

RESEARCH ARTICLE

# Materializing the digital landscape: the cinema–ecology complex and Chinese fantasy media

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## Abstract

Contemporary cinema and media studies are marked by a materialist turn that highlights material elements, such as objects, non-human agencies, the environment and places on and off screen, as well as the materiality of media productions and consumption. This article expands on the important scholarship of “materialist” media studies as well as existing ecocinema scholarship by stressing the materiality of digital landscapes in contemporary Chinese fantasy (or *qihuan* and *xuanhuan*) film and television works that have gained significant popularity in China and Hong Kong. Specifically, this article examines the animist landscape in film and television adaptations of *Eternal Love*, a fantasy romance television serial that loosely draws on Daoist mythology. Focusing on the material aspects of digital landscapes of Chinese fantasy cinema, the article develops the notion of the “cinema–ecology complex” to address the materiality of digital landscapes, the cinematic footprint of digitally enhanced landscapes through location shooting and the consumption of landscapes as scenic spots, including *daka* practices, in film studio cities and related film-induced tourism. Ultimately, this article calls for a textual–infrastructural approach in cinema and media studies, which tends to reorient to the infrastructural aspects of media production, distribution and consumption.

**Key words:** Animist; cinema–ecology complex; *daka*; digital landscape; fantasy; materialist; *qihuan*; tourism

## The “animist landscape” and fantasy media

Over the past two decades, fantasy (*qihuan* or *xuanhuan*) film, television and animation have gained significant popularity and are now a recognizable industry genre in China and Hong Kong. Although Chinese-language films with fantastic themes and visualizations have such a diverse and multifaceted history, one could argue that fantasy media (*qihuan yingshi*) started to (re)emerge as a recognized genre in the new millennium. After the box office successes of *The Lord of The Rings* and the Harry Potter series in China, *qihuan yingshi* gained more prominence. In popular literature, the term *qihuan*, literally the fantastic/strange illusions, is the Chinese equivalent to fantasy in English (Shao 2018). The term has gained prominence in production, circulation and audience reception. Online video platforms such as Youku, Tencent Video and iQiyi have used *qihuan* as a general label to classify the film and video content on their platforms. In this context, *qihuan* is usually defined in relation to *kehuan*, or science fiction. While *kehuan* refers to stories that are based loosely on science, often set in the future, *qihuan* serves as an umbrella term that encompasses, or overlaps with *xuanhuan* (mysterious fantasy) and *mohuan* (magical fantasy). Their stories are predominantly set in ancient times or make references to the past instead of the future.

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In the context of feature films, the new phase of film co-production between China and Hong Kong contributed to the rise of the *qihuan* cinema. The 2003 CEPA agreement further consolidated the industrial collaboration between China and Hong Kong by categorizing coproduced films as films from China, which were no longer limited by the strict quota system of importing foreign films, including those from Hong Kong. Many notable coproduced films contain fantasy elements, such as Stephen Chow's *Kung Fu Hustle* (2004) and *CJ7* (2008) as well as Jackie Chan's *The Myth* (2005). In this process, Hong Kong filmmakers tend to secularize the supernatural in order to pass censorship restrictions (Bettinson 2020). Besides feature film productions, online video platforms such as Tencent Video, Youku and iQiyi have started to generate original content such as online films, television serials and reality shows due to the rapid growth of online video-streaming platforms (Wang and Lobato 2019; Zhao 2018). Among them, fantasy films and serial dramas are popular genres in the era of media convergence. These fantasy media are enormously popular. The fantasy feature films often make it into the yearly top ten box office lists while the television and online series enjoy high ratings and strong followings.

As a part of world-building, landscapes are important for fantasy film and media. Most blockbuster fantasy films and television shows place considerable emphasis on the setting and landscape. Many scenes and stories are set in faraway borders, frontier regions, forests or mountainous areas with fantastic creatures or in magical realms based on traditional Chinese architectural elements. The elaborate and grand scenes provide visual spectacles that depart from real-life experiences. For example, the giant Buddha statue created using matte-painting technology in *Detective Dee and the Mystery of the Phantom Flame* (2010) and the ice caves, ruins, cemeteries and similar mysterious and scary settings in *Chronicles of the Ghostly Tribe* (2015) all employ spaces with strong visual impacts for the settings. Suspenseful and adventurous fantasy films are mostly adapted from popular print and internet literature. The world-building in the films has always been supported by the backbone of different systems of worldviews. Fantasy knights fixed in an ancient fictional universe, such as in the television drama series *Chinese Paladin* (2005) and *Chinese Paladin 3* (2009), and tomb raiding in modern adventures and criminal investigations, such as in the *Candle in the Tomb* series and *Grave Robbers' Chronicles*, all present elaborate and grand scenes and spectacular landscapes that are energetic and oftentimes move in unexpected ways. The creation of an artificial landscape, which can include world-making and destruction, as well as unnatural or extreme weather, often relies on digital technology, and these films are sometimes referred to as "visual effects" films. Heavily relying on digital visual effects for world-building and the creating of non-human characters, Chinese fantasy media in the new millennium is well-developed and includes a diverse body of films, television and online series, as well as animations and games. These cultural productions oftentimes take the shape of transmedia formation in the context of convergence culture. Such formation is exemplified by popular television shows or online series that were made into feature films (e.g. *Eternal Love*), or the other way around (e.g. *Ghost Blows Out the Light*).

These spectacular landscapes in fantasy media certainly depart from the environmental degradation taking place in the real world. The sensational imaginations of world destruction are also in contrast with the "slow violence" (Nixon 2011) cast upon vulnerable ecosystems and people. From a classic Frankfurt School and Marxist perspective, the more-than-human elements such as landscapes and animals in the fantasy world serve as manipulative ideological tools that distract the audience from urgent real-life environmental problems, which are at once political, economic and social issues. Popular Chinese fantasy media is thus regarded as escapist and superficial, and hence less worthy of scholarly attention. Yet, the study of mainstream cinema with an ecocritical perspective can shed new light on current studies of film and ecology.

