

Global Influences on Regional Industries; Game development in Nordic countries, China, and India

Marcus Toftedahl*, Björn Berg Marklund, Henrik Engström, Per
Backlund

School of Informatics

University of Skövde

Sweden

*marcus.toftedahl@his.se

ABSTRACT

The game development industry has historically been strongly associated with a few particularly dominant actors, namely Japan and the US. As a result, video game development processes and game content that have originated from these actors are often used as a benchmark for what game development is and can be. Discussing the games industry from these perspectives can, however, gloss over important nuances that make other game development regions unique. With this in mind, this paper intends to discuss the ways in which different cultural and regional contexts are reflected in the structure of local game development industries and, to some extent, in produced game content. To inform this discussion, the authors use the foundation and growth of game development practices in three different regions: the Nordic region, India, and China. These three regions serve as specific exemplifying cases of how video game industries and praxis can take different shapes depending on what resources and components they have available. The paper concludes that all regional games industries and game development practices are heavily influenced by the precedent set by historically dominant actors. This results in game content and development practices that often mimics pre-established standards. But, over time, the conditions surrounding the formation of regional industries manifest themselves in more locally unique content and development processes.

KEYWORDS

Game development, regional practices, Nordic region, India, China, game industry

INTRODUCTION

The idea that the consumption of games, and the forms which games take on, can be seen as a reflection of the values and structures that are prevalent in the regions and cultures in which the practices take place is anything but novel (e.g., Caillois 1958, p 82) describes it: “[One can posit] a truly reciprocal relationship between a society and the games it likes to play. [...] games reflect, on the one hand, the tendencies, tastes, and ways of thought that are prevalent, while, at the same time, in education and training the players in these very virtues or eccentricities, they subtly confirm them in their habits and preferences.” Just as the act of game play reflects and reinforces societal values and circumstances, the same has been argued for their creation, the processes of which are also largely informed by the regional and cultural contexts in which they take place.

Proceedings of Chinese DiGRA 2016.

© 2016 Marcus Toftedahl, Björn Berg Marklund, Henrik Engström, Per Backlund & Chinese DiGRA.
Personal and educational classroom use of this paper is allowed, commercial use requires specific permission from the author.

The structure and organization of IT- and creative industries differ between cultural regions (Izushi & Aoyama, 2006; Leidner & Kayworth, 2006), much as a result of what type of creative talent were available as the industries were formed, and the games industry is no exception. As stated by Izushi and Aoyama (2006) in a comparison between the game industries in Japan, the US, and the UK “each country draws on a different set of creative resources, which results in a unique [industry] trajectory.” Countries like Sweden and the UK, for example, have been found to have had a thriving community of software developers in the early 90s, which led to primarily computer science-driven game development endeavors during the industry’s formative years (Izushi & Aoyama, 2006; Jørgensen, Sandqvist & Sotamaa, 2015). Other countries, like Japan, had a stronger community of animators, comic artists, and writers, which in turn has been argued to manifest in different types of development practices and game content as the industry emphasize those aspects of development over others (Izushi & Aoyama, 2006). This paper expands on the discussion of how game development and game content is affected by structural and cultural regional contexts by focusing on comparing areas that, in spite of their growing presence in the games industry, have historically been less studied from this perspective: China, India, and the Nordic region.

For many countries, game development and content is something that is still strongly associated and informed by forms that originate from either North American or Japanese products and organizations (Latorre, 2013). India, for example, is just now in recent years starting to see games that represent Indian culture and cultural values (Mukherjee, 2015). Other countries, such as the UK, have put strategies in place to rectify this to some extent, for instance by offering tax reliefs for developers that create ‘culturally British video games’ (Mateos-Garcia, Bakhshi & Lenel, 2014). So, even though the games industries are thriving in many different regions, games as a platform of expression and representation have a tendency to follow the same forms of expression as the ones established in regions that have historically been more dominant in the industry – enough so that countries like the UK puts specific processes in motion to combat it. By understanding and comparing the unique cultural industry foundations of China, India, and the Nordic region, and examine to what extent they manifest in the production and consumption of games from the three regions, the paper also aims to discuss the prevalence and effects of cultural colonialism and centralized creative processes in the video game industry.

METHOD

The paper conducts a cross-cultural examination of how the chosen regions’ game industries relate to each other and the “global” industry perspective by: reviewing existing literature in the field; and by identifying production and consumption trends and patterns by using business reports and app store analysis to form an understanding of the game market in the region.

