Visualising the Arcane: Character Design and the Construction of Believability in Indonesian Digital Folklore Animation as Cultural Sustainability

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Abstract

Transposing stories through media conversion, from print to animated film, inevitably involves critical cultural negotiation shaped by visual decisions. This article examines character believability in the animated film Panji Tengkorak, one of the latest Indonesian animated films adapted from the 1967 Hans Jaladara comic. Although research on believability continues to proliferate, its prevailing focus on Western CGI productions, which characteristically exhibit a hyperrealistic aesthetic, marginalises the dynamics of folklore adaptation in Southeast Asian cultures, which remain infrequently explored. Formal visual analysis methods were used to examine selected screenshots through three technical parameters: anatomical plausibility, surface materiality, and the functional logic of character attributes. The results show that believability is not confined to production techniques but involves an intertextual negotiation between comics' visual language and the cinematic conventions of film noir. This process positions Panji as a valid cultural archetype for contemporary digital audiences. This article contributes to the discourse on the transformation of digital folklore and cultural depth in Southeast Asian animated films by arguing that character design results from the visual intertextuality of intangible cultural heritage, transmitted, transformed, and made relevant across various media.

Keywords: *believability, character design, digital folklore, formal analysis, Panji Tengkorak*

Introduction & Literature Review

The discussion of the animated film Panji Tengkorak must first be set within the broader context of the development of Indonesian animated cinema. Various studies on animated films and character design (Hetherington, 2015; Lönroth, 2021; van Rooij, 2019) have focused on how closely characters resemble their sources of

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inspiration. This article highlights the transformation of cinematographic beauty in the character design of the animated film Panji Tengkorak. This development reflects the growth of the animated film industry in Southeast Asia.

In August 2025, the animated film Panji Tengkorak premiered in cinemas. Its two-dimensional visuals create a morose, enigmatic atmosphere. Although its precise genre remains unclear, the pervasive unease and enigmatic tone point to elements associated with film noir. Film noir is characterised by distinctive compositions and lighting techniques that create an alienating effect, establishing a recognisable cinematic world even for those unfamiliar with specific titles (Neema, 2025). The utilisation of chiaroscuro, characterised by the contrast between light and shadow, serves not only as a technical device, but also as a medium for emotional expression. Panji Tengkorak is shrouded in darkness, aligning with themes of revenge, anger, and surrender to the power of evil spirits.

This film is a cinematic adaptation of the 1967 comic Pandji Tengkorak by Hans Jaladara. It employs a mysterious, mystical and supernatural atmosphere to explore themes of anger, heartache and revenge. Animated films must be regarded comprehensively; it is imperative to understand them as a medium with a broad, versatile scope, encompassing various genres and documentary events (Martinez, 2015). In a letter to Sifianos, the Canadian animator Norman McLaren emphasised the significance of the relationship between successive frames in animated films (Sifianos, 1995). The interstices that emerge between successive frames in a sequence afford animators the opportunity to exercise their imagination (Wells & Hardstaff, 2008). Huth et al. (2023) cite research by Heer & Robertson (2007) that found animated transitions aid visual perception. These in-between movements are continuously refined to enhance the fluidity of motion (Sakamiya et al., 2025). Fluid movement creates the impression of a living character behaving in a near-realistic manner, thereby creating an intimate connection between the audience and the character (Sultana et al., 2013). Moreover, animated films can give shape to the audience's imagination of events unfolding in memory.

Notably, characters in animated films are designed to form an emotional connection with their audience. This is analogous to the creation of works of art, which are produced with the intention of establishing a connection or 'emotional effect' with the viewer through a visual style that shapes perception and emotional response (Seifi et al., 2011). Characters are created to portray stories that transcend reality, possessing extraordinary abilities, while still overcoming the audience's initial scepticism (Hetherington, 2015). Cultural elements have been identified as a strategy to enhance characters' believability (Maldonado & Hayes-Roth, 2004). Indeed, the more a character resembles human personality, the more convincing they are perceived to be (Lee & Heeter, 2012). Furthermore, to maintain the illusion of reality, the character's realistic behaviour must be sustained without interruption in every situation and action (Landa et al., 2023). This shows that the more

believable a character is, the more likely they are to form an emotional bond with the audience.

