



Article

Players' perspectives on the positive impact of video games: A qualitative content analysis of online forum discussions

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Jeroen Bourgonjon, Geert Vandermeersche, Bram De Wever, Ronald Soetaert and Martin Valcke

Ghent University, Belgium

Abstract

On game forums, players often discuss the positive impact of video games on their lives. We collected 964 messages from top ranked game forums (viaAlexa.com) and analyzed them using a coding scheme based on an existing taxonomy about the impact of the arts. This directed qualitative content analysis resulted in an exploration of how players' talk about the impact of video games reflects broader cultural rhetorics. By analyzing players' positive experiences using a theory-based coding scheme that is attentive to the wide array of effects that have been ascribed to the arts, this study offers a broad perspective on the attributed impact of video games.

Keywords

Computer games, content analysis, digital games, discussion forums, impact of media, media debate, media effects, online talk, positive effects, video games

Introduction

The impact of both the arts and new media is discussed from a number of different personal and social perspectives. Policy makers, journalists, and other cultural participants (e.g. readers and gamers), all claim a stake in this debate. An analysis of their often

Corresponding author:

Jeroen Bourgonjon, Department of Educational Studies, Ghent University, H. Dunantlaan 2, 9000 Ghent, Belgium.

Email: jeroen.bourgonjon@ugent.be

conflicting perspectives can teach us about the changing social status of cultural artifacts, as different stakeholders defend their own interests and beliefs.

Recent discussions about the impact of video games stand as an exemplary case: defining what games are and what they do can be described as “a site of struggle” (McAllister, 2004: 25). An illustration of this larger debate about the definition and impact of video games is the recent inclusion of video games in the Museum of Modern Art (MoMA) in New York. While the public discussion addressed the question whether video games can be considered art that elicits powerful emotions, MoMA curator Paola Antonelli framed the debate by including them as instances of interactional design (Moore, 2013). In turn, game designers often refer to video games as a new form of cultural and artistic expression (Salen and Zimmerman, 2004). However, while some game developers argue that the full potential of video games is yet to be explored, many players already articulate the profound impact and everyday effects of video games on their lives, thus contributing to the “social institutionalization” (Stöber, 2004: 484–485) of gaming.

A cautious approach to media research

Since games represent “a site of struggle” (McAllister, 2004)—“a point in the dialectic where rhetorical forces are exerted in an effort to gain dominance over competitors, technologies, players, concerned citizens, and the media” (p. 25)—media scholars should adopt a contextualized perspective that includes an understanding of rhetorical positions in the debate. Belfiore (2009) has criticized cultural policy makers and scholars for how they ally themselves in uncomplicated ways to a single agenda in debates about the value of the arts. She suggests “a more cautious approach to the whole rhetoric of the social impacts of the arts” (Belfiore, 2006: 35). Based on the recognition that all stakeholders in the debate hold to the orthodoxy that media can have profound impact on individuals’ lives (Belfiore, 2009), we will focus on a particular agent in the context of video games: gamers.

Indeed, at the level of personal experience, people have regularly expressed and shared stories of how their lives were affected by books, movies, or video games (e.g. Hormes et al., 2013). According to Belfiore and Bennett (2008), who provide an intellectual history of claims made for the impact of the arts in Western societies, these stories can be considered as “the product of widely and deeply held convictions” (11). Such statements can thus be analyzed “not as evidence of what people really know or believe, but as a form of social action which serves particular social purposes” (Buckingham, 1999: 175).

When studying the impact of video games, we therefore believe it is meaningful to map out the foundations of the debate by exploring the perspectives of players.

New Rhetoric: constructing meaning through talk

The New Rhetoric provides a relevant theory and framework for this type of analysis because it addresses people’s descriptions of situations and phenomena, and how these descriptions reflect and shape our perceptions and behavior (Foss, 2004). According to Kenneth Burke (1969), a founding father of the New Rhetoric, discourse should not merely be studied as argumentative persuasion (cf. traditional rhetoric) but also as an important mechanism in the construction of meaning (p. 41). The New Rhetoric examines how people adopt and repurpose terms and arguments that have long existed in the public

sphere or intellectual tradition. It thus provides us with the epistemological basis to understand how people's talk about the impact of video games is constitutive of both the personal and social construction of the impact of video games.

Brian Sutton-Smith and cultural rhetoric in game studies

Inspired by Kenneth Burke, Sutton-Smith (1997) studied the different cultural meanings of "play." He identified different cultural "rhetorics" of play, which he defined as "a persuasive discourse, or an implicit narrative, wittingly or unwittingly adopted by members of a particular affiliation to persuade others of the veracity or worthwhileness of their beliefs" (p. 8). This approach to play has influenced many scholars to also explore the rhetorical aspects of video games.

