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Abstract

Game development and production practices are complex and highly reflected processes—worldwide. This explorative article discusses video game development as a cultural and creative industry in India, including the industry’s history and introducing recent trends which indicate profound transformations—the use and implementation of Indian cultural heritage in game settings. In the rather short history of Indian game development as compared to other countries—a significant number of games made in India first were produced around 2010—the industry has already lived through big changes and challenges. This article aims at introducing Indian game development and argues that especially independent (so-called indie) game studios in their search for their own, region-specific game development and stand-alone characteristics for Indian games increasingly turn to what they perceive as their own cultural heritage, including, for example, elements from history, art (music, dance, dress styles, and others), and architecture.

Keywords

video games India, cultural heritage, cultural and creative industries, video game development, indie games

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Introduction

When studying video game development and the industry surrounding it—in worldwide settings as well as with a focus on India—many aspects and diverse research questions may be targeted. For instance, many common approaches analyzing the video game development industry are interested in market related issues (market shares or marketing overall) or technical production issues. When aiming at discussing revenues, sales numbers, marketing issues, or technical possibilities to improve production and so forth, current research usually relies mainly on quantitative methods and frameworks. In the case of India, such studies are often market research commissioned by large game publishers, or journalistic reports (e.g., [Das, 2019](#); [Handrahan, 2012](#); [Suckley, 2017](#)). Journalistic reports (from India and elsewhere in the world) also increasingly take up gaming events in India, as they become more and more popular (e.g., [Batchelor, 2018](#); [Chapple, 2017](#)). In contrast to such market studies and brief journalistic reports, this article aims at opening an entry point for academic research on the subject, specifically by presenting an overview and introduction to the history and some interesting current developments, thus introducing video game development in India as a cultural and creative industry (for game development as creative and cultural industries beyond India, see e.g., [Dewdney and Ride, 2014](#), 177–187; [Hesmondhalgh, 2018](#), 314–319; [Kerr, 2017](#)).

Recently, Bjarke Liboriussen and Paul Martin highlighted the importance of regional game studies or research in the area that “attends to local places and cultures but also, at least to some extent, to how the local connects with higher-order economic, cultural and political structures” ([Liboriussen and Martin, 2016](#)). Expressly addressing research on postcolonial game studies, they take the Indian scenario into account in their observations on “thinking about how games produced in global centers of power and depicting peripheral countries in very casual ways might be experienced by players from those very countries” (*Ibid.*). Of course, according to them, the center-periphery model is more relevant to India than to other countries, China, for example. This strengthens their argument for a regional game studies and it is in response to this that a more nuanced discussion of Indian gaming needs to be engaged in within the global scenario.

Despite being one of the most populous countries in the world with around 622 million Internet users (“The Economic Times” 2021) and around 690 million smartphone users (“Statista” 2021), India is relatively new to both mass-scale computer and telephone access, which gained ground in the mid to the late nineties. The majority of Indian gamers have not played on the earlier consoles and while console gaming is gradually on the rise, PC gaming is more common and recently, the bulk of gaming in India happens on the mobile phone. As such, given the historical and sociocultural factors that are specific to the region, a different approach needs to be taken than those hitherto followed in assessing the games industry and cultures in other regions. In order to do so, this explorative article discusses how game development in India has historically unfolded and recently evolved. We aim at giving a broad overview of the

historic situations and contexts as specific to India and thus at presenting a first introduction to this field which to date lacks even preliminary academic studies. Therefore, we include contextual information on economic, political, and cultural factors. Our second focus was chosen based on the recent trend among Indian game developers to implement aspects of what game developers perceive as their own regional cultural heritage, as shown in the following sections. We present examples for such games in order to familiarize the reader with the diversifying landscapes in the current video game development in India. The definition of what precisely constitutes cultural heritage is diverse. This study is informed by the critique of the so-called Authorized Heritage Discourse which by today is a cornerstone of the Critical Heritage Studies movement (Smith, 2006). We also acknowledge that “Video games are already recognized as a component of the increasingly diverse ways in which we frame and consider the concept of ‘heritage’ – though so far, scholars have most often discussed and critiqued the depiction of history (as cultural heritage) in video games themselves (e.g., Cassone, 2016; Coplestone, 2017; Reinhard, 2018)” (Zeiler and Thomas, 2020). While most studies on games and heritage so far still concentrate on history as an aspect of cultural heritage (e.g., Hammar, 2017; Pötzsch and Šisler, 2016; Shaw, 2013), there are also some examples for studies which understand heritage in a broader sense and as including elements beyond history, such as specific art forms, Indigenous heritage, and religion (e.g., Campbell and Grieve, 2014; Longboat, 2017; Radde-Antweiler, Waltemathe and Zeiler, 2014). Building on such a broader understanding of heritage as related to games, we also acknowledge the fact that some academics consider games to be part of cultural heritage in their own rights (e.g., Barwick, Dearnley and Muir, 2011). In this use of the terminology, the discussed games make use of cultural heritage components, such as historical and religious references, and artistic cultural features in a broader sense, including music, dance, architecture, dress styles, and more.

