Posthuman Encounters in Heritage Tourism: Digital Mediation and Cultural Memory in Siak Sri Indrapura

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Abstract

This article examines how digitally mediated encounters at heritage tourism sites reconfigure cultural memory, tourist subjectivity, and sustainable development through a posthumanist lens. Focusing on Siak Sri Indrapura in Indonesia, the study draws from key posthuman thinkers including Haraway, Braidotti, Hayles, and Ferrando to analyze how tourists become relational nodes within networks of bodies, machines, and affect. Using critical posthuman cartography and digital ethnography, the research reveals how augmented reality, algorithms, and multisensory environments destabilize traditional notions of authenticity and cultural preservation. The paper argues for an ethical, inclusive, and distributed rethinking of tourism practice in the posthuman era.

Keywords: Posthumanism, Heritage Tourism, Digital Mediation, Cultural Memory, Siak, Cyborg Tourism.

Introduction

In an era where human experience is increasingly mediated by technology, the field of tourism-particularly heritage and cultural tourism-faces profound transformation. Traditional tourism practices centered on linear consumption of space and time are giving way to hybridized, digitally-enhanced experiences that challenge classical boundaries of human, cultural, and spatial identity. This shift compels us to reconsider not only what it means to visit a place, but how the encounter itself is constructed through posthuman assemblages of bodies, technologies, and environments (Braidotti, 2013; Haraway, 1991).

Siak Sri Indrapura, a historical town in Riau Province, Indonesia, offers a compelling site for examining this transformation. Home to the former Malay Sultanate and its architectural and cultural legacies, Siak has long been valued for its human-centered narratives-monuments, royal lineages, and cultural traditions. Yet in the context of posthumanism, these legacies are no longer static repositories of meaning. Rather, they become dynamic interfaces between memory, materiality, and digital mediation (Hayles, 1999; Wolfe, 2010).

The incorporation of technologies such as augmented reality (AR), virtual storytelling, and digital archives in heritage tourism introduces not only new aesthetic experiences, but new ontologies. As tourists engage with digitally-rendered histories and virtually reconstructed palace spaces, the line between past and present, between human memory and machinic reanimation, becomes blurred. This phenomenon resonates with Haraway's (1991) notion of the cyborg-hybridized beings of organism and machine-suggesting that the cultural tourist is increasingly a posthuman subject.

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Such digitally-mediated encounters are not merely enhancements; they reconfigure the very terms of historical experience. The Siak Palace, when experienced through AR, ceases to be a fixed artifact and instead becomes a site of recombinant narratives and embodied immersion. Tourists do not simply observe the site-they interface with it, extending their cognitive and affective reach via nonhuman agents such as mobile devices, sensors, and curated algorithms (Hayles, 1999). What is at stake here is the shift from representation to simulation, from interpretation to performance.

In this new configuration, heritage tourism becomes a posthuman act of becoming, rather than a passive act of consumption. The subjectivity of the tourist is co-constructed by technological systems, cultural memory, and nonhuman forces-from algorithms that suggest "must-see" attractions to GPS-mediated movement across curated routes. The posthuman tourist is no longer the autonomous traveler of Enlightenment rationality, but a decentered node within a network of planetary ecologies, digital infrastructure, and affective economies (Ferrando, 2019).

Moreover, the logic of sustainability-long discussed in tourism as a means to preserve resources for future human use-must also be reimagined. Posthumanism invites us to think beyond anthropocentric conservation, toward forms of ethical relationality that include environments, architectures, data, and other-than-human agents (Braidotti, 2013). In Siak, this means reconceiving cultural preservation not only as safeguarding tradition for human tourists, but as maintaining the ecological and technological systems that co-produce meaningful experiences.

This posthuman reframing also exposes tensions within cultural tourism: the commodification of heritage, the simulation of authenticity, and the asymmetry of digital access and interpretation. Whose memory is preserved, and by whom? Which histories are augmented and which are forgotten? These are ethical questions that demand attention in digitally-mediated heritage economies. As such, Siak Sri Indrapura is not just a destination but a site of epistemological contestation in the age of algorithmic memory and curated pasts.

Current tourism strategies in Siak emphasize visitor loyalty, digital branding, and experiential quality-all of which operate within neoliberal logics of repetition, personalization, and data extraction. Yet a posthuman approach encourages us to question these aims: What if tourism was not about increasing loyalty, but about fostering *affective encounters* between bodies, histories, and technologies? What if "return visits" were not merely metrics of success, but indices of relational transformation?