Panji Tengkorak, a character in a 1967 comic, embodies gloom in line with a narrative of loss and revenge (Zahar et al., 2023). The term 'tengkorak' (cranium) appended to the name 'Panji' alludes to the mask he wears, shaped like a cranium and used to conceal his identity. The cranium was procured from the individual's partner, who perished in a confrontation with a group of bandits intent on acquiring a magical tome (Zahar et al., 2023). The character is depicted in a highly expressive manner, employing bold lines and high contrast with black ink on white paper (see Figure 1).



The Character of Panji Tengkorak - https://www.slideshare.net/slideshow/01-panji-tengkorak/166179997

The cranium mask in the comic appears to blend seamlessly with Panji's face. The bold and delicate lines, along with the black shading on the face, emphasise the facial contours, which tend toward realism (Arianti, 2019). Characters are depicted as imitations of humans, through the attribution of identity and the use of symbols to shape cultural identity (Ekawardhani et al., 2020). The character of Panji in the animated film exhibits a persistent sense of despondency, consistent with the somber tone of the original comic. However, adjustments have been made to suit the new medium, namely animated film. Moreover, the visual style of the character Panji in the animated film deviates from the original comic, which draws on the American comic book style characterised by realistic depiction (Arianti, 2019). The visual simplification of the character in this animated film reduces the sharpness of the lines and the light-dark blocking on the contours of the face and body (see Figure 2).



Panji Tengkorak versi animasi - Screenshot from the animated film Panji Tengkorak (Netflix)

The growing body of research on character believability, based on Western film productions or hyperrealistic CGI characters, focuses on similarities with photorealistic humans (Hetherington, 2015; Lee & Heeter, 2012; van Rooij, 2019). Meanwhile, stylistically semi-realistic and hybrid animated films that adapt material from Southeast Asian folklore have received little attention regarding believability. Yet the intersection between comic traditions, mythological archetypes, and contemporary cinematic aesthetics is very interesting to study. The film Panji Tengkorak strives to remain faithful to the comic, meet the technical expectations of contemporary animated films, and maintain cultural readability for digital-age audiences. This article fills this gap by examining the construction of believability not merely as an aesthetic achievement, but as an intertextual negotiation between comic and cinematic forms, and further as a mechanism for reconstructing and sustaining folklore in the Indonesian animation industry.

Cultural sustainability is an essential component of a holistic societal framework, positioned as the fourth pillar alongside the economic, social, and environmental pillars (Endere et al., 2024). This pillar facilitates the preservation, restoration, and transfer of indigenous knowledge, cultural identity, and community history between generations. Sustainability in this context is demonstrated through reinterpretation, enabling cultural content to retain its value while remaining viable under new aesthetic and technological conditions.

The evolution of the animated film Panji Tengkorak (2025) reveals the dynamics of this alteration. The comic's gloom, conveyed through black-and-white contrast, is transformed into a noir-style animated film (see Figure 1). Visual enrichment, seen through finer lines compared to comics, semi-realistic surface treatment, and dim lighting, suggests new articulations for contemporary audiences. Believability is positioned as an apparatus for harmonizing continuity and change. The representation of Panji as an authentic character remains intact,

despite differences between his visualisation and the comic book version, marking the successful transfer of memories between media and their integrity in the translation process.

This research supports the Sustainable Development Goals (SDGs), particularly Goal 4 (Quality Education) through the preservation of intangible cultural heritage and the enhancement of mental well-being, and Goal 8 (Decent Work and Economic Growth) through the development of an intellectual property-based creative industry (BAPPENAS, 2017). Adapting local comic stories and folktales into high-resolution digital animated films serves two primary functions. Firstly, it reconstructs and immortalises this heritage in the public consciousness. Second, it boosts the competitiveness of the national creative economy ecosystem.

