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Narrative and Commodity Form in Video Games

Julian Kücklich, University of the Arts, London

Abstract

The media form of commercial video games is inextricably intertwined with their commodity form. This interdependence of mediality and economics can also be discerned on the level of ludic narration. While early arcade games like Pac-Man *or* Space Invaders *did not have an end, in order to persuade players to insert quarter after quarter, console games such as* Super Mario Bros. *had to introduce a narrative in order to necessitate the purchase of a new game after they had been finished. Meanwhile, massively multiplayer online games such as* World of Warcraft *have reinvented the business model of arcade games by charging monthly fees for the privilege to play. But even stand-alone computer and video games are less fixed and closed than they used to be due to the online capabilities of PCs and 7th-generation consoles, and the ensuing stream of constant updates, patches and expansion packs. This leads to a liquefaction of the media form of digital games, which is in a conflict with the petrifaction caused by the ongoing commodification of play. This article will attempt to develop the concept of a "narrative economy" of digital games by tracing the historical development of commodified narratives of video games, and by relating them to the grand narratives of technology, capitalism, and globalization.*

Introduction

Is there a link between the narrative of video games and their commodity form? And, if so, how does this link manifest itself within the narrative economy of the games themselves? At first glance, these questions might seem far-fetched, but if one considers them from a media comparative perspective, they appear much more plausible. Examples for narrative forms that are directly linked to the commodity forms of their carrier media include the Victorian serial novel (see Feltes; Vann; Miller), superhero comic books (see Bongco; Smith and Duncan), television soap operas (see Cantor and Pingree; Hobson; Wittebols) and feature films (see Sedgwick; Wasko).

Similarly, some historians of video games (e.g. Herz) have identified a connection between narrative and commodity form. According to them, the development of narrative in console games occurred because the transition from arcade machines to consoles involved a change in the business model. While arcade games never ended as long as players kept feeding coins into the machines, console games had to come to an end in order to provide an incentive for players to go out and buy new games. It is certainly overly simplistic to attribute the narrativization of video games entirely to this transition, but it seems obvious that it was at least a contributing factor.

However, this is just one – albeit crucial – moment in the history of video games. If there is indeed a link between narrative and commodity form, this link should be observable throughout the commercial history of the medium. Therefore, the only way to test this hypothesis is to trace the narrative traditions of the video game from the medium's inception in American research labs in the 1960s to contemporary massively multiplayer games, and to relate these traditions to the way video games are commodified.

As a corollary, it becomes necessary to regard video games as an essentially 'liquid' medium, which only 'solidifies' into identifiable 'products' through the forces of commodification. However, the medium's liquidity re-establishes itself at key moments in its history, and it is at these junctures that it becomes possible to study the way that narrative and commodity form interact. The move from 'infinite' arcade games to finite console games is just one in a series of such moments.

In regard to its theoretical perspective, the following overview relies on the concepts and terminology of political economy, but in order to counter-act the tendency of political economists of the media to overplay the 'effects' of media to the detriment of the uses and gratifications of their users, I will make liberal use of concepts and terminology gleaned from literary theory, cultural studies, political philosophy, and related disciplines. In particular, I rely on a Ricœurian understanding of narrative as something which draws together discordant and contingent elements (see Ricœur), the concept of participatory culture (see Jenkins), and the notion of biopolitical production (see Virno).

Cold War Games

As befits a liquid medium, the beginnings of the video game are difficult to get a grip on. While many popular histories mention *Spacewar* (Russell et al.) as the first video game, others bestow that honour on *Tennis for Two* (Higinbotham). Whatever the case may be, it is significant that both games appeared during a historical period in which the Cold War escalated (1961 and 1958, respectively), that both games were developed on equipment paid for by the American military, and that both games dealt – implicitly or explicitly – with the latent conflict between the United States and the Soviet Union.

William Higinbotham's work at the Brookhaven National Laboratory had to do with calculating the flight paths of intercontinental missiles, but for an open day at the lab he decided to demonstrate this technology using the civilian metaphor of a game of tennis. The PDP-1, on which *Spacewar* was implemented, was a mainframe computer at the Massachusetts Institute of Technology which had been paid for with military money (see Pias). However, like other projects of Russell's Tech Model Railway Club (such as the Expensive Desk Calculator), the game itself represented a waste of those military resources.

