

DESIGNING GAMES AS A VEHICLE FOR PASSING ON CULTURAL KNOWLEDGE: A CASE STUDY OF FINNISH SENIORS IN THE DIGITAL AGE.

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Abstract. The article discusses the case study of a game workshop for seniors in which they were the game designers. The workshop's objective was to explore the game interests of the seniors through the cultural resistance framework given by Salen and Zimmerman, with the theme based on the participants' hometown. In the process it was important to support the senior's acquisition of diverse ICT skills. While creating the games a communication of cultural knowledge took place. In the understanding of this phenomenon, the article addresses the use of the "magic circle" to support the transmission of cultural knowledge and the notion of games as a form of cultural resistance to support the reflection and transformation of culture. In the conclusion, implications for games as an example of dynamic processes for cultural transformation are examined as part of a bottom-up understanding of culture.

1. Introduction

"The game is one of the innate expressions of the human being. It is born with our abilities to move our bodies, and since then, has evolved through connections with dance, music, mimicry and the exploration of the senses. It is one of the first manifestations of sociability, because even though it can be played alone, the game's full achievement is in the interaction with others." Florescano (El juguete mexicano, 2006:our translation)

Through these lines Florescano opens an indirect invitation to observe that games and the overall activity of playing have been important exercises throughout human history. A close analysis of games reveals how games and toys have been evolving through time [Florescano, 2006; Huizinga, 1955]. As a simple and unsophisticated example, we can take the evolution of the doll over three generations during my personal experience in

Mexico City. While playing with my (first author) grandmother, she introduced me to her doll, an interesting, fragile and well designed porcelain doll, with which we should be careful, but we were able to dress and undress with fine clothes and play with the doll together. With my mother, we played with some magazine paper dolls, and she explained to me in detail how she used to play with paper dolls and cut dresses out of magazines to create a wide variety of outfits. For myself, I can recall when the first Barbie came on the market. I used any material I could find to create clothes for her (scraps, leaves, etc.). In this example, one can find different layers of meaning. In this doll example, the toy evolved along three generations, nevertheless the game prevailed and we could easily connect our experiences of the game-play together. Even though the source of the doll's clothing changes over time, one still has an exchange of meaning through the shared action of dressing and undressing the doll in the game. This cross-generation participation in creating and playing games carries with it cultural knowledge and information to help me to be socialized in my environment in Mexico City.

Through digital technology, toys are no longer only localized in one region, and so the possibilities of absorbing social norms through games have expanded to include the global environment. Thus, cultural socialization processes through games between the generations in the local space have expanded to include socialization processes between peers around the world. Furthermore, through a process of creating games, knowledge communication occurs; however, we would like to distinguish this cultural knowledge communication process inherent in game design and the action of playing as a socialization process from the precisely cultural games such as "BAFA, BAFA" (Fowler 1994) created for cross-cultural training purposes. The power of the game has been harnessed for cross-cultural training in our opinion due to the power of the "magic circle" as a space where we can engage in cultural growth through entering a space designed for cultural resistance, dialectic and change via the "magic circle." Thus we would characterize the "magic circle" as part of the "bottom up" processes through which we are socialized and participate in culture.

However, when games are mediated through technology, it shouldn't mean that the cultural knowledge of elder generations is necessarily lost because they are not well equipped to design and play computer games. Rather, with dialog between elders and technology developers, a more inclusive space within gaming can be opened up--a space which includes local as well as global influences of socialization. This argument also connects with current conversations about how to construct "shared contexts for meaningful play in virtual and real-world spaces" coming out of the journal of *Gaming and Culture*. (Pearce et al. 2007).

In this paper, we will discuss the exchange and transmission of cultural information as part of the knowledge communication processes which emerged in a project focused on enabling seniors to be game designers. The project consisted of a game development workshop focused on two main premises: exploration of the game interests of seniors and support for the acquisition of diverse Information and Communication Technologies (ICT) skills. However, through this process an important observation about how the games were, in effect, engaging in cultural knowledge communication processes across generations emerged. As culture can be understood through the metaphor of collective long term memory, the intergenerational game can, in parallel, be understood as part of a cultural knowledge communication process.