The landscapes in Chinese fantasy media, whose representation is facilitated by the employment of visual effects, can be understood as what Marina Warner calls "animist landscape" (2014, p. 20). With *anima* being the Latin for soul, the idea of animism can be traced back to the belief in spiritual beings and souls (Tylor 1871). The "animist landscape" depicts a world in which our preconceived opinions upon nature, materiality and beings – both living and non-living – as insensate, fixed or inactive are

radically challenged by the idea that the material world is endowed with activity and agency. Warner sees the Anglophone fairy tales as a world of animist landscape that advocates the irrational and the supernatural; it is a world where “animals speak, stones move of their own accord” (2014, p. 20). The Chinese fantasy worlds are oftentimes influenced by animist worldviews that stemmed from a long tradition of folklore and classical literature; in which landscapes are often active agents, rather than inactive objects.

Chinese fantasy media, like the long existing fairy tales, echoes recent scholarly understandings of materiality as vitalist, dynamic and agential. One of the most representative examples of these new understandings of materiality is Jane Bennett’s emphasis on the vibrant “vitality” of non-human or material life. In *Vibrant Matter*, Bennett calls for the recognition of “the capacity of things – edibles, commodities, storms, metals – not only to impede or block humans but also to act as quasi agents or forces with trajectories, propensities and tendencies of their own” (2010, p. viii). More importantly, as Rosemary J. Jolly and Alexander Fyfe argue, situating animisms in the postcolonial context requires not reducing them to a “theory” of the material, but exploring the full range of materialities in diverse contexts (2018). Focusing on the digitally enhanced landscapes in fantasy cinema through a materialist approach, in the remainder of the article I look at the entangled relationship between the images on screen and the ecological concerns, or what I call the “cinema–ecology complex.”

### Materialist turn from ecocinema to cinema–ecology complex

Contemporary cinema studies and media studies are marked by a “materialist turn,” which is exemplified by recent works that are informed by rich scholarship on post-humanism, new materialism, object-oriented ontologies and speculative realism (Shaviro 2014). This materialist turn can be sorted as a spectrum of scholarship, with one pole focusing mainly on film and media texts and the other on infrastructural data. The “infrastructural” end of the spectrum investigates the materiality of media productions and consumption (Parks and Starosielski 2015; Starosielski 2016; Starosielski and Walker 2016), which is exemplified by the emergent field of *environmental media studies*. Building upon economic, environmental and historical data, books such as *Greening the Media* assert that information and communication technologies (ITC) are not ecologically clean (Maxwell and Miller 2012). The cycle of producing, using and discarding smartphones, tablets, televisions and personal computers causes an overflow of poisonous metals and chemicals, toxic working environments and hazardous waste. Environmental media studies ask whether the production and consumption of media are done in an environmentally friendly manner. Increasingly, IT companies and Hollywood production companies have tried to neutralize their carbon emissions by buying carbon credits, using alternative energy and reducing production waste, yet the ecological impact of ITC is still overlooked. In *Signal Traffic: Critical Studies of Media Infrastructure*, Parks and Starosielski (2015) conceptualize sites such as data centres, under-ocean cables and mobile-communication towers as media infrastructures. They advocate for *environmental media studies* that consider “where the materials and energy needed to build, operate, and sustain massive systems of content distribution come from and [evaluate] the impacts of those systems on environs in different parts of the world” (2015, p. 14). This materialistic turn in the infrastructural approach to media is similar to what Litzinger and Yang call “media materialism” (2020), a reorientation to studying the materiality of media technologies based on new materialist conceptions of the vitality of matter.

On the other end, the “textual” pole exploring text highlights the material elements, such as objects, non-human life forms, environment and places on screen (including the study of ecocinema) and animals and non-humans in film and media. According to Willoquet-Maricondi (2010, p. 47), while environmentalist films offer a pro-environment and pro-sustainability perspective that “affirms, rather than challenges, the culture’s fundamental anthropocentric ethos,” ecocinema demands a shift that moves “from a narrow anthropocentric worldview to an earth-centered, or ecocentric, view” (2010, p. 45). In the field of Chinese-language cinema studies, an increasing number of works have been devoted to Chinese and Asian ecocinema (Chu 2016; Lu and Mi 2009; Riemenschnitter and

Imbach 2018; Yee 2019). For example, Sheldon Lu and Jiayan Mi (2009, p. 2) define ecocinema as a “cinema with an ecological consciousness,” which articulates the relationship between human beings and the physical environment, earth, nature and animals from a biocentric, non-anthropocentric point of view. The body of Chinese ecocinema literature focuses mostly on nonfictional and fictional films that rely heavily on realism as their aesthetic repertoire, stemming from the strong scholarship on Chinese-independent films and documentaries. The preference in these films echoes Scott MacDonald’s (2004) call of “Towards an eco-cinema,” where he locates a tradition of experimental filmmaking that provides “an evocation of the experience of being immersed in the natural world” (2004, p. 108). This tendency to focus on ecodocumentaries or realist fiction films is evident in works on Chinese ecocinema such as *Ecology and Chinese-language Cinema* (Lu and Gong 2019), in which the authors provide an excellent explanation on the importance of materiality of film production and consumption infrastructures in the introduction chapter yet the content chapters mostly deal with the materiality on a textual level.

Compared with the study of eco-documentaries or realist films, the study of Chinese popular films from an ecological perspective is a rather new area of academic interest. Among the scholars, Ng (2019) gives a detailed reading of the White Snake mythology on screen in different periods of the twentieth century in both China and Hong Kong. He reads them as an Anthropocene mythology that is closely connected to the political, cultural and ideological contexts from which the movies were made. In her analysis of the ethics of care in two Chinese fantasy films, Law (2019) argues that popular cinema, despite its contradictions regarding the idea of ecocentrism, may help the audience to become caring agents through kitschy aesthetics. The newly published anthology *Sino-Enchantment: The Fantastic in Contemporary Chinese Cinemas* examines how Chinese fantasy films are “re-enchanted by the natural world and non-human life” (Chan and Stuckey 2021, p. 246). In this book, Yiman Wang’s chapter explores how the representation of wildlife in big-budget films offers “a fantastic ecocinematic consciousness” that prompts the audience to “ponder the value of de-anthropocentrism and the ways of practising it” (Wang 2021, p. 191). These readings have provided important eco-critical or anti-anthropocentric critiques based on detailed textual analysis. Nevertheless, the primary concern based on textual analysis may overlook the materiality of the media production/consumption from an infrastructure point of view.

