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Loos, E.; Kubiński, P.; Romero, M.

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The representation of older people playing a digital game in the short film 'Pony Place': A semiotic and narratological analysis

Eugène Loos[1]
Piotr Kubiński[2]
Margarida Romero[3]

Abstract
This article focuses on Dutch older adults' use of digital devices in general, and digital games in particular, from an intergenerational perspective. We first present some facts related to provide insight into how Dutch older adults use such new media. Then, the case of the Dutch short film Pony Place is analyzed using a semiotic and narratological approach, to examine how older adults are represented as so-called 'digital immigrants', digitally illiterate persons who are unable to master a digital game device. Finally, an intergenerational digital game design approach is presented to show how older adults can actively be involved in the world of digital games, which could lead to a change from their unbalanced representation as digital immigrants to persons who are, like younger players, able to be active in the world of digital games.

Keywords
Intergenerational gaming, homo ludens, representation, semiotic quadrant, narratological analysis

[1] Utrecht University School of Governance, The Netherlands, e.f.loos@uu.nl
[2] University of Warsaw, Faculty of Polish Studies, Poland, piotr.kubinski@uw.edu.pl
[3] Laboratoire d'Innovation et Numérique pour l'Éducation à l'Université de Nice Sophia Antipolis, France, margarida.romero@fse.ulaval.ca

Introduction

According to Huizinga (2008 [1938]), games are a fundamental aspect of life. In 1938, he observed that, next to *homo faber* (man the maker), there is also the concept of *homo ludens* (man the player). Bogost (2007) comments that these days, we have become as used to playing digital games in the living room as watching television (see also the casual revolution as described by Juul, 2012).

International digital game studies have shown that digital games can enhance the mental, physical and social well-being of children, and of younger and older adults (Papastergiou, 2009; Biddiss et al.,2010; Hall et al. 2012; Connolly et al., 2012; Marston et al. 2012; Peng et al., 2013; Primack et al., 2012; Larsen et al., 2013; Kari, 2014; Bleakley et al., 2015; Baranowski et al., 2016). Playing games has been shown to have some impact on the cognitive and physical health state of older adults (Agmon et al., 2011; Anguera et al., 2013; Zhang & Kaufman, 2015), while at the same time allowing them to engage in playful activities (Romero & Loos, 2015; Loos & Zonneveld, 2016). The steadily rising number of digital game-playing older adults (ESA, 2016) led Pearce (2008) to introduce the term 'baby boomer gamers' in reference to this group. Yet despite the growing number of older adults playing digital games and a growing corpus of research showing overall positive effects of this practice, the question is whether older players are adequately represented in the world of digital games.

It is beyond the scope of this paper to discuss older people's media representation in detail, but it is important to be aware of the imbalance in the portrayal of older people in new media (e.g. Loos, 2012), as well as in television programs and advertisements (Vickers, 2007; Ylänne, 2015; Loos & Ivan, 2018 [forthcoming]). In the past, older people were under- and misrepresented (absent or depicted in a negatively stereotypical way, i.e., passive, alone, poor, in bad health) in the media, while in recent years, they have tended to be represented in a more positive, but still stereotyped, way: active, together with a partner, well-off, in good health, etc. Loos & Ivan (2018 [forthcoming]) coined the term 'visual ageism' to describe "the social practice of visually underrepresenting older people or misrepresenting them in a prejudiced way". Using a semiotic and narratological approach, the present paper aims to analyse the way Dutch older adults are visually represented in the world of digital games on the basis of the short film, Pony Place.