Our precise research questions thus ask when, how, and why Indian game developers chose to implement cultural heritage elements from Indian contexts. Methodically, this article uses content analysis and close reading to discuss and analyze the data consisting of interviews with game developers, trailers of the analyzed games and the games themselves.

The article begins with contextualizing video game development in India, namely its history and early evolution. It then goes on to briefly look at the rather less-researched history of game development and cultures in India. The focus on a growing demographic of Indian gamers and players has also given rise to an Indian independent (so-called indie) games industry which can be seen both as a driver and reflective of contemporary culture. It connects the growing mobile gaming industry in the country to the indie scenario and the way it influences and is influenced by local cultural mores. It then proceeds to introduce and discuss how currently in India, indie game developers especially increasingly use aspects of regional cultures of India to shape both the form and content of their games. Already released games such as *Asura* (2017), *Missing* (2016), or *Raji* (2020) as much as games in their final production phase such as *Antariksha Sanchar* or *Mukti* all attest for this new trend in the Indian game industry.

The creators of all these games have chosen to engage with regional elements from Indian culture and society, including, for example, specific aspects such as history, art (music, dance, dress styles, and others), and architecture. Interview data confirm that especially indie game developers now (a) target both international and regional markets and (b) in their search for an own, region-specific game development and stand-alone characteristics for Indian games increasingly turn to what they perceive as their own cultural heritage. A conclusion sums up on the findings and provides an outlook on video game development in India as a cultural and creative industry.

Contextualizing Video Game Development as Creative Industry in India: Early Days and Evolution

While it is necessary to contextualize the development of video games in India, it must be understood that the methods of historiography as used for European and North American regions do not apply to the peculiar scenario in the Subcontinent, given its situation as a Global South nation (see Mukherjee, 2019; Zeiler, 2020) and the lack of any defined archives. Writing as late as 2013, Adrienne Shaw notes that “[v]ideogames [...] must become part of Indian media culture and people must be educated about games. This is not only to correct the lack of a history of experience but also to address the conflicting connotations of gaming in Indian culture” (Shaw, 2013, 190). While noting the lack of history of gaming experience, Shaw also notes that “[l]argely, digital games are seen as external to Indian culture” (Shaw, 2013, 191). While the scenario is changing 8 years down the line in 2021, it must be understood that the same yardsticks for writing the history of gaming in Europe and North America cannot be applied in the Indian context due to the cultural and historical differences. Keeping this in mind, a brief note on the history of IT in India and its relation to the games industry is necessary.

The introduction of computers in India took a while, when despite the initial surge of interest in computing immediately after independence, the government’s policies and the “license raj” regime did not support the computer industry until the early nineties. Further, the severe import duties imposed by the government in order to promote local industry and the consequent exit of multinationals IBM affected the development of IT. The software industry did not see a significant development until 1991, when the National Association of Software Companies (NASSCOM) was formed to obtain tax and other concessions. The video game industry was, therefore, a latecomer to India and arguably, the earliest first-person shooters, made in the style of *Doom*, are *Bhagat Singh*, based on an Indian freedom fighter and *Yoddha*, based on the Kargil War where India fought Pakistan, both of which reached the Indian market in the late nineties. As for the period before that, one must keep in mind that consoles such as Amiga were virtually unknown in India and pirated clones of popular gaming media such as the Nintendo GameBoy existed only in the so-called gray-markets. PC gaming was also a late entrant, especially because of the limited computer time that Indian students would have—the work versus play cultural binary played out strongly here. Computer magazines such as *Digit* (published by Jasubhai Media) would include CDs of

shareware games or game demos. Even before the smartphone culture in the late 2000s, however, PC gaming was extremely popular with many titles being available in pirated CDs and later DVDs. Computer hubs in the nation's major metropolitan cities, such as Nehru Place in New Delhi and Chandni Chowk in Kolkata, did booming business in pirated PC games that were sometimes imported from South East Asia. With the coming of the high-speed broadband from the mid-2010s that replaced the older dial-up networks, downloading games also became an option. Torrents and websites such as Pirate Bay and Kickass Torrents (since shut down) have been popular destinations for game downloads. Recently, however, the introduction of Steam's competitive Indian pricing and the availability of high-speed broadband has been a game-changer in the market. The Android Play Store and the iOS store have also opened up multiple opportunities for developers and gamers alike.

