

EDITORIAL

Preservation, participation, persistence: Cutting-edge tensions in digital culture

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From high-precision 3D reconstructions of historic writers' homes to the synchronized cheers and high-fives of hundreds in an esports cinema, digital technology is penetrating the fabric of culture and the arts in unprecedented ways. Over the past decade, the spread of virtual reality, augmented reality, artificial intelligence, and large-scale interactive platforms has moved the integration of digital technology with the arts from the margins of experimentation to the mainstream of practice.¹ Cultural heritage that once relied on physical media for preservation and transmission, such as famous residences, traditional rituals, and performing arts, is now being digitized, visualized, and made interactive at a striking pace. Our understanding of the relationship between technology and art has moved beyond a simple binary of opposition or fusion and is now generating multiple readings from a range of disciplinary perspectives.

Yet this technological turn is not merely an upgrade of tools or modes of expression; it also creates a series of urgent tensions. This Special Issue organizes these tensions into three interrelated dimensions:

- (i) Preservation: How cultural heritage is digitally represented and transmitted over the long term;
- (ii) Participation: How the public engages with cultural practices through new sensory and bodily modalities; and
- (iii) Persistence: How culture maintains continuity over time rather than succumbing to fragmentation.

These tensions bring unprecedented opportunities as well as fundamental scholarly questions. The Special Issue revolves around these cutting-edge tensions, inviting scholars to re-examine the promises and predicaments of digital cultural production from critical, cross-disciplinary perspectives.

Digital technology is not a simple medium of representation. For some time, a basic consensus has emerged in research: it is profoundly changing the modes of cultural and artistic production, intermediation, and consumption. Traditional cultural intermediaries—curators, critics, distributors, marketing channels—are seeing their influence diluted or reshaped by algorithmic recommendation, traffic distribution, and platform mechanisms.² At the same time, cultural consumers are no longer passive receivers. Through likes, danmaku comments, user-generated content, and even offline gatherings, they also take on the role of producers. Digital technology changes not just one link but the entire ecosystem. From museums and performing arts organizations to commercial art institutions, cultural actors are undergoing an inside-out digital transformation.

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When a historic writer's home is turned into a highprecision 3D model, who decides which details are kept, simplified, or omitted? This process of knowledge translation seems to be inevitably accompanied by loss. When a standardized digital framework is applied to different cultural traditions, does it unintentionally generate a new discursive hegemony, suppressing local meanings that cannot be captured by standardized fields? These questions point not to technical feasibility but to power relations and ethical choices in the process of knowledge transfer.

A deeper challenge lies in the difficult tension between the "immersive" experience of crossmedia virtual spaces and the authenticity cherished by traditional cultural arts. Immersive technology pursues a sense of sensory presence, but that presence comes at the cost of encoding, compressing and representing physical reality. Meanwhile, the collective emotions generated in digital spaces—whether the synchronized roar of a live esports audience or the moment of empathy in a virtual museum—are becoming new cultural facts, challenging our traditional boundaries between "liveness" and "representation."³

If we view digital cultural production as a chain, the first link is often the transformation of resources. To enter the digital domain, cultural heritage must first be sampled, modeled, encoded, and stored. This process may seem technically neutral, but it is full of choices and tradeoffs. Which details must be kept to the millimeter, and which can be simplified? Who sets these standards? It reminds us that the first step of digitization is not only a technical question, but also a decisionmaking process about knowledge translation and authenticity.

Once cultural resources become digital content products, a deeper question arises: how has the mode of audience participation changed? Traditional "viewing" and "appreciation" are being supplemented or even replaced by likes, danmaku, usergenerated content, and offline collective viewing. It reveals a key shift: participation is no longer a remote, asynchronous individual act, but through spatial anchoring, sensory synchronization and bodily copresence becomes a collective emotional practice.

After we have accomplished resource transformation and understood the evolution of participation, an even more fundamental philosophical question cannot be avoided: how does culture maintain temporal continuity through this digital flow? Are we preserving one precise time slice after another, or the living endurance of culture as it passes between generations? One article in this Special Issue approaches this question from a philosophical angle,

providing an epistemological foundation for the first two links. It shows that behind preservation and participation lie different understandings of cultural vitality: is it to be treated as a specimen that can be stored, or as a living process that needs to keep breathing?

These three links are not linear or independent. They intertwine and support each other. Resource transformation shapes the possibility of participation; participatory practices in turn generate new resource demands; and the questioning of temporal persistence provides a criticalreflexive framework for the other two.

Looking ahead, digital technologies such as artificial intelligence (AI) generation, big data, and virtual reality/augmented reality interaction will radically transform the cultural and artistic ecosystem. Although many case studies and technical reports have accumulated in the field of digital culture, several core tensions remain insufficiently addressed.

One such tension is between preservation and reconstruction. Traditional conservation paradigms pursue authenticity with minimal intervention, whereas digital technology inevitably involves selection, translation and reconstruction.⁴ Color correction, model simplification, the design of interactive narrative paths—all carry the value judgments of creators and institutions. The issue is not whether distortion occurs, but what kind of distortion can be widely accepted by the public.

Another tension concerns cultural homogenization versus diversity. Digital intermediary platforms tend toward standardized data structures and user experience models, which certainly facilitate crosscultural communication. Yet cultural heritage grows precisely out of specific local practices, ritual contexts and social power relations. When a standardized digital framework is applied to different cultural resources, it may flatten or even distort the layers of meaning that cannot be reduced to standard fields, thereby creating a deceptively prosperous homogeneity.

A further tension is between creative workers and algorithmic traffic. Traditional cultural creative workers—editors, curators, agents, professional critics—are seeing their work replaced by algorithmic recommendation, traffic distribution and automated content moderation. This replacement, while increasing efficiency, may also lead to homogenized cultural taste, the shrinking of critical voices, and a higher risk that niche or experimental work will go unnoticed.

Embracing technology, of course, does not mean blind obedience. The impact of technological trends on

cultural and artistic production also requires us to remain vigilantly alert. The most immediate challenge lies in intellectual property.⁵ When AI-generated content can mimic a painter's style, continue a writer's text, or even produce complete musical works, the boundary between originality and copying becomes blurred. Does the source of largescale training data infringe on the rights of existing creators? These questions have yet to receive satisfactory answers. The deeper impact lies in the overall structure of the cultural ecosystem. We call for a "dialogical" mode of digital cultural production: technology developers, cultural heritage institutions, community representatives and critical humanities scholars should intervene in each other's practices earlier, rather than only conducting posthoc "ethical reviews" or "effectiveness evaluations."

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Conflict of interest

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