In sharp contrast to *Tennis for Two*, *Spacewar*'s title and gameplay referred directly to the rhetoric and imagery of the Cold War. Its name was reminiscent of the 'Space Race' and its gameplay seems to be a pertinent illustration of Lester Pearson's description of the nuclear stalemate between the United States and the Soviet Union as a "balance of terror." In the game, two spaceships take shots at each other while trying to avoid being sucked into the gravity well of a star in the centre of the screen – an apt metaphor for the threat of nuclear annihilation.

This draws attention to the fact that the narrative of *Spacewar* is constituted not by the events that are depicted on-screen but by the narrative of the Cold War, which is itself the

result of the confrontation of two 'grand narratives': that of communism and that of capitalism. At the same time, the game is entirely removed from the realm of commodity exchange – it is a project rather than a product, or, in the words of Steve Russell: a 'hack'. Thus, it represents a virtuosic misappropriation of military funds for the purposes of enjoyment; it is an "occasion of pure waste" (Caillois 5).

When Nolan Bushnell tried to make *Spacewar* into a commercial product in 1971, rechristening it *Computer Space* (Bushnell and Dabney), the game proved resistant to commodification. *Computer Space*'s commercial failure is usually blamed on the difficult gameplay, but it seems equally likely that the game told a story that was not interesting any more. The Americans had won the Space Race, the Cold War had entered into a period of détente, and an oil crisis seemed likelier than a nuclear crisis. Instead, it was Higinbotham's tennis game that gave rise to the first commercially successful video game, *Pong* (Atari *Pong*).

Significantly, it appears as if *Spacewar* was not considered anybody's 'intellectual property', and nobody tried to prevent Bushnell from making money with a game that he had been introduced to as a student at MIT. *Pong*, on the other hand, was regarded as an infringement of Ralph Baer's patent for an electronic ping-pong game, and in 1975 Magnavox, the manufacturer of Baer's *Odyssey* console, filed suit against Bushnell's company Atari. After lengthy legal proceedings, Magnavox and Atari settled out of court. Thus, between 1961 and 1976 the video game changed profoundly. What used to be a piece of code that could be freely distributed and manipulated was now a piece of intellectual property that could be 'exploited'.

The parallel development of the adventure game genre is another point in case. Will Crowther's game *Colossal Cave* – aka *Adventure* (Crowther) – was never intended to be a commercial product, and featured no storyline to speak of. Instead it delivered description upon description of the Mammoth cave system in Kentucky, which the player could explore textually and, in theory, endlessly. It was only when Don Woods added monsters, treasures, and a scoring device to the game (equally oblivious of the concept of intellectual property as Nolan Bushnell) that the game started to resemble a narrative. Still, the game was not turned into a commercial product until affordable personal computers such as the TRS-80 became available in the late 1970s. It was marketed under the name *Zork* (Anderson et al.).

Zork was also the first game to feature an in-game economy. Early in the game, the player was provided with a 'trophy case', which could be used to collect the treasures hidden in the game world. This supplied the game with a rudimentary narrative: when all 19 treasures had been collected, the player received a bonus, and a map with further instructions, which allowed the player to finish the game.[1] Crucially, the game itself is set up as a trade of 'narrative capital' for 'ludic capital': After the player has expended much "non-trivial effort" (Aarseth 1) to ergodically drive the plot forward, she is rewarded with 350 points, and is relieved – rather unceremoniously – of her duties.

[1] Interestingly, this also means that the game is finite in a mathematical sense: as Bill Piercy has demonstrated, the game can be completed in 236 moves (see Piercy).

Becoming-Machines

In the following years, the in-game economies of video games grew increasingly complex. Classic arcade games such as *Space Invaders* (Taito), *Pac-Man* (Namco) and *Asteroids* (Atari *Asteroids*) introduced the gameplay concept of multiple 'lives' – i.e., if the player's on-screen representation was destroyed, she could have another go as long as she still had a life left. After all the player's lives had been lost, some games flashed the message "insert credit to continue," which meant that the player could buy more lives without forfeiting her progress.

