

The Fading Fish Lantern Dance—Struggling Transmission of Sha Tou Jiao Fish Lantern Dance Between Tradition and Digital Technology

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Article

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Abstract

This study examines the reconstruction of the Fish Lantern Dance in Shalanxia Village, a recognized intangible cultural heritage of Shenzhen, in the context of rapid social transformation. Drawing on the theories of aura and simulacra, the research provides an anthropological perspective on the challenges associated with transmitting intangible cultural heritage in the digital era, with particular attention to the tension between tradition and digitalization within the local community.

1.Introduction

The Sha Tou Jiao Fish Lantern Dance was inscribed on the National Intangible Cultural Heritage List by the State Council of China in 2008. In Shanlanxia Village, Yantian District, Shenzhen, a troupe led by Uncle Wu, comprising approximately 20 male performers, actively preserves this tradition. The ritual consists of three choreographic stages: a collective dance representing maritime harmony, a confrontation with a fierce yellow fish, and a concluding restoration of balance. Shenzhen's focus on AR and VR technology creates a unique context. This setting allows for the examination of how digital innovation affects the preservation of cultural meaning in traditional performances.

In August 2025, WonderShare, a Shenzhen-based AI company, released a video entitled "AI lights up PengCheng, fish lantern dances beneath the Milky Way." This production demonstrates how Shenzhen reinterprets traditional heritage through advanced digital methods, using AR and VR to share intangible heritage online. The video contrasts the digital fish lantern's autonomy with the grounded nature of offline performances. It notably omits the heritage inheritor, prioritising visual spectacle over human-centred cultural transmission.

1.1 Research Aim

This study draws on theories of authenticity and ethics in digital heritage. It includes Benjamin's concept of aura, Baudrillard's theory of simulacra, and Lee and King's (2025) guidelines for VR/AR in intangible heritage. The study argues that in Shenzhen, AR/VR technologies act as a "hyperlink" between digital and tangible heritage. However, these technologies change the authenticity of the Fish Lantern Dance by breaking the link between the inheritor and the performance. WonderShare's AI video removes human performers, reducing the tradition to spectacle and undermining the community-based transmission needed for intangible heritage. This finding matches Lee and King's (2025) warning that VR/AR projects should respect practitioners' voices and ensure community representation.

1.2 Materials and Methods

This research uses ethnographic methods, including fieldwork and interviews, in Shanlanxia Village, Yantian District. Observations of rehearsals and performances show how inheritors such as Uncle Wu sustain traditions. Interviews with key stakeholders—including Uncle Wu, WonderShare's AI video team, and local audience members—address both live and digital versions of the dance. This mixed-methods

approach offers a full analysis of technology's impact on intangible cultural heritage. The article provides background and theory, reviews the literature on digital heritage and authenticity, discusses findings across four domains—creativity as hyperlinks, loss of physical skills, cultural dilution, and blurred community traits—and concludes with policy recommendations for preserving heritage in technology-driven cities.

The Sha Tou Jiao Fish Lantern Dance originated in Shalanxia Village during the Ming Dynasty in present-day Shenzhen, created by ancestors of the Wu family as an integral component of coastal fishing culture(Zhou, 2025). As a quintessential manifestation of Shenzhen's indigenous cultural heritage, this practice emerged from the unique maritime geography of the Pearl River Delta, serving as a ritual expression of fishermen's reverence for marine deities, prayers for bountiful harvests, and collective resistance against coastal piracy. The traditional Fish Lantern Dance constituted a comprehensive ritual system characterised by precise ceremonial protocols. Prior to the performance, a lantern-lighting ceremony was held, symbolising blessings from the Sea God and imbuing the lanterns with divine spiritual essence.

The performance itself comprised a sophisticated narrative structure spanning approximately one hour, divided into three distinct phases: a harmonious underwater realm, the invasion by fierce yellow fish, and the collective resistance of fish clans against the invaders. This complete narrative arc was executed through intricate body techniques including four fundamental footwork patterns—Wen (stability), Bai (swinging), Pu (rushing), and Tiao (jumping)—and three essential dance movements—Rao (encircling), Zhuo (chasing), and Yuan (circling)—representing the crystallization of embodied cultural knowledge requiring years of rigorous training (Wurilige, 2025).

The designation of Sha Tou Jiao Fish Lantern Dance as National Intangible Cultural Heritage in 2008 marked a critical transformation in its institutional status. However, this institutionalisation occurred within Shenzhen's trajectory of unprecedented urbanisation, wherein the city evolved from fishing villages into China's leading technology metropolis. This radical restructuring fundamentally destabilised the ecological foundations of Fish Lantern Dance transmission.