We chose to present a case study of digital game use by older people in a short film, as both this medium and digital games are cultural artefacts that reflect a certain representation of the society. "With a case study, the case is an object of interest in its own right, and the researcher aims to provide an indepth examination of it." (Bryman, 2016: p. 61). Focusing on a case study allows us to address the point of the unbalanced representation of older people in the world of digital games that are, for the most part, designed by male (88.5%) young adults (average age 31 years old) with highly developed ICT skills (Williams at al., 2009; Loos, 2017). Because of the predominance of homogeneous young white male game developers (Weststar & Legault, 2015), the representation of older adults in games often reflects the age stereotypes which game developers have about older age groups (see also Loos, 2014: p.48). Older adults, for

example, are frequently represented as stereotyped images of older persons, which conveys a certain ageism (Knight, 2010). As "it is social actors who use the conceptual systems of their culture and the linguistic and other representational systems to construct meaning, to make the world meaningful and to communicate meaningfully to others" (Hall 1997: p.23), it really matters how older people are visually represented. Moreover, the research conducted into older adults and digital games has often focused on the "frail institutionalized elderly" (Weisman, 1983; Zhang & Kaufman, 2015). Pearce (2008: p.142), however, highlights the importance of considering baby boomer gamers' "needs and interests that have gone ignored by both the mainstream game industry and the game press". Digital games have the potential to better engage older adults in topics that interest them, which are not only related to cognitive and physical health, but also to fun.

First, we present facts about Dutch older adults' use of digital devices in general, and of digital games in particular. Then, the Dutch short film Pony Place (2013) is analyzed (using a semiotic and narratological approach) to answer our research question: To what extent does the film show that Dutch older adults are still represented as so-called 'digital immigrants' (Prensky, 2001), i.e., digitally illiterate persons who are unable to master a digital game device? This case can be considered an "in-depth study of the particular, where the researcher seeks to increase his or her understanding of the phenomena studied" (Johansen, 2002: p.2, Ruddin, 2006: p.798). Finally, we present an intergenerational digital game design approach to show how older adults can actively be involved in the world of digital games, which could lead to a change from their unbalanced representation as digital immigrants to persons who are, like younger players, able to be active in the world of digital games.

Facts about Dutch older adults using digital devices

In this paper, we analyze the representation of older adults' use of digital devices in relation to the stereotypes of digital immigrants (who tend to be associated with digital illiterates in the literature) and digital natives, supposedly the digital literates (Prensky, 2001). Despite a growing corpus of evidence against the age-based distinction between digital natives and digital immigrants (Bennett et al., 2010), the stereotype of older adults as digitally illiterate immigrants persists (Bowen, 2011; Loos, 2012; Neves & Amaro, 2012; Lagacé et et al., 2016). For more information about the constitution of ageing adults in research on digital dames, we refer to Iversen (2014). Van Dijk et al. (2008) has estimated that, overall, around 20% of the Dutch population is a "digital illiterate", with no Internet experience. In another study, conducted in the Netherlands in 2009, Van Deursen & Van Dijk (2009: p.5) observed that "seniors do not seem to be inferior to younger citizens on both information and strategic skills", which is consistent with the observation of De Schutter (2011) that there was a huge diversity of digital literacy among older adults. Older adults are often represented as having poor ICT skills. However, older adults' skills and use of technology run the gamut from zero to expert. So, what do the statistics tell us about Dutch older adults' use of digital devices? According to a Statistics Netherlands

report [https://www.cbs.nl/en-gb/news/2013/21/one-third-of-over-75s-use-the-internet] in 2012 (the year before the short film Pony Place was released), a growing number of Dutch older adults are making use of digital devices, and these devices are becoming an increasingly important part of their everyday life:

> "The share of 65 to 75-year-olds in the Netherlands active on the internet has more than doubled since 2005. Internet usage in the Netherlands in this age category is among the highest in the EU. An increasing number of older people use the internet to access online calling, shopping and banking services."

What about the use of digital games by Dutch older adults? New Zoo (the only source for reliable data on Dutch older adults' use of digital games) clearly states that 39% of the 51-65 year-olds play digital games in 2013. The recent white paper Let's play: The deployment of applied gaming to encourage the elderly to exercise (Heuvelink, 2014), aims at the implementation, scale-up and, if necessary, the (further) development of applied gaming for Dutch older adults using current scientific insights, available evaluations and practical experiences provided by the partners of the Applied Gaming for Healthy Aging Coalition. This white paper also shows that there is a market for older adults playing digital games.