However, in the absence of a narrative, progress could only be measured abstractly – i.e. in the form of a numerical score – and the only end these games could be said to possess was the moment when the score counter ran out of digits and 'rolled over' back to zero: thus, the maximum possible score in *Asteroids* was 99,990, because the game could not display more than five digits. In *Pac-Man*, the end was even more arbitrary: due to a software bug, level 256 cannot be played, and the maximum score that can be attained by a 'perfect play' is 3,333,360. This feat was achieved by Billy Mitchell in 1999 in about six hours of non-stop play (Ramsey).

While some video game historians (e.g. Kohler) argue that arcade games were provided with a narrative frame through the design of the arcade cabinets, these proto-narratives lack a crucial element: closure. While it is plausible to understand *Space Invaders* as a narrative about an alien invasion, in which the player takes the role of the protagonist in charge of defending Earth from the invaders, this story inevitably ends with the victory of the aliens. However, since the consequences of this victory are never revealed to the player, the narrative always remains unfinished.

It could be argued that the marketing for Arcade Games such as *Space Invaders* is based on a psychological trap, which implicitly promises narrative closure without ever delivering it, thus persuading players to drop quarter after quarter into the coin slot. However, it seems more productive to regard this as an instance of commodity fetishism, in which the consumer derives no use value from the purchased product. This implies that the use value of cultural products resides in the fact that they provide closure, while their exchange value, and thus their commodity status, derives from the fact that the recipient's desire for closure can never be satisfied completely.

While early capitalist cultural products, such as the serial novel, deferred closure for a long time by delivering the product in instalments, genuinely capitalist cultural forms like the Hollywood feature film created a need for repeated closure by establishing a 'star system' (see McDonald), which made it possible to produce self-contained narratives that provided momentary closure – but only until the next film starring the same actor or actress hit the screens. As befits a late capitalist form, the arcade game did away with

narrative closure entirely, and offered a fluid product which deferred the fulfilment of the user's desire interminably.[2,3]

Thus, a game like *Space Invaders* can only be invested with value if the user invests labour into them. I have already referred in passing to Aarseth's definition of ergodic texts as texts which require the user to work (*ergon*) along a path (*hodos*), and it now becomes evident that this is precisely the way in which video games create meaning. By expending non-trivial effort, the user invests not only labour but also her desire for closure (i.e., her desire to reach the end of the path) into the game, and thus uses the game as a mechanism of subjectification. As I have argued elsewhere (Kücklich "Cheating"), this is also the reason why video games can be regarded as 'becoming-machines'[4] (Deleuze and Guattari).

Ultimately, however, the public nature of arcades did not provide a setting conducive to processes of subjectivation. Therefore, it is hardly surprising that it is on the domestic technology of the games console that one finds the most accomplished expression of this economy of narrative desire. In particular, early console games such as *Super Mario Bros.* (Nintendo) found pertinent metaphors for the exchange of narrative capital for ludic capital. It seems perfectly apposite that it was Japan – which was very much the West's other in the 1980s – that delivered these metaphors to the West through a complex process of cultural translation.

Super Mario Bros., with its 'cute'[5] graphics and upbeat music, is instantly recognizable as a Japanese game, yet at the same time it contains Western imagery: Mario is an Italian-American plumber, Princess Toadstool wears the pink gown and golden crown of Walt Disney's *Cinderella*,[6] and the magic mushrooms that turn Mario into the giant Super Mario are straight from *Alice in Wonderland* (Carroll). The 'save the princess' narrative is reminiscent of Grimm's fairy tales, but as Mary Fuller and Henry Jenkins have demonstrated, it can also be interpreted as a modern-day version of the Pocahontas myth (Fuller and Jenkins).

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[2] It could be argued that the video game thus replaced the cigarette as the 'perfect commodity'. Drawing on Oscar Wilde's definition of a cigarette as "the perfect type of a perfect pleasure, because it leaves one unsatisfied" (Wilde), Regenia Gagnier has pointed out that the "cigarette is the perfect commodity because it is addictive, it creates the desire for more" (Gagnier 15). However, while the cigarette still leaves a material residue of the consumption process, the process of video game play is completely immaterial, and can thus be regarded as an even 'better' perfect commodity than the cigarette.

