Philippe Dallais

Regionalmodul
Ethnologisches Seminar
Universität Zürich

The Gaming Industry's Impact on Japan

"Video games don't affect kids. If Pacman had affected us as kids, we'd all be running around in darkened rooms, munching magic pills and listening to repetitive electronic music."

-Nintendo CEO-

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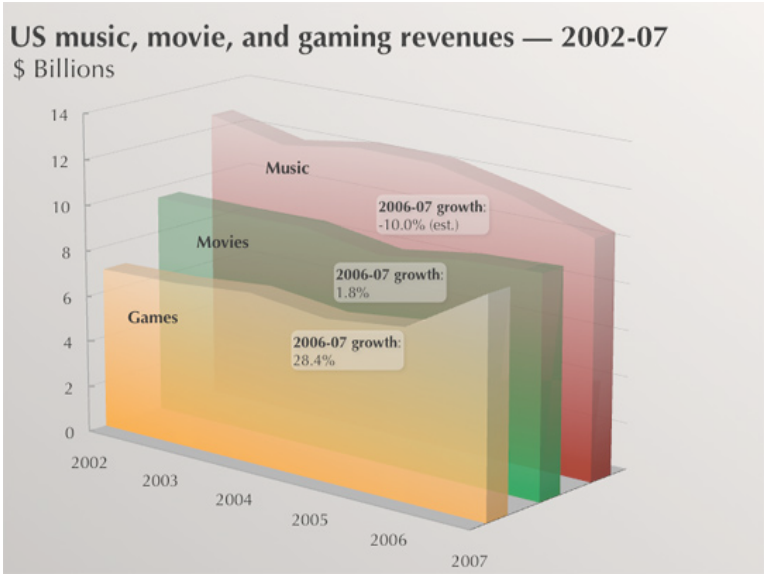
The worlds video game industry

According to David Perry on TED (2006, video) the video game industry business would grow from $29*10^9$\$ in 2005 to $42*10^9$\$ in 2010. But as the 2008 Pricewaterhouse Coopers "Global Entertainment and Media Outlook" states, the total industry sales did already reach $41.9*10^9$\$ in 2007. They predict the total industry sales to become $68.4*10^9$\$ in 2012, whereas the growth will be mostly through online games, in-game marketing and in the mobile gaming market.



(Image from Ars Technica, 2008)

To contextualize those figures, the report states that the video game industry will outgrow the other entertainment industries like the music and movies and DVD industry. Another comparison I would like to make is the comparison between the United Banks of Switzerland (UBS) and Electronic Arts (EA) who is a major game publisher. UBS has around 70k employees according to Career Journal (2009), and Gamespot (2009) states that EA has around 7k employees. But while the number of people they occupy is on a 1:10 balance, their operating expenses were in 2009: $5183*10^6$CHF UBS to $2912*10^6$\$ for EA which would make the bank about twice as big as the software distributor (data from: EA and UBS).

David Perry also states that contrary to intuition the average gamer is 30 years old (2006, video). This data can also be verified at the entertainment software association, "dedicated to serving the business and public affairs needs of companies that publish computer and video games for video game consoles, personal computers, and the Internet." (2010). According to the association the average gamer today is 35 years old (because the 30 years old people in 2006 are 4 years older today) and that 40% of all players are women. They also state that in the United States over two-thirds of

households play video games.

To touch the growing market of online gaming, I will use the most known example, World of Warcraft. While in 2006 it had $5.5*10^6$ subscribers (a subscriber is a person who pays a monthly fee, with the exclusion of China, where there are different payment methods) (Perry 2006) and Blizzard stated in November 2008 that they already have $11.5*10^6$ subscribers, in other words more people actively playing World of Warcraft than living in Switzerland.

The video game industry localized

We now know that the gaming industry is one of the big players in the entertainment industry. Therefore I'd like to have a more detailed outlook into what kind of games people are playing. And to also touch the essence of this essay, I'm also going to compare the games that are popular in the US and those that are popular in Japan as well as the gaming industry in Switzerland/US/Germany and the one in Japan.