In order to resolve some of the confusion about the meaning and impact of video games, we believe it is important to study how players' perspectives reflect broader cultural rhetorics. After all, if indeed "the ways in which [the term "play"] is used and interpreted usually reveal more about the observer and their theoretical framework than the phenomenon itself" (Squire, 2008: 660), it follows that game studies should address how players describe their game experiences and how these descriptions reflect cultural rhetorics about the impact of media and art.

Whereas Sutton-Smith (1997) predominantly stressed the persuasive dimension of these cultural rhetorics, we adopt a more constructivist position. Like Salen and Zimmerman (2004), we believe that "these rhetorics [...] are part of broad symbolic systems (political, religious, social, and educational) that help construct cultural meanings" (p. 518). While players may appeal to cultural rhetorics in order to legitimate and promote their activities to others, their talk also contributes to the construction of identities and the socio-cultural position of video games. According to Djikic et al. (2009), exploration of personal perspectives is precisely what is missing in the current research on the impact of the arts.

Research questions

In this article, we examine how players' personal stories about the impact of games on their lives, as expressed on popular game forums, reflect these cultural rhetorics. Our main research aim is to provide insight into the diversity and complexity of players' perspectives about the impact of video games on their lives. We, therefore, conducted a content analysis using a broad coding scheme based on Belfiore and Bennett's (2008) taxonomy of the arts' impact. Through the analysis of forum messages that stress positive experiences, we aim to move beyond prior research that mainly targeted potential negative effects of gaming (see Behrenshausen, 2013; Kirsch, 2006).

Method

Data collection

Forum messages about the impact of games were collected from popular game forums (Table 1). These forums were selected based on their popularity, as ranked on Alexa.com.

Table 1. Sample selected based on Alexa.com ranking.

Forum	Threads (total = 32)	Messages (total = 1615)
GameTrailers	13	597
The Escapist	8	581
IGN	3	234
Computer and Video Games	2	72
Giant Bomb	2	62
GameFAQs	2	41
Eurogamer.net	2	28

Each forum was scanned with the Google search engine, using multiple strings of keywords that refer to the perceived positive impact of video games. The first 100 search results were scanned for relevant threads. After three iterations—using the strings “change life,” “affect life,” and “impact life”—no additional unique and relevant threads were found. The resulting data consisted of 32 threads containing 1615 messages (unit of analysis). All threads were captured (available at <http://www.onderwijskunde.ugent.be/files/dataNMS.zip>), to ensure the data remained public. Informed consent from the players was not deemed necessary because no registration was required to consult these public forums (Mo and Coulson, 2008).

Development of the coding scheme

All messages were screened using directed qualitative content analysis (Hsieh and Shannon, 2005), focusing on expressions of how video games positively changed the life of the players. A coding scheme was developed based on the theoretical work of Belfiore and Bennett (2008) by three scholars with a background in social sciences or the humanities and with limited to extensive gaming experience. These experts identified key concepts and operationalized them as coding categories. Two pilot studies were performed in which three authors of this article tested the scope and applicability of the coding scheme and procedure. Each author coded 100 messages in the first pilot study and 40 in the second. Particular attention was paid to the question of validity and the need for adding categories to address the variance in the data. The resulting coding scheme reflects three dimensions: metadata, categories of cultural rhetorics based on Belfiore and Bennett (2008) and categories that account for the specific context of video gaming.

Metadata. Along the first dimension of the coding scheme, metadata were gathered to categorize the messages in view of subsequent analysis. We accounted for messages contesting the idea that art can have a life-changing impact by labeling them as *No Life-Changing Impact*. The category *On Topic* was created to identify only those messages addressing the research question. The category *Ambiguous* was added because many messages were deemed too vague for analysis (e.g. expressions of humor and irony, trolling), hindering straightforward interpretation.

Categories based on Belfiore and Bennett. The second dimension of the coding scheme comprises eight cultural rhetorics retained from Belfiore and Bennett (2008). As the cultural rhetorics in their taxonomy often overlap because they share historical roots, refinement was necessary in order to construct an efficient coding scheme.

The first cultural rhetoric goes back to Aristotle, who argued that spectators of Greek tragedies underwent *Catharsis*: a purification of emotions and thoughts after experiencing pity and fear for the main character's troubles. This theory became an influential cultural rhetoric: art can evoke moral catharsis through identification with characters, an emotional release, and a clarification of intellectual concepts. We coded *Catharsis* as such.

This leads to the second cultural rhetoric, which argues that the arts promote *Personal Well-Being*, either through enjoyment or by providing people moments of contemplation and therapeutic assistance, for example, consolation after hardship. Congruent with this conceptualization, we use *Personal Well-Being* as a label for messages denoting pleasure, escapism, and transportation to fantasy worlds, self-reflection, and therapy.

