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“I am a rogue night elf”: Avatars, gaming and *The Big Bang Theory*

ABSTRACT

CBS's *The Big Bang Theory* (TBBT) frequently exhibits elements of video games and gaming culture. The author uses subculture theory to consider the representation of video games, gamers, and their avatars within popular culture. This paper investigates the representation of avatars within the characterization of gaming subculture on the TBBT. The author performed a content analysis of the program's six seasons, examining the relationship between the show's video game playing characters and their avatars. This investigation found that almost half of the scenes that contained video gaming activities contained some aspect of avatars. TBBT reifies gaming as a subculture through the relationship between the characters and their avatars. Examining the representation of these relationships is essential to understanding the representation of the gaming subculture in the mass media and within culture at large.

KEYWORDS: *Subculture, Gaming, Avatar, Television, Content analysis.*

Television situation comedies have long exploited quirky subcultures for laughs, from Desi Arnez and his rumba beat of *I Love Lucy*, to the greaser gangs of Laverne & Shirley, or even the lascivious libido of Jack on *Will & Grace*. The representation of specific subcultures on broadcast television is important in how they inform mainstream audiences about a particular subculture and reinforce boundaries between mainstream culture and specialized subcultures. The representation of subcultures within mainstream culture is often exaggerated and even stereotyped to reinforce these boundaries, discursively created through the television program. This situation holds true today as television's most popular and profitable sitcom exploits the antics of gamers and gaming culture. CBS's *The Big Bang Theory* (TBBT) is a ratings juggernaut third in the Nielsen ratings during its sixth season with an average of over 19 million viewers tuning in each

week ("Nielsen Ratings"). *TBBT* frequently exhibits elements of video games and gaming culture.

This paper examines the representation of video game subcultures on *TBBT* through an investigation of player agency and controllable objects (Linderoth, 2005) within the characterization of gaming and gaming culture. Jørgensen (2009) notes that avatars "must be a functional extension of the player into that gameworld both emotionally and by allowing the player direct action into it" (p. 2). Avatars represent the site through which players interact with the gameworld and are indicative of a player's relationship with it.

The author performed a content analysis of the *TBBT*, examining the relationship between the show's video game playing characters and their avatars. *TBBT*'s representation of these relationships is essential to understanding the representation of the gaming subculture in the mass media. This analysis will provide a greater understanding of a particular representation of the gaming subculture within mainstream American popular culture.

THE BIG BANG THEORY

CBS describes the show as follows:

Leonard and Sheldon are brilliant physicists, the kind of "beautiful minds" that understand how the universe works. But none of that genius helps them interact with people, especially women. All this begins to change when a free-spirited beauty named Penny moves in next door. Sheldon, Leonard's roommate, is quite content spending his nights playing Klingon Boggle with their socially dysfunctional friends, fellow CalTech scientists Wolowitz and Koothrappali. However, Leonard sees in Penny a whole new universe of possibilities... including love. (CBS, 2012)

The description is telling in how it reinforces stereotypes of "geeks" and gamers, distinct though not mutually exclusive categories; they are often seen on the show as one and the same. Gamers are seen as male, socially inept, awkward around women, and slightly dumb despite their high intelligence and advanced degrees. This image is often played for comedic effect, using Penny as the audience stand-in against the comedic foil of the boy geniuses. In this series, Penny acts as the mediator for the audience to relate to these highly intelligent but unconventional men, as well as focus point through which the boundary between the gamer subculture and mainstream culture is constructed.

SUBCULTURE THEORY

In *Subculture and The Meaning of Style* (1979), Dick Hebdidge defines a subculture as a group of like-minded individuals who feel neglected by societal standards and develop a sense of identity different from the dominant one. While Hebdidge and Cohen both studied groups considered to be deviants, their conception of a subculture applies to any number of groups with values different from that of the so-called “mainstream” culture. As Cohen (1972) theorized, subcultures are made up of individuals who resolve issues of their own societal status by promoting values that make their own characteristics status-worthy.