Methodology

Grandparents trying to play a digital game

In order to analyse the representation of older adults trying to play a digital game in a short film, we used Greimas' (1983) semiotic square embedded in a narratological approach, focusing, as is common in semiotics, on the way people use a sign system while interacting to create meaning (De Saussure, 1959). This semiotic tool aims to analyze signs in relation to each other in a binary way. We seek to gain insight into how older adults are represented: as digital illiterates (incapable of playing a digital game) or digital literates (capable of playing such a game). In the field of game studies, the semiotic square was previously used by Marsen (2004) in the analysis of film and by Barr et al. (2007) in the analysis of video game values of paidia (spontaneous play) and ludus (controlled play). Consider the example of a semiotic square presented by Floch (2001) in which the concept of "good" is opposed to "the concept of bad", and their negations "not good "and "not bad" respectively:

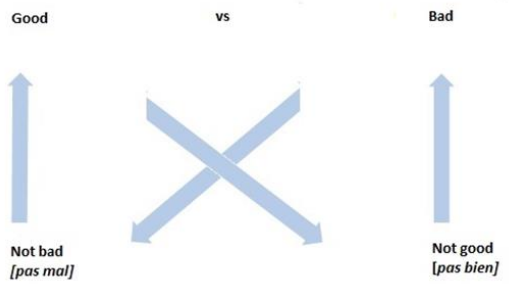

Figure 1: Semiotic square (Floch, 2001: p.22)

Floch (2001: pp.21-22) explains the working of a semiotic square as follows:

> "Now, what happens when we declare that something is *not bad [pas mal]* and then stand firmly behind this position? We enable – but do not make inevitable – the 'transformation' to *good*: a transformation that, if effectuated, is interpreted semiotically as an 'operation of assertion'. And it goes without saying that an identical trajectory, symmetrical to the one just elaborated, must be devised for the transformation from *not good [pas bien]* to *bad.* So, there is the 'square', constructed and skimmed through as if 'on gossamer wings of a butterfly' with the help of two operations: negation and assertion".

We follow Floch (2001: p.22) that in such a semiotic square there are:

> "four 'interdefined' positions resulting from just three relations: (1) the relation of contrariety, represented by a horizontal line (…); (2) the relation of contradiction, depicted as diagonal lines and corresponding to negation; and (3) the relation of complementarity, a vertical line that corresponds to the operation of assertion".

In our paper, we will present the semiotic square that is at the core of the short film Pony Place, and show how this is embedded in a narrative about older people trying to play a digital game. Narrativity – in the perspective of modern transmedial narratology and cognitive narratology – can manifest itself not only in literature, but also in other media (e.g. Ryan, 2006, 2009; Ryan & Thon, 2014; Kubiński, 2015) – including films (like Pony Place) and digital games (like the one in Pony Place). We understand narrative as medium-transcending phenomenon; for the purpose of this study the most representative definition of narrative is the one coined by Ryan (2003; see also Ryan, 2004) who defines the term in question:

> "as a mental image, or cognitive construct, which can be activated by various types of signs. This image consists of a world (setting) populated by intelligent agents (characters). These agents participate in actions and happenings (events, plot), which cause global changes in the narrative world. Narrative is thus a mental representation of causally connected states and events which captures a segment in the history of a world and of its members."

Following Ryan (2006: p.10), who states that "narrative is a type of text able to evoke a certain type of image in the mind of a cognizing subject", we will now analyze the type of image related to older people's effort to use a specific form of new media: a digital game.

Results

The Dutch short film Pony Place (http://www.npo.nl/pony-place/10-10-2013/WO_NTR_412910) tells the story of Emma, an avid young player of a digital game called Pony Place. Her parents won't allow her to take her tablet along on holiday, which means she is unable to take care of the ponies at her digital pony farm. So, she asks her grandparents if they would mind her farm while she is away.

In the following analysis, we use screenshots from the film to analyze whether the visual signs of the grandmother's actions in this narrative – the grandmother is the main character in this film – mark her as a 'digital immigrant' (a digitally illiterate person who is not able to learn to play a digital game) and whether the granddaughter can be classified as a full-fledged 'digital native' (who has grown up as a digitally literate person in today's digital world).