To explain gaming as a "bottom-up" process through which cultural knowledge is communicated, we first introduce a theoretical framework which combines the concept of "magic circle" from game theory with the cultural context in which a game is played. Then we explain the game design project which encourages intergenerational play,

situated in the Joensuu seniors' club in Finland. This project consisted of a game workshop for seniors who used their cultural knowledge to produce games of interest across the generations. For the purpose of this project, we refer to cultural knowledge as knowledge emerging from participation in the community of Joensuu over their lifespan. The game design project brought out cultural knowledge and assumptions about living in Joensuu through the exercise of modifying an existing game. These game designs were found to create bridges of communication between generations.

2. Culture and the “Magic Circle”: A space for conflict and cultural resistance

Rules of Play written by Salen and Zimmerman presents a major influence into the game research and game design community. Furthermore it analyzes carefully games in terms of open culture, as cultural rhetoric, as cultural resistance and cultural environment. To create a dialog between elders and technology developers, the workshop was designed to discover and understand which types of digital games the elders would like to play. We focused on Salen and Zimmerman's schema of games as cultural resistance because of the conflict which comes from combination of old rules and cultural and rhetorical structures of the game outside of the “magic circle” with the new possibilities given for changing the game. This conflict allows seniors to engage their own cultural assumptions about the game to express themselves. To explore the notion of cultural resistance, we will begin with Huizinga's notion of where and when the play takes place.

The historian Huizinga, while seeking to understand this phenomenon of playing, in his book *Homo Ludens*, starts by observing and analysing where the play takes place, finding that play takes place in specific but temporary spaces. The term which games researchers are using for this concept is the “magic circle.” In the “magic circle”, game-play takes place through players' interactions with themselves or each other regulated by the rules of the game. This “magic circle” can be a monopoly board, a playground or a football field, etc. The game-play can transmit culture, or act as a space where cultural norms are resisted and transformed. The “magic circle” can also be understood as a semiotic space, where meaning is created and shared:

*“The **magic circle** of a game is the space within which a game takes place. Whereas more informal forms of play do not have a distinct boundary, the formalized nature of games makes the magic circle explicit. Within the magic circle, the game's rules create a special set of meaning for the players of a game. These meanings guide the play of the game”* [Salen et al, 2004:99]

Although the “magic circle” is defined above as a separate space by Salen et al, it does not exist in a vacuum. Individuals that are part of a community perform the game-play. In addition, playing, is not exclusive—individuals of any socioeconomic, demographic or geographic group can play. The basic element needed is to be willing to

play. Hence, one of the powers of games emerges in the sharing of the game with others.

“the feeling of being “apart together” in an exceptional situation, of sharing something important, of mutually withdrawing from the rest of the world and rejecting the usual norms, retains its magic beyond the duration of the individual game.” [Huizinga 1955:12]

In the above quote, Huizinga links the game to norms, demonstrating games as places of resistance and transformation through the rejection (and implied reaction to) “the usual norms.” These players, in turn, are individuals embedded in cultural contexts, absorbing and creating culture. In this case, we take the definition of culture from Salen and Zimmerman and as culture being that which exists outside of the “magic circle”.

*“There are many definitions of **culture**. Most of them directly or indirectly involve what people think, what they do, and the material products they produce. For our purposes, culture is what exists outside the magic circle of a game, the environment or context within which a game takes place.” [2004:513]*

From the definition above, culture and play are interlaced through the manner in which participants within the “magic circle” are influenced by their cultural context through their actions of resistance to the rules outside in the cultural context. The game-play exchange of meaning between the surrounding contexts and the “magic circle” has been directly referred to by both Huizinga and Salen et al:

“... play and culture are actually interwoven with one another” [Huizinga 1955:5]

“All games are part of a culture” [Salen, et al. 2004:507]