This article expands on existing research about Chinese ecocinema in two ways. Thematically, I join the recent works on approaching commercial films, especially fantasy media (*qihuan yingshi*), from an ecological perspective, which differs from the earlier focus on ecodocumentaries and realist films in ecocinema. Methodologically, following Kääpä’s call to “synergize textual and infrastructural analysis” (2009, p. 84), I combine the two poles of the spectrum to approach the materiality of film and media. In *qihuan* media, the creation of otherworldly places and landscapes, together with the creation of non-human species and magics, relies heavily on digital visual effects. Although *qihuan* cinema and special effects emerged as early as the beginning of Chinese cinema, contemporary technologies that create visual effects, digital imagery and sounds entail a material process that presents the non-human in new ways. Exemplified by Bozak (2011), *environmental media studies* approach the digitality of the image from a materialist perspective. In *The Cinematic Footprint*, Bozak (2011, p. 12) calls for reducing “the cinematic footprint, or any other deleterious ecological impact,” which needs to be done “on the level of scale – limiting consumption and expenditure, however idealistic that may be.” One of the myths challenged by Bozak is the immateriality of digital images. Going digital tends to be equated with going green. However, the digital image also relies heavily on media infrastructures and the energy economy. This infrastructural approach to the digital image is worth noting in relation to recent studies on digital visual effects.

By combining the infrastructural approach with textual analysis of the animist digital landscape in fantasy media, I conceptualize the notion of the “cinema–ecology complex” to engage with the materialist turn in media studies and expand on the existing framework of ecocinema. In his framing of the military–entertainment complex, Lenoir (2000, p. 292) details the historical nexus between computer simulation and virtual reality for military purposes and the entertainment industry, which can be

traced back to as early as Ivan Sutherland's head-mounted display project in 1966. Military research agencies, such as the Defense Advanced Research Projects Agency, and long-term government support have been crucial in funding innovative research in computer graphics software and hardware (Lenoir 2000, p. 298). Similarly, Stockwell and Muir (2003) define the military–entertainment complex as “the close cooperation – and sharing – of ideas and resources: between computer games producers and the military, particularly on pretraining prospective candidates for the US armed forces; between Hollywood producers and the US government on language and concepts post September 11, 2001; and between the military's propaganda machine and the entertainment industry's thirst for manufactured and timely ‘reality’ that precludes the possibility of the critical representation of the real.”

While these previous definitions of “complex” have uncovered the hidden overlaps between military and entertainment sectors, my framing of the “cinema–ecology complex” follows the materialist turn and environmental media studies to accentuate cinema's largely overlooked reliance on, exploitation of and imagination surrounding ecology. In particular, I emphasize the materiality of cinematic arts to investigate what I call the cinema–ecology complex, a term that maps out how cinematic media and ecology – especially natural landscapes – are enmeshed in several registers. Landscape is the non-human element that operates across the cinema–ecology complex, a textual–infrastructure system. Besides the obvious meaning of cinematic representation of natural landscapes, I look at the operation of the cinema–ecology complex in three ways: first, as a one-off/scattered cinematic footprint on ecology through location shooting, especially on natural landscapes and habitus in remote areas with low human density; second, in terms of the cinematic footprint of location shooting that sustains the landscape on screen and third, via the emergence of the spectator–tourist in the affective encounters with landscapes facilitated by the film studio cities and related film-induced tourism. Hence the cinema–ecology complex captures how the film production process and its tourist developments impact ecology. In the following sections, I will use the example of the materiality of animist landscapes in television serial *Eternal Love* to illustrate my points.

### The peach blossom landscape and romantic fantasy in *Eternal Love*

Most blockbuster fantasy films and big-budget television shows greatly highlight the setting, especially with regards to what appears on screen and the visual style of the films and videos. Although feature films make up a crucial part of the recent proliferation of *qihuan* media, I define cinema broadly to encompass different cinematic forms, including feature film, television, online series and animation. One of the most iconic landscape and world-building fantasy media works is television serial *Eternal Love* (2017), the Chinese title of which means *Three Lives, Three Worlds, Ten Miles of Peach Blossoms*. Premiered on Zhejiang and Dongfang Satellite Television, the fifty-eight episode serial enjoyed high ratings and secured many reruns on other television channels. Starring Mark Chao and Yang Mi, the serial was simultaneously available through video-streaming platforms Youku and Letv. It became a cultural phenomenon as it accumulated 42 billion views online.<sup>1</sup> *Eternal Love* thus become one of the most representative Chinese fantasy media works, and is now also available on international streaming platforms such as Netflix. The movie of the same name was released in the same year. The television show was so popular that a side romantic plotline was developed into another online serial, *Three Lives, Three Worlds: The Pillow Book* (2019), produced by Tencent Video.

These film and video works are usually clustered under the label *xuanhuan*, a combination of *xuan* (Daoist metaphysics) and *huan* (fantasy or illusion). The term *xuanhuan* has a longer history in Chinese popular culture to describe works such as martial art novels by Wong Cho-keung in the 1990s. Yet the recent bloom of *qihuan* media encompasses or overlaps with the genre of *xuanhuan*, which draws on Chinese philosophy, folklore and mythology. As explained in the Introduction, I use the term *qihuan*, which literally means fantastic/strange illusions, to describe Chinese fantasy media.

<sup>1</sup>The quantity of the online views includes the views on promotional short videos, the serial by episode and relevant interview videos across all streaming platforms. The number is released by the marketing team of the show for publicity intentions.