[3] This evacuation of use value from cultural products has its material complement in the branded products of late capitalism, whose 'brand value' can only be retained by using them sparingly, or not at all. One of the best illustrations of this 'pure' form of commodity fetishism is the re-invention of the sneaker, which transformed an every-day object into a collector's item (see Goldman and Papson; LaFeber).

[4] The term *devenir-machine* can be understood both as an object (becoming *machine*) and as a process (*becoming* machine). While it is the former sense that is foregrounded here, it should be clear that both aspects are complementary, and cannot be separated from each other.

[5] For a discussion of cuteness as a marker of 'Japaneseness', see (Allison).

[6] For a discussion of the 'Disneyfication' of the European fairy tale, see (Darcy).

This pastiche of Euro-American and Japanese imagery is mobilized to tell a story of endlessly deferred closure. Super Mario Bros. consists of eight 'worlds', each of which consists of four levels, and

> [t]he fourth level of each world is a castle filled with fireballs and pools of lava. At the end, Mario encounters the giant lizard Koopa […]. All of the Koopas […] save the one in level 8-4 are fake; after Mario defeats them he advances to the right to find not the Princess Toadstool […] but instead one of her mushroom retainers […], who informs Mario that the Princess is, in fact, in another castle." (Kohler 58-59).

However, even at the end of the game Mario's desire for the princess is not consummated – not even in a 'family-friendly' symbolical fashion. Instead, the game's ending consists of "a flat, motionless Princess congratulating Mario curtly before sending him on 'another quest,' a harder version of the original game" (61).

While Kohler regards this as "a step back in terms of narrative compared to the movie-like *Donkey Kong* games," it must be seen as a giant leap forward for the commodification of video games. The perpetual deferral of narrative closure (and the *jouissance* derived from the denial of pleasure[7]) not only made *Super Mario Bros.* the best-selling video game of all time – a title which it still holds today (see "Nintendo Records") – but also made Mario "more popular among children than Mickey Mouse, according to the Q-ratings of Marketing Evaluations, a company that measures the familiarity and popularity of celebrities and products" (Levy).

For a brief period which lasted approximately from the mid-1980s to the early 1990s, video games were completely self-contained, hermetically sealed,[8] products. Distributed on cartridges or CD-ROMs, they were largely immune to hacking, unauthorized copying, or other forms of manipulation, and manufacturers considered them as disposable commodities, which needed to be replaced at regular intervals. The business model for games consoles was the same as for disposable razor blades (the so-called 'loss leader' model): consoles were sold at a loss, which was later recouped through software sales.[9] However, as J.C. Herz has pointed out, this model depended on the "competitors' blades being incompatible" (Herz 117).

Intertextual Commodities

While console manufacturers protected their profits by 'locking out' their competitors, personal computers experienced a period of standardization. In the early and mid-1980s, the PC market had still been fragmented by a large number of competing standards –

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[7] In "Video Games: Inverted Pleasures," John Fiske and Jon Watts argue "that video games are essentially texts without meaning, their essence lies in what they do, in their productivity of *pleasure and resistance*" (Fiske and Watts 102, emphasis mine).

[8] Nintendo cartridges were sealed with the 'Nintendo Seal of Quality', which ensured the compatibility of the software contained in the cartridge with the hardware it was intended for. In conjunction with the Nintendo lock-out chip (see Gallagher and Park), it prevented the production of third-party software for Nintendo consoles.

[9] This business model based on 'deferred profit' thus mirrors the 'delayed gratification' model of the games themselves.

such as the mutually incompatible Commodore, Atari, and Apple standards –, but in the late 1980s, the x86 processor standard and 'IBM compatible' PCs became increasingly widespread. At the same time, the switch from floppy disks to CD-ROM drives enabled computer game developers to produce games with an unprecedented degree of visual sophistication.

One of the first games to exploit this opportunity fully was *Myst* (Cyan Worlds), a puzzle-based adventure game set on an enchanted island. From a narratological perspective, it was a return to *Colossal Cave* – much of the gameplay consisted of aimlessly wandering around the island and admiring the scenery. The plot – a whodunit involving a murder between brothers – seemed almost incidental to the experience of the game. Nevertheless, *Myst* was praised by critics for its 'immersiveness' and intuitive point-and-click gameplay, although the game actually resembled nothing more closely than "the hoary technology of the slide show (with accompanying music and effects)" (Smith 490-91).