With the coming of the mobile phone, especially the smartphone, the video game industry saw a clear upsurge, especially after the runaway success of foreign games such as *Angry Birds*, *Temple Run*, *Pokemon Go*, and *PubG* in the market. The indie culture, where "indie" connotes "independent creation outside of traditional channels of cultural production" (Clarke and Wang, 2020, 2), has also become a major contributor to local game development; in 2016, the NASSCOM Game Developers Conference (NGDC), then by far the biggest games conference in India, promoted the indies as its theme. The indie culture in India, however, may be somewhat different: as a news daily comments rather strongly, "most of these studios are cheap outsourcing outposts for games originating elsewhere, filling up the details of someone else's creative vision" (Lewis, 2018). But the report goes on to praise some studios, such as *Xigma Games*, *Ogre Head Studios*, and *Pyrodactyl Games* that have gone against the grain and try to make games in the indie spirit. Others such as *Nodding Heads* and *Flying Robot Studios*, the makers of indie-titles like *Missing* and *Raji*, which are discussed in more detail below, have made Indian indie game development big in global forums. *Missing* was judged the best game at the NGDC awards in 2017 and *Raji* received three awards at the Dev Play Conference in 2019.

There has been a general sense of being upbeat about the industry and its promise in India among both the local advisory bodies and international commentators (Adams, 2009; Friedman, 2005; NASSCOM 2016) but some words of caution need to be heeded. The statistical projections for the Indian games industry look promising but the ground reality may be different. Game developers receive no government support and are reliant on individual investment and indeed, there are very few training establishments for game development. Shailesh Prabhu, an expat Indian game developer, outlines the major concerns in his essay *Breaking Down the Billion*:

In 2010, our game, 'It's Just a Thought' was in the top grossing paid apps on the Apple App store for a particular week... Sounds impressive, but the reality is that we only had five downloads at US\$0.99 that week - which was all it took. Today, many proponents of the Indian market, might argue that the figure is 6 years old and things are different now, but surprise, surprise - none of them openly share their stats. Meanwhile, including all our

future games (HUEBRIX iOS and Android) and the games I have partnered with other developers on (Socioball, One More Pass on iOS and Android and Bluk on iOS) we have less than 1% of our downloads in India. With HUEBRIX and Socioball, where we had more than two million downloads, about 17,000 are from India (Prabhu, 2016).

Prabhu states that besides poverty, telecom regulations (also including the extremely slow speeds of the broadband Internet) and widespread corruption (Prabhu names trade bodies and politicians), the lack of game development experience among the higher management of the bigger game-design companies creates a disconnect with the game development in the country. Casey O'Donnell (2014) astutely observes that there is a lack of communication between designers, programmers, and artists. Commentators also alleged that Indian game development is directed more toward outsourcing rather than local development. The general sense of hopeful expectation and promise is now giving way to something else. The NGDC conference that has now been renamed as the IGDC (Indian Game Developers Conference) and there are other conferences such as the Unity Conference that also attract a section of Indian developers. Speaking of this diversity that is characteristic of India, Prabhu and others also point out the many regional languages and cultures that the industry needs to keep in mind.

