

Proposing an Analytical Framework for Adaptive Reuse of Heritage Buildings

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Abstract

Despite the growing interest in the adaptive reuse of industrial heritage buildings as a sustainable strategy for urban development, existing theoretical approaches remain fragmented. They often prioritise physical preservation or functional transformation while overlooking the deeper socio-cultural processes involved. Grounded in theories of spatial production (Lefebvre 1991), cultural memory and narrative (Nora 1989; Ricœur 1984), and critical heritage discourse (Hall 2011; Smith 2006), this paper proposes a novel tripartite analytical framework—incorporating spatial transformation, social narrative, and economic governance—for systematically interpreting the interrelated processes of adaptive reuse in heritage buildings. The framework highlights how spatial interventions reshape architectural form and function; how social narratives articulate memory, continuity, and collective meaning; and how economic governance negotiates cultural value through institutional logics, policy regimes, and market forces. Through these interactions, identity reconstruction emerges as a negotiated outcome, reflecting how space, memory, and economy intersect in the redefinition of heritage. By connecting material change, cultural meaning, and governance structures, the framework reveals the cultural tensions and value negotiations that characterise adaptive reuse. It provides architects, planners, and policymakers with conceptual and analytical tools to engage with complex heritage contexts, while also offering a theoretical and methodological contribution that balances preservation and transformation and lays the foundation for future empirical research.

Keywords: Adaptive Reuse, Cultural Value, Analytical Framework

Introduction

Adaptive reuse has emerged as a critical response to the abandonment and obsolescence of industrial heritage buildings, many of which are large in scale, functionally obsolete, and marginalised in planning agendas (Overmann, Mieg 2015; Douglas 2006). While widely promoted as a sustainable alternative to demolition that reduces environmental burdens, adaptive reuse is also a cultural practice that sustains continuity by reactivating sites that embody the memory of industrialisation and collective labour (Overmann, Mieg 2015). However, both scholarship and practice still tend to prioritise technical efficiency and

economic return, while giving limited attention to how reuse reconstructs cultural meaning, evokes social memory, and sustains collective identity (Smith 2006; Pendlebury 2013).

These limitations become particularly visible in the adaptive reuse of industrial heritage. In the UK, conservation is embedded in planning and policy frameworks emphasising ‘authenticity’, understood as a measure of respect for the building’s ‘original’ conditions, and community engagement; however, the rise of heritage tourism has led many heritage sites to adopt increasingly entertainment-oriented approaches to stimulate local economies (Smith 2006). In China, adaptive reuse gained momentum in the late 1990s, closely aligned with state-led urban transformation of the cultural and creative industries, where redevelopment can mobilise substantial resources while also intensifying pressures for commercialisation (Niu et al. 2018). Despite their different contexts, both reveal a shared imbalance between economic imperatives and cultural values.

To address these limitations, the study develops an analytical framework combining spatial transformation, social narrative, and economic governance, to systematically analyse the interrelated processes of adaptive reuse. The purpose of this paper is to interpret how cultural value is produced, negotiated, and contested in adaptive reuse. Building on an extensive review of existing debates, the paper elaborates the theoretical foundations, outlines a novel framework, and discusses its scholarly and practical implications. The study lays the groundwork for subsequent empirical research and provides architects, planners, and policymakers with conceptual and analytical tools to navigate the complex cultural negotiations of reuse.

Literature Review

Adaptive Reuse and Obsolescence. Adaptive reuse emerged in the 1970s as a departure from conventional conservation practices, increasingly recognised as a sustainable strategy that prolongs the life cycle of buildings, reduces resource consumption, and supports urban regeneration (Lanz, Pendlebury 2022). While some scholars emphasise the technical and economic dimensions of reuse, focusing on life-cycle assessment, obsolescence, and financial viability (Iselin, Lemer 1993; Kincaid 2002), others highlight its cultural and symbolic potential, arguing that adaptive reuse redefines meanings and sustains collective identities (Oevermann, Mieg 2015).