Concurrently, government-led initiatives to promote Fish Lantern Dance to broader public spaces necessitated adaptations. The concept of "stage effect" emerged as a critical mechanism for reconstructing traditional rituals. The performance duration was reduced from the traditional one hour to approximately 15 minutes, with organisers selecting only climactic segments.

The use of AR and VR marks the latest stage in the Fish Lantern Dance's evolution. However, this digital shift creates deep cultural problems. Uncle Wu observes that digital presentations highlight visual spectacle while obscuring the years of training required for mastery.

AR/VR brings three key changes: spatiotemporal breakdown, visual focus, and loss of control by practitioners. Together, these shifts are the main challenge for the Fish Lantern Dance. New technology spreads the tradition widely but risks losing embodied cultural knowledge.

2.Literature Review

2.1 Intangible cultural heritage in China

Other researchers look at heritage and regional development. Yuan et al. (2022) examined how intangible heritage and tourism work together in Hunan. They say lasting preservation depends on linking traditions with local economies. An abundance of heritage and tourism facilities supports continued practice, but there is a risk. When culture serves visitors above locals, it may become a commodity. Dang et al. (2021) mapped Chinese intangible heritage research using CiteSpace. Their work shows research has moved from pure preservation to also stress sustainable growth and community involvement.

Legal and policy aspects have received much attention in recent studies. Lin and Lian (2018) looked at the clash between intellectual property law and traditional knowledge. They find that legal systems struggle with traditions held by whole communities. Their analysis shows that personal property rights are not well-suited for group-held practices. They suggest other legal options may better fit the needs of living heritage. This legal view shows the importance of crafting policies that honor community ownership, while also valuing each practitioner's role.

The concept of authenticity and lived experience has emerged as a central concern in contemporary heritage scholarship. Lu et al. (2022) investigated tourists' authenticity perception and its impact on experience quality in intangible cultural heritage tourism, using Kunqu Opera as a case study. Their work demonstrates that visitors' sense of encountering genuine cultural practice significantly shapes their engagement and satisfaction, highlighting the importance of maintaining traditional performance contexts even as heritage reaches broader audiences. This research challenges static conservation approaches by emphasizing that authenticity emerges through continuous negotiation between inherited forms and contemporary presentation.

The present study diverges from these established trajectories by examining what happens when intangible cultural heritage encounters radical technological mediation. While existing scholarship has illuminated the institutional, legal, and experiential conditions of heritage preservation, relatively little attention has been paid to how digital representation alters the epistemic and experiential foundations of traditional practice. This research addresses the Sha Tou Jiao Fish Lantern Dance as a case where embodied performance confronts algorithmic generation, where the physical presence of inheritors gives way to computational simulation. By tracing how practitioners, audiences, and technologists negotiate this transformation, the study contributes to understanding heritage not merely as subject to external threats or supportive conditions, but as fundamentally reworked through the material-semiotic infrastructures of digital platforms.

2.2 The Eclipse of Aura: Ritual Predicament of Fish Lantern Dance in the Age of Mechanical Reproduction

Walter Benjamin's(1969) concept of "aura"—defined as "the unique phenomenon of a distance, however close it may be"—provides a profound theoretical lens for understanding the preservation dilemma of the Shatoujiao Fish Lantern Dance amid digital technological intervention. Benjamin argues that aura originates from the uniqueness and ritual value of artworks, while mechanical reproduction technology detaches artworks from their embedded ritual contexts, transforming them from cult objects with unique presence into exhibition pieces for mass consumption (Bartu, 2008).

Relevant studies provide crucial technological-historical perspectives for understanding this transformation. Pavlidis et al. (2007) systematically elaborated the multidimensional process of 3D digitisation for cultural heritage, indicating that complete digital recording involves 3D digitisation, digital data processing and storage, archival management, and representation. This technical framework reveals how the digitisation process transforms living performing arts into storable, reproducible data forms, thereby attenuating their original aura. Similarly, Guidi et al. (2001) reviewed the state of the art in 3D acquisition techniques, emphasising that while these technologies provide high-precision digital records, they also acknowledge that technological intervention necessarily entails fundamental transformations in modes of heritage presentation.

For the Shatoujiao Fish Lantern Dance, the "hyperlinked" functionality of digital technology creates possibilities for transcending physical limitations—AR/VR technologies can reconstruct the temporality and spatiality of performance. However, as Benjamin(1969) cautioned, while technological reproduction expands accessibility, it necessarily entails the decay of aura: when the Fish Lantern Dance is transformed into digital imagery or AI-generated content, that ritual aura which could only be generated beneath the specific night sky of Shalanxia Village, in the weight of authentic fish lanterns, and in the embodied co-presence of inheritors, is irreversibly dissipated. The research demonstrates that while 3D digitisation can provide high-precision virtual reproductions, such reproductions essentially transform living, embodied cultural practices into static, disembodied digital models.