Believability in Animation

Characters in animated films can establish a connection with audiences. Indeed, they can serve as a medium for presenting cultural representations through narrative flexibility and depth (Abdullah & Abdullah, 2020). Research by Hetherington & McRae (2017) on the experience of watching human-like characters found that their believability is influenced by factors both within and outside the film: the technical aspects of character creation and animation, the integration of characters with the background, and their interaction with props, as well as other experiences such as playing video games, narrative expectations, and familiarity with the character itself. The degree of familiarity a character instils in an audience is influenced by two aspects of their visualisation: the character's appearance and their behaviour, as perceived by the audience (Ekawardhani, 2020). The expressions and gestures generated by the character's movements further reinforce this sense of connection. The character's ability to mimic human expressions – ranging from micro-expressions to macro-expressions – further convinces the audience of the connection with the character (Araujo et al., 2021; Maldonado & Hayes-Roth, 2004). The extent to which a character can respond to interactions with other characters has a direct impact on the level of the uncanny effect observed (Lee & Heeter, 2012; Uggah & Manaf, 2015). Feelings of comfort or, conversely, discomfort regarding the presence of non-human characters arise specifically across categorical boundaries, through entities whose appearance shifts from non-human to human (MacDorman & Chattopadhyay, 2016).

Characters can also be read as texts; according to Julia Kristeva's explanation in the late 1960s, texts are interconnected and form meaning through their interaction with other texts (Judijanto, 2025). When such texts encounter folklore, they produce intertextual events, especially in digital-era culture, where young audiences construct knowledge (Budairi, 2023). Animated films have emerged as a significant medium for the proliferation of digital folklore. The shift of folk culture to digital platforms has significantly expanded the repository, particularly through

new interpretations of traditions, customs, folk songs, myths, and legends (Kjupeva, 2023). Nevertheless, the transition from static to moving imagery in media invariably requires compromises in how characters are portrayed. This phenomenon can be considered a "logical consequence" of the existence of differing interpretations (Kjupeva, 2023). Adapting characters from comics to animated films shifts the narrative from panels to scenes (Callus, 2021). Regarding character believability in film, characters typically receive more comprehensive visual treatment than their counterparts in comics. As McCloud (2008) explains, visualisation in comics conveys meaning rather than reality. Characters in animated films are designed to convey a particular style, taste, and meaning, reflecting human nature (Chand, 2016). Figures 3a and 3 b below show the divergent portrayals of Panji in the comic and the animated film.



3a



3b

Panji Tengkorak in Pandji Tengkorak Comic Vol. 1 (3a) and Panji Tengkorak in the Panji Tengkorak movie (3b) (Netflix)

The employment of textures derived from bold lines and blocks of black, juxtaposed with white, serves to achieve visual clarity through contrast and simplification (see Figure 3a). In the context of animated films, however, bold lines are employed exclusively for the purpose of delineating characters from their background. In regions of reduced illumination, such as the hair, the outlines become indistinct from the surrounding light (see Figure 3b).

This animated film adapts the narrative of Panji Tengkorak with a visual style that blends magic and noir. Noir encompasses a complex melancholy underpinning moods, imagery, concepts, passions, imagination, and understanding—elements presented as distinct yet inseparable (Kochhar-Lindgren, 2023). The classic noir visual style, as described by Place and Peterson, emphasises low lighting, day-for-night techniques, deep focus, and wide-angle lenses, as well as extreme angles and "asymmetrical mise-en-scène" (Franklin & Thompson, 2022). The new generation of film noir incorporates colour as a new "noir landscape", showcasing an "aura" tied to its themes and narrative (Franklin & Thompson, 2022; Glitre, 2009). The inner

world of the character Panji is explored in the manner described by Etxeberria (2008), namely in an extreme way, accompanied by distorted lenses and the use of strong chiaroscuro lighting combined with highly stylised imagery to create images that seem to come alive, where the abstract and concrete, the imaginative and the real, are juxtaposed without transition. The way light is used in the film serves as a psychological conduit, facilitating emotional interconnection between characters (Della_aprila13 & Firman Mutaqin, 2024).

