GenAI as a collaborator that requires critical guidance rather than a black box that needs to be believed, and should incorporate the questions of authorship, bias, and provenance in its core curriculum rather than ethics [27-29].

5. Applying a Human-Control Framework to Graphic Design Practice

Legal, practical, and pedagogical evidence considered above follows the same trend in that authorship in GenAI-supported texts becomes seen as a gradient instead of a black-and-white property to award or deny. In all of the analysis presented above there are two forms of "originality" at work it might be worthwhile to distinguish them explicitly at this point. While copyright originality is a legal criterion of human authorship present in the text and sufficient for its protection, aesthetic originality is a critical design property pertaining to stylistic uniqueness of the work as compared to other competing pieces.

The first dimension is the specificity and iterative depth of human creative direction: the initial prompt, the sequence of refinements, the selections made among alternatives, and the explicit constraints a designer imposes on the generative process. The second is the extent of post-generation transformation, the degree to which AI-generated material is edited, recombined, or integrated into a larger, human-composed work rather than delivered largely unchanged. The third is the designer's capacity to identify, explain, and take responsibility for the specific expressive choices present in the finished artifact, a capacity that mirrors the disclosure requirements now emerging in copyright practice and that also serves the professional and pedagogical goal of making a designer's contribution legible to clients, employers, and students [5, 14].

Table 1. *From legal control tests to a graphic-design framework.*

Source model	This paper's adaptation	Graphic-design-specific indicator	Added value for design practice
Three-factor test: conception / generation / post-generation control [7]	Dimension 1 - specificity & iterative depth of direction; Dimension 2 - extent of post-generation transformation	Number of prompt refinements; manual redrawing/vectorizing of AI output; integration with existing brand assets	Gives a client- and classroom-legible vocabulary rather than a registration-only legal test
Graduated protection model keyed to verifiable input & expressive intent [8]	Dimension 3 - designer's capacity to explain expressive choices	Written design rationale; documented reason for rejecting alternative outputs	Converts an abstract 'verifiable input' criterion into an artifact a studio or classroom can actually produce
Multi-indicator threshold frameworks (prompt design, parameter selection, curation)	All three dimensions, combined into a single low/medium/high profile per project	Composite profile applied per deliverable (logo, poster, packaging, campaign)	Distinguishes projects that are legally and professionally defensible from those that are not, before a dispute or grading decision arises

It is worth being explicit about what is, and is not, new in this adaptation. The three dimensions below are not a competing legal test: they translate the same underlying logic used by Deng's conception/generation/post-generation stages and Odita's control indicators into a form a working designer, art director, or educator can apply without adjudicating a copyright claim. Where the legal versions ask whether a work merits registration, this version asks how a designer would document, teach, or defend a specific piece of GenAI-assisted work in a client or classroom setting, contexts where no comparable standard currently exists.

Four examples are presented below to illustrate how projects may differ across the three dimensions proposed in this framework.

Scenario A - Brand Identity Design: A designer uses a text-to-image system to generate several logo concepts, selects three for further development, manually redraws and vectorizes the preferred option, and adapts it to the client's existing brand identity. This workflow reflects a high level of direction, transformation, and explainability.

Scenario B - Advertising Campaign Design: A designer generates several campaign concepts with AI, selects one concept, makes only minor edits such as cropping, and adds the client's copy. Although the designer exercises creative judgment

when choosing the final concept, post-generation transformation is limited. As a result, this type of workflow is closer to the cases that have received the greatest scrutiny in decisions such as **SURYAST**.

Scenario C - Packaging Design: AI is used only to generate mood boards during the early concept stage. The final packaging design is developed from scratch in vector software following the client's brand guidelines, while the AI-generated mood boards serve only as reference material and are not included in the final deliverables. This workflow reflects a high level of transformation and explainability, although AI plays only a limited role in the final design.

Scenario D - Editorial or Information Design: AI is used to generate an initial icon set, after which each icon is manually redrawn to match an existing icon library. The designer also documents the reasons for these revisions in the project's style guide. This workflow reflects a high level of transformation and explainability, together with a moderate level of creative direction.

The purpose of this framework is not to establish a new legal doctrine or redefine the concept of originality. Instead, it provides a practical means of describing and comparing different forms of AI-assisted design practice by making variations in human creative contribution easier to identify and discuss.

