Researching the Gender Divide of Digital Games: How to Overcome the Virtuous Cycle of the Games Industry

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Acta Ludica
International Journal of Game Studies

Vol. 2, n° 1
March 2018

https://actaludica.com/

Bibtex: @article{hahn2018divide, author = {Sabine Hahn}, issn = {2527-0257}, journal = {Acta Ludica}, month = {mar}, number = {1}, pages = {6-24}, title = {Researching the Gender Divide of Digital Games: How to Overcome the Virtuous Cycle of the Games Industry}, volume = {2}, year = {2018}}

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Abstract

Even though almost 50% of the gaming population is female these days, only approximately 20% of the global workforce in the games industry is female. This might suggest the existence of a gender-specific access to the gaming space. This paper aims to define and describe four different layers on which gender-specifics seem to exist with regards to digital games. While an extensive research of existing studies has been the starting point for this work, an own empirical study was conducted (expert interviews within the German games industry). The findings help to describe the “virtuous cycle” model, first used with regards to the games sector by Fullerton et al., and validate its empirical relevance.

Keywords: game culture, games industry, gender, virtuous cycle.

Introduction

In this paper, I will examine the relevance of the “virtuous cycle” concept which first has been mentioned with regards to the games culture by Fullerton et al. in 2008 and which describes a correlation between the games offered to the female audience, the presentation within the games content and the participation of females within the production of games itself. As part of my PhD dissertation I’ve done qualitative interviews with experts from the German games industry to explore the existence and relevance of the “virtuous cycle.”

In the first part of this paper I will describe the main research question as well as the “virtuous cycle” concept and how I updated it based on the existing research findings. In the second part I will summarize the results of my study and briefly describe each of the identified levels on which gender construction with regards to digital games presumably takes part. But first I will build the framework for my work with briefly describing the “gender in games and gaming discourse” as much as the German games market.

The paper will be summarized with a brief discussion of my research as well as an outlook for the discussed topic. While the study described within this paper is based on the German games industry it is assumed its relevance is far beyond that.

The German Games Market

Digital games are without any question part of our everyday life as well as the popular culture. In Germany computer and video games are even officially recognized as “cultural products” since 2008. “To play video games has become the norm; not to play video games has become the exception.” At the beginning of the 21st century, digital games are experiencing a cultural (and economic) rise: “Like the earlier audiovisual leading media, theater, film


and television, they now shape our world and self-awareness as the central audiovisual expression and narrative form of digital culture.”

The Federal Association for Interactive Entertainment Software (Bundesverband für Interaktive Unterhaltungssoftware e.V.) states: “Just about every second German is playing digital games—and the trend is growing. This shows that games have become an integral part of their media life for more and more people.”

Digital games have seen rapid economic development in recent years—with annual growth rates of between 5 and 10 %.

Compared to the early days, the games industry is now one of the most professional submarkets in the media industry and it even tends to exceed the international film business. Some game franchises are not only more expensive to produce than Hollywood blockbusters but also generate substantially more revenue: “In September, a new pop-culture milestone was reached. The fourteenth installment of Grand Theft Auto did $800 million in worldwide sales in its first 24 hours. That was the biggest launch day ever for any piece of entertainment—any movie, any record, anything at all.”

Therefore, the film industry aims for commercial participation in the games market by cooperating with companies in the gaming industry. “Computer game films are now an important engine for the film industry.”

According to the market research company New Zoo, digital games generated around USD $88 billion revenue in 2015. In 2016, the figures were expected to be around USD $95 billion.

In Germany alone, approximately €2.9 billion was spent on digital games in 2016. The German games market accounts for about 5% of the world market. Around 13,000 employees are currently employed along the value chain of digital games in Germany, and some 450 companies are involved in the development and/or marketing of digital games.

**Gender and Gaming**

Considering the number of gender issues in game culture brought up in the recent years, it is clear there is a demand for both theoretical and empirical academic work on the subject.

Games studies is widely regarded as a new academic discipline. According to some scholars, the amount of new publications on this subject matter can be regarded as scientific proof that the discipline exploring digital games has been established on the academic horizon:

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3. Freyermuth, Games, Game Design, Game Studies (2015).


