Article

Traditional Chinese Culture in Animation Design: Translation Strategies, Sustainability Mechanisms and Cross-Cultural Limits

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Abstract: Animation is a highly design-intensive medium through which traditional culture is effectively translated into visual form, narrative, and immersive experience. Drawing on the three-level model of cultural design, this study examines how traditional Chinese culture is translated in animated film and how that translation contributes to sustaining cultural heritage. Combining documentary analysis with a comprehensive multiple-case study of Havoc in Heaven (1961), Big Fish & Begonia (2016), Ne Zha (2019), and Chang An (2023), it codes each work using a framework derived from that model. Four dimensions of application are identified: visual aesthetics, folk art and craft, philosophical thought, and myth. The analysis reveals that the locus of design translation progressively moves from the tangible and behavioral levels of visual form and performance toward the intangible level of core values and complex narrative structures. Furthermore, three cumulative mechanisms link animation to heritage sustainability: archival preservation, performative revitalization, and generative innovation. Reception data for Ne Zha 2 (2025), which drew less than three percent of its worldwide gross from outside mainland China, demonstrate that commercial scale is not strictly equivalent to cross-cultural reach. The study concludes that animation design represents a viable but conditional path to cultural sustainability, ultimately proposing four strategic design principles for creating animation that is culturally dense yet internationally legible.

Keywords: animation design; traditional culture; design translation; cultural sustainability; cross-cultural communication

1. Introduction

1.1. Research Background

Digital technology has transformed the production and circulation of culture [1]. With the spread of the internet, mobile media, artificial intelligence, and digital animation, cultural material increasingly circulates as content that can be copied, edited, and recombined at negligible cost, and the temporal and spatial boundaries on cultural communication have become more flexible.

Globalization also presents challenges to cultural diversity. Many traditional cultures experience disruptions in intergenerational transmission, aging practitioner communities, and shrinking avenues for dissemination. International cultural policy has therefore emphasized the safeguarding of living heritage as a key strategy for preserving cultural diversity [2].

Traditional Chinese culture, shaped over an extended historical period, encompasses philosophy, literature and art, folk customs, mythology, legends, and a rich body of intangible cultural heritage [3]. As a cornerstone of national cultural identity, it provides abundant resources for contemporary cultural and creative industries. However, within today's dynamic communication environment, it often faces limitations stemming from conventional expressive forms, restricted distribution channels, and relatively low engagement among younger audiences.

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Chinese animation has experienced rapid development in recent years, with numerous works drawing deeply on traditional culture. Havoc in Heaven (1961) established a distinctive aesthetic system for national animation by integrating traditional painting and opera. Big Fish & Begonia (2016) constructs a fantasy world infused with Daoist philosophy and Chinese mythological motifs, embodying Eastern aesthetic sensibilities. Ne Zha (2019) reinterprets a classical myth through contemporary narrative frameworks, while Chang An (2023) renders Tang dynasty poetic culture using advanced digital animation techniques. These works have achieved broad domestic resonance and garnered notable international attention [4]. This study examines whether—and under what conditions—such visibility contributes meaningfully to long-term cultural sustainability.

1.2. Problem Statement

Scholarship on Chinese animation has expanded considerably, but it remains concentrated on artistic style, the interpretation of cultural symbols, and the close reading of individual works. Recent studies have traced how the image of Nezha and its associated cultural discourses have evolved across four decades of national-style animation [5]. What remains underdeveloped is a systematic account of the relationship between animated production and the sustainability of cultural heritage. Four problems follow. First, the mechanisms by which animation contributes to heritage safeguarding have not been specified with sufficient precision; the relationship is generally asserted rather than analyzed. Second, claims about cross-cultural communication are frequently inferred from box-office performance, although commercial scale does not necessarily reflect cross-cultural resonance. Third, traditional culture, digital transformation, circulation, and cultural sustainability are typically analyzed within separate frameworks rather than within a unified conceptual structure. Fourth, although an animated film is a designed artifact in every frame, the incorporation of tradition is seldom examined as a design problem—that is, as a series of deliberate decisions regarding which cultural content to translate and how to encode it in character, color, space, movement, and narrative. This study addresses these four problems from a design perspective.

1.3. Research Questions and Objectives

The study addresses the following research questions:

RQ1. How are elements of traditional Chinese culture applied and reconstructed through the visual, narrative, and technological design of animated films?

RQ2. Through which design and technological strategies are these elements both inherited and renewed in digital narration and visual communication?

RQ3. What role does animation play in sustaining cultural heritage and fostering an inclusive cultural future, and under what conditions?

Correspondingly, the study aims to identify the forms and design characteristics of traditional cultural elements in animation; to elucidate the design and technological strategies enabling their transmission and renewal; and to construct an analytical framework linking design translation to cultural sustainability while specifying contextual constraints [5].

1.4. Research Significance

Theoretically, the study bridges traditionally distinct scholarly domains—including animation studies, critical heritage studies, design research, and cultural sustainability—and clarifies the interrelationships among them. Practically, it provides animation designers and cultural institutions with a nuanced assessment of animation's capacities and limitations in heritage transmission, alongside actionable design principles for production and distribution. Socially, by distinguishing domestic cultural revitalization from international accessibility, it supports a more grounded appreciation of cultural diversity and cross-cultural communication in digital contexts [3].