We have on one hand the ten best-selling games in the US according to Forbes (2008), and on the other hand we have the ten best-selling games in Japan according to Famitsu (2008):

United States	Japan
Grand Theft Auto: San Andreas (2004) - 9.4 million	GB Pokémon Red/Green/Blue 10,077,000
Guitar Hero III: Legends Of Rock (2007) - 8.2 million	GB Pokémon Gold/Silver 7,961,000
Madden NFL 07 (2006) - 7.7 million	FC Super Mario Bros. 6,810,000
Grand Theft Auto: Vice City (2002) - 7.3 million	DS Pokémon Diamond/Pearl 5,465,000
Madden NFL 06 (2005) - 6.65 million	GBA Pokémon Ruby/Sapphire 5,337,000
Halo 2 (2004) - 6.61 million	DS New Super Mario Bros. 5,187,000
Madden NFL 08 (2007) - 6.6 million	DS Brain Age 2 4,865,000
Call Of Duty 4: Modern Warfare (2007) - 6.25 million	DS Animal Crossing: Wild World 4,654,000
Grand Theft Auto 3 (2001) - 6.2 million	GB Tetris 4,230,000
Madden NFL 2005 (2004) - 6.1 million	GB Super Mario Land 4,180,000

As we can see, Japanese do not also play completely different games; they do also play on different consoles. Actually according to surveys on the top 100 games in Japan, the Japanese do only include a handful of games not made in Japan (compare to Next-Gen. biz 2009 and Consalvo 2009: 138). Or as Cuthbert in Winterhalter puts it: "Western games don't appeal to the average Japanese gamers sensibilities." (2007: 3). Overall the world's most popular games is more or less a merge of these two lists.

The Japanese gaming market revenue totalled in $6.26*10^9$$ in 2008 (Gamasutra 2009), which means about a tenth of the world market share and about a third of the market share of the United States ($21.3*10^9$$).

The Author Denis Dyack of Silicon Knights however stresses the importance of Japanese video game industry "…without the Japanese contribution, the games industry might not be around today..." (In Winterhalter 2007: 1). As we will see in the second part of this essay, the Japanese industry has had and continues to have a great influence on the world of video gaming.

Unfortunately Switzerland is not a relevant player in the gaming industry, according to the Neue Zürcher Zeitung (2010), there are a meagre 150 game designers working in Switzerland. The game with the most copies sold made in Switzerland, shipped 500'000 exemplars world wide and is named the "Landwirtschaftssimulator" (NZZ 2010). In the spite of that, the "Zürcher Hochschule der Künste" has a bachelor called "Game Design" since 2004 and the "Eidgenössische Technische Hochschule" has a course for computer graphics (NZZ 2010).

My personal standpoint

Thus having given a short overview of the gaming industry in a global and more statistical point of view, I would like to switch to a more anthropological approach of the topic. My person has extensive experience extracted from my own contacts to the world of gaming.

The first contact was imposed by my older cousin whom we visited and we I saw him gaming. Obviously the small kid I've been was instantly fascinated by that so he gave me a copy of "Age of Empires I" which he did not need anymore. That fascination developed itself into a hobby of mine, so I began playing some more recent "real-time strategy" games, which are basically nothing but a more complex version of chess.

After going into high school I began to become interested in the ways of creating games, therefore I learnt how to program on computers and bought literature about creating games. The climax of this was my senior thesis ("Maturaarbeit", a piece of work that the student undertakes in the final year of Gymnasium, under the supervision of a particular member of staff) where I created parts of a real game together with a fellow student. Back then I did also play the rather time intensive "Multi- Massive Online Role-play Game", World of Warcraft. I did already mention the economic dimensions of the game, to complement that I would like to add some insights into the game. While playing one can divide the game into two major parts. The first is levelling up to the level cap and meet the prerequisites to join a "raid group". The second part is coming together with such a group and beating the content of the game designed for those groups of 10 to 25 (when I was playing mainly 40) human players. There is a lot of competition for the world's best guilds who beats newly introduced content the fastest. Lately Blizzard has also introduced and promoted some additional content like Player versus Player combat. Obviously there are infinite possibilities of playing the game since it's nothing more as a virtual sandbox where somebody can become another character he wishes to be and interact with other similarly dispositioned people. But the majority of players seem to belong to the group trying to beat the raid encounters.