Williams (2011) calls attention to a distinction in Gelder’s (2005) definition of a subculture, between groups seen as “non-normative” and groups seen as “marginal” (p. 5). There is a difference between those particular subcultures and those considered simply different from the norm. Williams argues that subcultures today are “often characterized by either perpetuating non-normativity or by temporariness and liminality than by perpetuated marginalization” (p. 5). Copes and Williams (2007) argue that both mainstream cultures and subcultures are dialogically constructed; the boundaries between the two are constantly reconstructed and are not stable. Williams (2011) describes this negotiation as “an ongoing process of (re)classifying certain tastes and behaviors as legitimate or illegitimate” (p.10). For Williams, fan and participatory cultures represent subcultures because members of the group are “grounded in non-normativity” (p. 177) and situate themselves at the boundary between commitment and resistance to mass culture. Lastly, fan cultures are concerned with “the reification of insider authenticity and the quest of subcultural capital” (p. 179). Participation in fan cultures means participating in particular events that offset oneself as part of the mainstream. In his work on fan subcultures, Henry Jenkins (2006a) notes the importance of these groups as innovative creators and “central to how culture operates” (2006b, p. 1) through participation in “grassroots convergence” (2006b, p. 155). The portrayal of gamer culture as part of geek subcultures on TBBT demonstrates the prominence these subcultures within pop culture as a whole.

For the purposes of this paper, TBBT represents a site through which gaming is articulated as a subculture. As Williams (2011) notes, subcultures must constantly define themselves against mainstream culture. TBBT has the tendency to simplify complex subcultures, but it also has the ability to shape public conceptions of games and gamers.

GAMING CULTURE

According to the *PEW Internet and American Life Project*, 53% of American adults play some kind of video games, either on a computer, gaming console, cell phone, or handheld gaming device (Lenhart et al., 2008).

Yet those who avidly play games are often seen as part of a strange subculture, as Shaw (2010) notes, one filled with late-night button-mashing sessions with other players from halfway around the world, completing quests with other socially inept guild members, and suffering from repetitive motion injuries from playing too many Nintendo games and not enough real-life sports, all aspects of gaming portrayed in *TBBT*.

Consalvo (2007) argues that gaming is too large and diverse a world to qualify as a subculture (p. 3). While Shaw (2010) agrees that there are a vast array of both types of players and games, she asserts that video game culture is defined more narrowly, as a subset of users, sometimes described as “serious gamers,” who play specific kinds of games: immersive, time-intensive, usually multi-player games that involve an element of violence (p. 404–05). Video game culture, for many, goes beyond the game play itself. Winkler (2006) defines game culture as being “marked by modes of dress, specific linguistic jargon, and a sense of solidarity. Gamers often wear clothing that references specific games, comics, television shows, or movies that are not widely known outside of a small following” (p. 147). These external markers of gaming culture are also prevalent on the television show *TBBT*, which often equates gaming culture with geek culture. This paper argues that *TBBT* reifies these conceptions of gaming subculture Shaw (2010) discusses through its representation of gamer/avatar relationships.

AVATARS

The avatar, the figure that represents the player within a game world, is one of the most studied aspects of video games, as it represents the “the user’s representative in a fictional universe,” (Filiciack, 2003, p. 89). Navarro (2012) describes it as having “a dual role as a set of mechanics and a protagonist character, thus providing dual embodiment that results in a relation of identification” (p. 63). Studying avatars means studying the nexus of interaction between the player and the game, the central component of the gaming experience that gives meaning to the interaction (Kucklich, 2006). Gamers’ conceptions of their avatars, as Waggoner (2009) argues, play a role in their conceptions of the game, their conceptions of themselves, and the importance of the activity of gaming within their everyday lives. For the *TBBT*, the representation of the relationship between player and avatar is an important aspect of the gaming subculture, as “serious gamers” (Shaw, 2010) have a greater identification with that avatar and the world of game play. As Williams (2011) describes, subcultures constantly redefine their identity against mainstream culture; the relationship between avatar and player is one of the strongest examples of where that distinction happens on *TBBT*.

METHODOLOGY – RESEARCH QUESTIONS

This study considered the following research questions:

- 1) How does *TBBT* represent gaming as a subculture?
- 2) How do the characters reify their membership in the gaming subculture through their relationships with their avatars?
- 3) Which of the typological representations was most prominent in the data?

DATA COLLECTION

The author performed a content analysis of the first six seasons of *TBBT*, containing 135 22-minute episodes. Scenes were the operationalized units of measurement.

Episodes on *TBBT* theory are broken into scenes in one of three ways:

- 1) A simple animated transition of a moving molecule with spinning electrons.
- 2) A fade-to-black transition that usually signifies a commercial break.
- 3) a slight change in location. An example might be from Sheldon and Leonard's apartment to a laboratory or office at Cal Tech. The author determined scenes and the number of scenes with the assistance of a fan WordPress website (<http://bigbangtrans.wordpress.com>) containing transcripts of the show detailing scenes. For example: "Scene: Outside Penny's door. Leonard knocks." This website split scenes according to the three context markers noted above as well.