A central premise underpinning adaptive reuse is the notion of obsolescence. Beyond physical deterioration, obsolescence encompasses functional inadequacy, technological change, and shifts in social or cultural expectations (Iselin, Lemer 1993; Kincaid 2002). Unlike deterioration, which can be remedied by repair, obsolescence represents a rupture in systems of value, often resulting in the rapid decline of perceived significance (Ashworth 1999). In this sense, adaptive reuse is not merely a technical intervention but also a mechanism for negotiating and redefining value within the built environment.

Cultural Value and Commercialisation. The tension between cultural value and commercialisation has emerged as a central debate in heritage studies. In the UK, heritage tourism and cultural industries since the 1980s have brought economic benefits, but also the perceived risks of spectacle, selective storytelling, and the marginalisation of local communities (Dicks 2015; Smith 2006). Scholars warn that market-oriented redevelopment can transform historic environments into entertainment districts, eroding the symbolic and cultural value of heritage (Gražulevičiūtė 2006). However, others argue that economic

mechanisms can provide essential resources for heritage survival and community engagement, offering new forms of identity-building (Loulanski 2006).

In China, cultural value has often been mobilised as a tool for economic growth and political legitimacy. Adaptive reuse projects such as Beijing's 798 Art District (see Fig.1) demonstrate how market demand and government policy can rapidly transform abandoned factories into cultural and creative landmarks (Niu et al. 2018). However, over-commercialisation and rising rents have driven out artists and cultural practitioners (Liu et al. 2013), reducing the diversity of narratives. Moreover, scholars also highlight the "political alienation" of heritage, where local governments pursue redevelopment to achieve fiscal and performance goals, further subordinating cultural value to economic or political agendas (Zhu 2015).



Fig. 1. Interior of 798 Art District, Beijing, China, showing an industrial workshop adapted into a contemporary gallery space (image source Wild Great Wall, 2021)

Existing scholarship reveals a persistent tension between cultural and economic imperatives in heritage reuse, often framed as a binary opposition between commodification and cultural preservation. However, most studies treat these forces separately, with limited attention to how they interact in shaping heritage practice across different socio-political contexts. A more integrated framework is therefore required that links spatial, social, and economic processes in the production and negotiation of cultural value.

Theoretical Foundations

The proposed framework builds upon three strands of theory that illuminate how cultural value is produced, negotiated, and transformed in heritage contexts. First, Lefebvre's theory of the production of space challenges the notion of space as a neutral container, arguing instead that "(social) space is a (social) product" (Lefebvre 1991, 26). His spatial triad "spatial practice, representations of space, and representational spaces" (Lefebvre 1991, 33) provides a basis for understanding how material interventions, professional planning, and lived experiences interact in the adaptive reuse of heritage buildings. This perspective situates spatial transformation as both a physical restructuring and a social process that reproduces cultural meaning and identity.

Second, cultural memory and narrative theory offer tools for examining how heritage sites become carriers of symbolic meaning. Nora (1989) distinguishes *lieux de mémoire* from

milieux de mémoire, emphasising that modern societies increasingly rely on constructed sites to sustain memory. Similarly, Ricœur (1984) explains how narrative configures time into coherent plots, mediating between experience and meaning. These insights highlight that adaptive reuse is not only an architectural process but also a narrative reconstruction, where new uses and designs reshape collective remembrance and cultural identity. Finally, identity politics in heritage studies expose the power relations embedded in reuse. Hall (2011) argues that identity is not a fixed essence but a discursive construction shaped through difference and exclusion. Smith (2006) critiques the “Authorized Heritage Discourse,” which privileges monumental, expert-led narratives while marginalising everyday practices and diverse voices. In adaptive reuse, such discourses risk narrowing definitions of value and privileging market or elite perspectives. These critiques establish the importance of examining how heritage reuse processes reconstruct, contest, or silence identities within broader political and cultural frameworks.