2. Literature Review

2.1. Traditional Chinese Culture and Cultural Heritage

Traditional Chinese culture is the accumulated material and spiritual civilization formed over a long historical period, encompassing philosophy, literature and art, religious belief, folk customs, and traditional crafts. Intangible cultural heritage includes oral traditions, performing arts, social practices, rituals and festive events, knowledge and practices concerning nature and the universe, and traditional craftsmanship. China possesses abundant intangible cultural heritage resources, such as Peking opera, shadow puppetry, paper-cutting, New Year prints, traditional festivals, and mythological narratives [6]. These elements constitute an indispensable component of national culture and serve as a vital resource base for the cultural and creative industries.

Contemporary scholarship has redefined intangible heritage as a dynamic process rather than a static entity awaiting preservation. It emphasizes that the act of designating a practice as heritage actively reshapes its meaning, function, and perception. Consequently, representing tradition through animation is not a passive documentation but an active interpretive process—selecting, reframing, and recontextualizing cultural elements [1]. This perspective underpins the analytical framework developed in subsequent sections.

2.2. Film and Animation as a Medium of Cultural Communication

Film and animation combine artistic expression with mass communication, transforming intricate cultural concepts into accessible audiovisual experiences [4]. What audiences receive through these media is not tradition in its original form, but a mediated representation—constructed from symbolic systems, character design, and narrative structure. As such, the medium actively shapes meaning rather than passively transmitting it. Animation's non-indexical, constructed nature affords particular flexibility in rendering cultural symbols and mythological frameworks, surpassing certain constraints inherent in live-action filmmaking. Within global cultural exchange, animation has thus emerged as a vital vehicle for rendering national cultures both appealing and intelligible to international audiences.

The evolution of Chinese animation reflects an ongoing dialogue between inherited cultural forms and contemporary media technologies. Beginning in the 1950s, animators at the Shanghai Animation Film Studio consciously cultivated a distinctive national aesthetic [7]. Works such as *Havoc in Heaven* (1961) drew upon traditional painting and opera conventions; *Tadpoles Looking for Their Mother* (1960) pioneered the integration of ink-wash aesthetics with animated movement; *The Nine-Colored Deer* (1981) adapted Dunhuang mural visual language into fable-based storytelling. In the twenty-first century, digital innovation has propelled Chinese animation into a new era: *Monkey King: Hero Is Back* (2015), *Big Fish & Begonia* (2016), *White Snake* (2019), *Ne Zha* (2019), and *Chang An* (2023) reinterpret traditional motifs through advanced three-dimensional rendering, digital visual effects, and modern narrative strategies.

2.3. Animation as Cultural Design Translation

Design research provides a conceptual framework for understanding how cultural material is transformed into designed artifacts. A widely adopted model distinguishes three interrelated levels of cultural engagement: an outer, tangible level encompassing form, color, material, and ornament; a mid, behavioral level involving use, function, and social practice; and an inner, intangible level rooted in meaning, values, and belief. This tripartite structure has become foundational in cultural product design. Subsequent work classifies cultural carriers into physical, behavioral, and spiritual layers that correspond respectively to visual, behavioral, and conceptual design decisions, and outlines a staged process for extracting cultural elements from source contexts and translating them into design features [8]. Across this body of scholarship, a central premise holds that design mediates culture not merely through formal attributes, but through the intentional encoding of meaning within those attributes.

However, this framework has been developed predominantly for static products. Animation introduces time, performance, and narrative—thereby expanding the range of

sites where cultural translation may occur, including character design, color scripting, scene and environment design, motion design, and story structure. When applied to animation, the three-level model frames tradition-informed creation as a deliberate process of design translation, wherein practitioners make conscious decisions about which cultural level to foreground and how to encode it formally and experientially. In this study, the model functions as an analytical lens for identifying the primary locus of design translation across cases, and informs the design principles articulated in Section 7.1.

2.4. Cultural Sustainability and an Inclusive Cultural Future

Sustainable development has become a central concern of global policy, and culture is increasingly recognized as an integral dimension rather than a peripheral embellishment. Scientific discourse on cultural sustainability encompasses multiple interrelated themes: heritage, cultural vitality, economic viability, cultural diversity, locality, eco-cultural resilience, and eco-cultural civilization. Collectively, these themes indicate that cultural sustainability centers not solely on preservation, but on sustaining the conditions under which cultural resources are continuously produced, reinterpreted, and transmitted [9].

An inclusive cultural future emphasizes equitable exchange and mutual respect among diverse cultures, fostering cross-cultural understanding through education, media, and digital technologies [3]. However, digital availability does not guarantee broad access. Disparities persist in distribution capacity, platform visibility, and linguistic accessibility; consequently, a work may be technically accessible worldwide yet remain largely unseen beyond its origin market. In this sense, inclusiveness is an outcome achieved through deliberate effort, not an inherent feature of digital circulation.

A key concept from international communication research informs the subsequent analysis: cultural discount refers to the diminished appeal or interpretive ease experienced by audiences when engaging with media content originating from a different cultural context, due to gaps in referential knowledge, linguistic proficiency, or stylistic familiarity [10]. This concept suggests that works deeply rooted in a specific cultural repertoire tend to encounter greater challenges in achieving resonance across cultural boundaries—a proposition examined against the reception data presented in Section 6.2.

2.5. Research Gap and Analytical Framework

The existing literature addresses the topic only partially. Research on animation clarifies how traditional cultural materials undergo stylistic transformation; critical heritage studies emphasize that such transformations are inherently value-laden; design research explores how cultural content can be rendered into formal expressions; and cultural sustainability scholarship identifies the conditions necessary for ongoing cultural production. However, few studies articulate the specific mechanisms linking individual animated works to tangible heritage outcomes, and even fewer differentiate the contextual conditions under which those mechanisms succeed from those under which they fail. The analytical framework proposed here is designed to address this gap.