2.3 From Simulacrum to Hyperreality: The Authenticity Crisis of Fish Lantern Dance under Digital Reconstruction

Baudrillard's theory of simulacra offers a more radical critical perspective on the existential form of the Shatoujiao Fish Lantern Dance in the digital era. In *Simulacra and Simulation*, Baudrillard (1994) proposes that simulacra progress through four sequential orders: first, as a reflection of reality; second, as a masking and distorting of reality; third, as a masking of the absence of reality; and finally, as complete dissociation from reality, becoming "hyperreality." This theoretical framework forms a profound dialogue with the digital destiny of the Fish Lantern Dance.

Recent studies provide crucial observational windows for examining this issue. Colace et al. (2025) conducted a systematic review of challenges posed by artificial intelligence in cultural heritage protection, revealing how machine learning technologies are reconstructing the acquisition and presentation of cultural heritage. Within this technological paradigm, the Fish Lantern Dance

performance is transformed into computable datasets and generable visual content—a production process of "algorithmic simulacrum."

For the Fish Lantern Dance, when audiences "experience" the virtual performance through AI-generated scenes, they encounter a "hyperreal" simulation—computer-generated lighting effects may appear more "perfect" than authentic fish lanterns, algorithmically optimised movement trajectories more "standardised" than inheritors' performances. This represents what Baudrillard (1994) warns of as the fourth order of simulacrum: the simulacrum becomes more real than reality itself, rendering reality irrelevant. The genuine danger may lie not in technological reproduction causing aura decay, but in technological simulacra reconstructing our understanding of "what constitutes reality" itself.

2.4 Digital Pathways for Intangible Cultural Heritage transmission in Chinese Urban Contexts: Shenzhen and Fish Lantern Festival

The rapid advancement of China's urbanisation has posed unique preservation challenges for intangible cultural heritage within urban spaces. Research indicates that accelerated urbanisation has led to the compression of traditional community spaces, resulting in increasingly severed connections between ICH bearers and their survival environments (Wang & Lau, 2023). Furthermore, the mobility of urban populations exacerbates the uncertainty of cultural transmission, as the influx of migrants dilutes local cultural identity (Buragohain et al, 2024).

Digital technologies have been identified as crucial instruments for addressing these dilemmas. Technologies such as digital acquisition, virtual exhibitions, and interactive experiences enable the reconstruction of ICH's cultural contexts within urban environments, transcending physical spatial limitations (Jones, Smith, Ruiz, et al., 2020). However, digital preservation still exhibits significant limitations. Buragohain et al. (2024) point out that current digital projects are predominantly led by technology companies and lack deep community participation.

As a leading city in China's reform and opening up, Shenzhen serves as a significant reference point. By leveraging its technological innovation, Shenzhen has become an important testing ground for digital heritage preservation.

3. Discussion

3.1 Creativity as a Hyperlink between Time and Space

In August 2025, AI technology company WonderShare published a video clip called AI lights up PengCheng, fish lantern dances beneath the Milky Way. By using a fish lantern as a hint, the whole video clip expresses a story of the development of Shenzhen city. The video opens with a fish lantern drifting across the sea, representing the boundless South China Sea, which symbolizes Shenzhen's origins as a humble fishing village. As the scene shifts, the lantern glides over into an ancient Tang Dynasty village, bearing witness to generations of festive traditions. Finally, the lantern's journey evolves with the

passage of time into contemporary life. The video clearly depicts the transition to modern skyscrapers, with Shenzhen's landmarks distinctly recognizable. However, unlike the fish lantern dance we saw offline, this fish lantern can freely roam in the ocean and the sky. In addition, at the beginning of the video, there is no record of the inheritor of this intangible cultural heritage regarding this special fish lantern dance. This means that the digitalized versions of the fish lantern dance have the ability to appear outside the stage, and they can perform the fish lantern dance independently without the involvement of the intangible cultural heritage inheritors. For the fish lantern dance itself, this creativity carries both positive and negative implications. By transcending spatial and temporal constraints and liberating the dance from human performers, the fish lantern dance can now reach a broader cultural context. Traditional performance contexts reveal that fish lantern dances are typically tied to specific festive occasions (such as pre-voyage rituals or the birthday celebrations of the Goddess of the Sea) and particular venues (Temple of the Goddess of the Sea, ancestral halls, or stages). Attending this performance in person may present challenges such as traffic congestion, accommodation arrangements, and scheduling conflicts. Once at the venue, spectators may find themselves confined to the periphery of the crowd, observing from afar and thus unable to fully appreciate the intricate details and profound significance of the ceremony. Outside these contexts, audiences rarely witness such performances. Consequently, as an intangible cultural heritage, the Sha Tau Kok Fish Lantern Dance has traditionally been confined to specific communities. By digitally separating the lanterns from human performers, previously unattainable cultural connections become possible. Through digital technology, unmanned fish lantern dances can now inhabit diverse spatial and temporal settings. AR and VR technologies enable the fish lanterns to roam freely along any street, while audiences gain immersive experiences through these media. Moreover, these technologies allow viewers to witness fish lantern dance performances as they would have been staged during the Tang and Song dynasties. Digital technology has shattered the rigid constraints of physical space and time, creating a digital fish lantern dance performance accessible anytime, anywhere. The atmosphere of this online, digital performance is entirely distinct from its offline counterpart, conveying a different message to the audience. During discussions with AI company Wondershare, the video production team mentioned that within AR and VR experiences, when users “maneuver” the fish lanterns, the backdrop instantly shifts from a modern exhibition hall to a virtual Qing Dynasty-era Shatoujiao sea area. Simultaneously, oral histories narrated by elder practitioners play, enabling deeper comprehension of the lanterns' significance as a “maritime totem”. AR, meanwhile, overlays virtual lantern processions onto the real cityscape, transforming everyday spaces into layered landscapes imbued with historical memory. This significantly enriches the multidimensionality of cultural narratives.