Right from the start, it becomes clear that the granddaughter is represented as a digitally literate person. We see her sitting in the background, absorbed in the digital game world with an object (it later becomes clear that this is a game on a tablet [signifier referring to the digital device the grandmother will have to deal with]). This tablet is about to invade the world of the grandmother, who is enjoying her life in a well-kept garden.

Figure 2

Then, the granddaughter apparently leaves on holiday and the grandmother seems set to continue her life outdoors, in the natural environment of her garden. The granddaughter is already in the car with her parents, the car horn honks, and the family drives off. We then hear the sound of an argument in the car about the tablet. The car stops, and the granddaughter comes running back to her grandmother.

Figure 3

The granddaughter tells her grandmother "Mummy and Daddy say I'm not allowed to take my tablet along on the boat. Will you take care of my stall? Otherwise I'll lose Daantje."[4] And her grandmother answers: "Of course Granny will" and takes the tablet.

Figure 4

They say goodbye and we hear her grandfather mumble, (apparently sensing the danger represented by this digital object that will invade their world): "Well, good luck with that, then!"

Figure 5

The grandmother tries to learn how to feed Daantje and the other digital ponies at Pony Place…

[4] Daantje is the name of her digital pony, who needs to be fed at Pony Place.

Figure 6

Figure 7

…but fails to successfully take digital care of these digital animals in their digital world.

Figure 8

The screenshot above shows Daantje, who has crashed to the ground near the empty troughs [clear signifiers symbolizing the result of the actions of a digitally clumsy older adult]. Grooming the ponies, feeding them, nursing them through illness, extinguishing a fire: Grandmother does her best but fails. Hospital equipment beeps can be heard in the digital game.

The problems get bigger and bigger, and soon Daantje and the other ponies start to die.

Figure 9

Figure 10

Figure 11

The older couple even consults information sources in the real world, an activity that can be considered as a signifier connoting a ‘digital immigrant’ who is unaware of how to use digital information from within a digital game.

Her husband gives up, and the grandmother is left on her own. The digital game continuously emits beeping noises that serve as warning signals that the whole Pony Place is in danger. She is so desperate that even at night she is up, trying to save the ponies.

Figure 12

Figure 13

But nothing helps, and grandmother has to face reality: she has failed to keep Daantje and the other digital ponies alive. Then, the car horn honks, the granddaughter comes back from her holiday and the grandmother has to admit that she has failed to take care of the digital ponies: "Um ... I really, really, really tried my best, lovey." Granddaughter, staying calm, asks her how this could happen, and her grandmother replies: "Well, I had to do it all by myself. You know what Grandpa Wim is like. And Blacky came down with African Horse Sickness...and that poor Daantje with that lasagne and … I'm so terribly sorry."

The grandmother does not appear to understand the actual nature of the digital game – she does not see that "it is only a game" and that it can be re-played. This serves to confirm her status of a 'digital immigrant' – she is confused and lacks self-confidence when dealing with a digital device.

Figure 14

Figure 15

Figure 16

To her surprise, her granddaughter is not angry, but simply pushes a button, and a voice is heard telling her how to purchase new ponies and replay the digital game. The situation at the start of the film is repeated. The granddaughter does not assume the role of warm expert (Bakardjeva, 2005), teaching her grandmother how to act in the digital world. The grandmother can only go back to her garden, which has been devastated (see left picture above) by the lack of attention caused by the intrusion of the digital game on the tablet into the natural environment.