The framework follows the sequence: Traditional Culture → Animation Transformation → Digital Communication → Cultural Sustainability (Figure 1). The second stage—animation transformation—is conceptualized as design translation, as defined in Section 2.3; accordingly, Figure 1 delineates it across outer, middle, and inner levels of translation. Visual art, philosophical thought, and folk narratives are first translated into visual symbols and narrative content; these outputs are then disseminated via digital platforms; during dissemination, three mediating functions—cultural identity cultivation, cultural education, and cross-cultural exchange—are reinforced; and the ultimate outcomes include heritage protection, cultural innovation, and cultural sharing. Two features distinguish this framework from a linear model. First, it incorporates a feedback loop: revitalized heritage re-enters the creative cycle as source material for new production, enabling self-reinforcement within cultural communities. Second, it explicitly identifies constraining conditions—cultural discount, commercial pressure, and

technological ethics—that determine whether transformation leads to sustainability outcomes. This second feature enables the framework to account for both successful and unsuccessful cases.

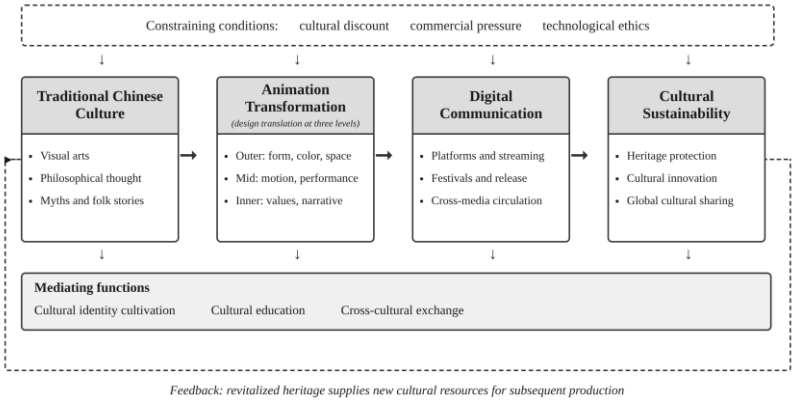


Figure 1. Analytical Framework: From Traditional Culture to Cultural Sustainability (Source: developed by the authors)

3. Methodology

3.1. Research Design

This study adopts a qualitative research design combining documentary analysis with a multiple-case study. Documentary analysis establishes the theoretical foundation by reviewing scholarship on cultural communication, critical heritage, design, and cultural sustainability. The multiple-case design follows a replication logic in which each case is treated as a discrete study whose findings are subsequently compared, rather than as a sampling unit within a population. The design suits the present research questions for three reasons: the questions are explanatory rather than distributional; the phenomenon cannot be separated from its historical and industrial context; and the study seeks analytic rather than statistical generalization.

3.2. Case Selection

Four works were purposively selected: Havoc in Heaven (1961), Big Fish & Begonia (2016), Ne Zha (2019), and Chang An (2023). Selection followed three explicit criteria [11]. First, temporal spread: the works span the hand-drawn and digital eras, enabling longitudinal comparison of transformation strategies. Second, cultural depth: each draws substantially on an identifiable traditional resource—opera and myth, Daoist philosophy, the Fengshen yanyi narrative tradition, and Tang poetry, respectively. Third, evidentiary sufficiency: each has generated substantial critical, industrial, and audience commentary, supporting robust analysis of reception. A further consideration was variation in transformation strategy: the four works differ in their emphasis on visual form, philosophical content, narrative reconstruction, or textual visualization, thereby enhancing analytical leverage through cross-case comparison.

The selection carries a known bias, explicitly addressed in Section 7.3: all four are critically or commercially successful works. The sample therefore supports conclusions about how successful transformation operates, but not about the overall likelihood of success. Ne Zha 2 (2025) is treated as supplementary reception evidence in Section 6.2 rather than as a fifth case, as the scholarly and archival record for that film remains insufficiently developed relative to the four principal cases.

3.3. Data Sources

Four categories of data were collected. Primary audiovisual texts comprise the films themselves, viewed in full and re-examined scene by scene for sequences in which traditional elements are visually or narratively salient. Publicly available production documentation—including director interviews, studio materials, and making-of

records—was consulted to understand creative intention. Reception evidence includes published criticism and publicly reported box-office data. Scholarly literature encompasses peer-reviewed studies of the individual works and of Chinese animation more broadly. Using multiple data types enables triangulation, ensuring that claims about creative intention, textual form, and audience response rest on distinct evidentiary foundations. Box-office figures are drawn from industry sources as reported in authoritative publications; because tracking methodologies differ in exchange-rate conversion and treatment of re-releases, figures are presented as approximations. User-generated review platforms and social-media commentary were consulted to map the spectrum of public opinion surrounding each film but are not used as evidentiary support; factual assertions beyond general record—such as release dates and production credits—are substantiated by peer-reviewed scholarship, institutional documents, and established news reporting, while interpretive claims derive from close reading of the films and, where original to the authors, are explicitly identified as such.

