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Devolution of the Game Market: from single leader to many strong competitors

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Devolution

When Sony Computer Entertainment (SCE) released the PlayStation 3 (PS3) in November 2006 and Nintendo launched its Wii game console in December, media coverage suggested we were witnessing the start of a new round in a battle for dominance in the game console market, a battle where we could expect to see one winner becoming the industry's de facto "standard bearer"

The idea that there would be a dominant game hardware manufacturer became common during the mid 1990s. The popularization of the Famicom (Family Computer) during the mid 1980s was a major influence in creating this notion. Before the emergence of the Famicom there was a short period when potential lay in a number of gaming communities, including the home gaming community, the arcade community, and the PC gaming community. It was a period of the various and challenges and tough competition.

During this time hobbyist programmers and hackers created game software that brought rich anarchy to the early gaming scene (for more on this point, see Yamane, Baba [2004]). However, led by the popularity of the Famicom market the gaming world subsequently underwent rapid

growth and high specialization, which caused the number of hobbyist programmers to decrease. The gaming industry started to become ossified, and increased conservatism and specialization in the industry lay the foundation for a "single winner" approach.

However, it seems circumstances are leading us to another turning point: I believe we are about to see the return of a period of intense competition between rival game hardware manufacturers. For the purposes of this paper, I refer to this intense competition scenario as "game devolution," and will try to explain the gaming scene of today.

The term "devolution" refers to the phenomenon when some powerful, leading entity diffuses its power into its surroundings. It is frequently used to refer to the decentralization of power to local governments, and it also carries the meaning of degeneration, returning to a former generation. In this case, a return from a generation dominated by Nintendo or Sony to a period of intense competition. Below, we examine the historical background for this situation.

The Wii, the PS3, and the Xbox 360

During development the Wii was known

by the codename " Revolution". At the time Nintendo president Satoru Iwata wanted to break with the tradition of creating new games that evolved as cooler, faster, better versions of earlier titles. He wanted to break with the principle that the games market would expand built on past successes. Nintendo's codename for the new console illustrates their intent to start a revolution rather than continue with evolution.

However, talking about revolution is a trite marketing slogan, what does this gaming revolution mean? The first thing to note is that competition is no longer just about gaming, all the new consoles have many new functions. The Wii allows users to view news and check weather information, and features such as linking with Windows Vista are planned for the Xbox 360, which also supports the next-generation HD-DVD standard via an external drive. Sony's PS3 provides support for Blu-ray Discs. These features have turned these systems into digital entertainment machines. For this reason their differences are difficult to see at a glance and it is too simplistic to think of competition between them as a new game console war, it has become a battle between household digital entertainment systems. Every console comes with Internet browsing, photo viewing, and game downloading features.

Looking at these features alone most games consoles have similar functions, however, given this new situation hardware manufacturers have taken to saying "I don't know who my competitors are anymore". Their market is no longer gaming, it is family entertainment and they are approaching the new market with significant differences in strategy.

The Wii has multiple functions that Nintendo hopes will entice household members previously not interested in gaming to use the console. Their objective is to get people who ordinarily would not play games to play games a little and involve the whole family in some activity using the Wii. The Wii's features have been honed for gaming and unnecessary components have been pared away. The Wii is inexpensive, lightweight, and small.

Sony and Microsoft's objectives are completely different. Their aim is to encourage consumers to experience games, and then ultimately get them to use the PS3 and Xbox 360 as digital consumer electronics devices. The consoles are extremely luxurious, with a large number of features aimed at increasing user satisfaction. The PS3 and Xbox 360 are expensive, heavy, and large.

Compared with earlier trends in

hardware competition, the current situation is a new phenomenon. Nintendo is not alone in attempting revolutionary change, almost all hardware manufacturers are pushing their products in new directions. Understanding why this revolution is beginning lies in the recognition of the devolution of the gaming market.

Collapse of the Single-Winner Structure

Summarizing recent developments in the gaming market we can see the single-winner structure has already come to an end and the present situation can be described as follows:

First, the Japanese gaming market reached a state of virtual saturation by the end of the 1990s. However, this was the height of the market and today the market is about 80% of the peak. Over the same period the international gaming market has nearly doubled and most top-selling software is developed locally rather than being produced in Japan.