Any scene in which a character was seen playing a video game, discussing or commenting on a game as it was being played, or referencing a video game or game situation was recorded. Scenes were transcribed using the website, closed captioning, and discourse analysis from the author. Dialogue was transcribed and placed in an Excel file where it was analyzed and coded.

CODING

Coding categories were created; if a particular scene had more than one instance of these parameters, the data was still coded for the one scene and not for each individual instance. This allowed for a more holistic analysis, freeing the author from keyword searches often too small to provide content and large enough to provide context.

During the course of this study, there were 79 scenes within the 135 episodes with video game references for analysis. During coding, the presence of the avatar was noted. In each instance where an avatar was included, the author included this as a binary measurement, yes or no, along with a qualitative measurement of the nature of the representation, as described below.

The author created a typology, with its coding scheme derived from the data, to describe the act or presence of gaming in individual scenes. Creating typologies for motivations and behaviors can be a productive way to describe and code them (Raudenbush, 2012; Green, 2001). Fine (1983), for example, derived different frame categories for the different worlds through which fantasy role players operate.

The qualitative categories used by the author in the present study showed the function of gaming and the nature of its representation within the scene in a utilitarian, easily categorized way. These categories were derived from the data and based on motivations for gaming widely discussed within game studies literature. This analysis examines the representation of the gaming subculture as acting through these categories and avatars are the conduit through which this representation happens.

The four typological representation categories (social, cultural, power, and economic) are described below:

1) – SOCIAL: A driving purpose of video gaming is to socialize with friends. Pena and Hancock (2006) note the important element of sociability in gaming, arguing gamers in collaborative, task-based games communicated more frequently about socioemotional content than task-based content. This category refers to interactions that emphasize the social aspects of gaming, that center around social interactions between the characters on TBBT. For example, in S01:E07, “Halo night” is described as a weekly social event for the four friends:

SHELDON: If we’re all through playing mock the flawed technology, can we get on with Halo night? We were supposed to start at eight, it is now 8:06.

LEONARD: So? We’ll start now.

SHELDON: Yes, first we have to decide if those lost six minutes will be coming out of game time, bathroom time or the pizza break. As a character, Sheldon is preoccupied with keeping to a schedule in all aspects of his life, but this interaction demonstrates the important social function of gaming within their friend group in that it is a weekly scheduled event.

2) – CULTURAL: This category refers to an interaction that reflects the norms of video game culture. As Winkler (2006) noted, this culture includes not only the act of gaming, but social conventions as well as the out of game marks of identity (pop culture affinities, references to classic games, etc.) common within the culture. For example, in the “The Dumpling Paradox” (S01:E07), Penny plays Halo for the first time with Sheldon, Leonard, and Raj. Sheldon complains that Penny doesn’t understand the conventions of the game:

“[EXPLOSION] PENNY: Ha-ha! There goes your head again.

SHELDON: Okay, it’s not good sportsmanship to shoot somebody who’s just respawned. You need to give them a chance to -- Now come on.”

The function of this interaction is to demonstrate how Penny has not been enculturated into gaming culture, and her actions violate its norms.

5. See http://www.theesa.com/facts/pdfs/ESA_EF_2011.pdf

3) – POWER: As video games are friendly forms of competition, interactions that involve gaming to demonstrate some kind of prowess are common. Volda, Carpendale & Greenberg (2010) note the importance of “trash talking” in building and maintaining hierarchies among individuals within a game to foster hierarchical divisions or to defend one’s space (p. 376). In S01:E15, for example, Leonard, Howard, and Raj fight over the opportunity to ask out Sheldon’s sister. Leonard finally announces a competition to settle the debate:

LEONARD: If we’re gonna fight over Missy, let’s do it the right way. The honorable way. (Time shift. Sheldon enters to hear sounds of fighting. It becomes apparent that the guys are playing Wii Boxing.)

HOWARD: Ow! Ow, ow, ow.

LEONARD: Take that. You want some more?

RAJESH: And he’s down.

In this example, the winner of the game not only asserts his dominance, but also wins a coveted prize. In his discussion of the avatar, Rehak (2003) describes the ways in which an avatar is a surrogate, and in this case, the Wii Boxing game represents a surrogate for Leonard’s impositional will.