3.2 Hyperlinks for Where? The Marginalisation of Embodied Skills in the Digital Transformation of Fish Lantern Dance

In August 2025, on a quiet afternoon, when inheritor Uncle Wu sat before his dimly lit computer screen watching the video "AI Shines in Shenzhen, Fish Lanterns Dance Across the Starry Sky" produced by WonderShare, I noticed his hand unconsciously resting on his thigh—those legs, hardened by years of Za Ma Bu squats, carried a muscular memory of a lifetime. When the video concluded, the room fell into

silence. Uncle Wu's face showed no anger, no protest, only a profound exhaustion and an ineffable sense of loss. In that moment, I suddenly understood: what we were discussing was not merely the digitization of Fish Lantern Dance, but a process in which one person's embodied experience, bodily memory, and the entire community's history he represents were being silently and irresistibly replaced by some overwhelming force. This reminded me of those moments frequently encountered in ethnographic work—when you look into your interlocutor's eyes and realize their pain is not merely individual but a manifestation of some larger historical process taking shape within them.

Uncle Wu's body carries the fishing village memories of several generations of the Wu clan in Shalanxia Village. He told me that for the fish lanterns to swim in performance like real fish, inheritors must master four fundamental footwork patterns—Wen(stability), Bai(swinging), Pu(rushing), and Tiao(jumping)—and three essential dance movements—Rao(encircling), Zhuo(chasing), and Yuan(circling). These movements are not simply technical requirements but fishing village experience inscribed in the body: the stability of Za Ma Bu is the fisherman's instinct for maintaining balance on swaying boats; the rhythm of lantern swinging replicates fish swimming trajectories in water; the explosive power of rushing movements bears the collective memory of community resistance against pirates and storms. Uncle Wu said these movements cannot be fully taught through language but can only be learned by disciples watching at their side, practicing repeatedly until the body remembers the feeling. This validates Wurilige's(2025) observation: the living transmission of traditional dance depends upon embodied skills, which carry local knowledge embedded within specific geographical environments, historical memories, and social relations. When Uncle Wu recalled scenes of learning Fish Lantern Dance from his elders in his youth, his voice carried a certain deep warmth—the emotional connection formed through long-term coexistence, imitation, and correction between mentor and apprentice, something digitized Fish Lantern Dance could never replicate.

However, when digitized, the Fish Lantern Dance appears in AR devices, and this embodied knowledge is systematically marginalized. Audiences see spectacular scenes of virtual lanterns flying above Shenzhen skyscrapers, marveling at this visual spectacle, yet cannot perceive the historical depth and cultural thickness carried within the inheritors' bodies. This visually prioritized mode of dissemination essentially transforms living, embodied cultural practice into visualized, consumable digital products. Digital technology creates an illusion of "cultural presence"—audiences feel they are experiencing Fish Lantern Dance, but in reality have not touched its cultural core—knowledge, sensibility, and cultural identity that can only be acquired through long-term training at the bodily level. This echoes Yang's(2021) observation on the intergenerational rupture of intangible cultural heritage in urban China: when culture transforms from intergenerational embodied transmission to digital media consumption, its deep meanings unconsciously erode. When I asked Uncle Wu what he thought if young people henceforth experienced Fish Lantern Dance through VR headsets instead of apprenticeship, he fell silent for a long time, then said: "Maybe eventually no one will remember, these things originally required doing with one's body."