11. http://www.biu-online.de

This publishing has taken place across disciplines. The growth in papers about digital games across the sciences, social sciences, and the arts and humanities serves to highlight the rich diversity of interest in digital games, as well as the great potential for work that involves cooperation between different disciplines and methodological perspectives.  

Besides the vast amount of research being published, there seems to be a variety of research topics and aspects with regards to the digital games medium being explored. The concern of gendered game culture has been a popular research topic for many years now. In addition to individual studies on the topic, there is also research done with regards to various aspects defining the gendered game culture as well as some empirical research on various aspects of the subject like game development, player behavior, avatar design, etc.

During the past few years gender has become a hot topic in digital gaming, and the various gender issues in gaming such as hate campaigns towards feminist media critic Anita Sarkeesian and indie game developer Zoe Quinn, discrimination of female game developers, and exclusion of female players from certain e-sports tournaments have received a great deal of attention in both game and mainstream media.

And yet, there has only been limited work done to bring together various aspects of the gendered games culture and to come up with a descriptive model explaining the different layers on which gender is being constructed with regards to gaming. This is where the following study wants to set its footprint; it aims to explore the virtuous cycle model—which has first been described by Fullerton et al. (“Ludica”, 2008) in their well-known paper “Getting Girls Into The Game: Towards a ‘Virtuous Cycle’”, and validate its empirical relevance based on expert interviews conducted within the German games industry.

**The chicken-and-egg situation**

Indeed, by dissociating gender from sex it becomes apparent that differences between males and females are socially constructed within our everyday experiences. (Bryce & Rutter, 2006, p. 302)

According to the German industry association Bundesverband Interaktive Unterhaltungssoftware (BIU, n.d.), some 34 million Germans play digital games, of which some 29 million regularly. About half (48%) of the players are female. This means that in...
Germany alone around 16.5 million women play digital games from time to time. And yet, digital games have widely been regarded as “boys’ toys” for quite some time.

Almost 50% of the players are female—not only in Germany, but according to global research in general (ESA, New Zoo, etc.). At the same time, only approximately 20% of game workers are women.\textsuperscript{18}

This raises questions about whether digital game offerings meet female (consumer) interest, whether gender-specific consumer preferences do exist, whether the industry can offer attractive employment opportunities, and what other aspects impact female career choices with regards to the gaming industry. This paper aims to answer some of these questions while bringing them all together in one theoretical framework (the virtuous cycle model) and underscoring it with empirical research results.

Since I have spent more than a decade in the games industry myself (as a female in a managerial role), I noticed the underrepresentation of women but never had a comprehensive theory to explain the situation. Moving to the academic side of things as part of my PhD dissertation,\textsuperscript{19} I started to research whether I could find some scientific answers on why there are so few women in games.

**The Virtuous Cycle Concept**

While there has been a remarkable amount of work centered around the question “Why are there so few women in games?”,\textsuperscript{20} I could not find a comprehensive and empirically validated concept which would explain why half of the gaming population is female when only one-fifth of game workers represent the female population.

What I did find was the Fullerton et al. essay “Getting Girls Into the Game: Towards a ‘Virtuous Cycle’”.\textsuperscript{21} This piece summarized the author’s own experience with “designers, authors, researchers and teachers, as well as conversations with women in industry, academia, and current and former students, to outline a vision for a future in which the culture of game design is more conducive to female participation.

The main finding with Fullerton et al. was:

We identified the chicken-and-egg problem that more girls and women would be interested in games if more games existed that girls and women liked to play and if work environments could be found that were more supportive of their values and work styles.\textsuperscript{22}

This virtuous cycle concept of how female participation in game production is closely related to (female) game aesthetics and (female) games consumption seemed so convincing and strong that I decided

\textsuperscript{18} Even though official statistics on this matter seem impossible to retrieve—which speaks for itself—there is the annual “game developer satisfaction survey” from the IGDA (International Game Developer Association) which provided the 20% benchmark. INTERNATIONAL GAME DEVELOPERS ASSOCIATION, Developer satisfaction survey 2014: Summary report (2014).