3.4. Analytical Procedure

Analysis proceeded in three cycles. In the first cycle, each film was analyzed within-case along a uniform path: cultural resources drawn upon; transformation strategies employed across the visual, narrative, and technological registers; cultural expression effects achieved in the finished text; and communication and reception outcomes. Design decisions were coded using the frame in Table 1, which operationalizes the three-level model for animation by linking each level of culture to the design sites at which it can be encoded and to a guiding coding question. Coding was carried out by the first author and reviewed by the second author; where disagreements arose over coding assignments or uncertainty existed regarding case classification, consensus was reached through discussion. In the second cycle, descriptive observations were grouped into higher-order categories, yielding the four dimensions of application reported in Section 4 and the three mechanisms reported in Section 6.1. In the third cycle, cross-case comparison tested the applicability of each category across all four works, identified points of divergence among cases, and examined disconfirming evidence—particularly critical commentary and reception data inconsistent with the emerging pattern. Table 2 presents the resulting cross-case matrix.

Table 1. Coding Frame Operationalizing the Three-Level Model for Animation

Level of culture	Cultural content	Design sites in animation	Coding question	Illustrative instance
Outer (tangible)	Form, color, material, ornament, built space	Character design; color script; scene and environment design	Which visual signs of the tradition are reproduced, and how are they stylized?	Red-and-gold palette of Ne Zha; tulou dwellings in Big Fish & Begonia
Mid (behavioral)	Performance, ritual, social practice, use	Motion design; acting; staging; sound	Which inherited ways of moving, performing and behaving are re-enacted?	Operatic movement of the Monkey King in Havoc in Heaven
Inner (intangible)	Values, beliefs, cosmology, meaning	Story structure; character motivation; theme	Which values or worldviews does the narrative carry, affirm or revise?	Daoist transformation in Big Fish & Begonia; personal agency in Ne Zha

(Source: developed by the authors, adapted from Leong and Clark [4])

3.5. Trustworthiness

Several measures were implemented to enhance the credibility of the analysis. Data triangulation aligned textual evidence with evidence from production and reception contexts [12]. A second researcher independently reviewed the coding procedures outlined in Section 3.4. Negative-case analysis was systematically conducted: for each film, alternative interpretations inconsistent with the primary analytical claims were deliberately sought, drawing on existing published commentary where available; principal reservations are reported in Section 5 rather than excluded. When reservations arose from the authors' own close viewing—rather than from external sources—they are explicitly identified as such in the text. Finally, the framework's boundary conditions were assessed using the observed divergence between the domestic and international performance of Ne Zha 2. Remaining limitations are detailed in Section 7.3.

4. Analysis I: Application of Traditional Cultural Elements

Across the corpus, traditional culture is integrated into animation through four dimensions: visual aesthetics, folk art and traditional craft, philosophical thought, and myth and legend. As outlined in the three-level model presented in Section 2.3, visual aesthetics and folk craft operate primarily at the outer, tangible level; operatic performance and ritualized movement at the mid, behavioral level; and philosophical thought and myth at the inner, intangible level. This section examines each dimension in turn.

4.1. Visual Aesthetic Elements

4.1.1. Digital Expression of Ink-Wash Art

Ink-wash painting emphasizes conveying spirit through form and creating atmosphere, pursuing an aesthetic that integrates substance and void while using blank space to carry meaning [13]. A pioneering ink-wash animation from 1960 translated visual motifs inspired by traditional ink-wash masters into animated form, marking a significant milestone in the development of nationally rooted animation. Digital technology has since expanded the expressive possibilities of this aesthetic: a 2023 production employed a 'particle ink' technique, wherein vast numbers of computer-generated particles flow and diffuse analogously to ink, reinterpreting the suggestive (xieyi) quality of ink-wash painting within a three-dimensional imaging framework. This transformation extends beyond technical substitution. Rendering ink-wash effects in a three-dimensional pipeline necessitates reconceptualizing the aesthetic principle of the void as a controllable parameter, thereby altering the relationship between gestural articulation and final image.

4.1.2. Traditional Color Systems

Traditional Chinese colors carry established symbolic associations: red conveys auspiciousness and celebration, gold signifies nobility, and cyan-green evokes nature and vitality. In the animated film *Ne Zha* (2019), red and gold are deployed extensively to emphasize the protagonist's mythological stature and heroic character. Here, color operates not merely as visual styling but as a condensed vehicle of cultural meaning—immediately legible to audiences familiar with these conventions and comparatively opaque to those without such background [6].

4.1.3. Architecture and Cultural Imagery

Traditional Chinese architecture embodies cosmological and ethical conceptions of spatial order. Palaces, gardens, pavilions, and historic towns appear consistently across animated works. Reconstructions of the Tang capital—featuring structures such as Daming Palace and Zhuque Avenue—depict civic life with historical resonance, while the circular earthen dwellings in a prominent animated film draw inspiration from Fujian's tulou and reflect communal spatial ideals. These architectural representations prioritize cultural plausibility and affective recognition over archaeological fidelity, a distinction critical to understanding animation's role in heritage transmission.

4.2. Folk Art and Traditional Crafts

4.2.1. Paper-Cutting

Paper-cutting is distinguished by concise silhouettes, expressive exaggeration, and symbolic decoration. The first Chinese paper-cut animation, produced in 1958, employed this art form as its foundational visual language; a later landmark series from 1986 integrated its stylistic principles into character design and motion articulation [14]. Contemporary practice merges these traditional conventions with digital tools to realize dynamic, multi-layered visual expression.

4.2.2. Shadow Puppetry

The flat forms and light-and-shadow effects of shadow puppetry possess a distinctive artistic appeal that translates readily into the moving image [2]. Its conventions—profile-oriented figures, jointed limbs, and planar rotation against a backlit screen—can be reproduced in digital production, which expands creative possibilities beyond the physical limitations of the live puppet stage while preserving the formal signature of the craft. As a performed art, its translation engages both the behavioral level and the outer level of form.