After starting with University I had less time at my disposition and I stopped playing World of Warcraft, but to stay up to date with the gaming industry I continued to play some the most popular games at the time like "Dragon Age", "Grand Theft Auto", "Final Fantasy", "Pokémon", "Mass Effect" amongst others. From that experience I'll make a short summary of the current developments. The most striking one is the improvement of graphics due to more calculating power of computers, although that seems to have been on the expense of the content a game offers (you need less time to beat a game). Another one is the rise of features connected to the internet, like special achievements one can unlock and link to an online identity where those can be seen by anybody on the internet. Those online profiles are similar to Facebook for games, just created and maintained by the big game distributors like Electronic Arts, Ubisoft and Blizzard. Or

to be more precise, they are probably more like rip-offs to Facebook. It's also possible to use special feeds to link the game content directly into Facebook or twitter. On the other hand, games featuring content tuned to the LAN (Local Area Network) are declining. Those features were used in the past, when playing over the internet was technically problematic to enable players to link their computers and play together. With the coming of many different consoles and games on smart phones, there is also a great diversity of games, but as seen on the global game ranking, established and well-known franchises are still the most popular (compare to Pricewaterhouse Coopers, 2008: Global Entertainment and Media Outlook).

In his video on TED 2006, David Perry does also show a visual summary of how different kinds of games changed since computers were introduced, I would recommend watching the first half of the video for anyone interested in seeing how games developed themselves from black and white pixels into the almost reality-like looking games we have today.

The impact of the Japanese video game industry

After gaining an overview of the worldwide gaming industry and where Japan and I stand in that landscape, I would like to take a look at some selected publications who also concern themselves with topic at hand: The impact of the game industry on the economy as well as the single user and also a insight on how the creators of games tick.

Mia Consalvo writes about convergence and globalization in the Japanese video game industry, which means how Japanese game publishers use global distribution channels and diverse forms of content to fight against the decline of their industry (2009: 135, 138). She uses three game developing and publishing companies to illustrate how they use diversified holdings: Bandai Namco, Square Enix and Konami (ibid.).

Bandai was founded in 1950 and produced toys like metallic cars, afterwards created brands like Sailor Moon and Power Rangers as well as the Tamagotchi (Consalvo 2009: 136). It acquired Namco in 2005 who used the Japanese division of Atari to gain entrance into the "coin operated" game market and had merged with Alladin's Castle Inc to dominate said market (ibid.). Therefore the company produces toys as well as gaming software and arcade systems and in addition to that, it even owns tourist hotels and restaurants, creates anime (ibid.).

Square Enix is as the name indicates a combination of the developing companies Square (who created the Final Fantasy franchise) and Enix (known for the Dragon Quest series) and if we take a look at the best selling game franchises, Final Fantasy resides on place four and Dragon Quest on place 17, and if we take a look at the most popular games in Japan according to Famitsu 2006, the first four places were taken by those two franchises and only three of the top ten were from other franchises (Consalvo 2009:

136). Additionally Square Enix acquired Taito Corporation to also join the arcade business (ibid.).

Konami began with producing arcade games and created games like Frogger, Castlevania, Silent Hill and Metal Gear (Consalvo 2009: 136). They currently divide their business into three segments, the Digital Entertainment segment (home video game software, card games and arcade systems), the Health and Fitness segment (owns sports clubs and creates health-related products) and the Gaming and System segment (responsible for gaming machine and casino management systems) (ibid).

Western media like "Star Wars", "Lord of the Rings" and "Star Trek" uses a centre-periphery model for their narrative worlds derivate from one franchise, they have a main product and content is created within that framework (Consalvo 2009: 137). The Japanese franchises use a different model, Consalvo makes an example of the Gundam universe, which began as a anime and was followed by a toy series and currently movies that are seated in the same world (ibid.). Another example she makes is the Final Fantasy series, where every game is situated in a different world and the series is connected by similarities over those worlds. In other words, in the Japanese media universes, there's no single defining product from which all the others are derived but rather many products composing one media universe (compare to Consalvo 2009: 137).