Another set of dominant beliefs dates back to the Latin philosopher Horace, who conveyed the long-held perspective that the arts should support *Education* and *Self-Development*. This comprises a broad collection of effects, such as the acquisition of cultural knowledge and broadening one's horizons. Despite their clear communalities, we decided to extricate these two cultural rhetorics due to their distinct meanings in game studies. Therefore, the category *Education* covers all aspects of learning, including traditional school subjects, but also stimulating intellectual curiosity, while *Self-Development* denotes a change in perspectives, beliefs, or personality.

Another set of dominant beliefs, often found in political writings, states that art supports both *Moral Improvement* and *Civilization* because it offers a representation of how things should be, serves as an antidote to society's problems, and improves empathy and moral imagination. We decided to distinguish between both categories in our coding scheme. On the one hand, the code *Moral Improvement* refers to becoming a better person and showing greater empathy. On the other hand, the category *Civilization* refers not only to making friends and joining game communities but also to increased participation in the arts and video game culture.

The seventh cultural rhetoric distilled from Belfiore and Bennett (2008) asserts that art functions as a *Political Instrument* in the formation of citizens and inspires political engagement. This conception gained relevance after the Fascist and Nazi dictatorships, although many 20th century philosophies also stress arts' emancipatory impact. We coded messages as *Political Instrument* only when literally referring to politics (i.e. by using the word "policy" or "government").

Finally, Belfiore and Bennett (2008) describe how art affects the *Social Stratification* of society: for example, knowing about art may become a mark of distinction and feeds into our understanding of social status and class. Thus, this eighth cultural rhetoric in our coding scheme refers to social and/or economic mobility.

Additional categories accounting for the game context. The third dimension of the coding scheme includes four categories accounting for the specific context of video gaming. In the pilot studies, data that could not be coded using the initial coding scheme were identified and analyzed separately "to determine if they represent a new category or a

subcategory of an existing category” (Hsieh and Shannon, 2005: 1282). Below we provide an overview of these categories that were induced from the data.

Significant Part of Life covers how games that were played for a long time can become part of players’ gaming biographies. *First Game* captures whether a life-changing experience occurred when forum members played their first game. *Appreciating Game Design* denotes a broader reflection on the genre or medium of games. The category of *Real-Life Action* refers to actual behavior—as opposed to thoughts and feelings—inspired by playing video games.

Content analysis

Using this newly developed coding scheme, we performed a directed qualitative content analysis (Hsieh and Shannon, 2005). First, for each message (unit of analysis), the trained coders determined whether or not each category was present (scored dichotomously as 1 when present or 0 when absent). This implies that each unit of analysis received multiple codes, as a message could contain references to multiple cultural rhetorics. We calculated descriptive statistics about the prevalence of each category. Second, common practice in directed qualitative content analysis is the use of exemplars to illustrate the different codes. Therefore, each coder was asked to flag messages that could be considered “representative” or “interesting,” in order to facilitate and improve the qualitative interpretation of the descriptive statistics.

Interrater reliability

Two coders were trained on the basis of a 30-minute introduction to the coding scheme and 3 hours of cooperative coding in close collaboration with the authors. The remainder of the coding was carried out independently. To allow calculation of interrater reliability, 10% of the threads were randomly selected for double coding. The other 90% were randomly divided over the two coders.

Percent agreement for all categories was between 93.7% and 100%. Krippendorff’s α was between .70 and 1 for all but two categories. The categories reflecting low alphas—*Social Stratification* ($\alpha = .00$) and *Moral Improvement* ($\alpha = .40$)—were excluded from further analysis, although the low alphas were probably due to low prevalence (as percent agreement was acceptable and Krippendorff’s α corrects for chance).

Results and discussion

Descriptive statistics

After removing messages not containing cultural rhetorics ($n_{\text{on topic}} = 1166$; $n_{\text{ambiguous}} = 88$; $n_{\text{no life-changing impact}} = 134$), 964 individual messages were included for analysis. On average, each individual message (within this set of 964 messages) referred to 1.56 (standard deviation [SD] = 1.23) cultural rhetorics. Interestingly, 80.8% of the messages only drew upon a single cultural rhetoric. To contextualize the data, Table 2 lists an overview of the most cited games.

Table 2. Top 10 most cited game titles.

Game title	Times cited	Percentage of posts	Percentage of cited titles
World of Warcraft	77	4.77	2.34
Final Fantasy 7	70	4.33	2.13
Metal Gear Solid	68	4.21	2.07
Pokémon Red/Blue/Yellow	63	3.90	1.92
Legend of Zelda: Ocarina of Time	54	3.34	1.64
Super Mario Bros	48	2.97	1.46
Half-Life	42	2.60	1.28
BioShock	36	2.23	1.09
Halo	36	2.23	1.09
Half-Life 2	35	2.17	1.06

The total number of cited titles was 3288.