Also, the general awareness about video games can be extremely varied, as evinced in the contradictory attitudes of the State and governments. It is important to note that there is no fixed ratings-system approved by the Indian government (Tech 2, 2008); overall, there is much confusion in the way video games are approached by the state. Displaying his familiarity with current youth issues, the Prime Minister spoke in January 2019 of the necessity of interactive technology at his *Pariksha Pe Charcha* program (India Today Web Desk, 2019), urging responsible parenting while children are exposed to technology. Shortly after, the police in his home state, Gujarat, banned the online game *PUBG* and arrested 16 youths for playing the game—probably the first-ever arrest the world over for just playing video games (BBC News, 2019). The arrests provoked a flurry of mixed responses on social media which captured the contradictory and confused attitude toward video games in India, especially among non-gamers. For instance, other Battle Royale type games (such as *Fortnite*) and ones that have a high violence-content (such as *POSTAL*) have not attracted similar censure. Also, strangely, only the mobile version of *PUBG* was banned and not the PC version. Recently, the Indian government has banned 59 Chinese apps as constituting a security risk in the wake of border skirmishes with China (Indian Express 2020). Among these apps are *Clash of Kings* and *Mobile Legends*—surprisingly, *PUBG* with its connections to Chinese gaming giant Tencent has escaped unscathed. As far as investment and government support to the industry is concerned, there is a similar degree of confusion. The Union budgets have often created an expectation of supporting the industry but the reality has fallen short of the expectations. For instance, The Ministry of Information and Broadcasting budget 2016–2017 allocated funds for a National Centre for Excellence for Animation, Visual Effects, Gaming and Comics, which was supposed to have been built in 2018–2019 (India Today Web Desk, 2017), but no such development

had taken place by mid-2020, at the time of writing. The Union budget 2020–2021 has provided no relief in the high import duties on computer hardware and this has not left gamers happy (DT News Network, 2020).

Nevertheless, India continues to expand in terms of gaming revenues. NASSCOM reports that the industry was worth US\$890 million in 2019 and is likely to reach US\$1 billion in 2020 (Das, 2019). Add to that the growing number of studios—a whopping 275 from a mere 25 in 2010. Having said this, one does need to account for a possible gap between the estimated value and the reality; similarly, the development of the industry has been uneven, with a concentration of studios in Bengaluru, Pune, and Hyderabad. The capital city, Delhi, also has seen a rise in numbers and as Manvendra Shukul, CEO and co-founder of the Delhi-based *Lakshya Digital*, says:

Until a few years ago, game artists didn't know what the quality expectations of the global audience were. Today, the artists are working on some of the best projects with more freedom and say in the development process. We are moving up the chain from just being the task developers to partners (Ahaskar, 2019).

Shukul makes an important point about the shift from outsourcing to becoming partners. Many international giants such as *Rockstar* (which has bought the locally significant *Dhruva Interactive Studios*), *Ubisoft* (which has two studios in the country), *Tencent*, and *Zynga* have a presence in the country. India is in the top five countries for mobile gaming in terms of turnover/revenues, profits, and new productions (reference). With widespread connectivity and the arrival of 4G in the major cities, online multiplayer games are big in India today. *PUBG* alone had six million downloads by December 2019 (IGN India, 2019). Other games like various versions of mobile Cricket, *Teen Patti* (a card game), *Ludo King*, and many freemium games are quite popular downloads. Despite the limited localization possibilities, these games have significantly wide reach in terms of demography.

The problems mentioned earlier need to be considered in context of the ground reality regarding the revenues and the connectivity. Prabhu's contention is correct in that the promised 4G speeds are not available uniformly and some parts of the country have poor internet connectivity. Also feature phones still outsell smartphones by over a hundred million units in India (Lochab, 2019) and as such, the penetration of games though on the increase still leaves much to be desired. For the big international players such as *Ubisoft* and *Zynga*, neither the Indian market nor Indian themes are the main concern. Local major players such as *Reliance* (owning one of the biggest communications networks) have their main focus elsewhere. As Prabhu comments elsewhere (Suckley, 2017), there are “some amazing games to offer from India” and “at least 20 developers all over India are making projects that are somewhat exciting to me.” He is referring to those involved in the indie scene or the independent games industry. One example is Zainuddin Fahadh of *Ogre Head* studio who wanted to make games based on Indian themes and was unsure about finding investors, but went ahead with money borrowed from his parents. The result was the very successful *Asura*. The following

section will go on to explore the stories of such indies and how they incorporate Indian cultural themes in more detail.

Engaging Regional Cultural Heritage in Indian Video Games

The focus on a growing demographic of Indian gamers and players, among other things, has given rise to an Indian independent games industry, which can be seen both as a driver and reflective of contemporary culture. Currently in India, we see that especially indie game developers increasingly use aspects of cultural traditions, practices, and heritage from regional Indian contexts to shape the form and content of some of their games. This section introduces some of these examples in Indian indie video games and explores how the creators have chosen to engage with regional elements from Indian culture and society. This includes, for example, specific aspects such as history, art (music, dance, dress styles, and others), and architecture. Already released games such as *Asura* (2017), *Missing* (2016), or *Raji* (2020) as much as games in their final production phase such as *Antariksha Sanchar* or *Mukti* all attest for this current trend in the Indian game industry.