The cultural norms present in games from their designers emerge in the “magic circle” as norms that are reflected, resisted or transformed. Although the correspondence between the “magic circle” and the norms in the cultural context surrounding it are not a one-to-one correspondence, the influence of the cultural contexts remains.... In turn, when other individuals play these games, they absorb some cultural meaning in their game-play and these experiences remain with the player and may be brought out from the “magic circle” once the game is over. Because of this connection between the “magic circle” and culture, games can play a role in transforming culture as well, as noted by Salen et al:

*“Games are designed objects that engage culture on several levels. As systems of representation they **reflect** culture, depicting images of gender (think of Barbie Fashion Designer, Duke Nukem’, or Tom Raider), as well as portrayals of race and class... In this case, the cultural dimensions of a game are part of the game itself, reflecting values and ideologies of surrounding contexts. As interactive systems, on the other hand, games offer players forms of participation that extend the boundaries of play **beyond** the edges of the magic circle. From player-produced objects like skins, mods, or game patches, to*

*role-playing games in which players explore and alter their personal identity, games have the potential to **transform** culture. These cultural transformations emerge from the game, to take on a life of their own outside the framework of a game play.*” [Salen et al, 2004:507]

Furthermore, we argue that game-play presents a space for expression and exchange of knowledge between the players. Knowledge can be understood as a cultural artefact—information which is recognized in a shared context—either inside or outside of the “magic circle”. Re-examining the example of the intergenerational play surrounding the doll, the players shared experiences about cultural norms of dress and situations appropriate to that dress. The cultural information resides in the explanations of cultural reasoning transmitted between the players. In the game, advice was sometimes embedded with stories or experiences or previous games or even visionary thoughts for new activities. This combination of activities reflects a life view supported by Huizinga’s claim that:

“[i]t is through this playing, that society expresses its interpretation of life and the world. By this we do not mean that play turns into culture, rather that in its earliest phases culture has the play-character that it proceeds in the shape and the mood of play” [1955:46]

In combining notions of play and culture, we open up a space for exploring cultural resistance and transformation through both the creation and understanding of games. This space is filled not only with play, but also tension emerging from the interactions of the “magic circle” and the cultural contexts in which players are situated.

“Games as cultural resistance explores the tension between games and their cultural contexts. The focus on the schema is exclusively on culturally transformative play”. In this case, “[r]esistance is the friction that occurs when two phenomena come into conflictual contact. Framed as resistance, the free movement of play has intrinsic friction with the systems of rules that seek to contain it. Through this process of resistance, the normally invisible edges of the magic circle become visible.... The alteration of the games can fall in three overlapping categories: alteration, juxtaposition and reinvention”. [Salen et al, 2004: 569].

In the above quote, Salen et al also offer a definition of cultural resistance based on tensions between the inside and the context of the “magic circle”. This frame is a useful approach to understanding how the seniors approached game design, because, while stressing the design focus on the modification of the cultural elements of the game, the seniors have to develop a focus which suits them and is interesting to play according to their cultural context.

The resulting game designs emerging from the game workshop for seniors described below can be understood through the combination of these three discourses. First, from game studies research, the conceptual framework of Cultural Resistance from Salen and Zimmerman [2004]. Secondly, Educational Technology offers a focus on the dual objectives of developing creative approaches to solving problems and

constructing reusable design principles. (Reeves 2006). Thirdly, the seniors' cultural knowledge, life experience and combination of curiosity and doubts about digital games offered a cultural space for reflection, resistance and transformation. These discourses were intertwined in the same environment, which through the "magic circle" reveals some of the participants' cultural attitudes and life experiences.

3. Joensuu Seniors Club and their Digital Game Workshop

To create cross-generational understanding through games which share knowledge and help seniors expand their understanding of younger generations' digital games, a digital game workshop was created. In the project, the participants were challenged to modify an existing game in order to create a digital game for example for younger generations. They were told that they should make use of their environment and experience. Thus, explicitly the researchers were inviting the participants to reflect within their own cultural knowledge about which elements they would like to put into the "magic circle". Through this activity of game development, in collaboration with ICT experts, the know-how of the technology will be acquired. The most relevant point of this process is to make visible the cultural elements outside of the "magic circle". Our interest is in the culturally transformative aspects of game-play and observation of this creative reflection process through with the participants, as representatives of the elder generation, will resolve the problem of modifying a game.