The results of the content analysis are summarized in Table 3. In what follows, we will discuss each cultural rhetoric according to its prevalence in the data and enrich the analysis with quotes. These citations are presented unaltered, although full titles of games are inserted to increase readability.

Categories based on Belfiore and Bennett

Civilization. From the categories based on Belfiore and Bennett (2008), the most commonly cited cultural rhetoric is *Civilization* (33.9%, $n=327$). Given its threefold operationalization in the coding scheme, the data were examined according to the distinctions “community,” “art participation,” and “participation in video game culture.”

The first component, that is, belonging to a community, was mentioned in 11.4% ($n=110$) of the messages. Previous research identified this type of socialization as an important motivation for playing video games (Yee, 2006). The high prevalence of this cultural rhetoric suggests that video games also have a profound impact on players:

From gaming [...] I have a core group of friends who I have met and got close to online to the point I have been to one guy's wedding and cuddled his new born son. Also through gaming I can safely say I have met the love of my life and now happily residing in Finland with him.

Although we did not differentiate between game genres, our findings coincide with Cole and Griffiths (2007): about 75% of the players surveyed about social interactions in and around massively multiplayer online role-playing games (MMORPGs) believe having made good friends while gaming, yet only half of them think online friends are comparable to real-life friends. We found similar messages about the quality of friendships and the distinction between online and offline friends: “Counter-Strike Source got me a bigger MSN contact list. Before i joined my clan i had about 6 contacts now i have around 27 the scary thing is i will probably never meet any of them.” Players are aware

Table 3. Results of the content analysis.

Category	Krippendorff's α	Percentage agreement	Percentage of on-topic postings (N=964)
Metadata			
On topic	.95	97.9	100 ^a
Ambiguous	.80	97.4	0 ^a
No life-changing impact	.91	98.4	0 ^a
Categories based on Belfiore and Bennett (2008)			
Civilization	.86	94.7	33.9 ^a
Self-development	.84	94.7	26.2 ^a
Personal well-being	.85	96.3	24.5 ^a
Catharsis	.86	97.4	16.3 ^a
Education	.89	98.4	13.7 ^a
Moral improvement	.40	98.4	2.2
Political instrument	1	100	1.2 ^a
Social stratification	.00	98.9	0.1
Additional categories accounting for the game context			
Significant part of life	.83	94.2	30.3 ^a
Appreciating game design	.79	95.8	18.8 ^b
First game	.81	97.9	13.7 ^a
Real-life action	.70	93.7	8.6 ^b

^aKrippendorff's $\alpha > .80$.

^bKrippendorff's α between .667 and .80 only allowing tentative conclusions.

of society's low regard for friendships formed in gaming communities: "I also met a lot of people (who I've never met in person) who I would consider better friends than people I see on a daily basis. Sad, but true."

Besides references to "community," we also found 243 messages (25.2%) describing how players felt stimulated to consult other works of art because of gaming. However, when distinguishing between participation in traditional art and in video game culture, a different picture emerges: participation in traditional arts was mentioned in merely 2.4% ($n=23$) of the messages. Despite their low prevalence, these messages offer a perspective on how games involve players in music, architecture, or literature:

Other games that have impacted me were *Eternal Darkness*, which (in addition to having an amazing narrative) led me to begin reading H.P. Lovecraft, which I love. Also *BioShock* led me to seek out and read Ayn Rand's *The Fountainhead* and *Atlas Shrugged*, which I also feel is a positive impact.

Some scholars are now using video games as tools for promoting literature and poetry (Gerber, 2009). Therefore, we also measured how often players mention how specific games stimulated further participation in game culture (23.4%, $n=226$): "NBA Jam got me into sports games. [...] OVERALL I would say *Super Metroid* is what made me love games like I do." A closer examination of the data shows that these games are not

necessarily the *First Game* (13.7%, $n=132$) they played, as the positive correlation between *Civilization* and *First Game* is rather small ($r=.21$, $n=964$, $p<.001$).

Self-development. The second most frequent cultural rhetoric was *Self-Development*. More than a quarter of the messages (26.2%, $n=253$) present a change in perspective, sometimes leading to a revision of attitude or personality.

Within the academic literature, Poels et al. (2014) revealed that intensive game play can shape players' perceptions and associations because "elements from the game world can trigger thoughts and imagery outside the game world, influencing the perception and interpretation of stimuli in everyday life" (1). In the forums, we found messages illustrating this development:

It sounds silly, but exposing myself to a lot of video games, books, and movies since I was young has certainly affected my outlook on life and worldview. Many people scoff at the archetypal hero and the notions he or she throws around, but those are things I've internalized and worked into the way I see things.

