

Tantra Art as Visual Knowledge: Collective Authorship from Lineage to Artificial Intelligence

Kanchan Das¹, Dr. Debabrata Roy²

¹Research Scholar, Sona Devi University, Jamshedpur, Jharkhand

²Assistant Professor, Sona Devi University, Jamshedpur, Jharkhand

Abstract

Contemporary debates on generative artificial intelligence frequently frame AI as a disruptive force that destabilises authorship, originality, and creative agency. Such concerns are shaped by print-era epistemologies that privilege individual origination and fixed authorship. This paper reframes these debates by examining Tantra Art as visual knowledge within an Indigenous Knowledge Systems (IKS) framework, where knowledge has historically been produced through collective transmission rather than individual artistic authorship. Drawing on Tantric visual practices—particularly yantras, ritual diagrams, and illustrated manuscripts—the study conceptualises authorship as cumulative and sustained through lineage, procedural validity, and communal accountability. In Tantra Art, authority does not derive from originary artistic intent but from correct transmission, repetition, and sanctioned variation. Through a genealogical and comparative analysis, the paper traces this visual epistemology across Tantric manuscript cultures, modern digital commons such as Wikipedia, and contemporary generative AI systems.

The paper argues that generative AI represents not an epistemic rupture but a computational intensification of collective visual knowledge production. The critical shift lies in the visibility of authorship: while Tantra Art, manuscript traditions, and digital platforms preserve traceable mechanisms of validation and responsibility, AI systems aggregate visual cultures into opaque statistical models that obscure lineage and accountability. By foregrounding Tantra Art as visual knowledge, the paper offers an alternative framework for rethinking creativity, pedagogy, and ethical governance in algorithmically mediated visual environments.

Keywords: Tantra Art, visual knowledge, Indigenous Knowledge Systems, collective authorship, lineage-based epistemology, yantra and diagrammatic systems, manuscript cultures, generative artificial intelligence, algorithmic opacity, AI ethics

1. Introduction

Tantra Art, Authorship, and the Problem of AI, Contemporary debates on generative artificial intelligence frequently express anxiety over the destabilisation of authorship, originality, and creative agency. AI systems capable of generating images and texts without identifiable creators appear to challenge long-standing assumptions about artistic intention, ownership, and responsibility. These concerns, however, are largely shaped by print-era epistemologies that privilege individual origination and fixed authorship, reinforced through copyright regimes, aesthetic canons, and institutional attribution. Such frameworks are

historically contingent and ill-equipped to account for both pre-modern visual knowledge systems and contemporary algorithmic production.

This paper argues that these anxieties can be productively reframed by examining **Tantra Art as visual knowledge within an Indigenous Knowledge Systems (IKS) framework**. Tantra Art is not approached here as aesthetic expression or symbolic iconography, but as a mode of knowledge transmission grounded in diagrams, ritual procedures, and lineage-based instruction. **This paper treats Tantra Art as visual knowledge—knowledge that operates through diagrams, procedures, and lineage rather than aesthetic autonomy**. Within this epistemology, authority is not derived from individual artistic originality but from correct transmission, repetition, and procedural validity sustained across generations.

Situating Tantra Art in this way allows for a rethinking of authorship beyond individual-centric models. Visual knowledge in Tantric traditions is cumulative and relational, shaped by teachers, practitioners, scribes, and communities rather than by named artists. Such systems foreground collective authorship as a historical norm rather than an exception. This perspective provides a critical lens for evaluating generative AI, which similarly operates through large-scale aggregation of visual cultures but lacks visible mechanisms of lineage and accountability.

The paper addresses two guiding questions: How does Tantra Art organise collective authorship through visual lineage and procedure? **and** What happens to visual lineage and responsibility when collective visual knowledge is computationally aggregated in AI systems? By tracing a genealogy from Tantric visual traditions and manuscript cultures to digital commons and generative AI, the study positions AI not as an epistemic rupture but as a technological intensification of collective visual authorship.