4.2.3. Opera Elements

Chinese opera synthesizes music, dance, visual art, and literature. Its painted facial patterns, elaborate costumes, stylized movement, and distinctive vocal delivery have provided animation with a rich formal vocabulary. The Monkey King in *Havoc in Heaven* (1961) draws upon the martial role conventions of Peking opera; its movement design fuses operatic postures with traditional martial arts techniques, yielding a performance system marked by clear stylistic and cultural identity. This integration enhances the work's aesthetic distinctiveness while broadening the reach of operatic aesthetics to audiences who do not typically engage with live opera.

4.3. Philosophical Thought and Spiritual Culture

4.3.1. Confucian Values

Confucian thought emphasizes benevolence, responsibility, loyalty, and family ethics [4]. In animation, the protagonist's maturation often reflects moral cultivation and a developed sense of obligation aligned with these values. The film Chang An (2023) portrays the interplay between personal aspiration and public duty through the lives of Li Bai and Gao Shi, while Ne Zha (2019) explores how individual responsibility and social recognition evolve together across the central character's development.

4.3.2. Daoist Thought

Daoism emphasizes harmony with nature, spontaneity, and the intrinsic continuity between human existence and the natural world [2]. Big Fish & Begonia (2016) draws extensively on classical Daoist texts such as the Zhuangzi, interpreting the unity of humanity and nature through a narrative centered on transformation, death, and renewal; its oceanic realm, sacred tree, and cyclical life system all reflect core Daoist cosmological principles. Analyses of Nezha narratives indicate that the articulation of Daoist philosophy has evolved over time—from earlier formulations in the late 1970s to contemporary interpretations that integrate Daoist concepts within modern scientific and philosophical frameworks. Thus, philosophical content is not transmitted statically but undergoes continuous reinterpretation.

4.3.3. Myths, Legends and Folk Tales

Chinese myth and legend embody enduring cultural values and shared historical memory, and have long served as a rich source of narrative material for animation. Recent productions have systematically reimagined these traditional stories through contemporary artistic and thematic frameworks. Ne Zha (2019) reinterprets the classical tale of Nezha's encounter with the dragon kings, emphasizing themes of personal agency and identity formation; White Snake (2019) presents a romance-centered prequel to the Legend of the White Snake; and Monkey King: Hero Is Back (2015) adapts Journey to the West by portraying the Monkey King as a hero in decline who undertakes a journey of renewal and rediscovery. Such adaptations operate through repetition with variation,

balancing audience familiarity with creative reinterpretation; thus, the revitalization of myth functions not as a departure from tradition but as an essential mode of its continuity and relevance. The evolving representation of Nezha, for instance, reflects broader shifts in cultural discourse rather than static replication.

Taken together, the four dimensions indicate a shift over time from the borrowing of discrete symbols to the integration of cultural logics. Visual art, folk craft, philosophical thought, and mythological narrative jointly constitute a distinctive expressive system, and it is this integrated system—not any isolated element—that carries cultural meaning into digital circulation.

5. Analysis II: Within-Case and Cross-Case Comparison

This section applies the uniform analytical path to each of the four cases and then conducts a systematic comparison. Consistent with the negative-case procedure outlined in Section 3.5, critical reservations regarding each work are reported alongside its achievements.

5.1. Havoc in Heaven (1961): The Foundation of National Animation Aesthetics

Produced at the Shanghai Animation Film Studio and released in two parts, in 1961 and 1964, the film adapts episodes from Journey to the West and draws extensively on Peking opera, New Year prints and traditional mural painting. Its design strategy is predominantly formal: character design adopts the exaggerated conventions of operatic facial patterning and New Year prints, movement design combines stylized operatic performance with martial-arts choreography, and the saturated, layered color scheme produces a visually distinctive national idiom. In terms of cultural expression, the film constructs a heroic figure defined by courage, vitality and spirited initiative, establishing one of the earliest systematic performance vocabularies in Chinese animation. In terms of communication and reception, the work was widely acclaimed in China, and the Monkey King has since functioned as one of the most recognizable symbols of Chinese culture internationally. Its limitation, from the perspective of the present study, is that its transformation operates almost entirely at the levels of visual form and performance; the philosophical substrate of the source text is largely left implicit. A close reading of the film supports this observation, in that the design emphasizes aesthetic richness over narrative emphasis. The Heavenly Palace, which the story presents as the setting for pivotal dramatic action, is rendered as the most sumptuous space in the film, and the fluid movement design, operatic performance conventions and rhythmic score together produce a sensory pleasure that immerses the viewer in visual artistry rather than foregrounding the narrative's thematic progression.

5.2. Big Fish & Begonia (2016): Philosophy and Myth in Digital Form

The cultural resources of this film include Daoist philosophy, Chinese myth, and vernacular architecture. Its transformation strategy is primarily conceptual: hand-drawn 2D animation, supplemented by computer-generated elements, reconstructs the spatial structure of the Fujian tulou based on on-site research, while the interwoven fates of the three principal characters dramatize ideas of transformation, natural law, and the continuity of living things. The film constructs a fantasy world of considerable aesthetic coherence and translates abstract philosophical propositions into visual narrative. A key limitation concerns narrative clarity rather than visual achievement: the rules governing the film's world remain largely unexplained, several plot developments lack sufficient motivation, and its themes of life, death, and rebirth are frequently articulated through voice-over rather than embodied in action. This case therefore illustrates both the potential and the difficulty of philosophical transformation—the film succeeds in rendering Daoist cosmology as visual atmosphere, yet the narrative architecture required to sustain that cosmology as a coherent argument remains underdeveloped [3].