Filling in the semiotic square

To further analyze the way the older players are represented in the short film Pony Place in more depth, we use a semantic square with four possible positions: **digitally literate, not digitally illiterate, not digitally literate** or **digitally illiterate:**

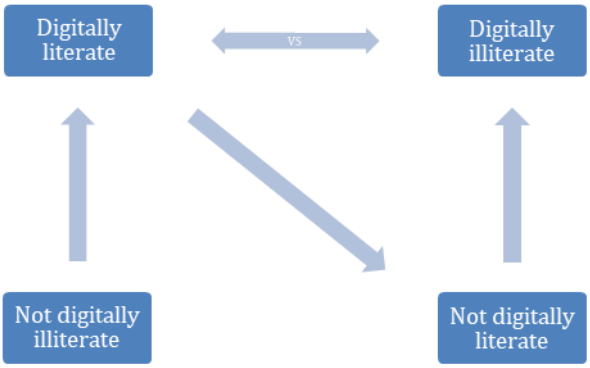

Figure 17. Semantic square short film Pony Farm (framework adapted from Floch, 2001: p.22)

Right from the start, the granddaughter is clearly positioned as being **digitally literate** (capable of playing a digital game), in contrast to her grandparents, who, in their struggle with their granddaughter's request to take care of the pony farm, have obviously been assigned the position of **not digitally literate** (operation of negation in a relation of contradiction). On the other hand, it was at that point still too early to conclude that they would be incapable of learning how this digital game worked. In short, their starting position was not completely clear. After all, there was always the possibility that, in the course of the film, the grandparents would evolve from being **not digitally illiterate** (i.e. not yet capable of playing the digital game) to **digitally literate**, i.e. capable of playing the digital game – an operation of assertion (Floch, 2001: p.21) in a relation of complementarity. At the beginning of the film, we have no way of knowing whether or not, as the narrative develops, they will be cast as older adults who learn how to play the digital game. Having analyzed the narrative of the film, we now know that they were not: the grandparents fail to find their way in the digital world of their granddaughter by taking care of the digital ponies at the farm. The 'operation of assertion' we therefore see appears to be in the relation of complementarity, from **not digitally literate** to **digitally illiterate**, with ultimately the semiotic establishment of a relation of contrariety between the **digitally literate** granddaughter and the **digitally illiterate** grandparents.

Worldviews and stereotypes in the Pony Place narrative

The dynamics of the semiotic square as described above are at the core of the narrative that is constructed by the short film Pony Place. To understand the type of image (Ryan, 2006) created in relation to older people's effort to play digital game, it is important to pay attention to the narrative that is constructed for the viewers of the short film.

Narratives play various roles in human life – and they certainly do not limit themselves to (more or less sophisticated) entertainment. Other functions that could be attributed to narratives are, for example, organizing (and giving coherence to) experiences, feelings and memories; passing specific knowledge on; sustaining various beliefs, values or worldviews, etc. (see e.g. Nagule, 2002; Korthals Altes, 2005; Ranta, 2013). Hence narratives serve as a crucially important tool in the context of both personal experience and social life.

World schemata and implicit normative judgments conveyed by narratives are strongly based on dichotomies (good-bad, etc.). Such oppositions are also an instrument used in semiotics "to flesh out the connotative meanings built into signs" (Danesi, 2002: p.38). And we agree with Berger (1999: p.128), who argues that:

> "Oppositions are also to be found in narratives where we find, for example, good guys and bad guys, rich men and poor men, people living upstairs and downstairs. These oppositions may not always be obvious or evident but they are always there. This is because, in part, stories need to be exciting and excitement is based in large measure on conflict and conflict implies oppositions of one kind or another. When we deal with texts we must elicit the various paired oppositions that give these texts meaning."

The short film Pony Place uses a clear example of such a dichotomous world schema, in line with insights from semiotics that signs are used in relation to each other in a binary way, as explained above, since the characters live in two separate worlds: the grandparents inhabit the 'analogue' world, while the granddaughter belongs to a digital space symbolized by the 'artificial' farm in the digital game. These two worlds – or two environments: an 'analogue' garden and an 'digital' farm – hardly penetrate each other. The film's plot construction implies a very conservative and preservative worldview, as it suggests that the characters' overstepping of the bounds of their allotted space will lead to disaster. This is graphically depicted by the fact that the grandmother's entrance into the digital world results in havoc in both the 'analogue' garden and the 'artificial' farm. Everybody should stay in their domain – this message is even clearer thanks to the film's ending (after all, the tablet returns to granddaughter's hands, and the former status quo is restored). Such a purport is underpinned by the strategy of creation of the digital world of the digital game, which – in the grandparents' perspective – appears to be full of fickle and incomprehensible threats (a normal reaction failing a "warm expert" to turn to for help). Though we acknowledge that the grandmother has learned to understand her granddaughter and her pastimes better and that instead of scolding off (in the beginning) in the end she sits beside her and watches her play, such a representation still implicitly buttresses ageism, since it discourages older adults from taking the initiative to participate in a digital world.