\textsuperscript{19} At the University of Cologne, Germany from 2013-2016.

\textsuperscript{20} Haines, Why are there so few women in games? (2004).

\textsuperscript{21} Fullerton et al., “Getting girls into the game: Towards a ‘virtuous cycle’” (2008).

\textsuperscript{22} Fullerton et al., “Getting girls into the game: Towards a ‘virtuous cycle’”, p. 162 (2008).
to build my planned empirical research on it. I expanded the concept while including a fourth layer on how gender specifics would impact the “gaming situation.”

In adding this fourth layer, I basically differentiated the “if games existed” into the level of game aesthetics on one hand and the game offering (i.e., game genres or storylines) on the other hand.

Based on my research, I was certain these four layers would impact the gender-specific situation in a unique way. Hence, they’d need to be differentiated.

Since merely summarizing the research which had already been done on each of these levels did not seem sufficient to me, I decided to examine the virtuous cycle concept on an empirical level.

The Research Method: Expert Interviews

The empirical study aimed to validate the theoretically postulated virtuous cycle concept while adding new aspects and hypotheses with regards to the different levels of the gender construction in digital games. The research design was an exploratory one based on qualitative expert interviews in two subgroups.

In contrast to quantitative methods, qualitative data is not based on objective factual knowledge about other persons but on the communication between researchers and the investigated persons. Therefore, meaningful interpretations can only be understood intersubjectively by the researcher.

In total, 12 experts with various backgrounds in the German games industry were interviewed based on a partially structured interview guide. The sample did include male and female experts.
equally as well as experts with rather theoretical backgrounds versus experts with “practical” backgrounds (directly working for a games company).

<table>
<thead>
<tr>
<th>“Code”</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Female gamer and Nintendo merchandise collector</td>
</tr>
<tr>
<td>T2</td>
<td>Female game designer and game journalist</td>
</tr>
<tr>
<td>T3</td>
<td>Female brand marketing manager, responsible for a browser game targeted primarily at women</td>
</tr>
<tr>
<td>T4</td>
<td>Professor game design; holds various volunteer positions within the German games industry (i.e., as juror at the German games award “Deutscher Computerspielpreis”; member of the GAME association)</td>
</tr>
<tr>
<td>T5</td>
<td>Female freelance game journalist</td>
</tr>
<tr>
<td>T6</td>
<td>Marketing expert; &gt; 15 years of games industry; passionate gamer</td>
</tr>
<tr>
<td>P1</td>
<td>Game designer; founder and owner of a well-known German development studio; 20 years of games industry experience</td>
</tr>
<tr>
<td>P2</td>
<td>Female lead game artist</td>
</tr>
<tr>
<td>P3</td>
<td>Professor game economics; ex-CEO of a French development studio based in Germany; has been the only women in top management within the German games industry for quite some time</td>
</tr>
<tr>
<td>P4</td>
<td>PR director of an international AAA publisher based in Germany</td>
</tr>
<tr>
<td>P5</td>
<td>HR director of an international AAA publisher based in Germany</td>
</tr>
<tr>
<td>P6</td>
<td>Lead game designer at a medium-sized game studio</td>
</tr>
</tbody>
</table>

**Table 2:** Overview of the interviewed experts.

**Results**

The bigger our industry is and the more people we reach, the more thoughtful we should be about what we do with it.\(^{28}\)

Hereinafter I am going to briefly summarize the main results from my study whereby it should be emphasized that based on three years’ research and 12 hours of expert interviews and many more hours of transcribing and analyzing those the present paper can only include the “high level” of my findings.

**The “Gender and Gaming Discourse”**

At the beginning of each interview, all experts were asked about their individual view of the relevance of gender in games and gaming discourse. The responses were relatively homogenous, although overall very different aspects were named, which can be attributed primarily to the experience of the experts.

Without exception, each expert underlined that gaming had evolved from a “boy’s toys” culture to a more democratic leisure
activity. Since women are now playing more, “women and digital games” inevitably receive more attention.