*Eternal Love* labels itself as *xuanhuan* yet it is also classified under *qihuan* in online discussion forums such as Douban. Adapted from a popular online novel, *Eternal Love* tells a love story in three lifetimes spread across thousands of years. The cultural trope of “three lives” loosely draws on the past, present and future lives of the Buddha as presented in the Buddha’s biography. The female protagonist, Baiqian, is Princess of the Foxes, an immortal (*xianren*) who loses her magic during combat and becomes a mortal (*fanren*) in her second life. She suffers emotionally and physically as she falls in love with the prince of the immortal world in her second life. Disappointed by her lover, she jumps off the Immortals Punishment Stage only to find herself back as the original powerful and prestigious immortal in her third life.

Like *Eternal Love*, many *qihuan* films and television shows are set in other-worldly realms. However, these cinematic fantasies are much more entangled with reality than one may first imagine. For example, as Ni (2020) points out, the cultivation of immortality, one of the recurring themes in *huan* media, does not imply a return to the Daoist tradition or practices; rather, the narratives of embodied practice engage with the reality of digital technology, neoliberal governance and global capitalism by constructing neoliberal *Homo economicus* individuals. Similarly, *Eternal Love* loosely draws on Daoist mythologies of the immortal world and the Daoist literary trope of “banished immortals,” which is commonly used in Chinese classical chapter novels to provide a framing story of multiple characters in which immortals are banished as mortals to experience the challenges of mortality. According to Lee Fong-mao (1995, 2007), the motif of banished immortals serves as an allegory for those who are frustrated in their official careers and also provides comfort to those mortal victims in destined challenges, as they are assured of a return to the immortal world after death. In *Eternal Love*, the framing story of the banished immortals across three lives provides comfort to the cruelty and tragedy experienced in the second life. The love affair in the second life between the powerless female mortal and the privileged immortal mirrors the relationship across the two poles of social classes. The framing story of the banished immortals resolves the class tension in the second life, justifies the violence imposed on the mortal-immortal lovers and creates a sense of destiny for the two lovers across three lives.

Besides *xuanhuan*, the serial’s emphasis on romantic love also aligns with the larger popular culture of *yanqing* as well as the genre of *gu’ou*. Dispersed through various media forms such as online novels, series and movies, *yanqing* (which means “expressing emotion” literarily, and was originally used by scholars such as Lu Xun to describe Western romantic stories [1973]) has developed into a vibrant Chinese culture of love, romance and emotion. *Gu’ou* is the abbreviation of “guzhuang ouxiang ju,” which means idol period drama, in which idols with gorgeous costumes and delicate makeup appeal to the audience with a romantic plot in an ancient setting. Historically, the special fascination with or cult of *qing* was prominent in the literature in the late Ming period. According to Martin Huang, this late Ming concept of “qing” does not have an exact English equivalent but has been translated on various occasions as “feelings,” “love,” “romantic sentiments,” and “passions” (1998, p. 153). Despite the difficulty to translate the idea of *qing*, the idea of romantic love plays a central role in *Eternal Love*, through the peach blossom landscape. In *Eternal Love*, as the Chinese title *Three Lives, Three Worlds, Ten Miles of Peach Blossoms* suggests, the peach blossom scenery plays an important role in the plot as well as in the visual vocabulary.

The Peach Blossom Spring (*taoyuan*), first imagined as a grotto haven in the writing of Tao Yuanming (365–427 CE), has a long history in Chinese literature and iconography. While the peach is usually associated with Daoist ideas of longevity and immortality, the peach blossom also symbolizes idealized femininity, or the “transience of the youthful female visage” (Liu 2019, p. 130). The peach blossom forest is seen as a vision of immortal paradise as well as a utopian imagination of a better, peaceful and other-worldly place. The peach blossom has been an important visual motif for Chinese literati *shanshui*, or landscape ink and brush paintings, either symbolizing a “fantastic land of the immortals and the magic of a paradise” or a place of “serenity and seclusion” usually preferred by the literati class (Liu 2019, p. 120). Another possible inspiration of the peach blossom could come from the play *Taohua shan* (*The Peach Blossom Fan*) by Kong Shangren (1648–1718).

Spattering her fan with blood in her resistance against corrupt officials, the female protagonist turns the blood stains into a painting of peach blossom on the fan. *The Peach Blossom Fan* is charged with “both a deep sense of loss and the authority of historical understanding” in the play’s dealing of the idea of *qing* (Li 1993, p. 87).

Like the peach blossom petals represented in the form of blood painting in *The Peach Blossom Fan*, the peach blossom petals as well as the forest in *Eternal Love* also act as important visual motifs. The peach blossom petals run through the serial’s promotional materials, opening and closing credits, as well as the story, both thematically and visually. They also serve as transitional visual effects that signify the morphing of the body. These petals move as if they had a life of their own, a prominent feature of animist landscape in the fantasy genre. In the story of *Eternal Love*, the peach blossom forest symbolizes the spiritual home of the female protagonist and the happy times of the two lovers. It is also where the two leading characters again encounter each other in the third life. The natural landscape has always been loaded with symbolic meaning and a complicated human–nature relationship. Green (1990, p. x) argues that nineteenth-century landscape painting is essentially a “private and domestic affair.” In contemporary consumer society, natural landscapes constitute by far the most widespread visual syntagma in advertising images of romance: “nature’s seemingly untamed wilderness evokes Crusoe-like fantasies of sovereignty and mastery, yet also reflects the couples’ feelings and allows the expression of their authentic selves” (Illouz 1997, p. 92). Unlike previous literary tropes and landscape paintings, which were mostly created by and for male intellectuals, the peach blossom serves as a romantic symbol of “eternal love” and the freedom of individual autonomy, targeting a contemporary female audience. It also creates an idealized “eternal youth and beauty” of the two immortal lovers, who do not age across thousands of years.