According to Consalvo, all three companies try to increase their "overseas" activity (2009: 139f). To do that, they do not only deliver localized content, but they create bases in the whole world to begin to create content custom-made for those markets (ibid.). As they are only beginning to do so, the impact of those strategies as well as their result is mostly subject to speculation.

The impact of video games on individual actors

Craig et al. 2008 tried to research the effects of playing violent video games on the behaviour of children in the United States and in Japan. They checked 3 samples of male and female schoolchildren (1595 in total) at two points of time and assessed how much they habitually played video games and how violent they acted (Craig et al. 2008: 1068). The US schoolchildren listed their three favourite video games, rated their violence and told how much they played those (Craig et al. 2008: 1069). The younger Japanese sample told how much they played different types of games (ibid. 1069). The sample with the older Japanese listed their three most favourite genres and how much they played games of those genres rated by violence of that genre (ibid. 1069).

The results of the study propose that there is a longitudinal correlation between gaming violent games and violent aggressions especially for the younger children (ibid. 1069). The most important factor for physical violence was obviously the past history of aggressiveness but exposition to violent game content leads to an increased risk of

violent behaviour later on in time (Craig et al. 1070). The impact of gaming however is declining for older children and stronger for the younger ones (ibid. 1070).

They also checked if there was a tendency for the violent games to be more influential in the United States than in Japan, but they found no such correlation (ibid. 1070). But we still have to consider that American people tend to play more violent games, as we could see on the list of the most popular games, when we would want to account for cultural differences. The baseline I would like to draw from this study is that gaming is in no way an activity that does not influence the behaviour of people. Games have an impact on people's lives and by looking at what people are playing we can also draw conclusions about their culture. It is a "total social fact", as Marcel Mauss would put it.

Another study trying to connect video games with the rest of the "Kids' Lives" was published by Reed Stevens et al. 2008. This essay has a greater horizon than the earlier one, since it does not limit itself to violent action but rather tries to explore all the different ways the gaming might affect the behaviour in the real life of the gamer with the question: What do people learn in video games? (Stevens et al. 2008: 41).

While the study was published from the not really unknown MIT, the researchers state that they use an ethnographic approach to solve their questions with a situated/everyday/distributed cognitive approach, because they thought that ethnographic studies on game play are underrepresented (ibid. 42). Their method was composed of filming 13 young people playing video games over a period of six months and interviewing them later on (ibid.). They filmed not only the children playing but also what they were playing on screen. To draw conclusions about effect of game play on other areas of the daily life, they compared it to the homework the youths had (44). Their conclusions come from how the players interact with their environment and they collected eight different forms of interactions they present in their thesis.

1. "Cory the Expert as Just-in Time Resource for Rachel the Novice" (Stevens et al. 2008: 45f): Rachel (15), a relatively inactive player relied on Corys (12) expertise for help, when she was gaming. She asked him for specific advice on how to play Age of Empires II for example.

2. "In the On Deck Circle: Apprenticing into Game Play" (ibid. 46-48): Here the older brother Mikey (15) introduced and lead his sister Maddy (8) into the world of playing video games. Mikey gives Maddy games to play, and if Maddy encounters hardships while playing, Mikey assists her.

3. "Exchanging Knowledge and Shifting Roles Through Coordinated Talk and Embodied Display" (ibid. 48-50): Here we have Jonny (13) and his friend Evan who play the cooperative mode of "Teenage Mutant Ninja Turtles". They had to coordinate

their cooperation and share their knowledge in the room whilst simultaneously playing the game on the screen.

4. "Enrolling Unused Devices: How an Extra Controller Helped Two Boys Learn a New Skill" (ibid. 50-53): In this case we have the two boys Andrew and Tyler, both 10 years old. Tyler uses a disconnected controller to show Andrew how he should play his game.

5. "Does Using 'Cheats' Make a Player a Cheater?" (ibid. 53f): The actors for this stage are again Tyler and Andrew. Tyler uses cheats when playing his games and does so when playing with Andrew. He also spreads his reputation as a cheater by announcing publicly that he is going to cheat. Andrew on the other hand used the knowledge of Tyler playing as a model for Tylers style of playing games.