The interconnectedness of believability studies, digital folklore, and noir aesthetics builds the logic of intertextuality. According to Paul Wells, translating print media into animated film risks becoming an unholy alliance (Dix & Read, 2023). However, Hutcheon suggests that adaptations of works of art are not limited to preserving the original work; they can involve creativity and stand alone with new perspectives, meanings, and interpretations (Adumati, 2023). The transformation of Panji Tengkorak from comic to animated film cannot be considered a degradation of visual quality; in fact, it can be the opposite, especially if the observation is limited to mere technical degrees. In fact, this intertextual act combines the visual language of the original comic, the cognitive expectations that underpin the characters' believability, and a Western film noir feel, weaving them into a coherent dialogue that subtly fuses Western aesthetics with the cultural memory embedded in Indonesian folkloric archetypes. The study therefore uses formal visual analysis not merely as a technical examination of visualisation, but as a method of tracing the workings of intertextual relationships between media, genres, and cultural archetypes manifested on the surface of the image itself.

Anatomical Plausibility and Gestural Flexibility

The character design approach in Panji Tengkorak uses a semi-realistic visual style, with simplifications in certain areas, such as the mouth and hair. This simplification aims to reduce the film's realistic feel (Riwinoto, 2020). The semi-realistic style helps avoid the so-called ‘uncanny valley effect’, a term coined to describe the phenomenon in which audiences feel discomfort when characters appear realistic but contain unrealistic elements (Kätsyri et al., 2017). The analysis of movement in animated films can be facilitated through screenshots, which depict the physical actions of characters engaged in diverse activities. The present analysis focuses on the characters Panji and Bramantya, the main and a peripheral character, respectively (see Figures 4a and 4b).



(4a)



(4b)

Panji (4a) and Bramantya (4b) - Instagram @falconpictures

A formal analysis of the character's movement mechanics reveals fluid gestures, particularly when Panji performs dynamic movements in a series of martial arts moves. While the movements in the original comic appear static, characterised by bold lines, this animated version emphasises anatomical plausibility through the distribution of weight and gravity in the character's movements (see Figure 5). The interplay between textual form and the audience's worldview, attained through the packaging of formal narrative structures and aesthetic symbolism, influences the audience's ideological framework more broadly than interpretations of specific scenes or shots (Vaughan & Johns, 2021). Seamless animated transitions support the audience's visual perception, capturing the intricacies of movement without compromising physical consistency. This finding aligns with Sultana et al. (2013), who argue that when characters exhibit behaviours that approximate realism, it fosters a deeper emotional connection with the audience. This sustained believability enables Panji to transcend traditional archetypes, becoming an entity that offers a believable cinematic experience.



Character motion capture - Panji Tengkorak movie (Netflix)

Materiality and Surface Qualities

The believability of the work is also conveyed through the surface qualities of the objects. This includes the rendering of skin tones, the play of light on skin and props, and the treatment of objects presented as made of specific materials. Panji

Tengkorak is an appellation referring to the character's distinctive appearance, marked by his human cranium mask. The cranium mask indicates Panji's fidelity in accompanying his beloved on her spiritual journey, despite the tragic demise she faces, to bear witness to and traverse this odyssey together (Jaladara, 1967). A notable distinction emerges in the depiction of the mask Panji uses in the comic and the animated film (see Figures 6a and 6b).



(6a)



(6b)

Panji wearing a cranium mask in the comic (6a) and Panji's cranium mask in animated movie (6b)

In the comic, the cranium mask appears to merge with Panji's face, creating the initial impression of an ugly face. As McCloud (2008) explains, this depiction places greater emphasis on meaning. The shadows on the mask are replaced by a block of dark colour on the right cheek. In the animated film, the mask is smaller than Panji's face, thus suggesting that the cranium belongs to an individual with a smaller face than Panji's. The mask's colour is designed to contrast with Panji's face, enhancing the believability of the semi-realistic character, as explained by Hetherington (2015). Similarly, the quality of the materials used in the attire can be seen in the accoutrements worn by Panglima Wirabaya, the military leader. His attire features a gold sash across the chest, signifying his position as commander of the royal army (see Figure 7).