In this context, the sales potential of the female target group is also emphasized. The companies would have wanted this reorientation in order to reach the target group of women long ago, yet they failed to realize what was holding them back: “The whole restriction on a purely male target group over the course of years, which made a big headache, because you wanted to open the market, of course, for a long time, but somehow worked it out and did not manage to do it.”


The aspect of the sales potential emerged in all discussions, whereby the commercial interests of the game developers were considered by the “theorists” rather critically and by the “practitioners” rather neutrally, as given “artefact.”

The #GamerGate debate was also a topic of lively discussion within the gaming community: “And, of course, quite clearly—‘Gamer Gate,’ in any case! . . . And I think it is just a bit more the center of the public, in the attention.”


As a final remark, all interviewed experts seemed to recognize the current importance and relevance of the “gender and gaming” discourse. This interest was demonstrated by their eagerness to support my research and provide insights.

Game Aesthetics:
Presentation of Female Characters

The aesthetic (and narrative) depiction of female characters is the most researched of the four proposed layers on which gender construction takes place. Empirical research goes back to 1998, and numerous scholars have tried to explore game aesthetics with regards to femininity. This discourse gained new popularity thanks to the #GamerGate debate in 2014. The relevance of game aesthetics was confirmed by the interview transcripts and the recorded interest of all interviewed experts in this aspect.

33. All interviews were transcribed and analyzed, and relevant items were marked. Most markings involved game aesthetics.

All in all, experts said that female characters are still far fewer than male, which does validate the existing research on this matter. In addition, female characters are usually less important for the game narrative than their male counterparts. They mainly hold victim or secondary roles.

The aesthetic representation for female figures is often based on stereotyping and sexual stylization: women with ample assets in little or inappropriate clothing. The male characters are also stylized to fit male gender stereotypes, though they are idealized more than sexualized. In addition, the female characters are generally more poorly equipped when it comes to weapons, competencies, and overall abilities within the game itself.

The often-stereotypical aesthetic representation is, according to
the interviewed experts, justified by the fact that players want to see “the beauty.” In games like these, which also serve as an escape from everyday life, one does not want to see “the everyday.” This would not meet the desires of the players who were just looking for a distraction from the normal. However, it was not adequately clarified why the sexual stylization was usually female.

Some experts also pointed out that digital games are a fictional format or art form, which is why they should not be regulated.

Overall, all experts emphasized that digital games are changing and diversifying, particularly with the aesthetic and narrative portrayal of femininity (and masculinity). "I believe that this is changing. So that video games can also represent a larger variety that corresponds more to the society. It’s changing slowly, but what was to be seen so far, does not really reflect variety." 36

**Game Offer:**

**The Product Range for Female Players**

The product range offered to the female target audience is a relevant layer within the proposed (and altered) virtuous cycle concept with regards to the gender construction of digital games. It is relevant to understand to what extent the existing range of digital games meets the female playing preferences.

Experiments of the so-called “girls game movement” in the 1990s, which developed and marketed games for the female target group, were commercially successful only in the short term. Nevertheless, the games industry could no longer deny the existence and relevance of female players as a target group, as evident from surprise successes such as *Barbie Fashion Designer* (1998).

Some experts specifically mentioned that the games companies did not do a great job in the past of pursuing the female consumer: "Only 50% of mankind has been approached, so to speak, with what has been done and that is, of course, a potential for sales, which must be lifted once."

The main question raised within the conducted interviews with regards to product offerings concerned whether the experts would see the need for a gender-specific product range.

Overall, all experts believed that content specifically tailored to women would not make any sense. "Because you always lose a large proportion of players or exclude them if you do not make offers for them." More importantly, games for the female audience were considered inappropriate and even discriminatory:

And the problem with these “pink games,” for example, is to create a small segment within the medium, which is awarded to women, and all the rest is then again men and guys. Thus, no real integration takes place, at least not in the short term.
This argument has been brought into the conversation by Julie Prescott and referred to as “ghetto-ization of the offer.”\(^{41}\) The qualitative interviews conducted for this present study seem to validate concerns around gender-specific products, as particularly raised by experts in the Germany games industry.