The causes of this embodied skill marginalization must first be understood through the structural forces of this city. Over four decades, Shenzhen has transformed from a fishing village into a global innovation center, and this astonishing urbanization has created a unique cultural ecology. Walking through Shenzhen's streets and watching young people hurrying toward office buildings, I could not help thinking: this city's temporal logic fundamentally differs from Fish Lantern Dance's transmission logic. Shenzhen's technology culture prioritizes efficiency, speed, and visual impact, while Fish Lantern Dance's embodied skills precisely require slow, repetitive, and patient long-term training. When Uncle Wu told me that in his youth, to master Za Ma Bu, he had to maintain parallel-thigh squats for over ten minutes daily, practicing until legs trembled without stopping, I suddenly realized: this craft requiring the body to "endure" appears fundamentally out of place in Shenzhen's cultural context of "Shenzhen Speed." Yan et al.(2025), in researching urban intangible cultural heritage in Chinese cities, have already pointed out that rapid urbanization has led to increasing alienation between inheritors and their survival environments, and Fish Lantern Dance's digital transformation represents a deepening of this alienation. Shenzhen's particularity lies in its dual role as both guardian of local culture and primary driver of digital cultural transformation, making it an exemplary case for observing tensions between tradition and modernity, locality and globalization, embodiment and digitality.

Secondly, the market logic behind digital heritage projects exacerbates the marginalization of embodied skills. WonderShare, as a commercial company, must produce visually stunning products within a limited time and budget. When communicating with one of their technical personnel, he candidly admitted: digitizing inheritors' complex embodied skills requires extensive fieldwork, motion capture, and iterative refinement, far exceeding commercial project capacities. Consequently, digital projects naturally invest resources in visual lantern presentation while simplifying or omitting embodied dimensions difficult to digitize. This market-driven decision transforms cultural heritage into visual commodities, pursuing viewability, shareability, and rather than cultural knowledge completeness. This echoes Sun & Zhang's(2022) research on "stage effect": when heritage adapts to modern aesthetics and commercial demands, its ritual completeness and cultural depth are often sacrificed. Uncle Wu said he understands digital technology can help promote Fish Lantern Dance, but his greater concern is that when young people can rapidly "experience" Fish Lantern Dance through VR headsets, the traditional apprenticeship transmission chain will break. Digital technology has created convenience, which actually becomes a hidden mechanism, depriving embodied practice of value.

Thirdly, AR/VR technology's inherent limitations also lead to representational bias. While current digital technology has achieved high photorealism in rendering static objects, capturing embodied skill subtleties—weight transfer, breathing rhythm, muscle tension, and relaxation—remains technically challenging(Bekele et al., 2018). When I watch those virtual lanterns in AR devices, although they look realistic, they lack a certain "vividness" present in Uncle Wu's performance—the vitality created by human bodies in motion, which algorithms cannot simulate. Digital platform representational logic tends to convert everything into computable data; those uncodable embodied knowledge and emotional dimensions are thus systematically filtered out. This technical representational bias creates a "disembodied digital heritage"—visually complete but essentially hollow.

This marginalization's impact on local heritage is profound. When young generations experience Fish Lantern Dance through digital devices, they gain superficial, consumptive cultural contact rather than deep, engaged cultural participation. Digital technology creates an illusion of "cultural presence"—users feel they are experiencing culture, but in reality have not touched its core. Over time, emotional bonds between local communities and their cultural heritage gradually loosen because the digitized Fish Lantern Dance no longer requires community embodied practice for maintenance. When inheritors discover their embodied skills are replaced by digital replication, what they feel is not merely craft transmission loss but existential negation—my body, my memory, my existence no longer matter in the digital age. This echoes Yang's(2021) concern about intergenerational rupture between young urban generations and traditional culture: when culture can be rapidly contacted through digital media, that transmission mode, requiring long-term commitment and bodily engagement, appears excessively "slow" and unvalued.

From a broader perspective, Fish Lantern Dance's digitalization presents a paradox: it attempts to protect culture through technological means, yet actually accelerates cultural alienation. Digital technology extracts Fish Lantern Dance from its specific community context, temporal rhythm, and embodied practice, transforming it into a cultural consumable anytime, anywhere. This "decontextualization" process dissolves Fish Lantern Dance's foundation as a community living practice. Appadurai's(1996) theory of cultural "deterritorialization" finds verification here: Fish Lantern Dance transforms from a local community ritual into a visual symbol freely flowing within digital space. However, the cost of this fluidity is cultural depth loss. Song et al.(2023), in researching Shanghai's intangible cultural heritage digitalization, demonstrate that digital projects often lack local community deep participation, leading digital products to detach from actual cultural needs. Fish Lantern Dance's case further reveals this detachment's embodied dimension: when digitalization neglects inheritors' embodied skills, it creates a digital heritage without "people" in reality.