Both the narrative investment of the player, and the ludic payout were minimal. In fact, it could be argued that Myst did not have a narrative economy at all, and that the game's success was not based on providing narrative closure (or the deferral thereof), but rather a form of technological closure. From the early 1990s onwards, personal computers were more and more frequently equipped with a CD-ROM drive, but according to a pervasive urban legend, they were initially mostly used as coffee cup holders. *Myst* proved to be the 'killer application' that finally provided the *raison d'être* for CD-ROM drives.

The first-person shooter *Doom*, which was published the same year, was much more innovative both in regard to its in-game economy and in regard to its business model. The game's developer, id Software, not only created enormous anticipation among the gamer community by feeding selected (mis)information to internet newsgroups, 'leaking' screenshots and even playable alpha versions of the game, they also decided to publish the game as 'shareware'. On December 10, 1993, the game was uploaded onto the servers of the University of Wisconsin-Madison, and those who downloaded it were encouraged to distribute it further. This proved to be such a successful strategy that in 1995 *Doom* was estimated to be installed on more computers than Microsoft's new operating system *Windows 95* ("Doom [Video Game]").

Thus, *Doom* marked a return to the liquid state of the video game medium. Rather than being shipped on cartridges or CD-ROMs,[10] the game was distributed through the essentially fluid medium of the internet, and there were nine updates released between 1993 and 1995. Therefore, it could be argued that the publication process of *Doom* lasted almost one and a half years, and ended with the release of *Ultimate Doom* on April 30, 1995. What is more, players were allowed, and even encouraged, to create their own levels for the game (in the form of so-called 'WADs'[11]), and to produce modifications

[10] It should not go unmentioned, however, that the retail version of *Doom* was shipped on floppy disk and CD-ROM, and there were console versions of the game for the Nintendo NES, the Sega Saturn and, eventually, the Sony PlayStation.

[11] Allegedly, the file extension .wad stands for 'Where is All the Data?'

('mods') that changed the gameplay entirely (see Mactavish; Morris; Postigo). All of this resulted in a radical decentring of the notion of the 'video game work' as a fixed and stable entitity.

In terms of the game's narrative economy, this meant that the game was by definition unfinished and unfinishable, so the idea of narrative closure became entirely untenable. Titles such as *Ultimate Doom* (1995), *Final Doom* (1996), and *Doom Collector's Edition* (2001) suggested that there was a textual core which could be referred to when talking about *Doom*, but in actual fact this perpetual repackaging of the game only contributed to the fragmentation of the game text, because there was not one but several of these 'canonical' editions.

However, this did not mean that video games ceased to be a commodity. Rather, they were transformed into what P. David Marshall calls an 'intertextual commodity'. As he points out, "[t]he new intertextual commodity identifies the attempt by an industry to provide the rules of the game, while realising that the pleasure of the game is that the rules are made and remade, transformed and shifted by the players" (Marshall 80). Significantly, this attempt to create a 'ruled space' within the 'unruled space' of video game culture takes place not in the form of a 'lock-in' strategy but rather used mechanisms of 'soft control' to create an intertextual web between players, technology, and games.

This change from a disciplinary model of 'customer relationship management' to one reminiscent of the Deleuzian control society (see Deleuze) takes place precisely at the moment when neo-liberal models of government are re-established all over the world, following the collapse of the Soviet Union, resulting in the privatization of disciplinary institutions such as schools, universities, hospitals, and prisons. From this historical vantage point, it becomes evident that *Doom*'s setting in a penal colony on Mars is not an accident. Neither is the 'every man for himself' mentality of the game, which reflects the neo-liberal shift from the governmental to the 'entrepreneurial' subject.

It is consistent with this hypothesis that the nameless[12] protagonist of *Doom* is subject to a merciless economic regime, which requires him to manage the game's two central resources – health and ammunition – rigorously. While both are ostensibly provided for free, they are in fact paid for through the additional time the player has to invest into the game in order to procure them. Thus, it is possible to discern the first inklings of the coming biopolitical turn in the way *Doom* subjected both the health and the agency of its central character to a ruthless paradigm of efficiency. Needless to say, players accepted this new paradigm enthusiastically.