'Digital immigrants' versus 'digital natives'

The narrative in the short film Pony Place is in line with the ideas of Prensky (2001: pp.1-2), who makes a rigid distinction between what he calls 'digital immigrants' and 'digital natives'.

> "'Digital immigrants' are older persons who, with much effort, can learn to use digital media up to a certain point. By contrast, 'digital natives' are young persons who grew up in a digital world: Our students today are all "native speakers" of the digital language of computers, video games and the Internet. So, what does that make the rest of us? Those of us who were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology by comparison are, and always will be, *Digital Immigrants*. The importance of the distinction is this: As Digital Immigrants learn – like all immigrants, some better than others – to adapt to their environment, they nonetheless always retain, to some degree, their "accent," that is, their foot in the past. The "digital immigrant accent" is evident by the way digital immigrants turn to the Internet for information in the second, rather than first instance, or read the manual for a program rather than assuming that the program is self-teaching. Today's older folk were "socialized" differently from their kids, and are now in the process of learning a new language. And a language learned later in life, scientists tell us, goes into a different part of the brain."

As several authors have pointed out, and even Prensky himself acknowledged in later work that his dichotomy was too blunt ("as we move further into the 21st century when all will have grown up in the era of digital technology, the distinction between digital natives and digital immigrants will become less relevant" (Prensky, 2009), there is no empirical evidence that the dichotomy between 'digital immigrants' and 'digital natives' ever really existed. Some examples: Loos and Mante-Meijer (2009) and Loos (2011) demonstrated in an eye-tracking study that daily Internet use has far more impact on the navigation patterns of Dutch users than does age (see also Hill, et al., 2011). An empirical study conducted by Herold (2012) found that that many undergraduate students in Hong Kong lacked the necessary skills for digital media-related assigned tasks. The results of an empirical study on the use of old and new media in a choice process (taking out health insurance in the Netherlands) conducted by Loos & Mante-Meijer (2007) clearly illustrated that, while the very old (75+) only rarely used the Internet, a relatively high incidence of Internet use was found among those aged between 55 and 74 (great interest in using a variety of information sources due to health problems). This is why Loos (2010, 2012), citing Lenhart & Horrigan (2003), advocates use of the notion of a 'digital spectrum' rather than that of a 'dichotomy'. This is not the place to further critically review Prensky's original deterministic view on older adults' capacity for digital learning (see Bennett et al. (2010) for a critical review of Prensky's claims), but we should not underestimate the impact of the 'digital immigrants versus digital natives' common sense metaphor on the way older adults are represented in our digital world. The Dutch short film Pony Place is just one example of this phenomenon.

Discussion

Increasing the participation of older people in digital games could lead to a change from their unbalanced representation as digital immigrants to persons who are, like younger players, able to be active in the world of digital games. An intergenerational digital game design approach that actively involves older adults in the world of digital games, offers a possible way forward.

First of all, it is important to understand the pitfall of the so called 'I-methodology': "the reliance on personal experience, whereby the designers consider themselves as representatives of the user" (Akrich, 1995: p.x). This is often an unconscious process, as the designer is not aware of the fact that the user representation he or she is using resembles himself or herself. In contrast to the images created by designers and what people expect, implicit methods are often more powerful than explicit methods in shaping the design (Oudshoorn et al., 2004: p. 41). The sheer youth of digital game designers could therefore explain why only younger and not older adults are represented in marketing studies in the world of digital games.

How could we fight this so called 'I-methodology'? A possible solution could be to use a participative approach to digital game design to reunite participants from different generations in the digital game creation process (Romero & Loos, 2015). Such an approach would allow social or age minorities access to digital game design and influence its process. Developing digital games *with* rather than for older adults would allow them to be engaged in a more active way (Rice et al., 2012a), hopefully leading to digital games they can identify with.