5.3. Ne Zha (2019): Modern Reconstruction of Traditional Myth

Adapted from the Nezha episodes of Fengshen yanyi, the film retains the core symbolic apparatus of the source while substantially reconstructing its protagonist, who is reimagined as a child marked by prejudice and social exclusion. The declaration that one's fate is determined by oneself rather than by heaven expresses a modern conception of individual agency. In design terms, the redesign of the protagonist—featuring dark-ringed eyes, jagged teeth, and a slouching, unheroic posture—visually conveys the theme of social exclusion, while the surrounding mythological iconography is rendered through three-dimensional effects animation. Commercially, the film achieved major domestic success. It has been observed that the film presents Daoist culture within a modern, scientific framework, reflecting an evolving soft-power discourse oriented toward a more internationally resonant national style; this contrasts with Nezha Conquers the Dragon King (1979), whose aesthetics and characterization drew on traditional Daoist cosmological concepts. It has also been noted that the 2019 film integrates its emphasis on self-determination with Confucian ethical values centered on communal responsibility: Nezha and Aobing ultimately sacrifice themselves to protect the populace. The distinction highlighted here, therefore, concerns relative emphasis rather than omission. Narrative focus rests primarily on self-determination, while the cosmological dimensions of the source serve mainly as a structural backdrop for character development—an instance of the balance between accessibility and fidelity discussed in Section 6.4. This emphasis plausibly enhances narrative clarity for general audiences, yet, as Section 6.2 shows for its sequel, thematic accessibility alone does not guarantee international resonance.

5.4. Chang an (2023): Digital Communication of Poetic Culture

Rooted in Tang poetry, Tang history, and the urban form of the capital, the film visualizes classical poetic imagery and digitally reconstructs the city, its civic life, and its frontier landscapes, using the friendship between Li Bai and Gao Shi as its narrative thread; dozens of Tang poems are recited throughout. It achieved strong domestic box office performance and stimulated widespread public engagement with Tang poetry; by introducing a broad selection of canonical poems to a general audience, it holds potential as an educational resource. Two considerations merit attention: first, the simplification of poetic complexity, and second, departures from established historical accounts. Regarding poetic representation, literal visualization—such as the climactic depiction of 'Bring in the Wine'—fixes inherently multivalent imagery into singular interpretations, limiting the cumulative poetic resonance of quoted verses. Furthermore, framing the dynasty's decline as incidental rather than structural diminishes the somber thematic depth that underpins many of the poems. Concerning historical fidelity, the Luoyang Sui-Tang History Society noted in August 2023 that certain narrative elements diverge from documented evidence: Li Bai and Du Fu first met in Luoyang, not Chang'an; Du Fu spent his early years in Luoyang, not Chang'an; the 'one day, three wonders' episode occurred at Tiangong Temple in Luoyang, not Yangzhou; and Li Bai—not Gao Shi—was involved in Guo Ziyi's release. The Society subsequently communicated its observations to the production team and directors. Both concerns relate directly to the archival function discussed in Section 6.1, as visual interpretations that resolve textual ambiguity and historical reconstructions that deviate from verified records may constrain, as well as broaden, the transmission of cultural heritage.

5.5. Cross-Case Comparison

Table 2 summarizes the four cases along the analytical path. Three patterns are evident. First, the cultural resources engaged shift over time, from predominantly visual and performing traditions (opera, New Year prints and mural painting) toward philosophical, literary and historical sources. Second, the locus of transformation migrates from visual form and performance toward narrative and conceptual content, a shift enabled but not caused by digital technology; in the terms of Section 2.3, design translation moves from the outer and mid levels toward the inner, intangible level. Third, the communicative function broadens from the establishment of a national aesthetic to education, identity formation and international circulation. Importantly, innovation and

inheritance coexist synergistically: both the national experiment of Havoc in Heaven and the contemporary adaptation of Ne Zha preserve identifiable cultural cores while transforming their expression. What differs is which layer of the tradition each work chooses to preserve.

Table 2. Cross-case Comparison of Design Translation Paths of Traditional Chinese Culture in Animation

Analytical dimension	Havoc in Heaven (1961)	Big Fish & Begonia (2016)	Ne Zha (2019)	Chang An (2023)
Cultural resources	Peking opera, Chinese myth, Journey to the West	Daoist philosophy, Chinese myth, vernacular architecture	Fengshen yanyi, the Nezha myth	Tang poetry, Tang history, classical literature
Design strategy	Operatic performance; symbolic, nationalized character design	Philosophical narration; atmospheric construction of scene	Reconstruction of values; remodeling of protagonist	Visualization of poetry; digital reconstruction of history
Production technique	Hand-drawn 2D; frame-by-frame painting	Hand-drawn 2D with 3D CG elements; location research on Fujian tulou	3D animation; particle and digital visual effects	Digital scene construction; large-scale environment rendering
Locus of design translation	Visual form and performance (outer and mid levels)	Conceptual content (inner level)	Narrative structure (inner level)	Textual visualization (outer to inner level)
Communication and reception	Founded national animation aesthetics; enduring cultural symbol	Established an Eastern fantasy aesthetic	Major domestic box-office success; renewed interest in the Nezha myth	Strong domestic box office; potential educational resource
Principal critical reservation	Transformation largely confined to form and performance	Narrative clarity uneven relative to visual density	Emphasis on self-determination outweighs the cosmological dimensions of the source	Simplification of poetic complexity; departures from the historical record

(Source: compiled by the authors)

6. Discussion

6.1. Three Mechanisms Linking Animation to Cultural Sustainability

The cross-case analysis supports the identification of three mechanisms through which animation contributes to the sustainability of cultural heritage.