Besides altering perceptions, we also found many reports of how games persuade players to take on divergent perspectives and/or adopt new beliefs. These forum messages confirm previous claims that video games are a medium with expressive underlying rhetorical processes (Bogost, 2007)—yet, further research is necessary to clarify the exact nature of these persuasive processes:

For me, *Lost Odyssey* would have to be the one game in my life that has really altered my perspective of things. After playing it, I began looking at things very differently. After all, having just spent the last however many hours seeing the world through the eyes of a man who could never die, and always lived on regardless of those he left behind, you can't help but be affected in some way.

This message illustrates that games can evoke a change of mind and supports the claim that video games can be considered, in Kenneth Burke's terms, "equipment for living" because they both offer a perspective on how other people interpret specific problems, dilemmas, and situations in life and suggest potential ways of dealing with them (Voorhees, 2009). However, Burke also warned that new perspectives are not necessarily better, which is reflected in some of the forum messages: "For me, games like *Dead Space 1* and *Metal Gear Solid 3* made me realize that women can't be trusted with nothing."

Some media scholars claim that changes in attitude can result in revisions of a person's identity. Video games stimulate experimentation with identity, as they allow players to behave and represent themselves in distinctive ways that are free from immediate and direct real-life consequences (Turkle, 1995). This play with self-representations can in turn affect the player's real-life identity, a process which Yee and Bailenson (2007) have named the Proteus effect:

The *Half Life* series, *Mass Effect* series, *BioShock*, *Fable 3*, *Call of Duty: Modern Warfare 1 & 2* (and probably a few others [...]) have altered how I look at and go through life for the better (I tend to think things through a bit more and think more about the consequences).

Personal well-being. In 24.5% ($n=236$) of the messages, the cultural rhetoric of *Personal Well-Being* was conveyed. This category includes pleasure/enjoyment, self-reflection, escapism, and the therapeutic use of games.

According to Sweetser and Wyeth (2005), player enjoyment is the “single most important goal for computer games” (p. 1). Indeed, many forum messages mention pleasure as a memorable experience: “Basically, I play video games near everyday for a few hours a day. Its just something I do for fun I guess.” However, similar to many scholars (e.g. Gee, 2003), players also criticized pleasure as a life-changing experience that is central to video gaming: “No video game has ever impacted my life. They’re merely entertainment, not life changing events. Getting through boot camp, hearing i was a father, those are life changing events friend.” This minimization of pleasure has previously been documented in literary studies, where Ross (1999) showed that some readers do not consider pleasure a sufficient answer to the question of how books can change our lives. Likewise, players might also rank pleasure low on the cultural hierarchy.

Academics argue that games can be beneficial in other domains of *Personal Well-Being* besides mere enjoyment. Ryan et al. (2006) insist that games should be studied for how and when they provide immediate psychological satisfactions and add that the impact of games on well-being is more profound when players feel competent during play. In addition, Allahverdipour et al. (2010) found that, in contrast to excessive gaming, only moderate play supports *Personal Well-Being*. Forum participants claim to be aware of the dangers of playing too long and often associate excessive play and addiction-like practices with the genre of MMORPGs. A typical example is the player claiming that World of Warcraft has affected him by “fucking up a year of my life.”

However, players differentiate between excessive play and temporarily escaping daily life: “To me, gaming is mostly about relaxing, relieve stress and get a little lost in world different from the real one, where you don’t have to worry about pretty much anything.” Video games appear to offer relaxation and a withdrawal from our highly competitive society, which is ironic since most video games thrive on competition (Turkle, 1995). Within academic rhetoric, escapism has a rather negative connotation as it was found to correlate with deteriorated well-being (Kaczmarek and Draskowski, 2014). Yet, Gee (2007) argues that “there are escapes that lead nowhere, like hard drugs, and escapes like [...] gaming that can lead to the imagination of new worlds, new possibilities to deal with those perils and pitfalls, new possibilities for better lives for everyone” (p. 12).

Besides escapism, players also report using games more actively as a form of self-medication or therapy:

Worms: Armageddon broke me out of my shell back in high school and was a major factor in stamping out my depression.

Final Fantasy VII helped me get through with a very tough spot in my life where I was contemplating suicide. Thus, it’s one of my forever-favorites.

Research also suggests that players can use video games to reduce depression and hostile feelings through mood management (Ferguson and Rueda, 2010), and recently, scholars have also started advocating the use of video games in institutionalized rehabilitation and therapy (Ceranoglu, 2010).

Catharsis. References to *Catharsis* were found in 16.3% ($n=157$) of the forum messages. Within media studies, *Catharsis* has often been conceptualized as reducing feelings of aggression or venting frustration. However, this interpretation has received substantial criticism since laboratory experiments did not find consistent evidence of reduced hostile impulses shortly after playing violent video games (Bushman et al., 2001). Nonetheless, we found many forum messages describing how video games provided opportunities for venting anger and aggression:

Violence in video games is fun and has no negative impacts on me outside of video games, if anything taking out my anger by curb stomping some zombies in a video game is much safer than me taking out my anger by curb stomping people IRL.