With the objective of listening to the game interests of the elder generation who were not players of video games, a game workshop based on cultural resistance schema for the Seniors' club was created, sponsored by the Computer Science Department of Joensuu University. With it, workshop designers challenged the seniors, not technological experts, but rather as people who were interested in playing with others, to create their own games for younger generations of our information society. Researchers and tutors sought to open an opportunity to create a dialog between participants' different layers of cultural knowledge and their interests.

The Senior's club is a technology club for elderly people aged 60-75 . It has been operating for two years and is sponsored by the Department of Computer Science and Statistics at the University of Joensuu, Finland. It has two main objectives: 1). to offer meaningful activities with new technologies for the seniors and 2). to function as a living research laboratory for researchers of educational technology and usability. [Naumanen et al 2007]. During winter 2006, the Seniors' club consisted of 12 members, who all enrolled voluntarily for the project. The level of Information and Communication Technology (ICT) skills of the participants range from complete novices to proficient users.

Throughout the workshop, the seniors were given the role of game designer. They decided which cultural information they would use in the game design and the form of the game that should be played in the "magic circle". Researchers and tutors functioned as coaches to support needs. Through this approach, researchers had access to different layers of meaning, knowledge and needs of each participant. Furthermore, throughout the workshop, the focus on learning the know-how of the technology turned out to be secondary, while the primary focus was on how participants could use the technology for the creation of their games. This focus on content rather than technology brought a transformation to the attitude and commitment of the seniors towards each session of

the workshop, which helped build excitement about their own expertise—the game content. [Islas Sedano et al, 2007]. Through this activity, the seniors delivered cultural knowledge and meaning by constructing games with reflected cultural symbols and icons from their home town area in Joensuu.

For the purpose of this workshop researchers decided to choose a simple foreign game for the Finnish culture as the game to be transformed, in this case, “La Lotería Mexicana” was selected. The Lotería Mexicana is a rich cultural game. By its origin, it is a game based on the art and culture of Mexico in the 18th century. It is a type of bingo, which makes it easy to understand and play for everybody. However it is based on pictures depicting the culture of Mexico at the time it was created, making it a game full of symbolism linked to a particular time and place. In order to completely comprehend its meaning, one needs to understand 18th Mexican culture. Another characteristic of this game is that the “yeller“ of the cards sings the cards in his own way, either by calling out the name of the picture or by chanting a few verses to describe it. Using this specific game as a model was intended to expose how a game as simple as bingo can be culturally rich, and it can be played through generations and across cultures, as in this case from Mexico to Finland.

There were two constraints given for the alteration of “La Lotería Mexicana.” Firstly, all the new games should use pictures and secondly, they should be games about Joensuu. It is intentional to require the use of pictures in this game workshop for several reasons. Firstly, to encourage the use of symbols, which are powerful in games, as a means of enhancing other channels of expression and secondly, to communicate implicit knowledge that would be difficult using only text. Finally, pictures offered a way to overcome some language barriers. In addition, there is a wide set of ICT tools for the manipulation and creation of photos which can be used in daily life which may be beneficial for them to learn to use.

4. Cultural resistance and transformation the Seniors’s Creation of Digital Games

The willingness to be able to create games together and understand different cultural needs and experiences is important for the richness of the game-play. And the game-play, in turn, adds to the richness of cultural behaviour by offering a space inside the “magic circle” for cultural resistance and transformation. The outcomes of transforming the “Lotería Mexicana” suggested by the researchers for the senior game design workshop delivered three games, each incorporating different cultural elements from outside of the “magic circle”, supporting the transformation of the original game. These new games were created through a process of resistance to cultural norms because they took the original game based on “Bingo” which the workshop designers learned was not highly regarded in Finnish culture. Through the intercultural influence of the Mexican game, the Finnish seniors were inspired to resist their cultural connotations for the game, and invented the following new games based on Bingo as a shared framework. From the beginning of the workshop, there was friction created by the use of “bingo” as the starting point. Mainly, as was understood later, in Finland, Bingo does not have positive connotations. Hence it is not a surprise to realize that within the “magic circle”, there were two complete reinventions of the game and one version that was clearly altered and juxtaposed following the categorization of Salen et

al. (2004). These reinventions carried cultural information at both the level of content and the participants restructuring of the game.