The peach blossom, the most important iconography of eternal love and beauty, is created in the above-mentioned film and video works via the technique of digital imaging and visual effects. As Bozak (2011, p. 12) points out, the conception that the digital images are immaterial is a myth. Like analogue formats, “digital is industrial and each image consumed bears a material life” because images “come from somewhere and are plugged into an energy economy that is becoming less of a phantasm.” In other words, the production and consumption of digital images are always dependent on the energy economy. The materiality of digital media production and consumption can be applied across the board to all media products. However, the representations of non-humans and the exotic surroundings and landscapes translate to a high demand for infrastructure (in terms of location shooting, settings and design of non-human characters) and are more evident in *qihuan* film and media. Compared with other genres, big-budget *qihuan* media demand more high-performance computers, and thus more energy to render digital visual effects in the making of media products. As many of these films are set in premodern times or an imagined world, their infrastructural costs are also higher than those of other types of films, which make them good examples for illustrating the cinema–ecology complex or the entanglement between cinema and the biophysical environment. In the following sections, I explore the details of infrastructural costs in relation to the notion of the cinema–ecology complex using the example of *Eternal Love*.

### Cinematic footprint of digitally enhanced location shooting

As Lefebvre (2006) points out, in commercial films natural or exterior spaces tend to function as settings instead of landscapes. Natural spaces rest on the spectator to generate a “landscape gaze” that can easily overlap with a more territorial gaze (2006, p. 53). At the same time, this also makes possible the change from setting to landscape through a “landscape gaze” that relies on the audience. Hence, Lefebvre describes landscape in cinema as “impure,” as it is attributed not to the director’s intention but to the audience’s interpretation. It is not impossible that films that extract natural resources also raise environmental awareness, depending on the message of the film and the audience’s interpretation. However, what the cinema–ecology complex perpetuates, if not pollution, is a larger scale of natural resource consumption that is based on media products, such as *qihuan* media.



**Figure 1.** Screen capture of *Eternal Love*, in which the female protagonist Baiqian is taking a walk in her hometown Qingqiu, which was filmed in Puzhehei.

Again, the example of peach blossom forest can serve as an example to look into the cinema–ecology complex. In some versions of the *Eternal Love* story using the same copyrighted content, such as the film, the peach blossoming relies completely on artificial film sets that are constructed in the studio and through Computer-Generated Imagery (CGI) in the post-production stage. In its mobile game version, the peach blossom forest was completely rendered through CGI. Live-action film and television depend more on real environments. For most video or mobile games, the in-game environments are relegated to “background scenery, relying on stereotyped landscapes, and predicating player success on extraction and use of natural resources” (Chang 2019, p. 21). Fantasy media, as special effect films and videos, have a higher ecological footprint because of their demand for energy in producing high-resolution digitized images. At the same time, it is important to note that the filming of these “alternative universes” in *qihuan* films also costs more environmentally because of the higher infrastructural needs and the dependency on real locations. Thus, I use digitally enhanced landscape to describe the infrastructural need of real locations as well as the infrastructural tools (e.g. green screen) that enable visual effects rendering in the post-production stage.

In the television serial *Eternal Love*, the shots of the peach blossom forest were mainly shot in two places. One location was Puzhehei National Park (Fig. 1), an ethnically Zhuang area, mostly used for establishing shots and long shots. The other was Xiangshan Studio, used for shooting most of the scenes (Xiangshan Film Studio 2017). Although *Eternal Love* seems ecologically sound in its shooting in Puzhehei, examples of environmental pollution caused by the construction of film and media settings in nature are not difficult to find in the news. The *qihuan* film *Promise*, for example, was shot directly in Jiuzhaigou, allegedly where Shangri-La is located, and left irreversible marks on the land. The crew also did not fully uninstall the set after the completion of the shooting, and the production was fined by the local government. Other notorious examples include the bombing of the snowy mountain for a snowslide scene in *Red River Valley* (1997)<sup>2</sup> and the creation of much water construction and the possible danger of water pollution and oil leakage caused by a scene of burning dozens of warships to represent the famous war in Red Cliff in the television series *Three Kingdoms*.<sup>3</sup> *The Return*

<sup>2</sup>For more information, see <https://kknews.cc/entertainment/q2vergy.html>.

<sup>3</sup>For more information, see <https://china.huanqiu.com/article/9CaKrnJlR9p>.



of the *Condor Heroes*, the 2004 television version of Jin Yong's martial arts classic, built artificial sets on a scenic area and polluted the water and the surrounding travertine lakes, and left irreversible marks on Jiuzhaigou.<sup>4</sup> Here, nature is a place of extraction for cinematic media in the cinema–nature complex. Cinematic production inevitably brings human change and sometimes irreversible damage to the environment.

These cases show just the tip of the iceberg of the cinema–ecology complex, where film production has left irreversible, sometimes harmful ecological footprints via location shooting in natural habitus with low human density. Contemporary media, especially those with fantastical elements, exact unsustainable changes upon natural resources, including the mountains, soil and water where they shoot. As many of these films use large-scale sets, the constructions involve heavy-duty engineering vehicles that leave irreversible marks on the land, rock, plants and forests. This is more evident in the television serial *Eternal Love*. *Eternal Love* created 300 new sets solely for the show, and around 80 per cent of the scenes were built from scratch in Xiangshan Studio, which took up 50,000 square metres (Croton Megahit Official 2018). The serial took place in seven main places in the diegesis: Ten Mile Peach Forest, the Heavenly Palace, Kunlun Xu, Qing Qiu, the Four Seas, the Demon World and the Mortal World. Each place has a distinct style. For example, the Fox Cave in Qing Qiu, the living place for the main character Bai Qian, was designed to imitate the natural experience of a cave. In the constructed cave, real candles were used to mimic the lighting of a real fire. After only 1 month of shooting, 15,000 candles (7 mm diameter) had been burned. And Ten Mile Peach Forest was built solely for the filming of the scenes that take place in the peach blossom forest (Sina Entertainment March 2016).

The making of blockbuster films and big-budget television productions is usually criticized as “ecologically destructive” because of their massive energy use, emissions production and, most prominently, the scale of waste they create (Maxwell and Miller 2012, p. 69). Yet the “immateriality” of the digital landscape tends to obscure the impact on the physical environment. For example, many scenes in the TV serial *Eternal Love* are digitally enhanced, including more than 7,000 digitally rendered visual effects shots. Nevertheless, the reliance on the physical environment is irrefutable. A careful look at the example of the *Eternal Love* film and television production shows us a rather different story.