Table 2. *Operational Framework for Assessing Levels of Human Creative Control (Low, Medium, and High).*

Dimension	Low control	Medium control	High control	Copyright / portfolio / classroom implication
Specificity & iterative depth of direction	Single prompt, output accepted as-is	Several rounds of prompt refinement and selection among alternatives	Extensive iterative direction with explicit constraints (palette, layout grid, brand guidelines) imposed throughout	Low control weakens both a registration claim and a portfolio credit; high control supports both

Dimension	Low control	Medium control	High control	Copyright / portfolio / classroom implication
Extent of post-generation transformation	AI output used largely unchanged, beyond cropping or resizing	Moderate editing: re-composition, retouching, partial redrawing	Substantial manual redrawing, vectorizing, or integration into a larger human-composed work	US and UK guidance both weigh this dimension heavily in registration and disclosure decisions
Capacity to explain expressive choices	Designer cannot account for why a specific output was chosen over alternatives	Designer can explain the overall direction but not every detail	Designer can identify, justify, and take responsibility for each specific expressive choice in the final artifact	Supports disclosure requirements, client trust, and defensible classroom assessment

In practice, the framework may be useful for several groups involved in AI-assisted graphic design. For practitioners, documenting the design process, prompt iterations, design decisions, and manual edits serves two main purposes. It supports legal and professional claims of authorship while also making visible the expertise that is often hidden behind the final design, as noted in practice-based research [5, 14].

For educators, the same three dimensions provide a practical basis for assessment. They allow instructors to evaluate students' work without discouraging the use of GenAI or treating unedited AI-generated outputs as equivalent to original student work, addressing concerns raised in previous studies on design education [27, 28]. In this respect, Table 2 can be applied directly to the process documentation described in Section 4.4.

For clients and brand managers, the framework offers a clear way to define expectations in design briefs and contracts by specifying the level of post-generation editing and documentation required from designers. It may also be useful for professional organizations and in-house copyright reviewers when deciding whether a project requires further registration or disclosure review. Although the framework is not intended to replace jurisdiction-specific legal advice, it may contribute to clearer contractual language and more consistent registration guidance than the current case-by-case approach [4, 5].

The limitations of the proposed framework should also be recognized. It is intended as a preliminary framework to support practice rather than as a validated assessment tool. The framework has not yet been tested using actual graphic design portfolios, it does not account for differences between copyright systems across jurisdictions, and it draws primarily on literature from related creative disciplines rather than on graphic design research alone.

Despite these limitations, the framework makes a conceptual contribution. It brings together three dimensions that appear repeatedly, although under different terms, across the legal, professional, and educational literature reviewed in this study. Tables 1 and 2 also provide a common structure that future empirical studies can use, refine, and evaluate.

6. Conclusions

Generative AI has not done away with authorship in the field of graphic design; rather, it has fragmented such a notion between legal, professional, aesthetic, and pedagogic contexts where there was formerly some ability to refer to an identifiable single human creator. The copyright officials within each jurisdiction surveyed in this article agree on the fundamental notion that protection should reflect demonstrable human creative involvement as opposed to a simple lack of AI tools in the process, although, as is noted in section 4.1, each applies that notion in its own way, and there remains a debate regarding how that should be accomplished in each case. Graphic designers and design theorists recognize an equivalent movement within their professional identity, from originator to curator, editor, and translator of machine-generated content.

In addition, this transition also presents certain aesthetic issues that are yet to be fully tackled. The datasets used in training generative models are unbalanced and highly influenced by Western visual culture, and hence, the generative models tend to replicate such biases and visual aesthetics. Human curation can help mitigate this problem, but it cannot solve it entirely. This is one of the problems in graphic design where the uniqueness of cultures, differentiation from other brands, and establishing trust with clients have always been some of the most crucial goals. This problem has particularly come out in the context of design education, where the research literature has indicated that GenAI needs to be taught as a tool that complements the designer's work.

Such a graded system, which is centered on the particularity of human creative control, the extent of post-production manipulation, and the ability of a designer to explain the expressional decisions of their creation, provides one method of operationalizing the aforementioned consensus in legal, professional, and pedagogical settings. The following conceptual tool is presented here with the explicit intention of being used as such and not as a validated measure. Tables 1 and 2 and the four scenarios above present a way to imple-

ment the grading system immediately, pending future empirical validation thereof. Further studies must test the grading system using actual portfolios and client cases from the world of graphic design, generalize the evidence collected from mainly UX, games, and architectural designers into graphic design, and examine the evolution of copyright doctrine as GenAI tools get increasingly incorporated into design practice.