The paper proceeds by reviewing relevant literature on authorship, visual knowledge, and AI; outlining a genealogical and comparative methodology; analysing Tantra Art and manuscript cultures as systems of collective visual authorship; examining digital commons as transitional commentarial systems; and critically assessing generative AI as computational visual collectivity. The conclusion reflects on the implications of this genealogy for creativity, pedagogy, and AI governance.

Timeline of Visual Authorship Models (Tantra Art → AI)

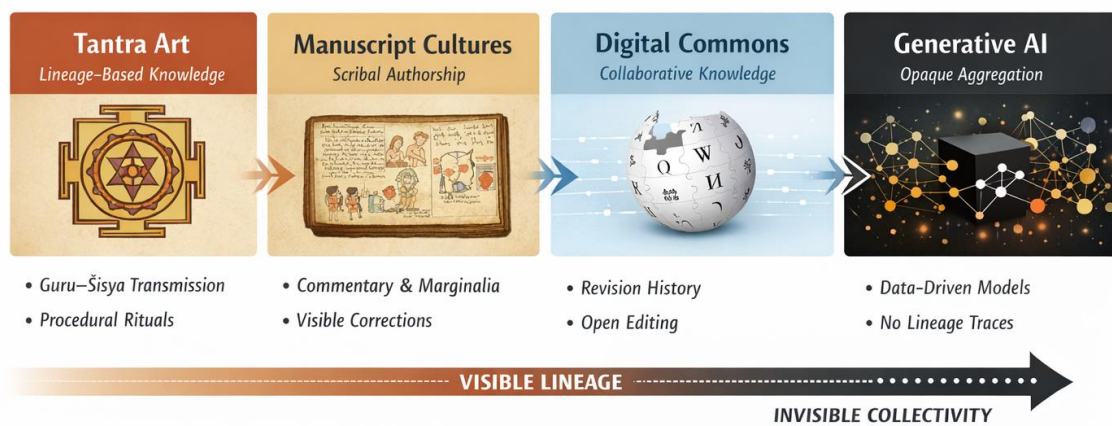


Figure 1, Timeline of authorship models from oral transmission and śāstra–bhāṣya traditions to digital commons and generative AI, illustrating the continuity of collective knowledge systems.

2. Literature Review

2.1 Print-Era Authorship and the Author-Function

Modern conceptions of authorship are shaped by the epistemic conditions of print culture, where texts and images are stabilised, attributed, and owned through institutional mechanisms such as copyright, canon formation, and academic citation. Within this framework, authorship is closely linked to individual origination and intentionality. Twentieth-century theory sought to challenge this model. Barthes' declaration of the "death of the author" questioned the authority of authorial intention, shifting attention toward language and readership (Barthes, 1968). Foucault extended this critique through the concept of the "author-function," arguing that authorship operates as a regulatory mechanism governing how texts are classified, circulated, and legitimised within specific discursive regimes (Foucault, 1969). While these interventions decentre the individual author, they remain anchored in print-centric assumptions, treating singular authorship as the norm to be dismantled rather than as one epistemic arrangement among others.

2.2 Collective Authorship in Manuscripts and Digital Commons

Historical studies of manuscript cultures demonstrate that collective authorship was the dominant mode of knowledge production prior to print. Manuscripts functioned as accretive artefacts shaped by scribes, commentators, and readers, with marginalia and variant copies evidencing distributed intellectual labour (Nichols, 2015). Meaning emerged through commentary and transmission rather than textual fixity, and authority was sustained through participation in recognised interpretive networks. Contemporary digital commons such as Wikipedia revive this logic in networked form. Research highlights how knowledge on such platforms is collaboratively produced through revision, discussion, and citation, with authorship distributed across contributors and validated through visible consensus-building processes (Levy, 2013). Unlike print-era texts, digital platforms make collective negotiation explicit, using transparency as an epistemic safeguard. Together, manuscript cultures and digital commons reveal collective authorship not as a modern disruption but as a recurring historical condition.