4) – ECONOMIC: Economic interactions are those that call attention to the economics of gaming or within the gaming world. Humphreys (2004) argues for attention to not only the ways in which games are commodities, but how players become part of this dynamic as player actions become commodified and players own in-game virtual goods (p. 3). This economic value is best seen in season 4, episode 19 where someone steals the items in Sheldon’s *World of Warcraft* account. Sheldon first calls the police and then laments: “Three thousand hours. Three thousand hours clicking on that mouse, collecting weapons and gold. It’s almost as if it was a huge waste of time.” In this example, Sheldon reflects on the labor required to acquire those items within the game. Sheldon’s actions reflect how valuable these items are within the economy of the game.

Given that scenes often contained several minutes of dialogue and different game references, these categories were multi-categorical. A scene that highlights the social interactions between the characters when playing a video game may also reinforce aspects of gaming culture, for example.

RESULTS

The author found 79 scenes with gaming referents in 39 episodes. Interestingly, only 18 scenes containing gaming references appeared in Seasons 5 and 6. As the show has gained mainstream popularity, the show has tried to appeal to a larger audience, and the niche jokes surrounding gaming culture have decreased. As noted in an interview with *TV Guide*, creator Chuck Lorre has noted the important addition of showrunner Steve

Molaro in focusing on the characters' interpersonal relations, changing from an emphasis on the relationships between the four main male characters to include their significant others as well (Schneider, 2013).

In total, 24 different games were mentioned on *TBBT*. The games referenced range from those with more mass appeal, such as *Tetris*, *Wii Sports*, and *Dance Dance Revolution*, to those considered more central to avid gamers and gaming culture, such as *Halo* and *World of Warcraft*. The program also references vintage games like *Zork*, as well as casual social games like *Words with Friends*. *Halo*, a quintessential representative of gaming subculture, is most frequently mentioned.

DISCUSSION: AVATARS

Using the presence of the avatar as an investigation point, 45.6% of the scenes contained some aspect of avatars. The relationship between the character and his/her avatar shown on the show reifies the portrayal of gaming as a subculture. *TBBT* was rich with these discussions of characters' avatars and their relationship with them. In the very first episode (S01:E01) "Pilot," Howard does not delineate between his and his avatar's identities.

HOWARD: This is one of my favorite places to kick back after a quest, they have a great house ale.

PENNY: Wow, cool tiger.

HOWARD: Yeah, I've had him since level ten. His name is Buttons. Anyway, if you had your own game character we could hang out, maybe go on a quest.

PENNY: Uh, sounds interesting.

After describing game play in the immersive and expansive virtual world of *World of Warcraft (WoW)*, Howard invites Penny to join him online in play. Despite Howard's bravado, he realizes that his best attempt may be online in the virtual world. Howard can use his heavily armored and well-muscled avatar (traits not shared by the diminutive Howard) to impress her. The avatar represents everything Howard wishes he were: tall, athletic, powerful, and of great import, so much so that he owns a giant tiger comically named Buttons. But importantly, he does not separate this virtual identity from his own.

As a gamer, Howard exhibits what *TBBT* represents as a common relationship between gamers and their avatars: "The player has a series of tools to interact with the game: they act as her embodiment with the gameworld and usually coincide with (but are not limited to) the avatar" (Navarro, 2012, p. 63). Navarro's notion of player embodiment is interesting for this inquiry, because it suggests a merging of the players and their avatars. This dual agency is important as well, because it moves the avatar from simple game-control subject, i.e. the spaceship in games like *Asteroids* or *Arkanoid* or the arrow shooting elf in *Centipede*, to something more, an

interactive agent of the player within the immersive gameworld: "The avatar has a dual role as a set of mechanics and a protagonist character, thus providing dual embodiment that results in a relation of identification" (Navarro, 2012, p. 63). By representing this relationship on *TBBT*, the program presents this position as a natural one for gamers and as an essential aspect of the gaming subculture. The program reifies this subculture and gamers themselves through a specific subset of gaming practices, as individuals who play massive multiplayer online role-playing games (MMORPGs) and identify strongly with their avatars, who represent an idealized self.

Another instance of this dual embodiment of the avatar can be seen in Episode 3 of Season 1, "The Fuzzy Boots Corollary." The four main characters are shown executing a raid in *WoW*, with a rather unsuccessful result as Sheldon betrays the group for his own ends:

LEONARD: Forget the sword, Sheldon, help Raj.

SHELDON: There is no more Sheldon. I am the sword master.

HOWARD: Leonard, look out.

LEONARD: Damn it, man, we're dying here.

SHELDON: Goodbye, peasants.