This study thus seeks to explore: How do digitally-mediated heritage experiences in Siak Sri Indrapura reconfigure the tourist subject, cultural memory, and sustainability in posthuman terms? By examining strategies of digital engagement, community involvement, and sustainable heritage design, we aim to move beyond models of human-centered consumption toward a more distributed, ethical, and technologically entangled understanding of tourism. This is not simply about saving the past-it is about rethinking the future of human and nonhuman co-becoming in tourism spaces.

Literature Review

The field of posthumanism offers a rich theoretical lens through which to reinterpret traditional concepts in heritage and tourism studies. Where conventional approaches to tourism often emphasize human agency, perception, and satisfaction, posthumanist scholarship challenges the centrality of the human subject, emphasizing instead the entanglement of bodies, technologies, discourses, and environments (Braidotti, 2013; Wolfe, 2010). Within this context, heritage

tourism can be understood not as a passive consumption of fixed history, but as a technologically mediated, affectively distributed practice shaped by hybrid agencies.

Donna Haraway's (1991) cyborg metaphor is especially resonant in this terrain, offering a conceptual vocabulary for understanding the tourist not as a bounded, autonomous individual, but as a composite of organic, technological, and informational flows. In digitally augmented heritage sites-such as the Siak Palace enhanced by AR or VR-the tourist becomes a posthuman interface, negotiating knowledge through interaction with machines, images, and databases. The "experience" of culture becomes inseparable from its algorithmic presentation and real-time modification.

This shift from representation to simulation is central to N. Katherine Hayles' (1999) argument that the posthuman condition is characterized by the decentering of the liberal humanist subject in favor of informational patterns and feedback systems. In heritage tourism, this is manifest in the way memory is encoded, stored, and reactivated-not solely through oral history or material artifacts, but through metadata, mobile apps, and digital archives. The "truth" of the past becomes a modular, interactive process shaped by software and curated algorithms.

Furthermore, posthumanism opens up new ways of thinking about place and temporality in tourism. The work of Braidotti (2013) invites us to see space not as inert background but as a co-actor in experience. Touristic places are not stable entities but relational assemblages constituted by architecture, narratives, affect, and environmental matter. Likewise, time in heritage tourism is not strictly linear or historical-it becomes layered, augmented, and remixed. AR-enhanced tours of Siak, for example, allow tourists to "walk through" multiple temporalities simultaneously-experiencing the palace both as it was and as it is, collapsing distinctions between original and replica.

This perspective also compels a re-evaluation of authenticity, a cornerstone of tourism discourse. From a posthuman point of view, authenticity is not found in unmediated presence but produced through affective intensities, performative interactions, and networked systems. Digital technologies do not necessarily dilute authenticity; rather, they produce new modalities of *authentic affect*-experiences that feel "real" precisely because of their hybrid, immersive, and participatory nature (Ferrando, 2019).

Another key contribution of posthumanism to tourism studies lies in its ethical repositioning of agency. Rather than focusing solely on human experience and satisfaction, posthuman ethics demands a broader view-one that considers the rights, impacts, and participation of nonhuman entities such as animals, architectures, ecosystems, and algorithms (Wolfe, 2010). In the context of Siak, this implies that sustainable tourism strategies must consider the health of riverine ecologies, the preservation of material heritage, and the ethical use of data technologies-beyond their utility to tourists.

Moreover, memory itself becomes an unstable category under posthuman scrutiny. Instead of treating cultural memory as static knowledge transferred across generations, we begin to see it as a dynamic ecology of storage, retrieval, and modification. Digital platforms enable tourists to contribute to the narrative, remix historical content, and inscribe their own interpretations onto public memory (Femenia-Serra et al., 2019). In this light, heritage sites are no longer guardians of truth but collaborative memory systems, always evolving.

Finally, this literature review underscores the necessity of integrating posthumanist theory into empirical tourism research. While much of the existing literature still prioritizes quantitative

metrics-such as satisfaction scores, loyalty indexes, and revisit rates-a posthumanist framework insists on exploring the affective, political, and ontological dimensions of tourism encounters. For sites like Siak Sri Indrapura, this means asking not only how many visitors return, but *what kinds of entanglements*, *what forms of becoming*, and *what ethical configurations* are being produced in the process of cultural interaction.