Framework Development

Building on these theoretical foundations, this study proposes a multidimensional analytical framework to interpret the adaptive reuse of heritage buildings. The framework is organised around the three core dimensions of spatial transformation, social narrative, and economic governance. These dimensions reveal the dynamic interplay of material form, symbolic meaning, and power relations within the adaptive reuse of industrial heritage.

Spatial Transformation examines how cultural value is materialised and professionalised through space. It emphasises the adaptive interventions through which architectural structures, spatial configurations, and uses are redesigned and adjusted (Lefebvre 1991; Douglas 2006). It primarily engages with the tangible restructuring of space, typically shaped by top-down interventions led by architects and planning professionals, and reflects how heritage retains usability and responds to new functional demands.

Social Narrative explores how cultural value is signified through everyday memory and community action. Historical and symbolic meanings are continuously accumulated, contested, and reconfigured through acts of narration, remembrance, and cultural inscription (Nora 1989; Ricœur 1984). Shaped through bottom-up processes by residents, community organizations, visitors, worker groups, and NGOs, this dimension underscores how narratives articulate collective identities.

Economic Governance examines how cultural value is framed and negotiated by institutional logics and capital forces through processes of commercialisation and economic regeneration. Heritage reuse is situated within broader political-economic discourses of power, regulation, and cultural practice (Hall 2011; Smith 2006). Defined by the interventions of governments, policymakers, developers, state-owned enterprises, and media, this dimension shows how heritage is used for economic growth and contested in identity politics.

Fig. 2 illustrates how cultural value is dynamically generated through the interplay of spatial transformation, social narrative, and economic governance. Starting with the first relational condition, economic governance provides institutional and financial resources to support spatial transformation, promoting market-oriented practices. In turn, spatial transformation facilitates economic and reputational returns. In the second relational condition, social narratives reinterpret and enrich spatial meanings, while spatial transformation may jeopardise the anchors of collective memory. In the third relational condition, economic

Main Dimension	Sub-dimension	Sub-indicator
Spatial Transformation	Adaptation Approach	● Full / partial / demolition and new construction ● Restoration / reuse / decorative preservation
	Design Language	● Industrial elements ● Contemporary expressions
	Planning Documents	● Keywords (cultural value, historical significance, etc.) ● Objectives vs actual interventions
	Professional Evaluation	● Value dimensions ● Cultural vs economic priority
	Residents' /Workers' Memory	● Oral histories / local chronicles, etc. ● Keywords (memory, identity, sense of belonging)
Social Narrative	Public Perception	● Cultural heritage vs commercial development ● Perceptions of improvements in living environment
	Public Opinion and Media	● Orientation of news coverage ● Social media / tourist reviews
	Community Practices	● Exhibitions, festivals, cultural events ● Spontaneous vs institution-led
	Visibility and Marginalization	● Amplified groups ● Marginalized groups
Economic Governance	Policy Orientation	● Regulatory focus (cultural value vs economic benefit) ● Funding mechanisms
	Investment Logic	● Business models ● Revenue models
	Economic Effects	● Growth in tourist numbers ● Changes in real estate prices / rental levels
	Institutional and Market Forces	● Dominance of government / developers ● Influence of market demand

Table 1. Conceptual dimensions and interpretive indicators derived from the proposed framework

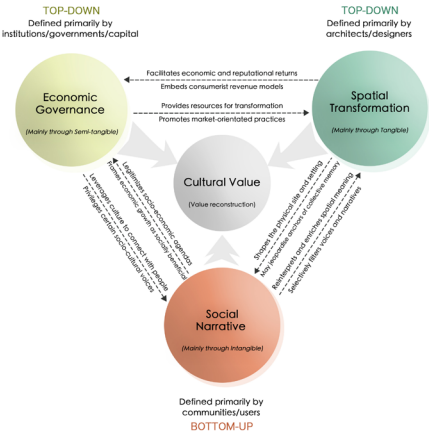


Fig. 2. Analytical framework for the dynamic (re)construction of cultural value (author, 2025)