During filming in Xiangshan, the crew spent a great amount of money building seventy scenes across 50,000 square metres of land to shoot more than 1,500 scenes, including the scene in which the female protagonist attempts to kill herself by jumping through the Immortals Punishment Stage and the male character follows her (Fig. 2). The building of new scenes claimed nearly 40,000 square metres of studio in total. Thousands of cast and crew participated in the filming, and the special effects team alone consisted of nearly 400 people. Art director Chang Suk-ping and the art direction team designed 130 character looks and produced more than 1,400 costumes. The total production time of making props took up to 2,000 hours, and the props display covered an area of 50,000 square metres (Tencent Entertainment 2016). In addition, to achieve the virtual landscapes on screen, more than 55,000 square metres of green screen were used in the shooting. These data, gathered from the serial's publicity, may be a way to promote the show by over-emphasizing its big budget and exquisite production process, yet it reveals the tendency to fetishize large-scale productions in popular discourse.

The feature film version of *Eternal Love* has more than 2,000 special effects shots and underwent 15 months of post-production. To build the environment of the *qihuan* world, the director, Zhao Xiaoding, and his team spent 3 years travelling to Chengdu, Wulong, Tibetan Linzhi and other locations to gather visual materials and inspiration for the digital production. To create what the director calls a sense of “familiar estrangement” (Guyan 2017), even though most scenes in the film used a green screen to integrate virtually rendered landscapes, the team still went to many places to shoot real landscapes as references for the establishment of the *qihuan* world in the later stages.

<sup>4</sup>For more information, see <http://news.sina.com.cn/c/2005-05-11/11016610441.shtml>.



**Figure 2.** Screen capture of the female protagonist Baiqian/Susu attempts to end her life by jumping through the Immortals Punishment Stage and the male character follows her. The scene was shot in Xiangshan using green screen to synthesize the clouds in the background.

Although the special effects were mainly executed by the special effects company in the post-production stage, the formation of the concept and the visual design was performed by the directors, the visual team and the concept team of the art department, and was started very early on. In the pre-production stage, the team built massive virtual backgrounds in advance to provide previews to give the actors a general idea of the scenes before acting. The team also added the virtual backgrounds to the playback so the actors would have a sense of the environment when they watched the playback using the green screen (Guyan 2017).

The behind-the-scenes story of the film *Eternal Love* points to the materiality of the digital landscape. In addition to the previously mentioned use of energy, metal and chemicals in making and sustaining digital infrastructures, the making of the digital landscape such as the peach blossom forest also involved building real sets, using large numbers of green screens and shooting locations to be digitally enhanced later or solely for inspirational purposes. While Bozak (2011, p. 3) points out that cinematic images in digital or other forms are “materially and economically inseparable from the biophysical environment,” they are also aesthetically inseparable from the biophysical environment. The conceptualization and creation of digital landscapes, as fantastic as they may appear, are at once infrastructurally and aesthetically entangled with the biophysical environment. This demonstrates the intertwined reality between the cinematic image and the ecological environment in the cinema–ecology complex.

#### **Affective encounters with landscapes in *daka* travels and film-induced tourism**

In addition to shooting films in a specific location, one off or repetitively, the demand for these media productions has also given rise to a more systematic change in the cinema–ecology complex. A number of large-scale film studios have been constructed to facilitate the shooting of film and television dramas. Later, the studios also opened to general audiences for tourism. Notably, it is the fame of the media products that has distinguished one studio from another and contributed to the branding of the studios. The need for elaborate exterior scenes set in “natural” environments, which is most evident in *qihuan* cinema, drives the construction of these studios in the first place. As many of these

studios have been set-up in remote areas with rich natural resources, the revenue from tourism maintains the daily operation of the studios.

Again, let's use *Eternal Love* as an example. Puzhehei National Park, located in Yunan, attracted many tourists because of the filming of *Eternal Love*. Besides Puzhehei, a majority of the scenes set in *Eternal Love* were filmed in Xiangshan Film Studio in Zhejiang province. Xiangshan Film Studio, established in 2003, consciously advertises its ecological resources of mountain, river, rock, cave and forest. In addition to *Eternal Love*, many media works with fantastical elements were shot in Xiangshan, including *qihuan* television series *Chinese Paladin 3* (2009), *Journey to the West* (2011), *Xuan-Yuan Sword: Scar of Sky* (2012) and blockbuster *qihuan* films such as *Zhong Kui: Snow Girl and the Dark Crystal* (2015) and Stephen Chu's film *CJ7* (2008). The total building area for *Eternal Love* in Xiangshan was 90,000 square metres, of which 50,000 square metres were solely used to house props and sets (Xiangshan Film Studio 2017). Xiangshan Film Studio regularly holds themed carnivals, such as film and television carnivals, the Kite Festival in April and the Songkran Festival during summer, to attract visitors all year round. Like other theme parks, it also has a performance table that provides Chinese magic, shadow puppetry, puppet shows and other activities for free and other areas that offer attractions, such as horse riding, for an extra fee (Baidu 2021). Yet, as an example of film and TV drama tourism, Xiangshan provides related tourist activities on several levels. First, the attractions are divided into different areas according to the popular television dramas filmed there, such as *Eternal Love* and *Nirvana in Fire* (2015). The attractions usually include places that play important roles in the plot – for example, Ten-Mile Peach Blossom Forest (*shili tao-lin*), where the two main characters first meet. Here, the peach blossom forest serves as one of the signature sites of Xiangshan and a popular place for tourists to cosplay as the characters (Fig. 3).

Other famous scenic spots (*jingdian*) related to *Eternal Love* include Three-Lives Stone (*sansheng shi*), on which the supporting female protagonist carves her lover's name; and Immortals Punishment Stage (*zhuxian tai*), where the heroine jumps down and returns to the mortal world. It is worth noting



**Figure 3.** Screen capture of online sharing of the visiting experience in Xiangshan. People wearing traditional Chinese clothing, roughly corresponding to the characters in *Eternal Love*, posing in front of the Peach Blossom scenic spot in Xiangshan.

that this stage and her jump in the TV show were synthesized by digital visual effects using a green screen in a studio, but Xiangshan Studio built the replica set just for the tourists. Hence, this particular set was built twice, once for the indoor digital visual effects and once for the tourists.