Methodology

This study adopts a posthumanist qualitative methodology that resists linear, human-centered models of knowledge production. Rather than treating tourism experiences as data points to be measured, this research views them as emergent phenomena co-produced by human and nonhuman assemblages-including technologies, architectures, cultural narratives, and affective atmospheres. The methodological framework draws on critical posthuman cartography (Braidotti, 2013) and digital ethnography (Pink et al., 2016) to explore the more-than-human dynamics of heritage tourism in Siak Sri Indrapura.

Cartography, in this sense, is not about mapping physical space, but about tracing relations, intensities, and transversal flows of meaning across bodies, devices, systems, and stories. Braidotti (2013) describes this as a "nomadic" method that allows for situated, affective, and ethical mappings of power, subjectivity, and knowledge. The method allows us to track how tourists, technologies, infrastructures, and cultural memories interact in hybrid, unstable ways-especially in a digitally mediated environment.

The study relied on secondary data sources, including policy documents, digital tourism platforms, augmented reality applications, and promotional content related to Siak's tourism offerings. These were not merely treated as texts to be coded, but as sites of ontological emergence-places where meanings are produced, contested, and negotiated between human and machinic agencies. Tourist reviews, for instance, were analyzed not for sentiment analysis, but for their performative and affective dimensions: how language, interface design, and social algorithms shape tourist subjectivity.

Additionally, the research included aesthetic and affective reading of virtual tour simulations, AR walkthroughs, and digital exhibitions related to the Siak Palace. Inspired by Hayles' (1999) method of material-discursive analysis, these interfaces were explored as technologies of embodiment-where historical knowledge is no longer simply delivered, but *felt* through multimodal engagement. Attention was given to the ways these technologies invite, exclude, or reconfigure affective relationships with cultural memory.

Rather than seeking generalizable findings, the aim of this methodology is conceptual intensification-to expose the affective, ethical, and epistemological stakes involved in posthuman tourism. This resonates with Haraway's (1991) insistence on "situated knowledges" and Ferrando's (2019) call for methodologies that are attuned to complexity, hybridity, and relational ethics. The method thus rejects binaries such as subject/object, real/virtual, and instead embraces processuality, instability, and co-becoming as valid frames of inquiry.

Finally, this methodology is deeply concerned with ethico-political positioning. Researching tourism from a posthuman perspective means asking: What assemblages are enabled or silenced? Whose memories are digitized, whose bodies are rendered visible, and who/what remains peripheral? These questions guided the analytic process and informed the interpretive stance of this study. The goal is not only to understand how heritage tourism in Siak operates, but to challenge, reimagine, and possibly reconfigure the logics of representation, engagement, and

sustainability within it.

Results

The findings of this study reveal that tourism experiences in Siak Sri Indrapura are increasingly shaped by human-nonhuman entanglements-networks involving tourists, digital technologies, architectural sites, historical narratives, and atmospheric affect. These entanglements do not merely mediate the tourist experience; they constitute it. For example, visitors engaging with augmented reality features in the Siak Palace are not merely accessing information-they are entering hybrid ontologies where digital projections and embodied presence collapse into one another.

One striking result is the reconfiguration of cultural memory through interface design. Rather than relying solely on textual placards or human guides, visitors now encounter curated digital layers that re-narrate the Sultanate's past in visual, sonic, and interactive forms. These digitally reassembled memories are inherently partial and algorithmically structured, often emphasizing visual spectacle over historical complexity. Memory becomes something not only consumed but also performed-visitors "tap" to remember, scroll to understand, and gesture to connect.

The integration of nonhuman actors-QR codes, sensors, multilingual guide apps, AR overlays-has produced a form of cyborg tourism in which the tourist is no longer fully autonomous, but dependent on technological prosthetics for navigation, knowledge, and meaning-making. This supports Haraway's (1991) assertion that cyborgs are "the illegitimate offspring of militarism and patriarchal capitalism," yet also potential agents of resistance. In Siak, such dependency both democratizes access (through language and interactivity) and consolidates control through pre-programmed pathways and data collection.

Further, the architectural site itself-the Siak Palace and its surroundings-emerges as a responsive material agent. Light, humidity, sound, and spatial arrangements interact with digital projections and bodily movement, generating an affective atmosphere that exceeds traditional semiotic analysis. The space becomes more-than-built: it is sensed, encoded, and activated through machinic relations. This reinforces Braidotti's (2013) argument that posthuman spaces are relational fields, not inert containers of human action.

Tourist agency is also redistributed across algorithmic systems. TripAdvisor reviews, TikTok "reels," and Google Maps suggestions shape itineraries in real time, generating feedback loops between individual movement and global data infrastructures. The posthuman tourist becomes part of a tourism assemblage that is simultaneously local and planetary, embodied and virtual, voluntary and automated.