6. "How Young people Customize the Same Game Differently Depending on What They Bring to Playing It From the Rest of Their Lives" (ibid. 54-56): Rachel and Katarina play the game Zoo Tycoon. Rachel played the game "by the rules" and tried to beat the scripted scenarios. Katarina played the game as an instrument for designing an aesthetic zoo and to reach her goal she used cheat codes. This did reflect how they did act in the real world: Katarina designed a school website and her own room and criticized her school for only allowing Power Point to create their presentations. Rachel on the other hand had so many activities that she had to schedule them to be able to efficiently coordinate them. Therefore the attitude on life and how they behaved outside of the games also shaped what they were playing.

7. "Continuities in Sibling Relationships Across In-Game Play and (Home)Work" (ibid. 56-9): Holly (14) assumed a caretaking role for her brother Brandon (12) while doing homework as well as in-game, ignoring the fact that she was the less proficient video game player. Brandon then asserts the value of Holly's help and if he deems it useful, he acts according to it. The situation when they are doing homework is similar with one important difference. Here Holly also makes herself available as a helper but if she is unable to help Brandon, she is distressed in contrast to when gaming it does not matter to her if her advice is useful or not.

8. "'I Wouldn't Really Do That' and 'I Couldn't Get Away With That': Making Distinctions Between In-Game and In-World Consequences" (ibid. 59-62): Stevens et al. observed that in-game identities are compared to real-world identities through the consequences their actions in-game have in comparison to the real-world consequences. One example is Rachel selling a new born animal in Zoo Tycoon and caring for a pet, where she states that if she owned a zoo, she would be more caring for the animals than she is in the game. Another example would be Andrew and Tyler who beat up baseball batters in the game but make a distinction to the real world behaviour where they would not do that because they could land in juvenile persecution.

This variety of ways the Kids were creating cooperative relationships while gaming surprised the researchers (Steven et al. 2008: 63). They concluded that because gaming is part of the cultural identity of children today, they arrange themselves around it. This strengthens my point that gaming is a important cultural institution for forging identities.

The impact of the game creators on video games

The third text I would like to introduce is less a scientific paper but rather a text found online on a renowned internet page for game developers, gamasutra.com. I came across that page when I was working for my senior thesis and since then it has been a valuable source of information about creating and designing games. If one wants to know what the people creating games think, this page is a good source. The article has been written by Ryan Winterhalter (2007) and has 5 pages, where he interviews three "western" game designers who immigrated into Japan and asks about their point of view. Since I can't yet do participant observation or interviews on game design in Japan myself, I would like to gain an emic perspective on the creation of games in Japan. Since the people interviewed are coming from the outside of the culture they are in a similar position to anthropologists, so I think it's just as good as going there and researching.

The first interviewed developer is "JC Barnett" is a British working in Tokyo (Winterhalter 2007: 1). He has a blog, Japanmanship.blogspot.com, where he also writes his own cultural observations about Japan. The second developer is Greg Tavares is a real veteran in the game design industry as he even worked together with the legendary Sid Meier (ibid.). He worked for 7 years in Japan before moving back to the United States. The last in the club is Dylan Cuthbert who began working with Nintendo before founding his own game Studio "Q-Games" in Kyoto (ibid.).

To transport the emic perspective the best I would just like to collect some quotes of those three men, to let them speak for themselves, meaning this part of my essay will be filled with some quotes rather than my own conclusions. Those can come later on.

Barnett came to Japan because he studied Japanese: "When I was between jobs in late 1997, I thought to myself 'Hmm, I don't have a girlfriend or wife or kids tying me down so if I really want to learn Japanese I should go to Japan.' So, I chose to go to Japan to learn Japanese. But I had no way of supporting myself so I needed a job in order to live there." (Winterhalter 2007: 1).

Cuthbert on the other hand was scouted by Nintendo: "[...] and then Nintendo saw it and flew us out to Kyoto two weeks later to show it to their engineers here. Kyoto and the Japanese people left a very good impression on me. So I pretty much decided I wanted to try working and living here from that first impression." (ibid.).