It remains questionable whether a gender-specific offer would be appropriate for/desired by women. Even though the number of young girls and women playing digital games has been rising significantly, this factor cannot be enough reason to offer a gender-specific to the female target group.

**Game Consumption:**

**Gender-Specific Consumer Preferences**

Regarding the question of whether and to what extent gender-specific preferences for digital games exist, it first needs to be stated that women are now playing as often as men. In the meantime, however, digital games can no longer be described as boy’s toys or gaming as the quintessential adolescent hobby of the white male. Half of the global gaming population is now female.

Well, I think, on the one hand it just was not an issue twenty years ago. There were games still such a niche, only guys have played. Games were made by men and then of course made for men in the first place and there was no thought about expanding the target groups or anything else. This has only changed since, in principle with The Sims, so certainly not only, but this was one of the most important points, where it was stated, “Hm, the target group women is of course also economically interesting.”\(^{42}\)

Even though the game intensity has become the same for women, girls and women do show an affinity for certain game platforms, such as those for social, casual, simulation, and role-playing games. Women sometimes have other motives for play than do men—joy, creativity, and a finished virtual product versus competition being the most important game motive for men. “I do believe that women prefer playing cooperatively or sometimes with a female friend or friend, it does not necessarily have to be a woman, instead of sitting alone in front of the computer.”\(^{43}\)

Men and women also differ in the preferred game context. Women often play alone, while men play in virtual communities and on teams. For women, the identification with the game character is more important than for men. Women are also generally more interested in community.\(^{44}\)

Overall, the interviewed experts emphasized that digital games are now consumed by both sexes on a regular basis, even though there seem to be some differences with regard to platform and genre preferences.\(^{45}\)

\(^{41}\) Prescott and Bogg, *Gender divide and the computer games industry*, p. 84 (2013).

\(^{42}\) Expert T4. See also: “This is because digital games have become the leading medium and have replaced the current digital culture and, as such, the film as the guiding medium for industrial culture, and it would be astonishing if this lead was perceived only by one sex and not by both” (Expert P4).

\(^{43}\) Expert T3.

\(^{44}\) Expert P1: “Well, I have a feeling so they are already a bit more interested in these whole communities and social things.”

\(^{45}\) Expert P3: "I do not know exactly, I believe that boys and girls have grown up with technology and therefore from the beginning is also for girls ok to deal with. This is more accepted, in the schoolyard, the girls also have a DS, also play. Games are no longer a comic hobby, but a normal leisure activity and have a bigger target group.”
Game Production:
Women in the Games Industry

The subject of women as part of development and marketing for digital games has been in the public discourse for several years, within the games industry as much as the scientific research community.\(^{46}\)

Overall, it can be stated that women are still underrepresented in the gaming industry, although a positive trend can be observed. According to the International Game Developer Association, there are approximately 20% women working within the games industry.\(^{47}\)

Currently, there are no specific figures for the German games industry. Although a lot of effort has been made to explain the lack of females in the games industry, empirical studies have not yet led to concrete answers on the subject.

According to research by Lizzie Haines,\(^{48}\) females are highly concentrated in non-technical roles, but only 25% of women working within games are working in technical roles (see fig. 2). Hence, 75% of women in the industry are not actually impacting game design/aesthetics.

This is hugely important with regard to the virtuous cycle model, since it would effectively mean only 25% of females within the industry are involved in the creative process and able to impact the products.

According to game designer and industry legend Sheri Graner Ray: "If we want to have (game) titles that reach a diverse audience, our workforce has to reflect that diversity".\(^{49}\)

Within the expert interviews conducted, various factors were outlined with the aim to explain the female underrepresentation. Discussed was the notion that women are supposedly less interested in the games industry and are generally not interested in technical professions.\(^{50}\) "But there are few women with programming, I do not know exactly why. There are only a few programmers and this

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46. For example, Prescott and Bogg, Gender divide and the computer games industry (2013).


50. Whereby I do argue that the games industry due to its creative nature as well as products can’t be considered the same as the wider IT industry, but this is yet to be decided.
is a big part of the industry.” The games industry must not be considered an attractive industry for young female talent.