The three games developed were Joensuu Koodi, Joensuu Lottery, and Poems from Joensuu. In the development processes, the seniors formed three groups voluntary according to their interest. Each one of the teams develop its own game. The game descriptions are:

- **Joensuu Koodi**, a strategic game that challenges the players about the history of Joensuu. The game is designed for one player and consists of three piles of 30 cards. The cards in the first pile consist of 30 statements. Each statement is a clever sentence related to a particular spot in the city. E.g. “Vuoden 1992 betonirakenne suomessa ja sen sisällä on Vipunen ~ “a concrete structure from 1992 in a place called Vipunen in Finland” . The second pile contains 30 pictures of the diverse places in the city that match sentences. Finally, the third pile contains 30 photos of the diverse places of the city but taken with a zoom lens focused on a detail of the place, so they look quite different from the normal perspective photos. Then the rules of the game are that the player should pick one sentence and find the proper match from each one of the photo piles. If the player gets the answer from the photo pile with zoom, this player will get a larger number of points than from the normal photo. This game communicates cultural knowledge about places, as well as introduces players to details in their environment which they may not have noticed before.

- **Joensuu Lottery** is a game with a main concept which does not differ much from the original Mexican game. It is also a type of bingo for multiple players; however, in this version, a special emphasis is placed on the architecture of Joensuu. Group members obtained and scanned old black and white photos of the main church, harbour, etc. and located them carefully in each one of the bingo boards. They followed a specific pattern between old and new pictures, avoiding repetition. Each photo is labelled with the name of the building. The rules of the game are different than traditional bingo. There is an additional option to win if a line of black and white pictures is formed on the board. This game carries cultural information about the history and evolution of architecture in Joensuu.

- **Poems from Joensuu** is a storytelling game. It does not assume that there will be winners, but rather it incorporates poems that the members of the team had written along their lifespans with pictures to match them. The photos, in this case, emphasized the nature of the area, especially the landscapes and the seasons of the Joensuu climate.

In all groups, the seniors put special emphasis into the selection of each photo selected for their game. Their landscapes, their nature and their history were important elements present in their games. The passion the seniors put into their games was outstanding, diligent and careful. Through the photos selected by the seniors we can perceive Joensuu through their eyes and observe how they present their hometown.

As with any digital game, after first developing successful paper prototypes, the games were then digitalized, using participatory design techniques. In other words, they were digitalized in the form that participants wanted to see on screen, and now those games are online. (<http://www.cs.joensuu.fi/games/seniors/>) Nevertheless, attitudes towards the technology were also part of the cultural resistance of the participants. To make the technology accessible, the workshop leaders needed to engage the seniors' cultural attitudes towards digital gaming, and link to participants' cultural knowledge of games, and their desires to play.

DESIGNING GAMES AS A VEHICLE FOR PASSING ON CULTURAL KNOWLEDGE: A CASE STUDY OF FINNISH SENIORS IN THE DIGITAL AGE 9

The content and the game systems the seniors created were relevant examples of cultural contexts entering into the “magic circle” for game designers. The seniors were interested in transmitting their cultural knowledge and life experience through their games. For example people who had been writing poems formed a group together and decided their poems ought to be present in their game. Those interested in the architecture of the city made a group, and emphasised the history of the buildings in the city. The participants with more expertise with technology looked to challenge players with the cultural knowledge of the city, and they even thought about different levels of challenge.