(1) Archival preservation. Digital production records traditional art forms, narrative material, and historical settings in a durable and reproducible medium. Chang An renders Tang poetry as audiovisual content, and Big Fish & Begonia models vernacular architectural form [9]. This mechanism must be stated carefully: what is preserved is an interpretation, not the original artifact itself; moreover, the act of preservation inherently reconstitutes the object it seeks to preserve.

(2) Performative revitalization. Reinterpretation returns heritage from static display to active circulation. The reworking of Nezha in Ne Zha exemplifies this mechanism,

which operates through use rather than conservation and reflects broader shifts in contemporary cultural discourse.

(3) Generative innovation. Creators recombine inherited resources by revising plot, remodeling character, and incorporating new techniques, enabling the tradition to produce new works continuously. This is the mechanism that closes the feedback loop in Figure 1 and serves as the condition under which the other two mechanisms become self-sustaining rather than terminal.

The three mechanisms are cumulative rather than alternative, and they correspond to the outcomes in Figure 1: archival preservation to heritage protection, generative innovation to cultural innovation, and performative revitalization to the renewed circulation on which cultural sharing depends. Archival preservation without revitalization yields an accessible but inert record; revitalization without generative innovation yields a single successful work rather than a living tradition.

6.2. The Limits of Cross-Cultural Transmission

Animation is frequently described as a medium that transcends linguistic barriers, and there is some evidence for the claim: the Monkey King has arguably functioned internationally as a point of entry into Chinese culture, and the themes of exclusion and self-determination in Ne Zha are not culturally specific. It is nonetheless necessary to distinguish commercial scale from cross-cultural reach, and the reception data now available make that distinction unusually clear.

Ne Zha 2 (2025) became the highest-grossing animated film in history, a position it still held at the beginning of 2026. Its worldwide gross stood at about US$2.15 billion in April 2025 and at about US$2.27 billion in April 2026, by which point it ranked fourth among the highest-grossing films ever released; the increase reflects exchange-rate movement and the late reporting of overseas receipts rather than continued business on the mainland. The revenue was extraordinarily concentrated [2]. In April 2025 only about US$60 million, less than 3 percent of the total, came from outside mainland China, and the completed run confirms that pattern rather than revising it: the film closed its mainland release on 30 June 2025 with RMB 15.445 billion from 324 million admissions, while all markets outside the mainland together contributed a little over RMB 400 million, approximately 2.5 percent of a worldwide total of some RMB 15.9 billion. A film may therefore set a global commercial record while achieving only marginal circulation outside its own cultural and linguistic space. Read through relevant theoretical frameworks, this pattern is not anomalous but anticipated: the density of mythological reference that makes such a work resonant at home is precisely what raises its cultural discount abroad, and industry analysis has identified the film's Daoist cultural elements as a barrier to reception in Western markets. Distribution conditions reinforced the effect. The film was initially released overseas in Mandarin with English subtitles, was promoted with what its North American distributor described as limited preparation time and weak media engagement, and encountered challenges in securing as many screenings as concurrent Hollywood releases, so that low overseas revenue reflects restricted access as well as cultural distance.

This finding has two consequences for the framework. First, the cultural-sustainability outcomes in Figure 1 are asymmetrically realized: revitalization and intergenerational transmission operate strongly within the cultural community, whereas global cultural sharing is contingent on conditions largely external to the text. Second, box-office performance should not be treated as an indicator of cross-cultural communication, however tempting the inference may be. Establishing genuine cross-cultural reception requires evidence of a different kind, including comparative audience research, analysis of localization strategy, and longitudinal tracking of reception, which the present study identifies as a priority for future work.

6.3. Toward an Inclusive Cultural Future

An inclusive cultural future presupposes reciprocity rather than one-directional export [9]. Chinese animation expands the global repertoire of narrative forms and offers

audiences cultural experiences structured differently from dominant Western conventions, making a substantive contribution to cultural diversity. Its educational potential is also significant: a work such as Chang An, which introduces canonical Tang poetry to a broad audience, demonstrates how animation can facilitate cultural learning beyond formal institutions. However, evidence indicates that inclusiveness arises through deliberate mediation—including contextual framing, careful localization, co-production, and sustained distribution—rather than automatically from digital availability.

6.4. Remaining Challenges

Four challenges qualify the account developed above [2, 7]. The first is the relation between cultural authenticity and commercial imperative: where traditional elements are deployed principally as visual differentiation, the result is a superficial traditionalism in which cultural symbols function as ornamentation. The second is interpretive depth: works may accumulate traditional motifs without engaging the values and cosmology that give them meaning, producing traditional form with contemporary content; the balance between accessibility and fidelity noted for Ne Zha in Section 5.3 exemplifies this issue. The third is cultural discount in international circulation, discussed in Section 6.2, which contextual framing and localization can mitigate but not eliminate. The fourth concerns the ethics of emerging technologies: generative artificial intelligence and immersive media improve production efficiency and access, but raise unresolved questions about originality, the provenance of training data, and the authority of bearer communities over their own traditions. This last challenge extends a longstanding concern in critical heritage scholarship—that the designation and mediation of heritage involve value-laden decisions and may marginalize bearer communities from defining their own traditions; the animation industry has not yet addressed these questions systematically.