Most experts emphasized the lack of professional training for the games industry:

So, there weren’t real training courses and studies in this direction for quite some time. So, if you were a programmer, you really started with it very early. So, I personally have never met a girl who started programming something at the age of 13.

Furthermore, specific barriers within the industry, including the crunch time phenomenon, the gender pay gap, and the glass ceiling phenomenon, were all named as possible reasons for the underrepresentation of women.

Some experts even remarked on the struggle to recruit the female talent, since women are considered “correctives” within male-dominated teams.

However, all experts also see positive developments and predict that the share of young women in the development and marketing sectors of digital games will grow in the coming years.

Since there aren’t currently sufficient empirical studies or data to support either the reasons for women not to enter the games industry nor to validate the increasing trend of young female talent to start their games career further research is needed on this matter. In my opinion there are still not clear arguments why half of the gaming population is female while only roughly 20% of the so-called game-workers are.

Final View on the Virtuous Cycle Concept

All in all, the expert interviews confirmed the existence of a relationship between the examined levels (consumption, supply, aesthetics, and production). The experts saw reciprocal relationships between: the game offer and the consumption, the game offer and the production, and the consumption and the production based on game offer. “I think so, so it all depends on each other, definitely. So, there would be more women, maybe the image would be different, as women are represented in the video games. I think so, it’s all connected.”

With regards to the future, it’s presumed:

That if more women strive for the industry, if a critical reflection is made about how the representation of females within the games looks and changes in the society would happen, that women are seen more in technical professions, then a total change could be made in the industry. But all this must come together.

This underlines the relevance and importance of the virtuous cycle concept, in other words, the chicken-and-egg scenario. While it’s plausible on a theoretical level, it remains to be seen which
of the four different layers studied will see the most change and through which activities.

**Conclusion and Discussion**

Almost half of the gaming population is female these days, but only 20% of the global workforce in the games industry is female. This might suggest the existence of a gender-specific access to the gaming space.

This paper aimed to explore four different layers on which gender specifics seem to exist with regards to digital games: game offerings, game aesthetics, game consumption and game production. The underlying virtuous cycle concept can be used as a theoretical framework to explain how they are connected. This concept was validated based on expert interviews within the German games industry.

Concluding this paper, the topic of gender and gaming seems so complex and should be explored with an interdisciplinary approach, thus requiring a lot more empirical research. But hopefully this paper can be considered a starting point as well as an empirical validation that the virtuous cycle concept is still a valid model to explore the gender construction of digital games.

But it is a cycle, as I said, by focusing on male consumers, fewer women seek to enter the industry, stay there, and then just keep it as it is. I believe this is difficult to break through... 

**Acknowledgement**

This paper is based on my PhD dissertation (University of Cologne) and I would want to express my gratitude once again for the support to Prof. Dr. Benjamin Beil (University of Cologne) and Prof. Dr. Jeffrey Wimmer (University of Augsburg) who have been accompanying my research for more than three years. Moreover, I am grateful for the open and supportive atmosphere I’ve found within the games industry and for all the great and impressing conversations and interviews I’ve conducted. Thank you all for making my project happen — you know who you are!

**References**


Further Reading


Online resources

Women in Games International: Women in Games International (WIGI), made up of both female and male professionals, works to promote the inclusion and advancement of women in the global games industry. [http://getwigi.com](http://getwigi.com)

Women in Games Conference: This is an open event for people of all genders together with anyone looking to join the games industry together with those already working in games who wants to learn and network. Running since 2010. [http://www.womeningamesconference.com](http://www.womeningamesconference.com)
Editor’s note: Acta Ludica is an open peer review journal. What follows are the reviews for Researching the Gender Divide of Digital Games: How to Overcome the Virtuous Cycle of the Games Industry. The published text was submitted by the author after reading the reviews.

Reviewer: Arlete Petry
(Universidade Federal do Rio Grande do Norte)

What are the highlights of the submission?

Is this submission relevant for Acta Ludica, according to our focus and scope?

The theme of this paper is quite relevant to game studies. Despite the fact that a debate already exists about this topic, more academic research is necessary to go deeper on it.