Of course, such messages neither confirm nor falsify that gaming affects behavioral impulses as they merely reflect players' beliefs instead of behavior. Yet, we found additional forum messages such as "it helps me relax, laugh when I'm playing with friends and forget the problems at times," which did not focus on cathartic effects associated with aggression, but rather associated games with a release of stress and sadness. This is consistent with the original Aristotelian interpretation, which also addressed identification with characters or ideas, and the search for emotional and intellectual release. As our study conceptualized *Catharsis* accordingly, we could identify forum messages such as the following:

Video games were important to me as a youth. [...] When shit would go bad with my family, with my father, and it always did, I would go and play video games for as long as I could. [...] Still being in elementary school, I knew no other ways to deal with my problems. I would feel better when all I could hear was the battle music from Final Fantasy, or the aggressive [sic] screams from Bloody Roar. [...] I realized that games [...] remained the best way for me to release tension.

Education. Within academia, the relation between video games and education is an important and well-documented field of interest (Gee, 2003). Similarly, more than one out of 10 forum messages explicitly refer to *Education* (13.7%, $n=132$). However, where research mainly addresses two perspectives on commercial games and education (Linderoth, 2012)—the use of video games as tools in education and the analysis of how they operate as powerful learning environments—almost all forum messages mentioning *Education* stick to the latter perspective. Few players mention educational games. In comparison, many others claim to have learned something from entertainment titles such as *Age of Empires* or *Call of Duty*: "Through Age of Empires and Age of Mythology, I learned a bit of interesting information about history and mythology."

Players seem eager to explain what they have learned through game play. This contrasts with academic literature, where content has received surprisingly little attention, with leading authors even explicitly avoiding the discussion (Gee, 2003). Potential explanations could be the preference for teaching higher order thinking skills rather than facts and figures, hesitation to get embroiled in the contentious debate about potential negative effects, and the lack of a clear link with the traditional school curriculum—an important factor in the adoption of game-based learning (De Grove et al., 2012; Squire,

2002). Players were less hesitant and discussed freely what specific knowledge they had gained, such as “Pokémon taught me that water conducts electricity.” Yet, instead of providing details, players also often reported how video games had stimulated their curiosity, thus raising interest in school subjects such as physics, history, and philosophy:

The Chrono series spurred my interest in time travel and parallel dimensions. So much so that I’m familiar with scientific theories dealing with string theory, and the 11th dimensions. I plan to eventually write a fictional story pertaining to that subject ... “the butterfly effect.”

Other recurring perspectives show that games can assist players in becoming more competent in their native language and in learning the basics of foreign languages:

Playing games like Final Fantasy VII and Diablo helped build vocabulary for the SAT. Honestly, somebody should put together a list of must-play videogames to help your SAT vocab.

Political instrument. Political games are said to enrich players’ knowledge of governance and political discussions with friends through the creation of a political self (Neys and Jansz, 2010). However, in our data, we hardly found any explicit political references ($n = 12$, 1.2%), suggesting few players consider the political potential within the question of how video games changed their lives.

In addition, because of the low prevalence, our data could prove nor disprove the common belief that young people are alienated from and cynical about politics (Buckingham, 1999: 178). Of the 12 messages, 4 reflected such cynicism:

Metal Gear Solid and Metal Gear Solid 2, by far. I don’t think I’d be so intrigued with the game of politics and governmental corruption if it wasn’t for these games. [...] I’d actually argue that The Patriots are essentially a fictional representation of the shadow government (probably comprised [sic] of heads of industry and the world central banking system) that most likely has influence over our [sic] government today.

Street et al. (2012) argue that video games evoke political discourse by provoking debate about the impact of gaming. Players position themselves in this debate by demonstrating awareness of gaming’s social construction and the capacity to separate the real and the game world. This supports Buckingham’s (1999) plea for a broader definition of politics to capture the everyday political experiences of young people and the impact of popular media on politics. As such a broad conceptualization overlapped with other cultural rhetorics, the low prevalence of *Political Instrument* is to be understood in relation to a strict definition of politics.

Additional categories accounting for the game context

Significant part of life. Besides the cultural rhetorics distilled from Belfiore and Bennett (2008), we included categories to explain additional variance in the forum messages. An important addition is the category of *Significant Part of Life*. More than one out of three messages (30.3%, $n = 292$) contained references to how long a specific game was played, with some even arguing that a specific game had become part of their gaming biographies:

Megaman 7: Probably the game I remember most from childhood, [...] I was obsessed with the game, I even have the final password memorized to this day: 1415558578236251. For a child, I thought that was pretty impressive.