These *Eternal Love*-related attractions contributed to the popularity of Xiangshan, which only had 100,000 yearly visitors in 2014; the number increased drastically to 2 million in 2019. These scenic spots provide ideal places for tourists to *daka*, or punch their card, a popular practice for social media users to showcase their whereabouts using the geo-location function of their smartphone or simply by showing pictures of famous scenery and activities using trending hashtags. Started as a youth subculture, *daka* encourages social media users to take pictures or make videos of scenic spots or delicious food that enjoy *wanghong*, or online popularity. Many of the early users are urban young professionals with little vacation time to immerse themselves in the places they travel to, yet the practices of *daka* give them a way to interact with people online and even enjoy the identity of the *daka* community, or *daka zu*. Besides travelling, the practices of *daka* are frequently used to show the user drinking mild tea as a niche urban consumption style. With the development of social media and short-video platforms such as Douyin, Chinese tourists with diverse backgrounds are practising *daka*. For example, in Douyin's travel topics, tourists will follow others' videos to specific scenic spots and perform similar actions during their travel experiences, such as purchasing the same souvenirs and posing using similar gestures (Bian and Zhu 2020).

The sites related to *Eternal Love* in both Puzhehei and Xiangshan are popular destinations for tourists and the practice of *daka* (Fig. 4). The *daka* travel can also include other activities that are more experiential and participatory. For example, tourists can rent costumes similar to those in the show and dine in ancient-style fruit stalls, vegetable stores and restaurants. Xiangshan also provides a



Figure 4. Screen capture of a tourist's *daka* of Puzhehei, where *Eternal Love* was filmed.



participatory dubbing experience that invites tourists to play the voices of the protagonists in *Eternal Love* and take part in the family friendly experience of *Wire fu*, a common special effect that adds the actors flying or jumping in *wuxia* or *qihuan* media. The organization of tourist activities designed by Xiangshan complicated the previously mentioned notion of the “landscape gaze” projected by the film audience. Instead, the arrangement of activities directs the “tourist gaze” (Urry and Larsen 2011) upon the biophysical sites, including landscapes associated with media works such as *Eternal Love*. The media spectator is turned into spectator-tourist in this context. In *daka* travel, landscape is no longer just scenery to be gazed upon, but an object to be captured in the camera, photographed with and later shared on social media. It is a process of visual reproduction of biophysical sceneries into commodities. Hence, *daka* travel is a process of reification in the Marxist materialist sense (Foster 1993), in which the tourist experience becomes merely things alienated from human relations – and, I would add, biophysical relations. More importantly, these *daka* practices are affective encounters between people, landscape and media technology. Those who visit these sites and film sets also bring with them the emotional attachments linked with the stories. This is evident in the cosplaying of characters in the peach blossom forest. Further, the tourist’s posing in *daka* practice is usually filled with emotions. Besides the typical cheerful “I have been here” claims of physical presence, tourists may also play on different emotional modes such as holding an umbrella, looking afar and contemplating (Fig. 4). Here, the encounters between the tourists and the landscape are affective, mediated by photography as well as the original media text. Rather than thinking about emotion as a state of mind, Ling Hon Lam sees emotion as “a spatial structure of which the atmospheric is just one kind among others” (Lam 2018, p. 4). Looking beyond Wang Guowei’s idea of “emotion-landscape mingling,” Lam provides a Chinese genealogy of the spatiality of emotion from dreamscapes to theatricality that sees time-space as emotion. Although Lam’s investigation remains in a text-spectator relationship, the *daka* practice broadens the understanding of emotion as a spatial structure embedded in embodied experiences.

The affective encounters of landscapes and people, including *daka* practices related to *Eternal Love*, are only the tip of the iceberg of a larger and structural change in film-induced tourism, which is the proliferation and expansion of film studios for tourism in recent decades. Xiangshan is only one of dozens of studio cities that have developed across China over the past several decades. Among them, the most famous are Hengdian World Studio and Zhengbeibao West Studio. Hengdian recreated the imperial palaces (the palaces of the Qin, Ming and Qing dynasties), ancient towns and Republican Shanghai streets, starting with the nineteenth-century Guangzhou and Hong Kong streets built for Xie Jin’s 1996 film *Opium War*, which was meant to celebrate the handover of Hong Kong from the British to the Chinese in 1997. Zhengbeibao West Studio is the only studio city in West China, with its signature landscape of desert and dry land in Ningxia province. These film studios provide exterior locations with untouched urban skylines, usually architectural landscapes in a natural setting. They are called *yingshicheng*, which means studio cities, as they are based upon extensive alterations of the natural landscape to create artificial sets. The name reflects the urbanization process of natural lands turning into built environments. Transnational theme parks, such as Disneyland Shanghai, provide a physical space for urban attractions while recreating ethnic or foreign architectural styles, such as Overseas Chinese Town in Shenzhen. In comparison, the landscape and natural environment associated with *qihuan* media are mostly based in rural and remote areas away from big cities. Besides the material support needed to create “immaterial” digital images on screen, the film cities are also a place where fantasy space on the screen can materialize into the alteration of biophysical spaces.

The popularity of the studio cities depends on the recognized prestige or fame of the attractions. As an index of its importance in mass tourism industry, Xiangshan Film Studio City was rated a 4A tourist attraction in 2020. As of 2007, the Ministry of Culture and Tourism now administers the tourist attraction rating system from the lowest A to the highest AAAAA (5A). Most 5A attractions include well-known natural landscape attractions, such as the Yellow Mountain; religious and heritage sites in urban areas, such as the Forbidden City in Beijing; or ancient heritage towns in more remote areas. As of 2020, there were 302 attractions nationwide (Ministry of Culture and Tourism 2021). Among them,



Wuxi Three Kingdoms Film and Television City was rated 5A in 2007, when the rating system started. Hengdian Film City made the list in 2010 and Zhengbeibao West Film Studio in 2011. The rating system of these attractions has specific requirements based on landscape, infrastructure, hygiene, service, safety and so on. For transportation, a first-grade highway and nearby airport access are crucial for accessing “environmental quality” (Baidu 2021). A short distance to a nearby town or prefecture is also rated higher. These criteria reflect the standard of construction and urbanization required for prominent tourist attractions.