Is the submitted text clear and well-organized? Is it well written?

The article is well organized into its sections, and is well written. Table 1 is perfect to understand the characteristics of each expert interviewed. I just suggest a better way to distinguish the colors on figure 2.

Does the submitted text present innovative ideas or results?

The text mentioned to ground this paper (Getting Girls into the Game: Toward a “Virtuous Cycle”) was authored by Ludica, a collective shared by Tracy Fullerton, Janine Fron, Celia Pearce, and Jacki Morie. It is the 11th chapter of a book, and I suggest that every name be explicited in the text and also in the references. Departing from that chapter the proposal of the article was to apply the theoretical framework of Virtuous Cycle to an empirical research work conducted. It was an interesting way to understand and explain gender issue in the games industry.

Are the methodology and protocols described in the text adequate, and clearly presented?

The methodology is clear and is answering what the reader needs to know about it, i.e. how many interviews were made, how long each one lasted, what kind of interview it was etc.
Further comments

1) The text mentioned to ground this paper (Getting Girls into the Game: Toward a “Virtuous Cycle”) was authored by Ludica, a collective shared by Tracy Fullerton, Janine Fron, Celia Pearce, and Jacki Morie. It is the 11th chapter of a book, and I suggest that every name be explicited in the text and also in the references.

2) I suggest a better way to distinguish the colors on figure 2.

Reviewer: Sergio Nesteriuk
(Universidade Anhembi-Morumbi)

What are the highlights of the submission?

This article brings up an extremely significant research on access to the gaming industry. It describes four different layers (aesthetics, supply, production, and consumption) in which gender aspects occur in digital games. The hypotheses are validated by a theoretical approach and an empirical study carried out by the author.

Is this submission relevant for Acta Ludica, according to our focus and scope?

As the author points out, even though almost 50

Is the submitted text clear and well-organized? Is it well written?

There is a well-organized structure that drives the reader throughout the text. The main ideas and concepts are clear and well presented, that is, there are textual coherence and cohesion.

Does the submitted text present innovative ideas or results?

Despite the enormous relevance, the article does not present a totally original idea. In this sense, the main merit is to associate some theoretical approaches (previously elaborated) with an empirical study conducted by the author herself.

Are the methodology and protocols described in the text adequate, and clearly presented?

The article is the result of a doctoral thesis combining quantitative and qualitative methods. Research methods are justified, especially interviews with specialists. The results are consistent and very well presented.
Further comments

This article describes an extremely important issue and is very well written and organized. However some (small) adjustments are necessary. One of the references used in "Preface 1" is out of date (2006) in relation to market data (Müller-Lietzkow, Bouncken, & Seufert). Therefore, it should be updated. The circle chart presented on page 13 (figure 2) does not provide good legibility - adjustment in size and/or in color palette is recommended. Conclusion and discussion may bring more of their own opinion and suggestions to change this reality since in some parts of the text the author used herself to express some questions and discoveries. In addition to that, some extra references - such as “women in games” website - can be provided to other researchers who want to know more about this problem.

Reviewer: Luciane Fadel
(Universidade Federal de Santa Catarina)

What are the highlights of the submission?

The highlights of this paper relies on bringing the opinion of women that are working in the gaming industry. These real, day to day perception are very rich. In addition the paper highlights the definition and description of the four different layers on which gender-specifics seem to exist with regards to digital games.

Is this submission relevant for Acta Ludica, according to our focus and scope?

The relevance is justified because this is a fact that many researchers are working on. In a broad view we want to understand the relationship between women and technology. So this paper brings light to one part of this huge problem: women x games

Is the submitted text clear and well-organized? Is it well written?

The text is easy to read and the flow of the writing facilitates understanding.

Does the submitted text present innovative ideas or results?

The problem addressed in this paper was approached following a previous concept. The contribution relies on the interpreting the concept as a framework.
Are the methodology and protocols described in the text adequate, and clearly presented?

The method used is coherent with the objective of the paper and the endnotes bring additional information. It could add the method used to analyze the transcript interviews.

Further comments

The paper is well written and will contribute to more publication about this issue.