Finally, the role of local cultural actors is rearticulated in this ecology. Guides, performers, and vendors often find themselves adapting to digital platforms-modifying narratives for Instagrammability, adjusting performances to suit drone footage, or translating oral histories into QR-code narratives. Their agency is thus not erased but technologically modulated, raising important questions about representation, labor, and authenticity in the era of heritage-as-interface.

Discussion

The results illustrate that heritage tourism in Siak Sri Indrapura is no longer a site of static memory transmission, but a living laboratory of posthuman becoming. Here, culture is not preserved in archives-it is co-produced in real time through tourist-technological-environmental

entanglements. The "authentic" becomes performative, the "past" becomes simulated, and the human subject becomes a node in a network of affective computation. This echoes Hayles' (1999) argument that the posthuman is not anti-human, but an expanded frame of reference for what counts as presence, knowledge, and agency.

One central theme emerging from this discussion is the digital reconfiguration of heritage epistemology. While traditional tourism valorizes historical fixity and expert interpretation, the posthuman condition values interaction, affect, and modularity. Visitors participate in producing meaning-through gestures, clicks, uploads, and feedback. As such, the notion of heritage shifts from substance to interface; from object to performance; from preservation to iteration.

This transformation carries profound ethical implications. Whose histories are being encoded into apps and AR projections? Who controls the metadata, the voiceovers, the multilingual narratives? In posthuman tourism, power operates through design, platform governance, and algorithmic bias-often subtly, yet decisively. Therefore, a critical posthuman analysis must remain alert to the politics of digital memory-what is included, what is excluded, and who benefits from the aestheticization of culture.

Moreover, the findings highlight how tourist subjectivity is reassembled through machinic relations. The body becomes a sensorium: tracking, navigating, reacting, and producing data. The human subject is enhanced, but also surveilled and modulated. In this sense, posthuman tourism can be both emancipatory and extractive-offering immersive experiences while feeding into global circuits of data capitalism. The tourist is both agent and dataset, explorer and product.

The role of local communities must be re-theorized as well. Posthuman ethics challenges us to move beyond seeing communities as passive hosts or cultural resources. Instead, they should be understood as co-engineers of the tourism assemblage, whose voices, bodies, and labor are inscribed in every digital narrative. Empowering these actors requires not just economic inclusion, but platform agency-the ability to shape, design, and reframe digital heritage itself.

Ultimately, this study invites a reimagining of heritage tourism not as a quest for loyal visitors or economic growth, but as a posthuman choreography of relations-between matter and meaning, memory and code, human and more-than-human. Siak Sri Indrapura, in this light, is not simply a destination, but a site of ontological experimentation-a place where the boundaries of history, embodiment, and subjectivity are in motion. Embracing this complexity opens the door for tourism practices that are not only more ethical, but more imaginative, inclusive, and future-facing.

Conclusion and Implications

This study has argued that heritage tourism, particularly in contexts like Siak Sri Indrapura, must be reconceived through the lens of posthumanism. In an age where digital technologies, environmental shifts, and algorithmic infrastructures deeply mediate human experience, the tourist is no longer a sovereign individual encountering static history, but a relational node embedded within hybrid ecologies of culture, code, and community. The transformation of Siak into a digitally augmented cultural destination is emblematic of this ontological shift-from heritage as content to heritage as interface.

Key findings demonstrate that tourist experience is increasingly shaped by nonhuman actors-augmented reality, GPS, social platforms, ambient architectures-whose presence reconfigures the epistemological and affective structure of memory itself. This hybridization challenges

dominant paradigms of authenticity, agency, and sustainability within tourism discourse. The tourist, no longer detached observer, becomes a cyborg participant, entangled in circuits of simulation, data extraction, and mediated immersion.

These dynamics have profound ethical and political implications. Posthuman tourism demands not only new methods of design and interpretation, but new frameworks of accountability. Heritage cannot be curated solely by institutions or platforms-it must be co-produced with communities, with transparency about the role of algorithms, aesthetics, and data. In this regard, posthumanism offers more than critique; it offers a generative ethics of care, one that considers nonhuman entanglements not as threats, but as possibilities for inclusive, multispecies, and multitemporal futures.