From the seniors’ own feedback, it is possible to observe how the participants decision-making process focused on changing the games by resisting the norms of Bingo, and thus moving past the negative cultural implications associated with the original task. Throughout the task, participants were aware of their own cultural knowledge and able to abstract it and put it into their game design. Some participant evaluation comments which support this cultural awareness include:

“to find out background information for the hint questions cost quite a lot of work, however was interesting. It also took time to walk in the city with the camera but I have plenty of time”

“...I am surprised at how something can be done in so many different ways”,

“When the game is changed, it opens up new ways of looking at things”,

“it demanded versatile skills, it was creative, inspiring, and the spirit in the group was really good”

The process of developing cultural awareness also supported the possibility of communicating seniors’ interpretations regarding how their games about Joensuu should be played. The game creation process opened the doors for self-expression. It offered seniors the possibility to share and play with each other as well as with other generations, through the use of paper prototypes and electronic versions of their games. Participant comments supporting this include:

“I got an idea to make a follow up game for my grandchildren”,

“when I get my own version of the game, I will test it with my friends, acquaintances, and relatives”,

“the ideas help me to develop”,

“the games were intellectual and refreshing”.

The players, outside of the game workshop, have expressed their interest on the content and creativity of the games. Through this content, it is possible to observe how each one of the new game creations reflects the cultural knowledge of their creators, and how playing, as well, has an influence on the cultural knowledge of the player. Of course, this influence varies from player to player, according to each context. Thus, in the game design, the cultural symbols inherent in Joensuu architectural history, poetry from Joensuu seniors, and knowledge of architectural details in special places in Joensuu entered into the “magic circle”. On another level, the seniors also have participated in a process which includes them in this digital gaming, not only because they gain ICT skills, but also because their view about digital games was challenged and changed during the course of the project. Some examples of participant feedback which support this include:

“there can be interesting video games”,

“I can show it off as my own production”.

This experience demonstrates that designing games can be a vehicle for passing on cultural knowledge and integrating individuals into a digitized society. The objectives of the workshop were to explore game interests and to develop ICT skills within a cultural resistance framework, not to investigate the cultural communication process. However, an awareness of the cultural forms of knowledge communication were an important outcome of the seniors’ game design. This demonstrates a connection between gaming and engaging in cultural knowledge communication processes. This connection has also been explored in using the game as a form of intercultural training (Fowler 1994). However, there is a difference between designing a game for intercultural training and exploring games that may result communicating some cultural knowledge. In this way, our work views the game as a vehicle for cultural based knowledge communication. The above discussion shows the importance of the acts of both designing and playing games. In other words, and individual’s knowledge is communicated through the experience of moving between the inside and outside of the “magic circle”.

5. Conclusions

The process of participating in the senior digital games workshop opened a channel to the “magic circle” for seniors—allowing them to engage and resist some their own cultural biases toward the game and reflect on their world views. In doing so, they actively transformed their cultural attitudes towards digital games. They created games which reflected their cultural knowledge and through the process were offered the possibility to engage in a space for reflection. The resulting cultural resistance and transformation of both the games and the seniors also created the opportunity to reintegrate cross-generational play into gaming. And the game itself prevails in this “magic circle” where the players not only play together, but also communicate their cultural knowledge. The Joensuu seniors creativity merged with their life experience was able to produce interesting and enjoyable computer games which brought their

DESIGNING GAMES AS A VEHICLE FOR PASSING ON CULTURAL KNOWLEDGE: A CASE STUDY OF FINNISH SENIORS IN THE DIGITAL AGE 11

cultural knowledge into the “magic circle” and re-established cross-generational play, in the same way that a dolls have been played with for generations.

Using the link between culture and technology inherent in the lens of the digital game and the “magic circle” offers a framework for understanding cultural reflection, resistance and transformation through cross-generational play. As we search for frameworks which help us understand dynamic aspects inherent in cultural change, the notion of the “magic circle” of play offers a space for focusing on not only transmission and transformation of norms across generations, but also for understanding the impact of games played on a global scale in processes of cultural change. Some questions for further investigation include:

How does the resistance to cultural norms play out through players situated in different cultural contexts? Do they resist similar or different norms, and does this resistance have transformational effects with respect to cultural contexts outside of the “magic circle”?

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