Though there are a few examples for implementing Indian cultural heritage elements in Indian games before that, it has been around 2015 that this new trend became clearly visible in the larger video game boom in India: “More Indian developers have propped up in the last 3–4 years, I think we’ll see more people tapping into the old cultural, the rich cultural history which we have, and probably creating games on that” (Goyal, 2016). It was then that several new games that make extensive use of Indian cultural settings emerged. We refer to these settings as heritage, in the full awareness that currently in academia and beyond, the definition of what precisely constitutes cultural heritage is diverse but, among other things, acknowledging the fact that games today by some academics are considered part of cultural heritage itself (e.g., Barwick et al., 2011). In this use of the terminology, the presented games make use of cultural heritage components, such as historical and religious references, and artistic cultural features in a broader sense, including music, dance, architecture, dress styles, and more.

At around 2015, reasons why Indian game developers started to incorporate such Indian themes into their games among other things often seemingly had to do with the wish to acknowledge the own cultural backgrounds in one’s work, as the founders and developers of *Yellow Monkey Studios* in Mumbai, <http://www.yellowmonkeystudios.com/>, respectively, *Pixel Ape Studios* in Palghat (Kerala), <http://www.pixelapestudios.com/>, reflect (also see Zeiler, 2016):

“This is imparting a little bit of what we know, of our culture, into our work. It also makes it unique, and it makes it something only we can do. Because we know what Indian instruments exist, we know what an Indian skyline looks like, and we can use those things much better than anyone else. A little bit more identity, I guess.” (Prabhu, 2015). “Being an Indian, I’m actually in the best position to push it out, this kind of stuff. . . . For my next game, I’m thinking more into something really, really Indian.” (Menon, 2015).

It is not just game developers who have been revisiting the theme of “Indianness” time and again but the Indian government has been actively exhorting the domestic games industry to adapt “Indian culture and folktales” and adopt “Indian ethos and values” (Handrahan, 2020). At the same time, games like *Raji* have been criticized both for not having Indian language versions (which they rectified later) and for the way in which they “flatten Indian history and mythology into a caricature” ostensibly with a Hindu bias that subconsciously reflects far-right nationalism (Thapliyal, 2020).

One of the strategies to implement Indian regional cultural heritage elements is to refer to Hindu mythology, in storylines as well as aesthetics. This goes back to the earliest Indian games, some of which are directly based on Hindu mythology and narratives. A case in point is the game *Hanuman: Boy Warrior* (Aurora Technologies Hyderabad for Sony Computer Entertainment Europe, 2009) which claimed to be the first console game developed entirely in India. The game triggered a media debate, mainly in the USA, because of mainly two factors. First, the appropriateness of including Hindu deities in video game environments (in contrast to including them in other media genres such as film and TV which, of course, previously was often and successfully done) was a move opposed by some groups. Adapting their critique to the specifics of gaming environments, the group argued that it is not appropriate to control a deity in a game (that is, play a deity as a game character) (Zeiler, 2014). Second, the game was widely criticized for the quality of its technical execution, a critique which was consistently voiced on both international and Indian levels (Desai, 2009).

The debate was unexpected—in fact, the production team made it a point to stay close to textually authorized Hindu mythology (Makwana, 2009). *Hanuman: Boy Warrior* is based on Hindu mythology and represents Hanuman, a highly popular Hindu deity with scriptural representation in the revered Indian epic Ramayana and many other important Hindu texts, in a very text-conform way. That is, the game narrative, esthetics, and symbolism stay very close to the textual representations and current popular imagery and worship practices. For instance, the deity’s main weapon (a mace), his ability, and fearlessness in the fights against evil demons (asuras), the deity’s relation to the sun god Surya—all these game characteristics directly relate to Hanuman’s textual base (Zeiler, 2014).

Nevertheless, after its release, the game caused international debates centering on discussion about the appropriateness of incorporating Hindu deities in gaming environments. That is, this first console game coming out of India triggered a debate on (game) simulation as opposed to (text, film, TV, etc.) representation of Hindu deities. Namely, a Hindu group based in the USA objected that Hanuman was allegedly trivialized as the player could control (= play) the deity. While the group did not object to the overall representation of (text-conform) Hindu mythology in the media, it expressed worries of the fact that “Controlling and manipulating Lord Hanuman with a joystick/button/keyboard/mouse is denigration” (Gibson, 2009).