Then, where does Fish Lantern Dance exist in the digital age? Is it for the masses rapidly "experiencing" culture through AR devices, or for communities transmitting culture through embodied practice? Are they visualized products defined by technology companies and government departments, or living culture embodied by Uncle Wu and his disciples? These questions have no simple answers but must be seriously raised. When Uncle Wu said "these things originally required doing with one's body," he was actually expressing a fundamental insistence on culture—those genuinely living cultures can never exist independently, separate from human bodies and emotions. In the digitalization wave, if we cannot guard culture's embodied dimensions and subjectivity, what we protect may be merely culture's shell, not culture itself. As Wurilige(2025) emphasizes, embodied skills constitute the core of traditional dance's living transmission; neglecting this point, any digitalization protection loses its most fundamental meaning.

Baudrillard's theory of simulacra provides a penetrating analytical framework for comprehending Uncle Wu's "profound exhaustion" and "ineffable sense of loss" when confronted with the AI-generated video. Baudrillard's third-order simulacrum in *Simulacra and Simulation*—the simulacrum that "masks the

absence"—precisely captures the ontological rupture between the digital Fish Lantern Dance and the inheritor's embodied experience. When Uncle Wu watched the virtual fish lanterns freely traversing skyscrapers in the video, what he witnessed was not a faithful reproduction of his lifelong craft, but rather a "copy without an original," a simulation that masks the absence of the authentic Fish Lantern Dance. The danger of this simulation lies not in its "falsity"—after all, WonderShare never claimed the video to be a documentary record of actual performances—but in its "hyperreality": the visual spectacularity of virtual lanterns may prove more "stunning" than authentic performances, algorithmically optimized movement trajectories more "standardized" than Uncle Wu's Za Ma Bu, thereby establishing a reference system more "perfect" than reality itself. Uncle Wu's silence and exhaustion constitute the traumatic response to this colonization of the real by the hyperreal: when the simulacrum gains epistemological priority, the authentic becomes the defective copy.

A deeper theoretical tension emerges in the ontological competition between "muscular memory" and "digital memory." The hardened muscles on Uncle Wu's thighs, forged through decades of Za Ma Bu squatting, carry the fishing village memories of several generations of the Wu clan in Shalanxia Village—this "history inscribed in the body" constitutes the material foundation of what Benjamin terms "aura." Benjamin emphasizes that aura derives from the "unreproducibility" of artworks, which in the context of the Fish Lantern Dance manifests specifically as the unreproducibility of the body: the stability of Uncle Wu's Za Ma Bu represents the internalization of fishermen's instinct for maintaining balance on swaying boats; the rhythm of lantern swinging embodies the trajectories of fish swimming in water; the explosive power of rushing movements deposits the collective memory of community resistance against pirates and storms. These "body techniques" (Mauss, 1934) cannot be reduced to transmissible knowledge systems but can only be acquired through the prolonged process of "observation at one's side—repeated practice—bodily memory." However, the representational logic of digital technology tends to transform everything into "computable data," systematically filtering out those uncodable dimensions of breathing rhythm, muscular tension and relaxation, and emotional bonds formed through long-term coexistence between master and apprentice. This is precisely the "tyranny of simulacra" that Baudrillard warns against: not that the simulacrum imitates the real, but that the real must be reconstructed according to the standards of the simulacrum.

3.3 Hyperlinks for Whom? The Dilution of Cultural Significance in the Hyperlinking Process

The Fish Lantern Dance is deeply rooted in the tidal-flat fishing culture of Sha Tou Jiao. In this coastal community, residents rely on the tides for their livelihood, and the Fish Lantern Dance serves as a ritual that expresses reverence for the ocean and offers prayers for abundant harvests. It also carries the collective memory of early fishermen resisting pirates—survival wisdom and spiritual sustenance woven into every movement that mimics the rise and fall of waves. Yet AR/VR technology extracts Fish Lantern Dance from its original spatiotemporal context, allowing it to be re-embedded into any digitally constructed space-time. This spatiotemporal extraction severs the dance from its ritual foundations: its connection to tidal flat ecology, community survival, historical memory, and spiritual practice. As Sun

and Zhang (2022) observe, hyperlink structures reduce complex cultural meanings into clickable fragments. When Fish Lantern Dance can travel freely through any digital hyperlink, it transforms from a specific community's "life ritual" into decontextualised "digital content."

More critically, the core decision-making power of this digitalisation lies not with heritage bearers but with digital companies. As controllers of technology, companies determine what dazzling effects to present, what ritual details to omit, and which spatiotemporal scenarios to hyperlink Fish Lantern Dance into. Zhang et al. (2025) note that digital media tend to "reduce dimensions" of complex rituals into consumable fragments—a process driven by technological and commercial logic rather than cultural preservation needs. In this unequal power field, Sha Tou Jiao bearers are marginalised: they are excluded from supervising the digital transformation, and their interpretive authority over the dance's ritual significance is appropriated by digital companies. When companies arbitrarily link Fish Lantern Dance to various spatiotemporal scenarios for commercial purposes, the dance shifts from "living heritage controlled by bearers" to "digital assets controlled by companies."