2.3 Visual Knowledge, AI, and the Contemporary Gap

Alongside debates on textual authorship, scholarship on visual knowledge emphasises that diagrams, schemata, and instructional images function as epistemic tools rather than representational art. Such visual forms encode procedural knowledge, enabling action and repetition beyond linguistic explanation. However, these insights have rarely been integrated into discussions of generative AI. Current AI scholarship focuses largely on data governance, bias, and accountability, foregrounding the opacity of machine-learning systems and their implications for epistemic trust (Zednik, 2021; Alshaar, 2025). What remains underexplored is how pre-modern and Indigenous visual knowledge systems conceptualised collective authorship without relying on individual origination. This gap limits our ability to assess AI-generated images beyond legal or technical frameworks. By bringing Tantra Art into dialogue with manuscript cultures, digital commons, and AI systems, this study addresses this lacuna and offers a visual-epistemic framework for understanding collective authorship grounded in lineage, procedural validity, and responsibility. *What remains underexplored is how Indigenous visual systems such as Tantra Art conceptualise collective authorship without recourse to individual artistic origination.*

3. Methodology

This study employs a **genealogical and comparative methodology** to examine collective authorship across Tantra Art, manuscript cultures, digital commons, and generative AI systems. Rather than seeking linear origins or causal explanations, the genealogical approach traces how epistemic practices of

authorship—lineage, authority, and responsibility—emerge, persist, and transform across different historical and media contexts. This method is appropriate for analysing continuity without presuming technological progress or rupture.

The comparative framework places four knowledge systems in dialogue: Tantric visual traditions, pre-modern manuscript cultures, contemporary digital commons, and generative AI. These systems are examined as epistemic formations that organise collective authorship through distinct mechanisms of validation and transmission. Comparison is structured around three analytical dimensions: visibility of lineage, distribution of agency, and modes of accountability.

The study further employs **visual–epistemic analysis**, treating diagrams, yantras, manuscript illustrations, and digital visual interfaces as carriers of procedural knowledge rather than as aesthetic representations. Visual artefacts are analysed for how they encode instruction, regulate interpretation, and sustain collective authority.

This research is **non-empirical and interpretive**. It does not involve quantitative analysis, technical system evaluation, or user-based studies. Instead, it advances a conceptual framework grounded in Indigenous visual knowledge systems to inform debates on authorship, creativity, and responsibility in algorithmically mediated environments.

4. Manuscript Diagrams and Visual Commentary in Tantric and Purāṇic Traditions

Illustrated manuscripts play a crucial role in understanding collective visual authorship within Tantric and Purāṇic traditions. Far from serving as decorative supplements to text, **manuscript diagrams, marginal drawings, and ritual inserts** functioned as integral components of knowledge transmission. Yantras, mandala-like schemata, seed syllables, and ritual layouts were embedded within manuscripts to guide practice, visualisation, and procedural execution. Visual meaning thus emerged in dialogue with text, gesture, and ritual context rather than as autonomous pictorial expression.

The production of such manuscripts involved **scribal–visual labour** that was inherently collective. Scribes, ritual specialists, and practitioners participated in copying, annotating, and occasionally modifying diagrams in response to local pedagogical needs or ritual lineages. Variations across manuscripts—differences in geometry, scale, or annotation—should not be read as corruption or error, but as evidence of **accretive meaning-making**, where visual knowledge evolved through use and transmission. Authority resided not in fixing a definitive image but in maintaining procedural coherence across iterations.

This logic extends to **Tantric and Purāṇic visual cultures more broadly**, where distributed authorship is evident through the existence of multiple versions and regional adaptations of visual forms. Purāṇic narratives and Tantric diagrams circulated across geographies, languages, and communities, generating diverse visual expressions while preserving recognisable structural features. Authority in these traditions was established through **circulation, ritual efficacy, and communal acceptance**, rather than through stable authorship or textual fixity. Such visual ecologies foreground authorship as a collective process sustained by repetition, adaptation, and embodied practice—anticipating later manuscript and digital commons models of knowledge production.



Figure 2, Tantric manuscript image illustrating the integration of visual form, mantra, and geometry as lineage-based procedural knowledge rather than autonomous artistic expression.