Of course, *Hanuman: Boy Warrior* did not remain the only Indian game with a strong focus on textually transmitted Hindu mythology. For instance, a very popular

and successful Indian franchise which has some base in Hindu mythology, *Chhota Bheem*, also released simple games. All of these remained simple in their execution and did not attract large audiences. Characteristically, such games refer to Indian cultural heritage in a less dominant or explicit way. They may make use of terminology such as the names of classical texts or figures or art styles—without making any actual transmitted heritage the major theme of the game. Nevertheless, some games implement cultural heritage elements in a (much) more direct way—and they do so consciously, as the following discussion of some examples will show. Overall, we find a high level of reflection about the complex interrelationships of the entertainment and creative industries, in general, and video games, in particular:

“Entertainment creates far more precedence/importance than play. ... I’m coming from a culture where which has the earliest toys, has the most viable culture, it has so many options, and then you come into a modern culture which basically doesn’t want to engage in play as such, but doesn’t mind entertainment. Yeah. That’s ... Well, that’s something you can’t do much about in a way except make games and make stuff in the way you believe it should be and you believe it could be done.” (Kumar, 2017)

Raji: An Ancient Epic

This game was released in autumn 2020 and is based on both Hindu mythology and Indian cultural heritage. In its complex aesthetics and narrative, the game as per self-description invokes these themes:

“Raji: An Ancient Epic is a video game set in ancient India. Chaos unfolds as demons invade to conquer the human realm with ambitions to overthrow the mighty gods themselves. Amidst this chaos, a girl is chosen, her destiny to face the demon lord Mahabalasura. The demon lord plans to sacrifice Raji’s very own younger brother, which will complete a ritual granting him relentless powers. Blessed by the gods, Raji set’s on her journey to rescue her younger brother, and to face the treacherous Mahabalasura. An adventure awaits” (Raji-An Ancient Epic, 2017).

The game’s storylines draws heavily on Hindu mythology but also many artistic elements of cultural heritage have been incorporated into the aesthetics. The music uses tablas and other instruments characteristic of Indian music styles; we hear the main character’s ankle bells as she walks; she is dressed and adorned with jewelry which evoke traditional Indian dress styles. The colors and architectural optics are “inspired by the medieval architecture of Rajasthan, which was the pinnacle of architectural achievement during the medieval era of India” (kickstarter campaign Raji: An Ancient Epic). All of these aspects are consciously incorporated into the game as a means of honoring the game developers Indian cultural backgrounds: “We are an Indie game development company situated in Pune, India. We are working on the game we always wanted to make, a game which reflects lore, myths and stories from our motherland”

([NoddingHeadsGames, 2017](#)). Just one—but a very flamboyant—way of doing this is the intense use of mandalas:

“The game’s most striking articulation of its cultural inheritance is its handling of mandalas - ornate geometrical compositions from Hinduism and Buddhism that chart cosmic knowledge or social frameworks. In *Raji*, they serve as puzzles, emergent narrative devices and the basis for what could almost be a kind of meditation. The simplest mandala puzzle might see you restoring a symmetrical pattern to proceed; more complex varieties are animated, and tell stories about the universe or characters. The most elaborate of them all are full-blown 3D layouts, travelled across and restored piece by piece. It recalls how in certain traditions mandalas are drawn in water colours on consecrated ground, retracing the design in a performance of the idea it represents” ([Evans-Thirlwell, 2017](#)).

Raji: An Ancient Epic thus is a vivid example of how currently in India, indie game developers very consciously build on the own cultural background and make use of these specifics for the games they produce. Additionally, this game is the currently most striking example for how, in addition to more general artistic cultural heritage, also especially narrative, symbolic and esthetic content is implemented into games produced in India.

Antariksha Sanchar

A second example for an upcoming game and attesting to the creative highlighting of yet other aspects of cultural heritage is *Antariksha Sanchar* (English: *Transmissions in Space*). As per self-introduction it is “a speculative adventure inspired by the vibrant cultures of South India” and a “point and click adventure inspired by the dream theorems of prodigious mathematician Srinivasa Ramanujan, and originating from an opera by the classical dancer Jayalakshmi Eshwar” ([Antariksha, 2017](#)). The game includes elements pointing to the historical life story of the South Indian mathematician Srinivasa Ramanujan (1887–1920) as well as elements of science fiction and Steampunk. With this creative mix, a specifically South Indian heritage tale is created.