Abbreviations

AI	Artificial Intelligence
GenAI	Generative Artificial Intelligence
GAN	Generative Adversarial Network
UX	User Experience
US	United States
UK	United Kingdom
EU	European Union
CJEU	Court of Justice of the European Union
TPACK	Technology Pedagogical Content Knowledge
DOI	Digital Object Identifier

Author Contributions

Bahaa Mustafa: Conceptualization, Investigation, Writing – original draft, Writing – review & editing

Abeer Ibrahim: Data curation, Resources, Writing – review & editing

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Formosa, P., Bankins, S., Matulionyte, R., Ghasemi, O. Can ChatGPT Be an Author? Generative AI Creative Writing Assistance and Perceptions of Authorship, Creatorship, Responsibility, and Disclosure. *AI & Society*. 2024, 40(5), 3405-3417. <https://doi.org/10.1007/s00146-024-02081-0>
- [2] Earp, B. D., Porsdam Mann, S., Sawai, T., Wangmo, T. Death, Authorship, and Generative AI: A Call for Commentaries. *JME Practical Bioethics*. 2026. Available from: https://www.researchgate.net/publication/404948426_Death_Authorship_and_Generative_AI_a_Call_for_Commentaries
- [3] Slater, A. Phantoms of Citation: AI and the Death of the Author-Function. *Poetics Today*. 2024, 45(2), 223-231. <https://doi.org/10.1215/03335372-11092818>
- [4] RPC. Generative AI – Addressing Copyright. RPC Legal Insights. Available from: <https://www.rpclegal.com/thinking/artificial-intelligence/ai-guide/generative-ai-addressing-copy-right/>
- [5] Congressional Research Service. Generative Artificial Intelligence and Copyright Law. CRS Legal Sidebar LSB10922, Library of Congress. 2024. Available from: <https://www.congress.gov/crs-product/LSB10922>
- [6] Cooley LLP. Copyright Ownership of Generative AI Outputs Varies Around the World. Cooley Insights. 2024. Available from: <https://www.cooley.com/news/insight/2024/2024-01-29-copyright-ownership-of-generative-ai-outputs-varies-around-the-world>
- [7] Deng, G. Human Authorship in AI-Assisted Creative Works: A Three-Factor Test for Evaluating Expressive Control. *International Journal of Law and Politics Studies*. 2026, 8(5), 1-7. Available from: <https://al-kindipublisher.com/index.php/ijlps/article/view/12693>
- [8] Oditia, O. Human Creative Control as a Legal Threshold for Copyright Protection in AI-Assisted Works. *International Journal of Science and Research Archive*. 2022, 7(2), 938-951. <https://doi.org/10.30574/ijrsra.2022.7.2.0366>
- [9] Gaffar, H., Al-Barashdi, S. Copyright Protection for AI-Generated Works: Exploring Originality and Ownership in a Digital Landscape. *Asian Journal of International Law*. 2024, 15(1), 23-46. <https://doi.org/10.1017/S2044251323000735>
- [10] Fenwick, M., Jurcys, P. Originality and the Future of Copyright in an Age of Generative AI. *Computer Law & Security Review*. 2023, 51, 105892. <https://doi.org/10.1016/j.clsr.2023.105892>
- [11] Mei, Y. Prompting the E-Brushes: Users as Authors in Generative AI. arXiv preprint arXiv: 2406.11844. 2024. <https://arxiv.org/pdf/2406.11844>
- [12] Zhou, S., Joneuraratana, E., Sirvesmas, V., Jamuni, P. The Impact of Artificial Intelligence on the Evolution of Graphic Design: Current Practices and Challenges. *Premier Journal of Science*. 2025, 14, 100151. <https://doi.org/10.70389/PJS.100151>
- [13] Li, J., Cao, H., Lin, L., Hou, Y., Zhu, R., El Ali, A. User Experience Design Professionals' Perceptions of Generative Artificial Intelligence. arXiv preprint arXiv: 2309.15237. 2023. <https://arxiv.org/pdf/2309.15237>
- [14] Matthews, J., Nairn, A., Fastnedge, D., Asuncion, A., Guinibert, M., Narayan, A. D. Creative Expertise and Generative AI in Visual Design Practice. *International Journal of Creative Media Research*. 2026, 13. <https://doi.org/10.24135/ijcmr.v13iApril.165>
- [15] Schneider, J., Sinem, K., Stockhammer, D. Empowering Clients: Transformation of Design Processes Due to Generative AI. arXiv preprint arXiv: 2411.15061. 2024. <https://arxiv.org/pdf/2411.15061>
- [16] Peng, X., Mackay, W. E., Koch, J. Design Generative AI for Practitioners: Exploring Interaction Approaches Aligned with Creative Practice. *Proceedings of CHI '26*. 2026. <https://arxiv.org/pdf/2603.03074>