Second, in 2006 Nintendo DS software accounted for 51.2% of software sales in the Japanese gaming marketⁱⁱ. For the first time the home game consoles had fallen from the leading position. Additionally, gaming on mobile phones continues to almost double each year, in

2005 the market exceeded 100 billion yen and trends suggest it will soon also overtake the game console marketⁱⁱⁱ. The online PC gaming market is also rapidly growing around the world. In South Korea the word "game" has become virtually synonymous with online PC games.

Third, while manufactures like Nintendo and SCE are still powerful there are new trends in the gaming market, for example of Hangame, which developed mainly in South Korea. Hangame is a Internet portal site for games. In South Korea the portal functions as a game platform hosting a wide variety of games. Hangame and similar portals may replace the console as the dominant gaming platform.

Fourth, new types of games are becoming popular. It used to be said that software for purposes other than pure entertainment did not sell well in Japan. But recent major hits like the multi-million-selling success "Brain Age: Train Your Brain in Minutes a Day!" (2005, Nintendo) and "Brain Age 2: More Training in Minutes a Day!" (2005, Nintendo) have demonstrated that even non-entertainment games can become major hits if created and marketed well.

At the same time, in the online gaming world, virtual societies have been created

where users earn actual money through gaming, and the global market is estimated to be several hundred billion yen. According to some reports, there are 500,000 people in China who live by "playing" rather than "creating" games. To such people, "playing" games is almost a work activity. There are other examples of game software spreading into areas beyond entertainment.

Considered these points together it becomes clear that the game market that developed as an extension of the Famicom has reached its peak both quantitatively as well as qualitatively. The domestic market is sluggish, and improvements in game graphics standards are developing less quickly than in the past.

At the same time, the widespread global uptake of PCs and the Internet over the past decade has seen online gaming and other markets expand tremendously. A shadow has fallen across the era when Japanese Famicom game console manufacturers reigned supreme over the global market, and handheld game machines and mobile phones have begun to come into their own as game platforms.

After the single-winner scenario focused on the game console collapsed, the overall market has expanded and at the same time has lost its centralized nature and become diffused.

The Concept of "Play" and the Rise of Media

According to Shin Mizukoshi [2002]^{iv}, the element of "play" has been a strong influence on the rise and popularization of new types of media. For example in the early days of radio, there was a grand dream among those developing early wireless technologies of creating an interactive, real-time communications network by covering the entire world with wireless, and using this network to foster the development of democratic society. Early radio enthusiasts thought they might be able to create something resembling the Internet we are enjoying today.

These early enthusiasts were disdainful of the word "listener", the act of merely listening to people talking or playing music is passive, and was considered by these pioneers to be uninteresting.

However, as we know the history of domestic radio has not been as an interactive media, that ability was lost the when radios were stripped of the capability for transmission and became a household appliance, and the entertainment value of one-way broadcast media grew rapidly thereafter.

Mizukoshi also points to the similarly

powerful influence of the element of "play" on the process of creating the gaming industry.

Hackers who contributed to the creation of the personal computer (PC) and to the Internet, and those who created the first computer games were part of what is virtually the same community. World Wide Web Consortium (W3C) associate chair Alan Kotok, who passed away recently, was co-developer of Spacewar!, the world's first shooting game, and Will Crowther, who wrote Adventure, the world's first adventure game, was an ARPANET engineer^v. For them and many others, developing games and developing computers were connected in a very real way.

In this light, we can see that games have always been part of the development of computers and computing. Further, according to Mizukoshi, "One essential part of the family tree in the evolution of computers was hackers' and enthusiasts' pursuit of activities that mixed seeking enjoyment with overcoming technical challenges as regard to microcomputer and computer games, and it was these activities that resulted in the rise of the media of personal computers and video games. The enjoyment of video games is placed at the center of the path to the development of the computer."