Since research on India as a game developing nation is scarce, understanding of the current state of the Indian game market trends is based on business reports (from Newzoo, NASSCOM, IGDA, and Superdata), as well as data retrieved from the Google Play store. By using the App Annie service, which gathers data from app stores in all regions and makes it accessible globally, it is possible to identify trends even in markets other than the domestic. When it comes to gathering information regarding developers’ experiences within the different industries, the paper also relies on accounts provided by developers to non-peer-reviewed sources.

The analysis of the Nordic games industry in this paper is also in large part informed by previous studies made by the authors, where the past and present state of Scandinavian game development was examined (e.g., Berg Marklund, 2012). The analysis is also based on extensive personal experience working with game development and game education in the region.

It should be noted that, much like other similar research endeavours, this paper is not exempt from inherent limitations of cross-cultural and cross-continental industry research. Language barriers may obfuscate important literature on the foundation and evolution of game development communities in Asian regions, and the authors' own region of practice carry with it biases regarding what sorts of qualities the games industry should manifest.

RESULTS

The formation and evolution of the video game industries and cultures in countries or regions that are seen as more instrumental in the creation and continuation of the global video games industry as we know it today – that is to say Japan, the US, and to some extent the UK – have been studied extensively (e.g., Consalvo, 2006; Izushi & Aoyama, 2006; Kirkpatrick, 2015). The sway of these key industry players, their roles in the early years of the establishment of the video game industry, and the focus on understanding their practices, results in a situation where the forms of video game creation and business processes established in these regions become the norm which other regions and smaller industry actors often try to follow (Latorre, 2013). From our brief review of literature and produced game content in the Nordic region, China, and India, these regions seem to exemplify this phenomenon.

The Nordic Region

In their study of the history of the Nordic games industry, Jørgensen, Sandqvist and Sotamaa (2015), highlighted the issue of the limitations of the “traditional” global game development perspective and combated it with extensive case studies including regional developers. They describe the founding of the region’s game industry as being characterized by a lack of “large-scale supporting industries that would have provided applicable skills for the new industry” (Jørgensen, Sandqvist & Sotamaa, 2015), and that each country’s industry was born from various constellations of demo-scene developers.

Broadly speaking, the region’s game development industries started becoming formalized in the early 90s. Sweden and Finland in particular have a heritage of software development and engineering, and thus many of the early game development endeavors in these countries were initiated with a heavy emphasis on programming expertise and exercise. A specific example, as described in Sandqvist (2010), is the now large industry actor EA DICE, which (like many other Nordic companies from the past) has its roots in the demo scene where developers primarily “showed off their programming skills by developing technically and graphically impressive programs” (Sandqvist, 2010, p 149). DICE progressed from the demo scene by starting to develop commercially successful pinball games. While the act of transcribing the mechanics of pinball to a virtual environment in a satisfactory way is a creative exercise, it would probably not be altogether unfair to describe DICE and similar Swedish studios as being born out of a tradition of software engineering rather than an impulse to convey a story or a novel aesthetic experience. Finland has a similar heritage in software development, with one of the early companies being interested in pioneering techniques of software- and hardware graphics rendering (Jørgensen,

Sandqvist & Sotamaa, 2015). By contrast, the game industries of Norway and Denmark show signs of a different type of heritage – one of film production, animation, and more visual means of storytelling. For example, when looking at the types of organizations supporting and directing these industries Norway's matters of game development are directed by the Norwegian Film Institute, and in Denmark some of the main funding opportunities for game developers can be found in the Danish Film Institute and the national organization for animation. Differences can also be found in the types of tertiary education programmes available in the different countries. Finish and Swedish game educations have a higher emphasis on programming, game design, and applied technologies, whereas Norwegian and Danish game education has a higher emphasis on visual storytelling, interactive technologies, and animation.

As the shape of the Nordic game industry is highly informed by pre-existing resources and traditions of creativity, innovation, and business, they largely ratify the conclusions reached by Izushi and Aoyama (2006). The Nordic region, if considered as a case of regionally situated development practice, also highlights the importance of considering nuances and differences between countries that can, at first hand, seem fairly homogenous. Thirdly, which will be discussed in relation to India and China, the region also provides some interesting examples of how game development grows and changes over time; initially mimicking precedents of successful game development as provided by bigger actors with available means, to later progress into an establishment of processes and content that is more informed by the peculiarities of the local region.