This unequal digitalisation shapes audience reception in troubling ways. Museum exhibition feedback shows that visitors from other regions, lacking prior cultural knowledge, gain little from dazzling AR/VR effects. They are drawn by visual spectacle and spend almost no time engaging with Fish Lantern Dance as an ancestral ritual. When audiences immerse themselves in interactive virtual lantern experiences, they consume a "visual product" repackaged by digital companies rather than the intrinsic value of a community cultural practice. Baudrillard's fourth-order simulacrum—the model of simulation that becomes more "real" than the real itself—illuminates this dynamic: digital hyperlinking does not merely misrepresent Fish Lantern Dance; it replaces the ritual as the primary mode through which audiences encounter and understand the practice. Benjamin's theory of aura deepens this critique. The ritual significance of Fish Lantern Dance derives from its embeddedness in a specific tidal flat ecology, a particular community's survival history, and a communal spiritual practice that cannot be separated from its original setting. Aura is precisely this "unique phenomenon of a distance, however close it may be, the sense that what one witnesses is irreplaceable because it is rooted in an unrepeatable spatiotemporal context. Digital hyperlinking abolishes that distance: by making Fish Lantern Dance instantly accessible anywhere, it renders the original ritual's appearance unnecessary. The question then becomes unavoidable: when Fish Lantern Dance's digital representation is entirely controlled by companies, when bearers' voices are marginalised, and when audiences encounter only ritual fragments wrapped in dazzling effects—whose heritage is this, and to what extent does what digital companies present still belong to the Sha Tou Jiao fisherman community at all?

3.4 Results

Fish Lantern Dance, as part of the Sha Tou Jiao community's intangible cultural heritage, possesses immutable spatiotemporal coordinates: it occurs during the Lantern Festival in the village's specific alleys, with movements that require three to five years to master. With advancing AR and VR technologies, Fish Lantern Dance performances, boasting dazzling visual effects, have been transported from real-life stages to screens. Uncle Wu observed that young people can now "experience" the entire

process within hours through VR headsets, "participate" in virtual parades through AR applications, and create their own "digital Fish Lantern Dance" for social media. When Fish Lantern Dance's experience becomes infinitely replicable—when anyone can "participate" at any time and place—what significance does Sha Lan Ha Village retain as the dance's ancestral home? The consequence is the blurring of community-specific experiential qualities. Nicholas (2022) notes that digital technology transforms heritage into repeatable data, making experiences ubiquitous while losing their particularity. Precisely because of digital alternatives, fewer young people in the village are willing to dedicate three to five years to a genuine apprenticeship.

Benjamin's theory of aura provides an indispensable analytical lens. Benjamin conceptualises aura as "the unique phenomenon of a distance, however close it may be, fundamentally dependent upon embeddedness in a ritual context and its irreducible 'here and now'" (Bratu, 2008). The Fish Lantern Dance traditionally generates its aura through an intricate web of spatiotemporal specificities: the tidal cycles that structure fishermen's livelihoods, the mudflats where community members collectively labour, the moments of pre-voyage rituals and Sea Goddess birthday celebrations, and the embodied dialogue between performers and oceanic forces. This is not merely a dance performed in a particular location, but one emerging from the very relationship between human bodies and tidal environments—a relationship cultivated over generations through the "rise and fall of waves" that lantern movements mimetically embody. Benjamin's (1969) insight that aura "withers in the age of mechanical reproduction" acquires its full force here: when AR/VR technology extracts the Fish Lantern Dance from Sha Tou Jiao's tidal flat ecology, it dissolves the very conditions of aura production. For Benjamin, mechanical reproduction transforms cult value into exhibition value. Digital technology, however, achieves what we might term "hyper-emancipation"—the dance is no longer anchored to any specific spatiotemporal coordinates, severed not by replacement with a single alternative context but by multiplication into an infinite set of possible contexts. Benjamin distinguishes between "authenticity" and "authority": mechanical reproduction destroys authenticity but preserves authority, yet the Fish Lantern Dance's digital transformation suggests destruction of both, replaced by "algorithmic legitimation"—digital companies derive legitimation not from ritual embeddedness or community authorisation, but from technical capability and market reach.