Mizukoshi concludes that in the subsequent history of video games, following the successes of Atari, it was the Famicom that "popularized video games around the world."^{vi}

Based on these examples, Mizukoshi argues that during the popularization of a media, the media will tend to become more rigid as it moves toward maturity. They become less "playful". This can be observed in the popularization of radio and games. Of course, the path towards the more rigid state won't always be linear, the route will vary according to the circumstances of the individual media and societal conditions. (See Figure 1).

Following Mizukoshi's arguments, we can describe the game world the past 20 years as a process of "systematization/regularization centered around the Famicom." Conversely, the phenomenon we see today is a reverse of the trend Mizukoshi describes regarding the Famicom. Considering Figure 1, instead of following the arrow pointing to the upper right in Mizukoshi's diagram, the game world is hooking back to the left. The game industry is responding to the diffused and expanded market by opening up the development environment to users. As a result, the gaming world is flourishing with possibilities for various types of games, without monopolization of development by professional creators. There appears to be a strategic effort to

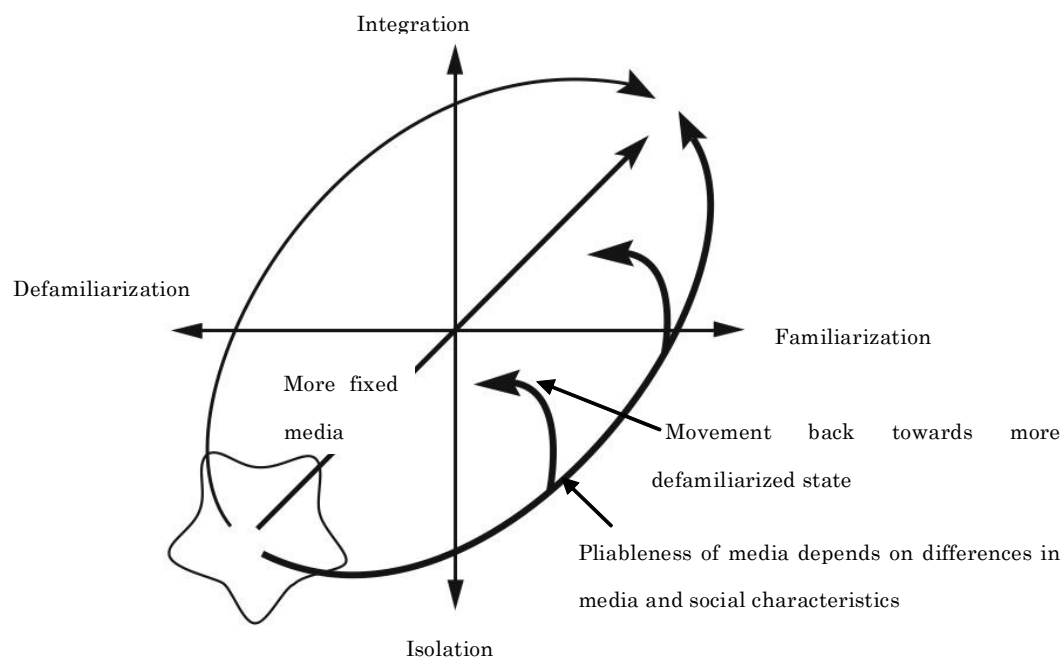


Figure 1: Development of Media

bring about circumstances similar to those that occurred by chance some 20 years ago.

It is not yet possible to say how successful this return to the intense competitive scenario --game devolution-- will be. The "single winner" scenario and more controlled market situation could return.

User-Created Content

In these chaotic and changing market circumstances user-created content is attracting considerable attention.

Over the past decade game production costs have risen dramatically. Recently, it's not unusual for hear of projects with budgets of 10 billion yen or more involving hundreds of people over a period of years developing a single piece of software. Keeping development costs under control during these long and complex processes has become a major problem. Moreover, as discussed above, during the 1980s, there were many people who created games as a hobby, and there were also many others whose hobby led them to become professional game developers. However, due to the specialization and sophistication of game production technologies, the number of hobbyists producing games has decreased, and the number who moved

from amateur to professional ranks has also decreased. The chronic personnel shortages that plagued the game industry beginning in the latter half of the 90s was a result of this pattern.