While the game shows many elements of South Indian cultural heritage (such as temple architecture), it is especially dance, and along with it partly music, which are highlighted: “The game features a memorable Indian classical soundtrack of Carnatic musicians and instrumentalists, including samples from the dance repertoire of Bharatanatyam dancer Jayalakshmi Eshwar, and contributions from electronic musicians from India” ([Antariksha, 2017](#)). The classical Indian dance style Bharatanatyam plays a central role in the game, as the main game developer Avinash Kumar states (cited in [Anonym, 2016](#)):

“The starting point of the project was a dance production of the same name by my mother and Bharatanatyam dancer Jayalakshmi Eshwar. In this spectacle, she traces the idea of

flight from small plants to insects to birds and finally to mythological concepts like Hanuman, the Pushpaka Vimana and the Vaimanika Shastra, an early 20th century Sanskrit text on aerospace technology.”

The game is currently promoted in several activities and events, even before its actual release (e.g., on STEAM where it was greenlit, in game trailers, events, dance shows, journalistic blog entries, and on an own website). This secured appraisal and attention, in India and beyond. The game’s most striking feature is its intensive implementing of classical Bharatanatyam dance. A Bharatanatyam performance also was the initial point of departure and provided the idea for the game. In the words of Avinash Kumar (2017), the main game developer:

“The idea was not to make a game, it was to explore what are means to make a transmedia story and a transmedia product and see what the experiences are like. And the videogame was a part of it, but obviously the videogame is so intense that it’s become like the hero of the thing.”

Dance performances not only provided the creative spark to get the game going, but they remained a central activity around the creative brand *Antariksha Sanchar*: In such dance events, “when it all comes together, you’re treated to an engaging, immersive storytelling experience that blends history, mythology and modern technology in new and exciting ways” (Kappal, 2018). It is notable and adds to its appeal that the game concentrates on one specific Indian dance form, the South India originated Bharatanatyam, as opposed to games which incorporate an unspecified mix of several Indian dance traditions.

For the game production, new technological equipment was experimented with. For instance, motion sensor technique was used—a technique that makes it possible to catch an actor’s movement and incorporate it into a game. Motion sensor technique has been successfully used in some popular so-called triple A games, and in *Antariksha Sanchar*, it was applied specifically to capture dance movements. The very life-like dance movements which are provided by these technical means enable a unique gameplay experience.

Missing: A Game for a Cause

Created specifically as a “game for a cause,” this game may be counted among the persuasive, serious, or educational games. It is a perfect example for how “video games are gradually transforming into the perfect medium for telling unique, personal stories and generating empathy through active participation of the player-audience” (Solarski, 2019). This understanding, not surprisingly, has also reached Indian game development: “now more than ever, game developers have realized that they can use the gaming environment to shine light on important real world issues” (Missing, 2017). The game was released in 2016 and in the very same year received its first large award—it won the

prestigious Indian Nasscom Indie Game of the Year award. Such acknowledgement of the unique game and its theme was not limited to India and *Missing* has been recognized globally since its release. It is an outcome of an art project, as the game developer Satyajit Chakraborty (2017) explains:

“Missing is actually the name of a public art by Leena Kejriwal who I kind of worked for and made the game for. So I collaborated with her in this. She is a photographer and a public artist who kind of turned one of her photographs into a street painting kind of thing, which you can paint with the help of a stencil, a paper stencil, cut-out kind of thing, and you can paint with an airbrush, air spray kind of paint. And throughout the city in Kolkata and Mumbai and other cities as well you can see this painting over there.”

Both the original art project and the game aim at creating awareness for human trafficking and the social and cultural related implications. The game is designed so that the player takes the role of an abducted girl who is sold into prostitution and who is trying to find her way to freedom. During gameplay, the player is exposed to the theme of human trafficking in India. For the game’s development, as the main goal was to enhance empathy and awareness, this posed unusual creative challenges. Especially the narrative had to be well looked into:

“An entertainment game having a plot about human trafficking never happened. So I thought like I won’t be having any inspiration to look forward to, a copy or something. So I had to kind of start from scratch, whatever happens. And I was compelled to do a story-based thing over here, because from the onset I understood this cannot be a game where player skill is very important Like how fast you can kind of tap or something like that. Move a joystick or something like that. It cannot be like that. It has to kind of portray stories” (Chakraborty, 2017).