Baudrillard's theory of simulacra provides the most radical critical framework. The first deprivation concerns the transformation from body to sign. Uncle Wu's body carries the memories of several generations: hardened muscles from decades of Za Ma Bu squatting, the slightly hunched back from years of holding lanterns. These constitute the irreducible material foundation of the Fish Lantern Dance. When WonderShare's AI video transforms the dance into a virtual existence freely traversing the ocean and sky, this corporeality is systematically erased. Baudrillard notes that power has shifted from the realm of production to the "code"—structural violence that transforms all existence into calculable, circulable, and consumable symbols. The inheritor's body is reduced to a visual sign; complex bodily craft to algorithmic parameters; intergenerational emotional bonds to interactive interface feedback. This is ontological reduction: from "bodily practice" to "visual consumption," from "embodied mastery" to "symbolic recognition." The second deprivation involves the algorithmic reconstruction of social

relations. When digital companies hold "core decision-making power," when inheritors' "knowledge and interpretive authority" are marginalised, and when the Fish Lantern Dance transforms from "living heritage controlled by inheritors" to "digital assets manipulated by digital companies," cultural production's social relations are fundamentally reconstructed. Uncle Wu's subjective status—his control over performance protocols and interpretive frameworks—is deprived not through explicit rejection but through the invisible architecture of technical systems: commercial cycles exclude long-term fieldwork, motion capture cannot record bodily subtleties, and platform optimisation does not value ritual completeness. The third deprivation concerns the simulacralization of expectation structures. Baudrillard's concept of the "precession of simulacra" notes that in postmodern society, models no longer reflect reality but precede and determine the form of reality (Bratu, 2008). When younger generations become accustomed to "experiencing" Fish Lantern Dance through VR, their expectations are shaped by simulacra: seamless immersion, perfect effects, immediate feedback—expectations that authentic Fish Lantern Dance cannot satisfy. Authentic performance involves bodily fatigue, obstructed sightlines, and weather discomfort—these "imperfections" become "defects" under the simulacral reference system. When digital versions become audiences' cognitive prototype, the audience base for authentic performance shrinks; when transmission chains break, digital simulacra become the only existing form of "Fish Lantern Dance." This is the "evaporation of reality" Baudrillard warns against—not that the Fish Lantern Dance disappears, but that we lose the capacity to distinguish authentic Fish Lantern Dance, lose desire for the real, and ultimately lose the category of "reality" itself. As Uncle Wu said, "Without people dancing, Fish Lantern Dance is just data."

4. Conclusion

This study identifies a central paradox: the "hyperlink" function promised by technological modernity may, in practice, result in the systematic deprivation of cultural sovereignty from heritage communities. While Shenzhen's technological advancement provides innovative preservation methods, these digital interventions risk appropriating cultural representation from the communities themselves.

Benjamin's theory of aura provides a crucial framework for understanding the cultural politics of the "hyperlink." The Fish Lantern Dance traditionally generates its aura within specific contexts: the bodily craft of inheritors such as Uncle Wu, the ritual atmosphere of community participation, and the rhythm of fishing village life. However, when transformed into an "unmanned" performance freely traversing virtual space, the conditions of aura production are thoroughly dissolved. More importantly, this dissipation accompanies the transfer of cultural representation rights—from "living heritage controlled by inheritors" to "digital assets manipulated by digital companies."

Baudrillard's theory of simulacra guides us to recognise that the function of the "hyperlink" is far more radical than simple decay of aura. The digitisation constitutes a "third-order simulacrum"—a hyperreality more "real" than the real. When young audiences "experience" the Fish Lantern Dance through VR headsets, they encounter a "copy without an original." The visual spectacularity of virtual fish lanterns

may prove more "stunning" than authentic performance, establishing a reference system more "perfect" than reality itself.

4.1 Theory and calculation

For policymakers and practitioners, this study poses an urgent question: in the age of the "hyperlink," how can we enjoy the accessibility technology offers while safeguarding heritage communities' control over their cultural sovereignty? The theories of Benjamin and Baudrillard do not ask us to reject the "hyperlink," but remind us to maintain critical vigilance—to recognise that every "connection" may simultaneously be a "disconnection," and every "preservation" may simultaneously be a "deprivation."

Future research can further explore how to establish an ethical framework for digital technology interventions in the transmission of intangible cultural heritage; how to preserve inheritors' participation rights during the digitalisation process; and how to maintain community particularity while expanding dissemination.

Declarations

Author Contribution

Wang Haochen: Conceptualization, Methodology, Writing- Reviewing, Writing- Original draftResources,Investigation, Software, Supervision and Editing. Li MengXin: Writing- Original draft, Data curation, Project administration, Formal analysis,Validation.

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Data Availability Statement

The data that support the findings of this study consist of ethnographic interview transcripts with two stakeholder groups. All personally identifiable information has been removed through anonymisation. The anonymised interview transcripts, the interview guides, and the informed consent forms signed by all participants are available as supplementary files accompanying this article. The research ethics approval letter is also included. Data for this research is available, see documents in Related files or sent email to correspondent author .

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