[WHOOSHING SOUND ON LAPTOPS] LEONARD: The bastard teleported.

RAJESH: He's selling the Sword of Azeroth on eBay.

LEONARD: You betrayed us for money? Who are you?

SHELDON: I'm a rogue night elf. Don't you people read character descriptions? Wait, wait, wait. Somebody just clicked "Buy It Now."

HOWARD: I am the sword master.

Howard, of course, had just purchased the sword on eBay, becoming the sword master. In this scene, Sheldon is seen as an expert gamer, one who has adopted his avatar's persona in detriment of the raid and his friends' virtual lives. When Leonard challenges him regarding his betrayal, Sheldon responds, "I'm a rogue night elf. Don't you people read character descriptions?" Sheldon identifies so strongly with his avatar that his gameplay has changed to better represent the character. This behavior is antithetical to both Sheldon's personality and the typical cooperative style with which he and his friends play. Leonard recognizes the difference and asks, "You betrayed us for money? Who are you?" Within the context of the game and the personality type of his avatar, Sheldon becomes his avatar.

For gameplay to be a series of seamless action of the player and the game, "all player actions therefore are one step removed from gameworld" (Jørgensen in Navarro, 2012, p. 70). It should come as no surprise that in order to represent gaming and gaming culture to viewers possibly unfamiliar with gaming, this relationship between the gamer and avatar needs to be explored, and is shown by *TBBT* as an essential element of the gaming subculture.

The scene mentioned above also contains all four typological representations. The activity portrayed in the scene features a communal gaming session, where the four friends play *World of Warcraft* together as a social activity (social), yet this is also a competitive activity, as Sheldon obtains the sword and abandons his friends, only to have the sword taken by Howard (power). The scene represents elements of gaming culture, in portraying a collaborative mission within a role-playing game stereotypical of gamer culture as Shaw (2010) defines it (cultural). In this scene, Sheldon also acts against in-game social conventions in abandoning his partners, which represents social norms within gaming culture. Lastly, the scene represents economic aspects of gaming in how Sheldon capitalizes on his winnings and monetizes them by selling a virtual, in-game object on eBay, showing the overlap between in-game and real life economies.

TYPOLOGICAL REPRESENTATIONS

Of the typological categories of gaming presented, cultural was most often connected to avatar representations, demonstrating the importance of avatars in portraying the gaming subculture. Avatars were often present in scenes featuring the representation of power; *TBBT* often shows gaming as an active and competitive enterprise, what better way to display this competition but through the use of avatars.

Many of the references to economics of gaming within the series were also related to gaming culture, best shown through “The Zarnecki Incursion,” (Season 4, Episode 19) when Sheldon’s *WoW* account is hacked, and all of his possessions within the game are stolen. Howard and Raj try to help Sheldon track down his items within the gameworld, and Howard believes to have found some of Sheldon’s items: “Whoa, somebody’s auctioning off a jeweled ostrich bridle.” Sheldon replies, “No, Glenn’s was leather. He was a simple ostrich. Is. Is. I haven’t given up hope.” Penny sums up the situation at the end of the scene, “He was robbed of a bunch of imaginary crap that’s useful in a make-believe place.” Sheldon’s attachment to what Penny calls “imaginary crap” both reflects the culture of gamers and the economics and labor through which they operate. Like many representations of gaming on *TBBT*, this example also discursively constructs a boundary between the gaming subculture and mainstream culture. Penny’s comment is presented as a position the audience should also have; this is “imaginary crap” from a “make-believe place,” things that non-gamers, i.e., normal people, should not care about.

CONCLUSION

When studying a media representation of a subculture, it is important to understand how the media product represents that subculture, but it is also important to understand how the characters reify their position within the subculture. If we only saw the characters of *TBBT* playing games but never

refer to themselves as gamers or participants within the social norms of the gaming community, this example would be a representation of an activity rather than a subculture. Through the representation of avatars, however, the characters constantly define themselves as gamers. By contrasting the actions and interests of show's four main characters with Penny and therefore, with the audience, *TBBT* constantly defines the boundary between mainstream culture and this gaming subculture. In providing a mainstream audience with what are portrayed as "typical" gamer experiences, *TBBT* is an example of a popular view of the gaming subculture strengthened by the reification of the tropes the show promotes.