The result has been a narrative-driven, slowly progressing game which acknowledges the dark and difficult theme, in its narrative, aesthetics, and overall gameplay. *Missing*’s big success attests for the fact that the novel, innovative, and creative approach and execution has hit a nerve—despite the initial doubts of the developer:

“I was under the idea that nobody will play this game, because it’s not entertaining at all. ... I’m kind of astounded by the fact, like people are playing the game. People playing it ... have to go through a lot of pain to actually save this girl. So that’s something weird that we don’t do in games. We keep them feeling fun, to keep them remain in the game. Other than that, they will quit the game – that is the only thing a game designer is scared of. We shouldn’t disturb the player. We should always care if he’s having enough fun or not. And look at this game, this is not giving them fun, this is giving them pain throughout. ... So somehow it stroke a chord, even in the international audience who are not from India, who never knew this kind of thing has happened. ... I’d get this thing in the reviews and all, they’ve never played anything like this before. Even the prolific gamers and all. Because

there is no games like this before. No game actually talks about anything other than fun. So it has been a kind of new experience to them” (Chakraborty, 2017).

The examples discussed here vividly attest to the popularity of the current trend to turn to Indian cultural heritage aspects. But they also illustrate how much thought, finesse, and resources especially indie game developers invest to implement it. In their search for a special look and feel of their new games—that is, for stand-alone features in the highly contested global markets, they seek new content and aesthetics. The new trend also did not remain unnoticed by both Indian and global journalistic reporting (e.g., George, 2019; Kappal, 2018; Solarski, 2019) and researchers (e.g., Mukherjee, 2019; Mukherjee, 2015; Shaw, 2013; Zeiler, 2016; Zeiler, 2020). At the time of writing, the trend continues in multiple games that have recently been developed, such as *Venba* and *Forgotten Fields*. *Venba* is a cooking simulator, wherein one cooks “South Indian” food as an expatriate Indian trying to remember her roots and “restore lost recipes, hold branching conversations and explore in this story about family, love, loss and more” (Wong, 2020). *Forgotten Fields* (Frostwood Interactive) is about a game developer suffering from a writer’s block and then revisiting his roots in Goa, where he engages with the community, culture, and his childhood memories. As such examples abound in the recent games that are being made or have been made in or about India, the trend of establishing deep connect with the cultural heritage should not go unnoticed in the attempts to analyze game development in India.

Conclusion and Outlook

In our exploratory article, we presented a first introduction to and examples for emerging trends in Indian video game development when understood as a creative and cultural industry. While we think that such studies would be very necessary and welcome, the limited scope here did not allow us to discuss the economical, political, or social aspects of Indian game development or to analyze more in-depth extensive case studies of the new trend to implement regional cultural heritage elements. Instead, we focused on presenting the historical context which lead to the current developments and overall situation of the Indian video game development as creative industries (current developments and trends which we and many actors in the industry itself as well as journalistic observers from around the globe expect to not only continue but to even expand), and on portraying telling examples for these exciting new trends.

What we define as the possibly most surprising find when looking not only at the themes currently en vogue but also at levels of innovation in Indian game development at large, since its pioneering days until now, is that both are mainly driven by especially indie game development studios, above larger players in the industry. While big studios in India might still come to appreciate the potential in embracing regional cultural heritage(s), it is clear that so far, this has not been the case.

The academic interest in Indian video game development, certainly in relation to creative industries and cultural heritage but even much more broadly, has just begun.

Interesting questions to still be tackled abound and might include but are not limited to, for instance, questions on the creative toying with heritage aspects in game development (such as the role and understanding of fantasy in relation to historically transmitted heritage), on potential differences in the use of regional heritage(s) as used by Indian game developers in contrast to Indian narratives and aesthetics implemented by global or “Western” developers, on dangers of reproducing potential colonial or orientalist narratives and aesthetics (for instance, by implementing clichés), on technological means to integrate heritage elements in game (such as motion sensor technique for dance or scanning tools for heritage buildings and landscapes), on potential interrelationships or cooperations between games based on regional cultural heritage(s) and the GLAM (Galleries, Libraries, Archives, Museums) sector, on conditions of game production, the (national and international) reception of games made in India, and so forth. It is our hope that we contributed to a first detailed glimpse into this exciting field.

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