According to Tavares, one issue when working in Japanese companies is that you work longer hours than one would in other countries "At Sega we worked 10am to 11:30pm 5 days a week with an hour and 20 minute commute each way to the company apartments.", because an employee can't leave before his superiors leave "Basically, you as a 'noob' are assigned to be under someone. That person is supposed to show you the ropes and be responsible for you and conversely you are generally supposed to do whatever that person tells you to do." (Winterhalter 2007: 2). But Barnett says that rule can be changed over time: "Being foreign certainly helps break the mould. But it's a slow process. At a new job, I usually follow the hours of my co-workers but then slowly start to scale down. People have to get used to your working hours slowly. Once they are accustomed to me always being the first in, the fact I'm the first out every day should be less of a shock. In the meantime of course, I must make sure my work is all in order and finished on time. I wouldn't be able to get away with it if my work was late or not up to scratch." (Winterhalter 2007: 2).

The second big issue is the payment, Tavares says that Japanese companies "…hire right out of school and pay very little. A programmer at Sega or Sony would start at around 3 million yen a year or $26k U.S. A top programmer at Sega or Sony makes a maximum of 6 million yen a year or about $52k. Because Japanese companies work that way, they do not value experience." (Winterhalter 2007: 5). In comparison Stephen Siwek (2007: 23) states that the average salary for somebody in the entertainment industry in the United States is $92,368. My informatics professor Thomas Gschwind said in a lecture that he once had a job offer from a Japanese company and another one. The Japanese offered him less payment and less holidays, so why would he want to work for them?

Tavares has a rather pessimistic view on this problem: "The hiring out of college and paying poorly issue has not changed and I don't know if it ever will or if it will…" (Winterhalter 2007: 5).

Another issue is obviously the language barrier, but according to Cuthbert there are ways around that: "They learned English!… Much of Miyamoto's English was learned from the Star Fox team. But towards the end of Star Fox my progress with Japanese started moving along faster than their progress with English and Star Fox 2's communication was entirely in Japanese." (Winterhalter 2007: 3). And Tavares said that often pictures were used to communicate with each other (ibid.).

Barnett adds that the weak Japanese skills were often used as an excuse: "Anything I asked for, was asked to do or had problems with was always met with the '...but your Japanese ability...' excuse." (ibid.).

Another cultural difference that has been observed by Cuthbert is the relation to the

press relations: "This is one thing I do like about Japanese development; (PR, press relations, and marketing) come quite late in development. PR, sales and press are informed of the product rather than consulted." (ibid.)

As we have seen with Consalvo, Japanese development companies try to enter the global markets, but that is not as easy as it seems, here we have an example from Barnett: "There is a general lack of planning in these matters. Localization is always an issue to be dealt with later, with the focus being the home market. This often leads to immense problems localizing at a later date as you can imagine. Too little space for text, too many textures with texts on, as most things are hard-coded there will be very little automation, etc. I'm sure most developers know the foreign markets are important, as they are much bigger than the Japanese one, but I think few really understand it or what is required." (Winterhalter 2007: 4). Of course the localisation problem is also the other way round, one reason for the low popularity according to Tavares might be that they haven't been localized correctly for the Japanese market (ibid.). But he also states that this is changing: "There used to be that view in Japan that Japanese games were better. But in the last few years the number one games have been Western games. On top of that Japan has not stayed up technically and so, seeing the systems Western teams have created to make game development easier has also been an eye opener for Japanese teams." (ibid).

Cuthbert summarizes his insights on the three different "work cultures" he experienced as follows: "The UK is a pub culture - people like to doss and arse about a lot, but they are very good and very skilled at their jobs - when they do them."

"The US is a corporate culture, everyone is a cog in the machine, even in a smaller company, so there is far less responsibility towards the company and its finances and people assume that they should have the best wage, best equipment, best software, best everything, even if they don't use them. That said, they have great responsibility to the work itself and there are some extremely clever and diligent people there. Corporate politics, gossip and rivalries can get a bit too much."

"The Japanese games development culture is still slightly "salaryman", everyone kind of avoids responsibility by remaining quiet but they persevere by themselves until they get the product done. Unfortunately, this lack of sharing is hurting the technical development of the games industry here in Japan. The Japanese never give up until all the details are in place and they try and leave nothing haphazard or rough-edged, oroozappa (in Japanese)." (Winterhalter 2007: 5).