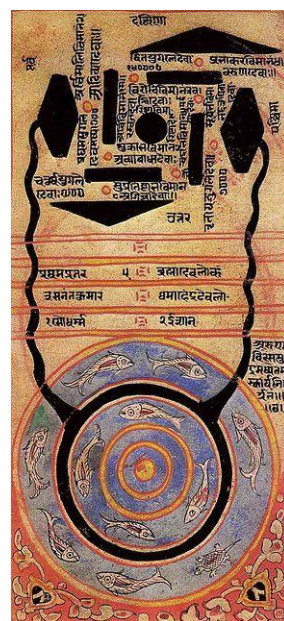


Figure 3, Diagrammatic manuscript combining text and geometry as lineage-based visual instruction, exemplifying collective authorship in Tantric visual cultures.

5. Theoretical Framework: Rethinking the Author

5.1 Print-Era Authorship and the “Author-Function”

Modern concepts of authorship are closely tied to the epistemic conditions of print culture, where texts and images are stabilised, attributed, and circulated as the products of individual creators. Within this framework, authorship functions as a marker of origin, intention, and ownership, reinforced through copyright regimes, artistic canons, and institutional validation. Twentieth-century theory sought to unsettle this model. Roland Barthes famously challenged the authority of authorial intention, arguing that meaning

is produced through language and readership rather than through the sovereign will of the author (Barthes, 1968). Michel Foucault extended this critique through the concept of the “author-function,” framing authorship not as a natural attribute of individuals but as a regulatory mechanism that governs how texts are classified, circulated, and endowed with authority within specific discursive systems (Foucault, 1969). While these interventions successfully decentre the individual author, they remain anchored in print-centric assumptions. Singular authorship is treated as the normative condition to be deconstructed, rather than as one historically specific arrangement among many.

5.2 Why Tantra Art Exceeds Print-Era Theory

Tantra Art operates outside the assumptions that print-era authorship theory seeks to critique. As a system of **visual-procedural knowledge**, Tantra Art never centres originary artistic authorship. Yantras, ritual diagrams, and manuscript illustrations derive authority not from individual expression or intention but from correct transmission, procedural validity, and lineage continuity. Visual knowledge is enacted rather than authored, sustained through repetition, calibration, and sanctioned variation.

In this context, authority exists **without individual artistic ownership**. Authorship functions as a relational and distributed role, enacted collectively by teachers, practitioners, scribes, and communities. Tantra Art therefore does not anticipate post-authorial theory so much as exceed it: where print-era theory dismantles the author retrospectively, Tantra Art never installs the author as an epistemic foundation in the first place. This distinction is critical for understanding contemporary debates on AI, where the problem is not the loss of authorship, but the disappearance of visible lineage and responsibility.

Yantra as Procedural Visual Knowledge

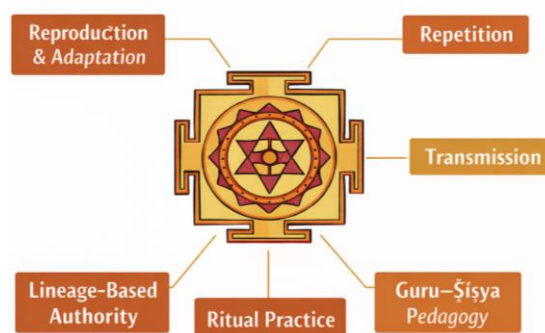


Figure 4, illustrates the yantra as a system of **procedural visual knowledge**, where geometric form functions as executable instruction rather than representational image. Authority emerges through **repetition, transmission, and lineage-based pedagogy** (guru-śiṣya paramparā), with correctness determined by proportional accuracy and ritual enactment rather than individual artistic expression. The diagram highlights how visual knowledge in Tantra Art is sustained through **collective authorship**, where creativity operates as interpretation and calibration within inherited constraints, and legitimacy derives from continuity, not originary authorship.