Practically, this suggests that tourism development in Siak Sri Indrapura should move beyond models of attraction and loyalty, and toward models of entangled engagement-where local communities design digital narratives, where tourists participate in co-preservation, and where sustainability extends beyond human generations to planetary coexistence. Such a vision requires not only policy shifts but imaginative rethinking across disciplines, sectors, and epistemologies.

In conclusion, heritage tourism in the posthuman era is not about returning to the past, but about inventing new ways of relating to it. The palace, the river, the archive, the app-all become part of an expanded field of meaning, where experience is neither purely material nor immaterial, but affective, distributed, and open-ended. Embracing this complexity is not a luxury-it is a necessity for any future-facing tourism practice that seeks to be ethical, inclusive, and alive.

Recommendation

In light of the findings and theoretical insights of this study, several posthuman-oriented recommendations are proposed for the future development of heritage tourism in Siak Sri Indrapura. These suggestions aim not merely to improve tourist retention but to reconfigure the ethical, technological, and ecological frameworks within which tourism unfolds.

First, policymakers and heritage managers should reimagine tourism planning through a multi-agential lens, acknowledging that not only humans-tourists, communities, officials-shape experiences, but also technologies, architectures, ecosystems, and data systems. A *Posthuman Heritage Charter* could be developed locally, aligning with global ethical frameworks, to ensure equitable inclusion of both human and nonhuman stakeholders in decision-making processes.

Second, digital technologies such as augmented reality (AR), AI-driven guides, and algorithmically curated routes should not only be treated as tools of attraction or entertainment, but as ethico-aesthetic mediators of memory. Their deployment should be transparent, participatory, and co-designed with local communities, historians, and technologists, to avoid algorithmic colonization of cultural narratives.

Third, cultural tourism strategies must expand beyond human-centered notions of "authenticity" to embrace affective authenticity-experiences that are meaningful precisely because they are relational, hybrid, and co-produced. Local communities should be supported not only as performers or service providers, but as platform curators and memory authors with control over how their culture is digitized, represented, and recombined.

Fourth, sustainability practices should adopt a more-than-human ethics, incorporating environmental, atmospheric, and material actors into conservation plans. For example, the

humidity of palace interiors, the health of riverine ecologies, and the energy footprints of digital infrastructure should all be considered part of an entangled heritage ecosystem.

Fifth, tourism education in Siak and beyond should promote posthuman literacy-teaching visitors, guides, and developers to think relationally about space, time, technology, and ethics. Workshops and digital exhibitions could foster awareness of how historical experience is not merely preserved, but dynamically reassembled through platforms, sensors, and user interactions.

Finally, these recommendations call for a shift from managing tourism for efficiency or loyalty, toward curating spaces of co-becoming-where heritage is not something to be preserved in isolation, but something to be enacted through mutual, embodied, and evolving relations. In embracing this paradigm, Siak Sri Indrapura may lead not only in cultural tourism innovation, but in posthuman futures of care, complexity, and coexistence.

References

Braidotti, R. (2013). The posthuman. Polity Press.

Ferrando, F. (2019). Philosophical posthumanism. Bloomsbury Publishing.

Femenia-Serra, F., Neuhofer, B., & Ivars-Baidal, J. A. (2019). Towards a conceptualisation of smart tourists and their role within the smart destination scenario. The Service Industries Journal, 39(2), 109–133. https://doi.org/10.1080/02642069.2018.1508458

Haraway, D. J. (1991). Simians, cyborgs, and women: The reinvention of nature. Routledge.

Hayles, N. K. (1999). How we became posthuman: Virtual bodies in cybernetics, literature, and informatics. University of Chicago Press.

Li, J., Xu, L., Tang, L., Wang, S., & Li, L. (2021). Online information channels of tourist destinations: A comparative study of the United States and China. Tourism Management, 83, 104235. https://doi.org/10.1016/j.tourman.2020.104235

Pink, S., Horst, H., Postill, J., Hjorth, L., Lewis, T., & Tacchi, J. (2016). Digital ethnography: Principles and practice. Sage.

Rasoolimanesh, S. M., Seyfi, S., Hall, C. M., & Hatamifar, P. (2021). Understanding memorable tourism experiences and behavioural intentions of heritage tourists. Journal of Destination Marketing & Management, 21, 100621. https://doi.org/10.1016/j.jdmm.2021.100621

Stylidis, D., Belhassen, Y., & Shani, A. (2023). The sustainability of tourist destinations in a posthuman context. Annals of Tourism Research, 95, 103407. https://doi.org/10.1016/j.annals.2023.103407

Wolfe, C. (2010). What is posthumanism? University of Minnesota Press.