governance leverages cultural discourse to privilege certain socio-cultural voices, while social narratives legitimise socio-economic agendas by framing economic growth as socially beneficial. Through these recursive exchanges, identity reconstruction emerges as a negotiated process mediating between spatial transformation, social narrative, and economic governance. The original framework is proposed as a to-be analytical model rather than a direct representation of empirical reality; in practice, the relative weight and strength of their interactions will vary across different contexts and cases. Building on this analytical framework, the three dimensions are operationalised into sub-dimensions and indicative themes, with Table 1 providing a conceptual reference for empirical interpretation. For example, in widely cited reuse contexts such as Beijing’s 798 Art District, the framework enables an indicative reading of how spatial transformation, social narratives, and economic governance intersect in the negotiation of cultural value.

Applying the Framework across Contexts: UK vs China

While the proposed framework establishes a universal structure for analysing the interplay of spatial transformation, social narrative, and economic governance, its operational logic unfolds differently across contexts. Fig.3 illustrates how adaptive reuse follows distinct entry points and sequential dynamics under the UK and Chinese lenses.

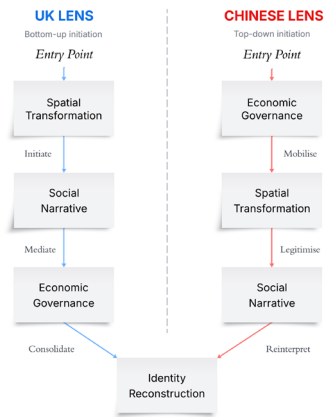


Fig. 3. Typical flows of the framework under UK and Chinese contexts (author, 2025)

Under the UK lens, adaptive reuse is typically spatially initiated, primarily driven by designed and community-based approaches, reflecting bottom-up spatial practices that initiate new uses and meanings. Economic governance then supports these spatial and social dynamics through planning policy, funding, and market adaptation. This trajectory reflects a participatory and incremental planning culture in which cultural value evolves through negotiated interactions between space, community, and institution, though this tendency varies across projects and governance scales.

Under the Chinese lens, adaptive reuse is generally institutionally initiated and commercially mobilised. Policy intervention and economic governance first mobilise capital and define redevelopment agendas, after which spatial transformation legitimises these institutional

objectives. Social narratives arrive later in the process, subsequently reinterpreting heritage meanings in alignment with political and market discourses. This top-down trajectory demonstrates how heritage is instrumentalised for economic and political purposes, with cultural value reconstructed through intertwined processes of commercialisation and legitimisation.

Despite these contrasting pathways, both trajectories ultimately converge in the negotiated process of identity reconstruction, where spatial form, cultural meaning, and institutional power are continuously redefined. This comparison highlights the framework's flexibility and adaptability to diverse socio-political contexts, revealing context-specific mechanisms of cultural value production.

Conclusion

This paper contributes to addressing the fragmented nature of existing research on the adaptive reuse of industrial heritage, which often prioritised technical efficiency and economic return while marginalising cultural narratives, social memory, and collective identity. Responding to this gap, the paper proposes a novel tripartite analytical framework: a focus on spatial transformation, social narrative, and economic governance offers a way to connect material, cultural, and economic dimensions and to articulate their interplay and relative weightings on a case-by-case basis. Building on a cross-contextual analysis of the UK and China, the study further demonstrates the framework's applicability to diverse institutional settings and national values and priorities.

Theoretically, the framework establishes a relational perspective that integrates spatial, narrative, and economic dimensions into a comprehensive structure, moving beyond the conventional either/or binaries of “material versus cultural” and “preservation versus development”. Through this lens, cultural value is redefined as a dynamic and negotiated process rather than a fixed attribute, contributing to a broader theoretical shift in heritage studies from value preservation to value production.

Finally, the proposed framework lays the foundation for an analytical tool to guide architects, planners, and policymakers for developing reuse strategies that balance cultural and social processes with technical and economic priorities. As a conceptual model, the framework requires further empirical testing and refinement through case studies across diverse socio-political contexts. Future research should also investigate the roles of informal actors and everyday practices in shaping adaptive reuse outcomes.

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