Panglima Wirabaya - Instagram @falconpictures

The importance of material quality is highlighted using white light on yellow and blue surfaces (see red circles). Furthermore, the material quality is evident in the shoes (see arrow), with chiaroscuro created by contrasting light in dark areas. A similar approach is also applied to the depiction of the clothing worn by the pencak silat instructor character, Panji Nagamas (see Figure 8). The surface of his clothing shows effects of light and shadow. However, the colour choice differs, symbolising the simple demeanour of a pencak silat instructor. This simple material quality instils a sense of believability in the character's background and activities.



Nagamas - Instagram @falconpictures

Notwithstanding the exhaustive portrayal of attire, another intriguing object for examination is the cranium mask itself. As previously discussed, the cranium originates from Murni's corpse, an event that significantly shaped Panji's anti-heroic disposition. The film depicts the use of the cranium as a mask from the moment Panji excavates it from the ground (see Figures 9a and 9b). The texture of the cranium is depicted in greater detail on the inside (see Figure 9b). Distinct lines delineate the contours of the cranium's bones.



(9a)



(9b)

Panji proceeded to excavate the skull from the underlying layer of soil (9a); The cranium is delineated by the presence of sharp lines, which delineate its contours (9b) - Panji Tengkorak movie

Digital Folklore and Cultural Sustainability

The narrative of Panji Tengkorak has transcended folklore, becoming a testament to local creative storytelling. Its transformation into an animated film contributes to the digital reconstruction of Indonesian folklore. Notwithstanding the contradictions inherent in its existence, this represents the adoption of a new form of communication for today's modern society (de Seta, 2019). The Panji Tengkorak animated film retains the bold lines found in the original comic, though with reduced intensity and enhanced by a colour palette. The pervasive sense of foreboding that characterises the protagonist Panji, a contemporary anti-hero, is conveyed through the medium of cinematic intimacy. This believability keeps the character's qualities intact and brings them to life in the collective memory of a contemporary society oriented towards the digital age.

In the context of sustainable development, the characters' actions and associated attributes support the realisation of Sustainable Development Goal 4 (Quality Education), particularly Target 4.7 on conserving intangible cultural heritage. Although the film reflects the values of its era, including anger and retribution, it also deliberately reflects on the repercussions the characters experience. The film is lauded for its visual splendour, as well as for integrating values and visualisations that create a significant entity with which today's young generation can engage. At the same time, the animation quality has the potential to strengthen the competitiveness of the national creative economy, in line with SDG 8 (Decent Work and Economic Growth), particularly Target 8.9. Improving visual quality and establishing consistent believability in local hero characters are pivotal to fostering a sustainable animation industry built on Intellectual Property Rights (IPR).

Conclusion and Recommendation

This research addresses the gap in character believability research, which has largely focused on hyperrealistic Western CGI, by examining character believability in Southeast Asian animated folklore films. The research uses a formal analysis of Panji Tengkorak in terms of anatomical plausibility, surface materiality, and the functional logic of character attributes, which are intertwined to persuade the audience to suspend disbelief. The film's noir aesthetic, rooted in chiaroscuro, goes beyond stylistic borrowing and functions as a visual grammar that conveys the gloom of the Panji Tengkorak story while offering the audience contemporary cinematic beauty.

This study moves beyond the technical dimension to explore the believability of the Panji Tengkorak character as a visual intertextual entity. The negotiation between the graphic language of comics, film noir conventions, and the cultural memory embedded in the Panji character becomes clear. Intertextuality, combined with adaptation theory in the character's discussion, shows that this animated film not only updates a classic character but also reconstructs it through aesthetic mediation. This effort helps preserve cultural continuity through new media. Believability thus complements aesthetic achievement and serves as a mechanism for cultural transmission. Further research could examine audience reception of these folktale adaptations across demographic contexts, or deepen the formal analytical framework for other Southeast Asian animated films. This could be particularly relevant in terms of a comparative understanding of regional visual cultures negotiating tradition and modernity through digital animation.

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