In the field of information systems (IS), participative design "promises to improve IS quality while empowering the participants and fostering relationships among developers and users" (Lukyanenko & Parsons, 2015: p.1). A participative digital game co-design blurs the boundary between digital game players and the professional digital game designers (Stewart et al, 2013).

Co-design strategies could include making digital games from scratch, modifying or 'modding' existing digital games (Sotamaa, 2010) through a shared decision-making process. A good start could be to develop an intergenerational digital game, in which grandparents and their grandchildren are actively involved from beginning to end (see also Rice et al., 2012a/b; Xie et al. (2012); Vanden Abeele & de Schutter, 2010; Loos, 2014; Costa & Veloso, 2016; Zhang & Kaufman, 2016; De la Hera et al., 2017). Hence, we should follow a human-centered research procedure (Vanden Abeele & Van Rompaey, 2006) to design intergenerational digital games. Adopting such an approach would enhance the chance that playing digital games becomes a meaningful activity (Salen & Zimmerman, 2003: p.32; De Schutter & Vandenabeele, 2008: p.1) for both younger and older generations. Intergenerational participative design could foster the engagement of individuals from different backgrounds in the digital game design decision-making process and character representation. Opening participative game design to a variety of persons could help to improve older adults' social representation, in this case a more balanced representation of their capability to be active persons in the world of digital games, through a critical perspective (Flanagan & Lotko, 2009).

Conclusion

Our semiotic and narratological analysis of the narrative showed that, in the Dutch short film Pony Place, the grandparents are clearly represented as 'digital immigrants', digitally illiterate persons who are not able to learn to play a digital game, while their

granddaughter is characterized as a digitally literate person, a representative of the 'digital natives' generation (Prensky, 2001). Yet as the statistics we consulted (Statistics Netherlands, 2013) revealed that a relatively large group of Dutch older adults make use of digital devices, and specifically of digital games, this representation of Dutch older adults as 'digital immigrants' does not reflect their actual position in today's digitized society.

As stated in the introduction, it really matters how older people are visually represented. Using a semiotic and narratological approach, this paper showed the misrepresentation of older people in the Dutch short film Pony Place and argues that a participative approach to digital game design that unites participants from different generations in the digital game creation process could lead to a change from older adults' unbalanced representation as 'digital immigrants' to persons who are, like younger players, able to be active in the world of digital games.

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Eugène Loos is a professor of "Old and New Media in an Ageing Society" in the Department of Communication Science at the University of Amsterdam and an associate professor of Communication, Policy and Management Studies at the Utrecht University School of Governance in the Netherlands. Currently his research focuses on the role of old and new media related to accessible information for senior citizens, in order to guarantee their inclusion in our society. He investigates the (ir)relevance of age for: (1) different groups of older adults' digital information search behaviour, (2) their perception of the reliability of information, (3) their identification with images in information sources, (4) the impact of visual and textual signs in digital health information on their cognition and affection, (5) the creation and use of (intergenerational) digital games for their wellbeing.

Piotr Kubiński is associate professor at the Section of Comparative Studies (Faculty of Polish Studies), University of Warsaw. He teaches undergraduate and graduate courses in literature, media and comparative studies. He conducts research dedicated to video games and digital forms of art. His PhD dissertation discussed the poetics of video games and their influence on other forms of textuality and discourses. He is a member of Management Committee of COST Action IS1402 "Ageism – a multi-national, interdisciplinary perspective" where he investigates the way older people are represented in digital games.

Margarida Romero is research director of the Laboratoire d'Innovation et Numérique pour l'Éducation (#fabLINE), a research lab in the field of Technology Enhanced Learning (TEL). Professor at Université de Nice Sophia Antipolis (FR) and ass. prof. at Université Laval (CA). Her research is oriented towards the inclusive, humanistic and creative uses of technologies (co-design, game design and robotics) for the development of creativity, problem solving, collaboration and computational thinking.