To examine whether the time invested in a specific game is related to indications of pleasure, we calculated the correlation coefficient for *Significant Part of Life* and *Personal Well-Being*, revealing that both categories correlate only weakly ($r=.16$, $n=964$, $p<.001$).

Appreciating game design. Many players also articulate how game design made them reflect on the medium itself (*Appreciating Game Design*, 18.8%, $n=181$) because they exhibited innovating game play mechanics or fascinating narratives:

Braid—Similar to Portal, Braid takes two simple concepts (Super Mario Bros-style platforming and time-travel) and combines them into a stellar puzzle game. But more than that, it [...] results in a culmination of all that is best in art. If any game could ever be considered “artistic,” Braid is it.

According to Gee (2003), video games challenge players to think like designers. After all, only by figuring out the game rules and mechanics, players will be able to master the game. Within the forums, many players claim that they are indeed “learning about and coming to appreciate design and design principles” (p. 49):

Metal Gear Solid 3: Snake Eater—I consider it to be the pinnacle of depth in gameplay. With every playthrough, I was discovering new gameplay techniques that I hadn’t noticed before. Nearly every other game out there seems shallow by comparison.

Real-life action. So far, we discussed changes in people’s self-perceptions and left out whether video games can cause *Real-Life Action*. We found indications that the impact on people’s lives surpasses attitudes and intentions. For example, many players discussed taking on hobbies (“I got into skateboarding and punk after i played the first Tony Hawk Pro Skater”), and for some, video games have even influenced their career ($n=83$, 8.6%):

Believe it or not, Fallout 3 may end up being responsible for my life’s work, and it’s not the game itself but one little piece of the audio that’s responsible. I got hooked on Galaxy News Radio [...] I thought to myself, “whatever happened to good old-fashioned radio plays like that?” Then I thought “with the advent of the podcast, this old content delivery form could be brought back to life!” So I put an ad on Craigslist looking for writers [...] We’re up to a ten-person creative and acting team [...] Plus, once our show goes live in May, it could be the spark plug for an Internet radio station. [...] How’s that for gaming making life better?

Conclusion

By analyzing players’ positive experiences using a theory-based coding scheme that is attentive to the wide array of effects that have been ascribed to the arts, this study offers a broad perspective on the attributed impact of video games. We found traces of most arts-centered

categories in players' forum messages. The results show that players refer to cultural rhetorics, such as "Civilization," "Self-Development," and "Personal Well-being," that are central to the philosophy of the impact of the arts (Belfiore and Bennett, 2008). Furthermore, our study has revealed additional categories for studying discussions about video gaming: "Significant part of life," "Appreciating game design," and "Real-life action."

Findings in line with previous research

In the "Results and discussion" section, we addressed many similarities in how players and academics define and interpret the positive effects of games. As suggested in the literature, players indeed report making friends in-game and reflect on the quality of those online friendships. Players on the forums also confirm that games can serve as equipment for living. Additionally, by taking on the role of virtual characters and their perspectives, players are susceptible to the Proteus effect. Furthermore, players are well aware of the presumed dangers of excessive play. As scholars point out, moderation can enhance well-being, which players also report in their comments. Also, pleasure is not that often reported as a profound impact of gaming on the lives of the players, which is in line with academic discourse and could be exemplary of players' eagerness to position games as a legitimate form of media, even art. Finally, we found evidence that many gamers indeed came to appreciate game design.

Findings that problematize previous research

Our analysis also exposed how many forum messages problematize concepts and ideas commonly used by academics.

First, the idea that players have become omnivorous in their media consumption was not reflected in the forum messages, as video games were not often reported as an incentive for reading literature or attending theater. Players on the forums appear to be on a cultural diet of video gaming and are only drawn to other works of art when there is a clear and straightforward thematic overlap (e.g. between BioShock and the work of Ayn Rand).

Second, many players challenge the overly negative conceptualization of the impact of video games in the academic debate. With regard to escapism, players provide indications of improved feelings of personal well-being, for example, by traveling to virtual worlds. This also pertains to the call for a broadened perspective on catharsis to include the relief of stress and pain through mood management. In order to attend to the cultural discussion about video games as reflected in the forum messages, scholars should widen the scope of catharsis by refining and broadening the concept (see Ferguson, 2010).

Third, in contrast to research on mental health risks as a consequence of video gaming (see Ferguson, 2010), we found that many messages rather focus on the psychological benefits. This might inform research on the use of video games in institutionalized therapeutic practice. According to Ceranoglu (2010), many therapists and scholars are still hesitant to use video games because of perceived negative effects. Based on players' descriptions of gaming as self-medicating—for both daily concerns (e.g. stress relief) and serious psychological traumas (e.g. abuse)—we suggest a reassessment of this negative evaluation through further research on the testimonies of players.