6. Commentary Logic in Visual Manuscript Cultures and Digital Commons

6.1 Commentary Logic in Visual Manuscript Cultures

Visual manuscript cultures operated through a dense logic of commentary in which meaning emerged from **marginalia, diagrammatic layering, and interpretive networks** rather than from a fixed, authoritative image. Diagrams, yantras, and ritual schemata were embedded within or around textual passages, creating composite visual fields that guided reading and practice. Margins functioned as active epistemic spaces where scribes annotated, recalibrated, or recontextualised visual forms in response to

lineage and use. This constituted a system of **visual collectivity as epistemic regulation**, in which variation was permitted but constrained by inherited proportional and procedural norms. Authority derived not from originality or fixity, but from coherence across iterations and continuity of transmission (Nichols, 2015).

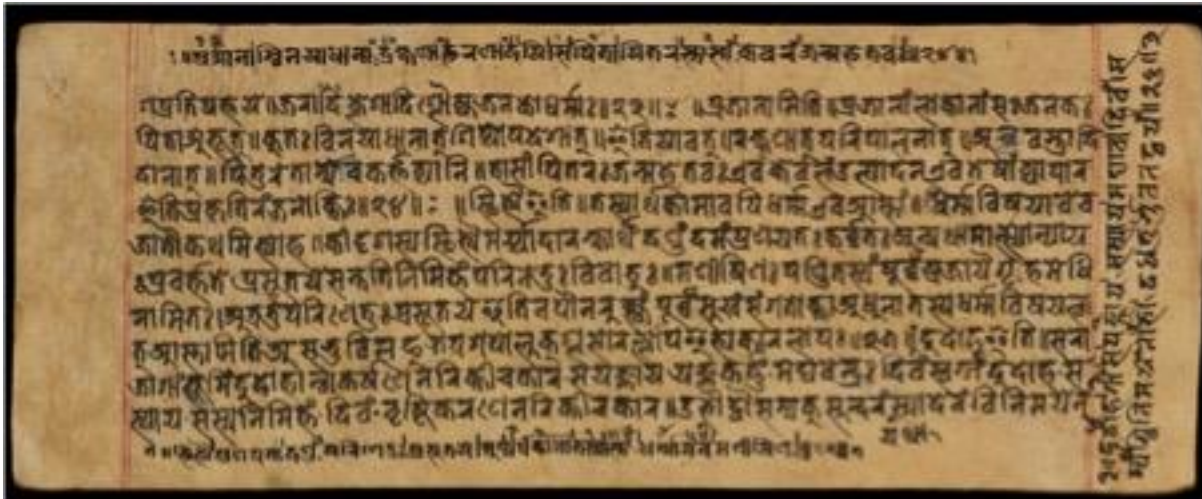


Figure 5, Raghuvamśa manuscript (17th century) with anonymous marginal commentary, exemplifying lineage-based authorship in Indian manuscript culture.

6.2 Wikipedia as a Modern Visual-Commentarial System

Wikipedia reconfigures this commentarial logic within a digital environment, particularly through its treatment of **images, diagrams, and infographics as collaborative artefacts**. Visual content is collectively produced and refined through iterative editing, discussion, and citation, with no single contributor holding definitive authority. Unlike manuscript cultures, Wikipedia renders collective negotiation **explicit and traceable** through revision histories and talk pages, allowing users to assess how visual knowledge is constructed and stabilised (Levy, 2013). This transparency functions as an epistemic safeguard, regulating authority through communal oversight rather than lineage alone. While Wikipedia restricts original interpretation through sourcing norms, it preserves accountability by documenting collective decision-making, positioning it as a critical bridge between pre-modern visual commentary and contemporary AI systems (Zednik, 2021).



Figure 6, Wikipedia edit history interface, demonstrating visible collective authorship as a digital analogue to manuscript marginalia..

7. Generative AI as Computational Visual Collectivity

7.1 Training Data as a Computational Image Archive

Generative AI systems trained for image production operate on vast datasets composed of artworks, photographs, diagrams, and visual artefacts drawn from diverse cultural and historical contexts. These datasets function as a **computational image archive**, compressing collective visual cultures into statistical models. Unlike archives that preserve material context and provenance, AI training processes transform images into abstracted features and weights, dissolving distinctions of style, origin, and lineage. The collective labour of artists, scribes, designers, and visual communities becomes operationally inseparable within the model. While this enables unprecedented scalability and recombination, it simultaneously erases traceable links between generated images and the traditions from which visual forms originate. Stylistic influence persists, but lineage does not.