As a means of addressing this issue in the United States, game development environments that would normally have been priced in the range of millions of yen have been given to ordinary users, i.e., game development software was made available for free. Broadening the developer base in this way has resulted in games created by users that have gone on to become major worldwide hits, for example Counter-Strike, which has sold tens of millions of copies around the world.

Second Life is another example of user-created content. Users create clothing, daily goods, buildings and their whole virtual environment within the game, and they are able to sell goods they create and buy virtual goods created by other users. Users also stage live performances, hold exhibitions, company meetings, and university conferences or classes within the game. IBM held a conference with 300,000 attendees in Second Life. Organizations such as Nissan, Toyota, Reuters, and Stanford University have also made use of Second Life. Because the API (Application Program Interface) is publicly available,

users are able to freely carry any experiment they wish and have the skills to create within the game. The result of these experiments has been the creation of an increasingly livable world within Second Life, and the number of users, known as residents, of the game recently exceeded 1.7 million.

In this way, games and new features within games are being created by both professional developers and by users. Games that have a major impact on the world are coming into existence as the result of users tweaking and creating as they play games.

Two scenarios may develop from this situation. In the first, the popularity of user-generated content and emergence of a new wave of amateur developers may reverse of the trend towards systematization/regularization shown in Mizukoshi's diagram. The game industry will become more sustainable.

In the second scenario, instead of extending the lifespan of games as we understand the media today, user-created content may already be fundamentally changing the nature of games and gaming. Virtual worlds and immersive environments like Second Life have lost their gaming origins, and now only have weak game-like characteristics. It is expected that these

virtual worlds will evolve as a form of 3D browser or a new communications space rather than a simple game. As such they have the potential to become a new type of media. In terms of Mizukoshi's diagram, instead of traveling back and forth along the arrow heading to the upper right, it may be possible to position Second Life as a departure point for a new form of media.

It is unclear to what extent Second Life will be successful as a new form of media, but games today have come to the point of producing such new media, and this potentiality seems to continue in the future.

Games as a Future Social Infrastructure

Ken Suzuki, a highly skilled programmer and senior research fellow at GLOCOM, philosopher and critic Hiroki Azuma, and novelist Hiroshi Sakurazaka have launched "Geetstate" a project to create a picture of the future in the year 2045 from the perspectives of culture, social science, and information technology. Geet is derived from Geek + NEET representing a new type of social actor^{vii}.

In their image of the future, in 2045 1.5 million people in the southern region of Kanto, approximately 6% of the area's total population, will work from home in what they describe as "gameplay working."

This new type of work will take place on open public networks, anyone can join at anytime, to participate in "games" that have the feel of entertainment, but are actually performing some productive activity, perhaps a sophisticated form of simulation or problem solving. This conceptualization positions gaming as of the ultimate extension of crowdsourcing such as Amazon Mechanical Turk, and presents a future where games function as an important infrastructure supporting society.

Of course we cannot be sure if games will achieve such a role, however, the medium of games is poised to venture beyond pure gaming into the realm of new communication spaces and multifunction digital entertainment machines. Considering these developments, the Geetstate vision of the future may not be so unlikely.

was a computer research network known as the prototype of today's Internet.

^{vi} Atari was established solely to create the world's first video games such as Pong and video game consoles.

^{vii} "Geet" was coined by Hiroki Azuma and Ken Suzuki and is a combination of "geek" and "NEET" (Not currently engaged in Employment, Education or Training) A young unskilled intellectual laborer working from home via the "gameplay working" game in the future of 2045.

ⁱ Shinji Yamane, Akira Baba [2004] The Origin of the Business Model for Application Software: Viewpoint from the Hobbyist Market and Individuals, IEICE Technical Report Vol.104, No.343, SWIM2004-10. pp.7-12.

ⁱⁱ Research by Media Create Co., Ltd.

ⁱⁱⁱ Computer Entertainment Supplier's Association [2006], 2006 CESA Games White Paper.

^{iv} Shin Mizukoshi [2002], The Digital Media Society: A New Edition, Iwanami Shoten.

^v W3C promotes the standardization of technologies used on the Web. ARPANET