The dark side of film-induced tourism and the related *daka* practices is the ecological impact brought about by infrastructural changes caused by the construction of film studio cities. Globally, the rapid expansion of tourism has caused natural resource depletion and environmental degradation when large natural lands were converted into tourism-related facilities. While forests constitute tourism’s natural capital and raw material, they suffer the impacts – including deforestation – of mass tourism development (Kuvan 2010). In the context of China, mass tourism serves as part of a larger process to urbanize China’s countryside squatters (Lora-Wainwright 2012), including building new cities, regulating displaced populations and controlling squatters.

As explained earlier, the Chinese name for these film city tourists (*yingshicheng*) reflects the change of land use, the construction boom and the related urban expansion. Urban and urban dwellers in or near these attraction sites have benefited from the economic boom, yet those in the surrounding rural areas, which are often inhabited by ethnic minorities such as Naxi, Yi, Zhuang or Miao, may feel “relative deprivation” (Perry and Selden 2003). For example, in Yunnan province, where Puzhehei is located, tourist sites such as Lijiang have brought significant economic profit and development. However, the surrounding rural areas and natural village inhabitants have felt the lack of economic opportunities, and some inhabitants have started to cut timber, which further induces deforestation (Zackey 2007).

One may argue that film studio cities are environmental, as they recycle the movie sets. However, film and television productions create large-scale architectural settings and thematized experiences in film studio cities. These expansive constructions and the urbanization of indigenous lands inevitably bring ecological impacts to the natural habitus and villagers. On the other hand, the profits from film-induced tourism in turn support a high-consumption, low-cost model for film and television productions. For example, to attract more film and television crews, Hengdian has free rent or discounts for media productions, and the studio can use the ongoing productions to attract tourists and fans to visit the film studio city. The cinema–ecology complex in this context is illustrated by the remaking of digitally enhanced landscapes such as the peach blossom in *Eternal Love* into physical tourist spots in the cycle of mutually enabled cinematic production and the development of film-induced tourism at the cost of the ecological environment.

### Conclusion: towards a textual–infrastructural approach to media studies

In 2007, Qi Yuan, a film studio park in Shandong with a size of 13.2 square kilometres, was demolished and remade into a public park. The architecture sets in the studio were built in the 1980s based on the style of the Chunqiu period and served as locations for TV serials such as *The Confucius*, based on the philosopher born in this region. Yet gradually, the studio could no longer attract tourists and film production crews. The demolition of Qi Yuan is only one of the better known unsuccessful stories of film studio cities. Many other failed film cities invested millions of dollars to occupy a large area across the country,<sup>5</sup> yet not much detailed information, let alone academic studies, can be found. Yet these “failed” development projects also point to the resilience, if not agency, of the ecological spaces and reveal the problematic logic of land development driven by the forces of mainstream media productions as well as tourism that co-create the landscapes in fantasy media.

<sup>5</sup>These examples include Chuzhou Film Studio City in Anhui province, which started construction in 2013; Hancheng Film Studio City in Hubei province, which opened in 2016; Xiangyang Film Studio City in Hubei province, which opened in 2015 and Jiaozuo Film Studio City in Henan province, built in 1995.

Throughout this article, I have investigated the cinema–ecology complex that accentuates the materiality instead of the virtuality of digital landscapes through the case of *Eternal Love*. Besides the cinematic representation of animist landscapes, particularly the textual features and cinematic footprints of the digitally enhanced landscapes in *Eternal Love*, the cinema–ecology complex is evident in three interrelated aspects. First, location shooting of natural landscapes in remote areas that cause irreversible environmental changes functions as an integral part in the making of digitally enhanced landscapes. Second, a more systematic establishment of artificial architectural settings in the form of film studio cities emerges to facilitate the creation of digitally enhanced landscapes. Location shooting of landscapes often takes place in film studio parks but also extends to other national parks, such as Puzhehei, and other unique sites that are not part of the tourism sector. Third, the landscapes are turned into scenic spots and consumed by the spectator-tourists and the related affective *daka* travel practices in the film studio cities and other touristic sites. While this article focuses on the more well-known film studio city of Xiangshan as well as the Puzhehei park, many other film studio cities are not. Qi Yuan provides an example of an entire film studio park that was turned into construction waste when it was no longer successful as a tourist site. What is worth noting is also the size and scale of these film studio cities. In contrast with traditional urban film studios, film studio cities operate on a much larger scale. Disneyland Shanghai, as a film-related theme park, takes up 4.1 square kilometres, a significant parcel of land in suburban Shanghai. In comparison, Hengdian World Studio takes up 495 square kilometres, which is more than 120 times larger than Disney Shanghai. Xiangshan Film Studio takes up 784 square kilometres for the entire studio theme park area, including 350 square kilometres for the film studio part. Further empirical research is needed on how film studio cities have turned natural resources into artificial buildings, and what ecological impact this has on the animals, environments and habitus, as well as on the human population – usually ethnic minorities who live in the area.

By considering the cinema–ecology complex and the infrastructures (e.g. green screen, location shooting and film studio cities) that support the production and consumption of audiovisual entertainment, this article aims to overcome what Park and Starosielski (2015, p. 5) call “a serious disjuncture between the amount of scholarly attention dedicated to screened entertainment and the amount devoted to understanding the infrastructures” in “humanistic media studies.” On a textual level, it is possible that mainstream Chinese *qihuan* media displace real-life environmental issues and the materiality of filmmaking itself and, at the same time, offer ecological perspectives of narrative agency and aesthetic experiences. However, as I have demonstrated through the cinema–ecology complex, the model of making these *qihuan* media and the related film-induced tourism is not sustainable. We need to think about how to reduce the ecological footprint of the media industry and strive for a sustainable future. One way to start is to study the cinema–ecology complex and the media production and consumption using a textual–infrastructural approach.

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