Fourth, we found similar criticism on the concept of game-based learning. While the academic debate mainly focuses on the introduction of video games in education to stimulate the acquisition of attitudes and skills, players also tackle the question of content. They noted that games foremost raised their curiosity about a variety of (school) subjects.

Implications for practice

Given the nature of video games as a “site of struggle” (McAllister, 2004: 24), the results of confronting cultural rhetorics reflected in forum messages with academic research about video gaming have implications for other stakeholders in the debate about the impact of video games.

Salen and Zimmerman (2004) rightly point out that *game designers* should consider dominant ways of thinking within culture when constructing characters, designing plots, and creating moral dilemmas. Similarly, our research could inspire game design by clarifying how players perceive the multitude of video games’ effects. Knowledge about these cultural rhetorics can help designers to align or even detach themselves from conventional perspectives, thus inspiring or revitalizing game design. Additionally, our results can inspire *marketeers* to promote video games using a much broader palette of emotions and beliefs than the rather clichéd “promise of sex, violence and glory on the electronic battlefield” (Egenfeldt-Nielsen et al., 2008: 139).

Because of the contentious nature of the debates about the impact of the arts, it often proves difficult for *policy makers* to find clear-cut evidence for making grounded decisions. Therefore, policy makers often turn to an economic logic. Belfiore and Bennett (2008) have tried to broaden the agency of policy makers by reconnecting governance with historically constructed cultural rhetorics. We have attempted to relate these cultural rhetorics to how they are conveyed in the personal stories of players. By taking into account these personal stories, policy makers might further improve the democratic base for justifying their decisions.

Limitations and directions for future research

Our coding scheme was deduced from a generalized theory about the impact of the arts that does not explicitly differentiate between artistic expressions and art forms (Belfiore and Bennett, 2008). Arguably, our findings could have been different or more pronounced if we would have distinguished between types of play or game genres. Within the academic debate about the impact of video games, there is a convention that playing a shooter game like *Counter-Strike* will lead to *Catharsis*, massively multiplayer online games (MMOs) like *World of Warcraft* to *Community*, and simulation games like *Europa Universalis* to *Education*. Future research could tackle this by addressing the issue of game genres and by accounting for the different ways of game play.

Also, as Hsieh and Shannon (2005) point out, within the confines of directed qualitative content analysis, it is “more likely to find evidence that is supportive rather than nonsupportive of a theory” (p. 1283). However, this risk is reduced because the theoretical basis of our coding scheme is embedded within the tradition of cultural policy and the

history of ideas, rather than the study of (the impact of) video games. This might provide the necessary distance between the research instrument and the data.

It is also important to note that our coding scheme was built on a historical overview. Our goal was to embed the question about the impact of video games within a broader discussion about the impact of the arts. Other scholars might target the relation between games and play by using a coding scheme based on Sutton-Smith's (1997) rhetorical framework, thus clarifying the particular functions and ludic forms that might underlie both. An important question remains whether we should strive for further delineating the categories or whether we should accept the significant overlap between many of these historically constructed cultural rhetorics (e.g. when taking on a broader approach to politics). On the one hand, a clear delineation might help to address specific research questions such as the impact of gaming on well-being, but on the other hand, specification might be necessary or fruitful when taking on a broader approach to the research of complex cultural rhetorics about the impact of video games on players' lives.

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Author biographies

Jeroen Bourgonjon works as a Research Foundation—Flanders (FWO) fellow at Ghent University. His research focuses on the relation between literacy, culture, technology, video games, and education. The title of his upcoming PhD is “Video game literacy: Social, cultural and educational perspectives.” More info can be found at <http://www.onderwijskunde.ugent.be/jeroen>

Geert Vandermeersche is a Postdoctoral Researcher at the Department of Literary Studies (Ghent University). He completed his PhD (“Literature Teaching: The Narrative Construction of a Discipline”) at the Department of Educational Studies in 2013. His work focuses primarily on studying the intersections of literature, and educational and narrative theory.

Bram De Wever is a professor at the Department of Educational Studies (Ghent University). His research focuses on technology-enhanced learning and instruction, peer assessment and feedback, computer-supported collaborative learning activities, and inquiry learning in higher education.

Ronald Soetaert is a professor at the Department of Educational studies (Ghent University). His fields of interest include the study of rhetoric, media, literacy, and culture. In addition to numerous articles in Flemish and English, he also published various books and book chapters including “De cultuur van het lezen” (2006) (*The Culture of Reading*).

Martin Valcke is currently head of the Department of Educational studies at Ghent University. As a full professor, he is specialized in innovative teaching and learning approaches, math education, and information and communications technology (ICT) in education. Part of his research is set up in developing countries aiming at establishing innovative higher education practices, curriculum development, and management structures. More info can be found at http://users.ugent.be/~mvalcke/CV_2012/