7.2 The Epistemic Break: Visual Authority without Accountability

This transformation marks an **epistemic break** when compared with earlier systems of collective visual authorship. In Tantra Art, authority is grounded in visible lineage, procedural correctness, and ethical responsibility. Manuscript cultures preserve accountability through marginal commentary and recognised forms, while digital commons such as Wikipedia institutionalise transparency through revision histories and attribution. Generative AI, by contrast, produces visually authoritative outputs without offering access to the processes or sources that shaped them. Authority is performed through coherence and fluency rather than earned through lineage or communal validation. This condition can be described as **opaque aggregation**, where collective visual knowledge is mobilised without mechanisms for responsibility or correction. The challenge posed by AI is therefore not its collective nature, but the disappearance of lineage-based validation that has historically regulated trust, authority, and ethical use in visual knowledge systems.

The critique here is epistemic rather than moral: the problem is not collective intelligence, but the disappearance of lineage-based accountability

8. Implications for Visual Creativity, Art, and Pedagogy

8.1 Creativity as Curation and Interpretation

The expansion of generative AI has intensified concerns that automated image production undermines artistic agency. Such concerns rely on a narrow, originary notion of creativity. Read through Tantra Art as visual knowledge, creativity appears instead as **curation, interpretation, and ethical calibration** within collective systems. AI-assisted creativity does not erase agency; it redistributes it. Artists and designers increasingly shape meaning through prompt framing, selection, contextualisation, and judgment, functioning as **curators and ethical interpreters** rather than sole originators (Manovich, 2019). Agency persists in responsibility for outcomes, not in isolated authorship.

8.2 Art, Design, and AI Literacy

These shifts demand a reorientation of art and design pedagogy. Treating AI as a neutral tool obscures questions of lineage and accountability. Drawing on Tantric pedagogical logics, the **human-in-the-loop** can be understood as a modern *śiṣya*: an active participant responsible for discernment, repetition, and ethical evaluation. AI literacy must therefore include **lineage awareness**, critical assessment of visual authority, and responsibility for social impact. Without such grounding, AI risks amplifying authority without accountability (Zednik, 2021). Embedding these principles prepares learners to engage AI

creatively while sustaining ethical responsibility—setting the conditions for reclaiming lineage in algorithmic visual cultures.

Conclusion

Reclaiming Visual Lineage in the Age of AI

This paper has argued that concerns surrounding generative AI and authorship stem from historically narrow, print-era assumptions that privilege individual origination and fixed ownership. By reframing **Tantra Art as visual knowledge within an Indigenous Knowledge Systems (IKS) framework**, the study demonstrates that **collective authorship is not an exception but a historical constant** in the production of visual knowledge. Tantra Art, manuscript cultures, and digital commons all operate through cumulative transmission, procedural validation, and shared responsibility rather than through individual artistic ownership.

Situated within this genealogy, generative AI does not constitute an epistemic rupture. Instead, it represents a **computational intensification of collective visual authorship**. The real crisis lies elsewhere: in the emergence of **invisible collectivity**. Unlike Tantric lineages, manuscript commentary systems, or platforms such as Wikipedia—where collective processes remain traceable and corrigible—AI systems aggregate visual cultures into opaque models that obscure provenance, responsibility, and mechanisms of correction. Authority is performed through coherence and scale rather than earned through lineage or accountability.

Tantra Art offers critical resources for rethinking AI ethics beyond regulatory or instrumental frameworks. It foregrounds **lineage** as a principle of traceability, **accountability** as a condition of authority, and **responsibility** as intrinsic to knowledge transmission. Together, these principles point toward the need for **IKS-informed frameworks for visual AI governance**—frameworks that do not reject collective intelligence, but seek to render it visible, answerable, and ethically grounded. Reclaiming visual lineage is thus essential if AI-mediated creativity is to remain trustworthy and socially responsible.

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