The Gaming Industry's Impact on Japan

To delineate the impact of the video game industry on Japan I've tried to show in a holistic approach several dimensions to the gaming industry. I've started by showing the economic dimension and by placing the Japanese game industry in that context. I've shown the differences between Japan and the United States and Switzerland. Then I wrote about my own position on the field.
Having successfully demonstrated that the gaming industry has a important place in the entertainment business and that Japanese Industry might not be the most important quantitative market but an important qualitative market, I began assembling some social dimensions to the industry.

With the work of Mia Consalvo I tried to demonstrate the global integrity of the Japanese entertainment industry as well as making a sketch of how a Japanese game developing company can look like.

The thesis's of Craig et al. and Stevens et al. had the objective of contrasting the point of view of the company with the human beings who buy the products of those companies. It is the strength of ethnographic data to give the numbers we've seen before a face. It is important to understand that the countless video game players are humans with their own agency.

This of course raises the question how the human face behind the game developing companies look like. With the text of Winterhalter I had the intention of illustrating that last point of view. I used this source as my last one because it closes the bow and brings together all the topics I've shown interest into. It combines the location Japan, the human and corporative actors and the economic background of game design.

An additional point I would like to make is to stress the fact that video games are important components of an individual identity in the world today. In the samples I made we can detect how not only individuals but also corporate actors as well as whole countries define themselves with the help of game production, distribution and consumption.

Blizzard 2008: http://us.blizzard.com/en-us/company/press/pressreleases.html?081121 .
Career Journal 2009: http://www.career-journal.com/en/job-suche/22.html?infoView=21083 .
Consalvo Mia 2009: Convergence and Globalization in the Japanese Videogame Industry, in Cinema Journal 48, published by University of Texas Press
Craig A. Anderson, Akira Sakamoto, Douglas A. Gentile, Nobuko Ihori, Akiko Shibuya, Shintaro Yukawa, Mayumi Naito and Kumiko Kobayashi 2008: Longitudinal Effects of Violent Video Games on Aggression in Japan and the United States in Pediatrics published by American Academics of Pediatrics.
Entertainment Software Association 2010: http://www.theesa.com/ .
Famitsu 2006: www.famitsu.com, data retrived from http://www.next-gen.biz/features/japan-votes-all-time-top-100 .
Famitsu 2008: www.famitsu.com, data retrived from http://vgsales.wikia.com/wiki/Famitsu_Best_selling_video_games .
Forbes 2008: http://www.forbes.com/2008/06/03/top-video-games-tech-personal-cx_bc_0603video.html .
Gamasutra 2009: http://www.gamasutra.com/php-bin/news_index.php?story=21763 .
Gamespot 2009: http://au.gamespot.com/news/6239401.html?tag=latestheadlines;title;1 .
Neue Zürcher Zeitung 2010: http://www.nzz.ch/nachrichten/digital/game-industrie_waere_eine_chance_fuer_zuerich_1.5216140.html .
Next-Gen.biz 2009: http://www.next-gen.biz/features/japan-votes-all-time-top-100 .
PricewaterhouseCoopers 2008: Global Entertainment and Media Outlook found on http://arstechnica.com/gaming/news/2008/06/gaming-expected-to-be-a-68-billion-business-by-2012.ars .
Perry David 2006: Video on TED http://www.ted.com/talks/lang/eng/david_perry_on_videogames.html .
Siwek Stephen 2007: Video Games in the 21st Century, published by the Entertainment Software Association (downloadable pdf: http://www.theesa.com/facts/pdfs/VideoGames21stCentury.pdf).
Stevens Reed, Satwicz Tom and McCarthy Laurie 2008: In-Game, In-Room, In-World: Reconnecting Video Game Play to the Rest of Kid's Lives, in The Ecology of Games: Connecting Youth, Games and Learning, published by the Massachusetts Institute of Technology.
Winterhalter Ryan 2007: http://www.gamasutra.com/features/20070425/winterhalter_01.shtml .