As Shaw (2010) argues, the popular conception of the gamer is much narrower than the demographics of those who actually play video games, and television programs like *TBBT* help to shape that conception. The depictions of certain relationships between the game player and his/her avatar on the show marks this relationship as part of the subculture, thereby distinguishing it from mainstream culture. As Shaw (2010) argues, these conceptions not only play a role in cultural attitudes about gaming, but can also influence the way academics conceive of and study these relationships. The aspects of gaming portrayed on *TBBT* marks gamers as "geeks," using a subset of games and gamer practices to stand for the increasingly diverse nature of games and those who play them. Programs like *TBBT* reify gaming culture and can shape cultural attitudes about gamers and video games as a whole.

REFERENCES

- CBS. (2012). About: The Big Bang Theory. Retrieved from http://www.cbs.com/shows/big_bang_theory/about/
- Cohen, P. (1972). Sub-cultural Conflict and Working Class Community. *Working Papers in Cultural Studies*. No.2. Birmingham: University of Birmingham.
- Consalvo, M. (2007). *Cheating: Gaining advantage in videogames*. Cambridge, MA: MIT Press.
- Fine, G.A. (1983). *Shared fantasy: Role-playing games as social worlds*. Chicago: University of Chicago Press.
- Gelder, K. (2005). Introduction: The field of subcultural studies. *The Subcultures Reader* (2nd Ed.) London: Routledge.
- Green, C. B. (2001). Leveraging Subculture and Identity to Promote Sport Events. *Sport Management Review*, 4(1), 1–19.
- Hebdige, D. (1979). *Subculture, the meaning of style*. London: Methuen.
- Humphreys, S. (2004). Commodifying Culture: It's Not Just about the Virtual Sword. In J. Heide Smith and M. Sicart (Eds.), *Proceedings of the Other Players Conference*. Copenhagen: IT University of Copenhagen, 6–8 December.
- Jørgensen, K. (2009). "I'm overburdened!" An empirical study of the player, the avatar, and the gameworld. In *Proceedings from DiGRA 2009: Breaking New Ground: Innovation in Games, Play, Practice and Theory*. Brunel University, London, UK.
- Kücklich, J. (2006). Literary theory and digital games. In J. Rutter & J. Bryce (Eds.), *Understanding digital games* (pp. 95–111). London: Sage.

- Lenhart, A., Jones, S., & Macgill, A. (2008). Adults and video games. Pew Internet & American Life Project. Retrieved from <http://www.pewinternet.org/Reports/2008/Adults-and-Video-Games.aspx>
- Navarro, V. (2012). I am a gun: The avatar and avatariness in the FPS. In G. Vorhees, J. Call & K. Whitlock (eds.), *Guns, grenades and grunts: First-person shooter games*. New York: Continuum.
- Nielsen Television – TV Ratings for Primetime: 2012–13 Season-to-Date. In Zap2it, Retrieved from <http://blog.zap2it.com/frominsidethebox/2012/05/american-idol-to-the-vampire-diaries-the-top-rated-tv-shows-on-each-network-for-2011-12.html>.
- Pena, J. & Hancock, J. (2006). An analysis of socioemotional and task communication in online multiplayer video games. *Communication Research*, 33, pp. 92-109.
- Raudenbush, D. T. (2012). Race and interactions on public transportation: Social cohesion and the production of common norms and a collective black identity. *Symbolic Interaction*, 35(4), pp. 456–473.
- Rehak, B. (2003). Playing at being: Psychoanalysis and the avatar. In M.J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 103–127). New York: Routledge.
- Rutter, J. & Bryce J. (2006). *Understanding digital games*. London: Sage.
- Schneider, M. (2013, January 28). Bigger Bang than ever. *TV Guide*, pp. 6-7.
- Shaw, A. (2010). What is video game culture?: Cultural studies and game studies. *Games and Culture*, 5, pp. 403-424.
- Voida, A., Carpendale, S., & Greenberg, S. (2010). The individual and the group in console gaming. *Proceedings from CSCW 2010* (pp. 371-380), February 6–10, 2010. Savannah, GA: CSCW.
- Waggoner, Z. (2009). *My avatar, my self: Identity in video role-playing games*. Jefferson, NC: McFarland.
- Winkler, W. K. (2006). The business and culture of gaming. In J. P. Williams, S. Q. Hendricks & W. K. Winkler (Eds.), *Gaming as culture: Essays on reality, identity, and experience in fantasy games*. Jefferson, NC: McFarland and Company.
- Williams, D. (2006). Virtual cultivation: Online worlds, offline perceptions. *Journal of Communication*, 56, 69–87.
- Williams, J.P. (2011). *Subcultural theory: Traditions and concepts*. Cambridge: Polity Press.