India and China

China and India have, in the past, been subject to a large amount of development outsourcing. A core catalyst of the emergence of China's game industry, for example, was the establishment of offices by western developers who did so primarily due to the access of cheap and effective labor (Kshetri, 2009; Ström & Ernkvist, 2014). Similarly, India's role in the global game industry have in the past been seen as a source of subcontractors (Dyer-Withford & de Peuter, 2006). Thus, some of the game development activity that takes place in these regions has not historically done so with native instigation, but functions as a support structure for foreign developers to produce their own IPs and products more efficiently.

However, with a focus on mobile games, new market opportunities has started rapidly emerging, and China is an example of this. The gaming and game development sector in China has seen a rapid growth, mostly in the mobile gaming sector. Newzoo's *Casual Games Sector Report* (Newzoo, 2014) states that the Chinese games market has quadrupled its total revenues between 2008 and 2013. In spite of this growth, strict censorship rules, a multitude of app stores and piracy has made it difficult for especially western companies to establish themselves on the Chinese market (Newzoo, 2014). According to recent game industry analyst reports (IGDA, 2014; Newzoo, 2014; Superdata, 2015) the Indian game market is also in a developing phase and is growing rapidly. In a report from the Indian trade organization National Association of Software and Services Companies (NASSCOM, 2015) estimates are that in 2015 the install base of mobile phones were approx. 200 million users (of which 50 million using their phones for games) and is estimated to grow by 100 million users yearly thereafter. These games industries thus have an enormous potential of growth and of establishing robust indigenous practice, but so far the international perspective is given high priority. NASSCOM, for example, has concluded that 75 percent

of all game productions in India is focusing on being internationally marketable (NASSCOM, 2015).

In 2007, NASSCOM took a step towards gathering and formalizing the Indian game development industry. At that time the NASSCOM Animation Forum had enough game related companies to form a Gaming Forum which led to a bigger focus on games and game development within the country's IT sector. Looking briefly at the current situation of the mobile game market in India local variances in the consumption of games can be seen in the Google Play store, compared to, for instance the Swedish. Since the console market share in the Indian region is relatively small, traditional console games such as *Grand Theft Auto: Vice City* and *Grand Theft Auto: San Andreas* is top-sellers (second and ninth place in the "Paid" category) whereas the same games are lower ranked in the Swedish Google Play (89th and 34th place).

When looking at the regions from a development perspective rather than a marketing one, interesting correlations can be found with the Nordic region but at a different scale and with different timeframes. In the case of India, indigenous video game development started with a few scattered titles in 1999 and 2002 (Mukherjee, 2015), making it a comparatively young industry. According to some developers in the India, the effects of the industry's youth and subcontracting history can still be felt in the development practices in the country: "on the app stores, most of the games are arcade, puzzle, simpler games. Here, if something works with western audiences it's just easier to convey [...] that you're making *Clash of Clans*, but an Indian version" (Handrahan, 2016). As put by Mukherjee (2015, p 245), "the industry needs the support of both the government and the public, but it also needs to pay greater attention to the needs of the Indian playing community and to incorporate Indian contexts in its designs".

CONCLUSION & DISCUSSION

While the literature and industry reviews conducted in this paper are admittedly limited, they point towards a need for more research in regards to regionally localized game industry practices and the ways in which they relate to the standards that are predetermined by historically dominant industry actors. Looking at some examples of how localized industries have emerged and grown over the years, it becomes apparent that while there are some unifying factors that can be said to characterize the "global" games industry, the games industry, if taken as a collection of regional industries, is far from homogenous.

Even in small areas that are often referred to as having a unified model of praxis, there is a large variation in creative traditions and prospects; many of which arise from the unique combination of creative resources, structures, and organizational cultures that make up the foundation of the gaming industries. As put by Jørgensen, Sandqvist and Sotamaa (2015, p 17), the Nordic game industry provides a case that challenges the "predominant notion of a single game industry history." Norway, Sweden, Denmark, and Finland are each characterized by their own unique industries, with different challenges and advantages that shape the ways in which new game studios (which in the end contribute to the countries' development communities) are formed. In the case of the Nordic region, the countries range from emphasizing aesthetically and artistically driven game production largely informed by the creative industry's strong tradition of film production and storytelling, to being driven by software engineering.

Even though regional differences in practice do exist, video game production and produced content still seems to be guided by global pre-established standards. It is worth debating whether or not the video game medium is more susceptible to this type of centrally governed creativity than other mediums. Many of the tools utilized for developing, distributing, and playing games are in control by a small number of companies (e.g., Microsoft, Apple, Google, Epic, Valve, Nintendo, and Sony). As the tools used by a creative industry has a large influence on the types of content and expressions that can be made in its creative productions, the largely US and Japancontrolled tools may mean that there is pressure on Indian, Chinese, and Nordic developers to adopt their practices. This might be the reason for the large amounts of games that simply use familiar mechanics with different visuals and iconographies that make the content more familiar to local audiences: the mechanics, which are more deeply intertwined and incorporated into development tools, are a universal constant, but the aesthetics are subject to changes.