7. Conclusion

7.1. Design Principles and Development Strategies

The analysis yields four design principles for animation that draws on traditional culture, together with conditions that lie beyond the text itself.

(1) Layered encoding. Visual symbols should be anchored in the values that give them meaning, so that the outer, tangible level and the inner, intangible level are designed together. Where color, costume, or architecture is deployed without that anchoring, tradition becomes decoration—the shallow traditionalism discussed earlier.

(2) Legibility scaffolding. Culturally dense references should be supported within the work by establishing sequences, character motivation, and visual exposition that allow viewers without the relevant cultural repertoire to follow them. Such scaffolding lowers cultural discount without requiring the reference itself to be simplified.

(3) Interpretive restraint. When poetry or philosophy is visualized, suggestion, blank space, and partial disclosure—principles native to certain classical visual traditions—preserve the ambiguity that literal illustration closes down.

(4) Accountable reconstruction. Historical settings and figures should be developed in consultation with subject-matter experts and communities associated with the heritage in question, and the use of artificial intelligence, virtual and augmented reality, and high-fidelity digital reconstruction should be governed by explicit provenance and consent protocols.

Beyond these principles, international reach depends on conditions outside the text. Aesthetic quality alone is insufficient: professional localization, international co-production, and negotiated distribution—each informed by prior audience research in target markets—are also required. Production should further extend its resource base beyond the small canon of frequently adapted myths to include poetry, festival practice, regional legend, and intangible heritage.

7.2. Implications

Theoretically, this study contributes an integrated framework linking traditional culture, design translation, digital circulation, and cultural sustainability; extends the three-level model of cultural design from static products to time-based narrative media, operationalizing it as a coding frame for animation (Table 1); and specifies three mechanisms—archival preservation, performative revitalization, and generative innovation—that are frequently asserted but rarely differentiated. By incorporating constraining conditions and a feedback loop, the framework accommodates both uneven and successful outcomes. Practically, the distinction between domestic revitalization and international intelligibility provides animation designers, producers, and cultural agencies a more precise basis for planning than box-office performance alone, indicating that investment in localization and distribution is not ancillary to cultural transmission but constitutive of it.

7.3. Limitations and Future Research

Three limitations should be acknowledged. First, the sample comprises critically or commercially successful works; thus, the study elucidates how successful transformation operates but does not establish its frequency of success. Comparative work incorporating unsuccessful or marginal productions is needed to address this gap. Second, audience reception is inferred from secondary sources—including published criticism and box-office data, which vary across tracking platforms—rather than from primary audience research. Moreover, evidence on overseas reception is drawn from a single film, rendering claims about actual audience interpretation of cultural content necessarily provisional. Third, the analysis is interpretive and conducted by researchers situated within the cultural tradition under examination. While this positioning facilitates access to cultural references, it also introduces the possibility of confirmation bias. The negative-case procedure outlined in Section 3.5 and the second author's review of the coding serve to mitigate—but not eliminate—this risk. Because coding was performed by one author and reviewed by the other rather than independently by two coders, no inter-coder reliability statistic is reported. Future research should therefore integrate textual analysis with cross-cultural audience reception studies, systematically compare Chinese and non-Chinese strategies of cultural adaptation, and examine the governance of artificial intelligence in heritage-related production.

7.4. Concluding Remarks

This study has examined the application and communicative value of traditional Chinese culture in animation design from the standpoint of sustainable cultural heritage and an inclusive cultural future. The three research questions can now be answered directly.

In answer to RQ1, traditional elements enter animation along four dimensions—visual aesthetics, folk art and craft, philosophical thought, and myth—and are reconstructed rather than reproduced. Across the corpus, the locus of reconstruction migrates from visual form and performance toward narrative and conceptual content: that is, from the outer and mid levels toward the inner level of culture. The four dimensions together constitute an expressive system with a distinctive national character.

In answer to RQ2, inheritance and innovation are integrated within a single creative operation. The strategies identified include the stylization of painterly and operatic conventions in character and motion design, symbolic color scripting, spatial reconstruction of vernacular and historical architecture, re-motivation of mythic characters, visualization of poetic text, and digital techniques such as particle-based ink rendering and three-dimensional effects animation. Digital narration and visual design act directly on inherited material: rendering ink-wash painting within a three-dimensional pipeline, or restaging operatic movement as animated performance, inherently entails reinterpretation. Such reinterpretation is not a loss of fidelity but a necessary condition for contemporary circulation, since it is the reinterpreted form—not the archival original—that reaches a present-day audience.

In answer to RQ3, animation advances sustainable heritage through three cumulative mechanisms—archival preservation, performative revitalization, and generative innovation—but only under specifiable conditions. Analysis of *Havoc in Heaven*, *Big Fish & Begonia*, *Ne Zha*, and *Chang An* shows these mechanisms operating robustly within the cultural community that shares the relevant repertoire, and contingently beyond it.

The study also qualifies a claim often made about animation. Animation does not transcend cultural boundaries automatically. Reception data for *Ne Zha 2* indicate that a work may achieve unprecedented commercial success while remaining largely confined to its own cultural and linguistic market—a pattern consistent with established observations of cultural discount. Animation is therefore best understood as a viable but conditional route to cultural sustainability: robust for revitalization and intergenerational transmission within a cultural community, and dependent on deliberate mediation for genuinely inclusive circulation beyond it. As artificial intelligence and immersive media develop, balancing cultural authenticity, innovative expression, and international intelligibility will remain the central design challenge.

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