- [17] Hafez, S. A. Artificial Intelligence in Graphic Design: A Critical Synthesis of Tools, Methods, and Creative Implications. *Cihan University-Erbil Scientific Journal*. 2025, 9(2), 129-139. Available from: <https://journals.cihanuniversity.edu.iq/index.php/cuesj/article/view/1167>
- [18] Chen, Z., He, Y. Ethical Dilemmas in Artificial Intelligence-Generated Art: Authorship, Ownership, and the Blurring of Creative Boundaries. *Digital Scholarship in the Humanities*. 2026, fqag035. <https://doi.org/10.1093/llc/fqag035>
- [19] Bomba, F., De Angeli, A. Agency and Authorship in AI Art: Transformational Practices for Epistemic Troubles. *International Journal of Human-Computer Studies*. 2025, 205, 103652. <https://doi.org/10.1016/j.ijhcs.2025.103652>
- [20] Tsao, J., Liang, C., Nogues, C., Wong, A. Perceptions and Integration of Generative Artificial Intelligence in Creative Practices and Industries: A Scoping Review and Conceptual Model. *AI & Society*. 2025. <https://doi.org/10.1007/s00146-025-02667-2>
- [21] Shin, D., Gao, A., Pang, R. Y., Lee, J., Reinecke, K., Tseng, E. Interrogating Design Homogenization in Web Vibe Coding. *arXiv preprint arXiv: 2603.13036*. 2026. <https://arxiv.org/pdf/2603.13036>
- [22] De Rosa Palmini, M.-T., Cetinic, E. Patterns of Creativity: How User Input Shapes AI-Generated Visual Diversity. *arXiv preprint arXiv: 2410.06768*. 2024. <https://arxiv.org/pdf/2410.06768>
- [23] Huang, L. T.-L., Huang, T.-R. Generative Bias: Widespread, Unexpected, and Uninterpretable Biases in Generative Models and Their Implications. *AI & Society*. 2026, 41, 1893-1905. <https://doi.org/10.1007/s00146-025-02533-1>
- [24] Zhou, E., Lee, D. Generative Artificial Intelligence, Human Creativity, and Art. *PNAS Nexus*. 2024, 3(3), pgae052. <https://doi.org/10.1093/pnasnexus/pgae052>
- [25] Doh, M., Gulati, A., Canali, C., Oliver, N. Aesthetics as Structural Harm: Algorithmic Lookism Across Text-to-Image Generation and Classification. *arXiv preprint arXiv: 2601.11651*. 2026. <https://arxiv.org/html/2601.11651v2>
- [26] Bartlett, K. A., Camba, J. D. Generative Artificial Intelligence in Product Design Education: Navigating Concerns of Originality and Ethics. *International Journal of Interactive Multimedia and Artificial Intelligence*. 2024, 8(5), 55-64. <https://doi.org/10.9781/ijimai.2024.02.006>
- [27] Hwang, Y., Wu, Y. Graphic Design Education in the Era of Text-to-Image Generation: Transitioning to Contents Creator. *International Journal of Art & Design Education*. 2025, 44(1), 239-253. <https://doi.org/10.1111/jade.12558>
- [28] Fleischmann, K. Generative Artificial Intelligence in Graphic Design Education: A Student Perspective. *Canadian Journal of Learning and Technology*. 2024, 50(1), 1-17. <https://doi.org/10.21432/cjlt28618>
- [29] Lee, C.-W. Application of Generative Artificial Intelligence in Design Education: An Exploration and Analysis to Enhance Student Creativity. *Engineering Proceedings*. 2025, 98(1), 29. <https://doi.org/10.3390/engproc2025098029>

Biography



Bahaa Mustafa is an associate professor of graphic design at the Arab Open University-Jordan. generative artificial intelligence, graphic design theory, copy-right and intellectual property law, design education, hu-man-AI co-creation, visual communication design, design ethics.



Abeer Ibrahim is an assistant professor of graphic design at Al-Zaytoonah University of Jordan. Her academic work focuses on graphic design, animation, and visual communication, design education, hu-man-AI co-creation.

Research Field

Bahaa Mustafa: His recent research explores graphic design, visual communication, animation, and the integration of artificial intelligence in design practices. He has published peer-reviewed research and participated in international conferences.

Abeer Ibrahim: Her recent research examines user experience in digital environments and the application of immersive technologies in contemporary design. She has contributed to research in these areas through academic publications.