It is important to point out that this paper does not argue that the forms which video game ideation and creation takes should become staunchly localized, or be adherent or limited to local principles. However, the video games industry can at times be prohibitive to ideas that do not follow formats that have become axiomatic conventions for the medium and its associated value chains. It is important to also explore potential differences in expression and development practices between regions outside of the usual trinity of global actors. While the influence of these larger industry actors need to be acknowledged, referring to them as a benchmark of video game development standards can perhaps limit our ability to find nuances of the form which are native to other regions and cultures.

REFERENCES

- Berg Marklund, B. (2012) *Game Development, Education & Incubation: A brief overview of Scandinavian game development, markets, education, and support structures*, Scandinavian Game Developers, Skövde.
- Caillois, R. (1958) *Man, Play and Games*, The Free Press of Glencoe, Inc.
- Consalvo, M. (2006) "Console video games and global corporations: Creating a hybrid culture", *New Media & Society*, Vol. 8, No. 1, pp 117-137.
- Dyer-Witheford, N. and de Peuter, G.S. (2006) "'EA Spouse' and the Crisis of Video Game Labour: Enjoyment, Exclusion, Exploitation, and Exodus", *2006*, Vol. 31, No. 3.
- Handrahan, M. (2016) "Made in India, made by indies", *Gamesindustry.biz*, [Online] Retrieved from: <http://www.gamesindustry.biz/articles/2016-02-14-made-inindia>.
- IGDA, (2014) *Casual Gaming in India*. [Online] Retrieved from <http://www.nasscom.in/casual-gaming-india>.
- Izushi, H. and Aoyama, Y. (2006) "Industry Evolution and Cross-Sectoral Skill Transfers: A Comparative Analysis of the Video Game Industry in Japan, the United States, and the United Kingdom", *Environment and Planning A*, Vol. 38, No. 10, pp 1843-1861.
- Jørgensen, K., Sandqvist, U. and Sotamaa, O. (2015) "From hobbyists to entrepreneurs: On the formation of the Nordic game industry", *Convergence: The International Journal of Research into New Media Technologies*.
- Kirkpatrick, G. (2015) *The Formation of Gaming Culture: UK Gaming Magazines, 1981-1995*, Palgrave Macmillan, Basingstoke, UK.

- Kshetri, N. (2009) "The evolution of the Chinese online gaming industry", *Journal of Technology Management in China*, Vol. 4, No. 2, pp 158-179.
- Latorre, Ó.P. (2013) "The European videogame: An introduction to its history and creative traits", *European Journal of Communication*, Vol. 28, No. 2, pp 136-151.
- Leidner, D.E. and Kayworth, T. (2006) "Review: a review of culture in information systems research: toward a theory of information technology culture conflict", *MIS Q.*, Vol. 30, No. 2, pp 357-399.
- Mateos-Garcia, J., Bakhshi, H. and Lenel, M. (2014) *A Map of the UK Games Industry*, The Association for UK Interactive Entertainment, Nesta.
- Mukherjee, S. (2015) "India", in M.J.P. Wolf (ed.), *Video Games Around the World*, MIT Press.
- NASSCOM, (2015) *The Indian Gaming Market Review: Opportunities in a Rapidly Growing Market*. [Online] Retrieved from <http://www.nasscom.in/indiangaming-market-review-opportunities-rapidly-growing-market>.
- Newzoo, (2014) *Casual Games Sector Report: Towards the Global Games Market in 2017*. [Online] Retrieved from <https://newzoo.com/insights/articles/free-casualgames-sector-report-towards-global-games-market-2017/>.
- Sandqvist, U. (2010) "Digitala drömmar och industriell utveckling: en studie av den svenska dator- och tv-spelsindustrin 1980-2010", Doctoral thesis, Umeå University, Institutionen för ekonomisk historia, Umeå.
- Ström, P. and Ernkvist, M. (2014) "Product and Service Interaction in the Chinese Online Game Industry", *Technology Innovation Management Review*, Vol. 4, No. 5.
- Superdata, (2015) *2016 and Beyond: Game Monetization Trends*. [Online] Retrieved from <http://1.videogamesintelligence.com/LP%3D7186>