[12] In a forum thread about the protagonist's name, co-designer John Romero has pointed out that "[t]here was never a name for the DOOM marine because it's supposed to be YOU" (Romero, emphasis in original).

The Biopolitics of Play

If the biopolitical turn in video games can be said to begin with *Doom*, it found its logical continuation in 3D action-adventure games like *Tomb Raider* (Core Design) and *Half-Life* (Valve). These hybrid games, which combined the ballistic gameplay of the first-person-shooter with the puzzle-solving of graphical adventure games, addressed the player as an entrepreneurial subject (the rogue archaeologist Lara Croft and the post-doctoral researcher Gordon Freeman, respectively) who is pitted against the 'bare life' (cf. Agamben) of mutants and aliens. What is at stake in these games is thus not just the life but the humanity of the protagonists.

While this *topos* was already present in *Doom*,[13] it was configured in a more interesting way in *Tomb Raider* and *Half-Life*. Lara's gender and Gordon's spectacles marked them as 'weak' characters, and also this found its expression in the narrative economies of the games. In *Tomb Raider* it is the scarcity of 'save points' in the game, which necessitate a cautious approach on the part of the player,[14] whereas in *Half-Life* the player was forced to continually re-charge the protagonist's HEV (short for 'hazardous environment') suit.

Significantly, the HEV recharge process is reminiscent of an injection or a blood transfusion, suggesting that the difference between Gordon Freeman's *bios* and his opponents *zoe* consists in nothing but the fact that he is clothed while they are naked. Thus, the difference between humans and aliens is revealed as 'cultural' rather than 'natural' (i.e. a difference in class rather than in species), which means the protagonist's distinctiveness can only be maintained by performing with virtuosity.[15] In other words: Gordon may have escaped the boredom and anxiety of his academic day job, but he still must perform as if he were on the tenure track.

It is characteristic for the multitude that their lives are characterized by a radical openness (caused by the precariousness of biopolitical production) rather than closure, and it is consistent with this paradigm that *Half-Life* not just defers, but negates closure. After Gordon Freeman has defeated the final 'boss' of the game, he loses consciousness, and wakes up in the presence of the mysterious 'G-man', who praises his performance, and offers him a job. If the player rejects the offer, Gordon is given the opportunity to meet the survivors of his "personal holocaust";[16] if he accepts, the G-man congratulates him and puts him into 'stasis'.

The lack of closure on the narrative level is reflected in the fluidity of *Half-Life*'s text. To an even greater degree than *Doom*, *Half-Life* is more usefully seen as a loose bundle of textual nodes – including the expansion packs *Half-Life: Opposing Force*, *Half-Life: Blue*

[13] Later it would find an autonomous expression in the survival horror genre, in particular in the games of the *Resident Evil* and *Silent Hill* series.
[14] This was a common complaint about *Tomb Raider*, and in *Tomb Raider II* Core Design replaced fixed save points with a 'save anywhere' feature.
[15] Drawing on Paolo Virno's concept of virtuosity as one of the "salient traits of the Post-Fordist experience" (Virno 68), Andrew Murphie has pointed out that the performance of virtuosity in the high-skilled and low-paid jobs of biopolitical production is "subsumed into the general and the personal angst involved, and finding no anchor, turns into a kind of featureless dread." (Murphie).
[16] For a verbatim transcript of the dialogue, see ("G-Man").

Shift, and *Half-Life: Decay*;[17] modifications such as *Counter-Strike*; the sequel *Half-Life 2*; the mini-sequels *Half-Life 2: Episode 1* and *Half-Life 2: Episode 2*; and games set in the same narrative universe such as *Portal* – than as a textual entity in and of itself. Furthermore, the intertextual references between these nodes are varied and dense, suggesting that *Half-Life* is even more of an intertextual commodity than *Doom*.

However, it was in *The Sims* (Maxis) that the biopolitical paradigm found its most salient expression. As Greig de Peuter and Nick Dyer-Witheford have pointed out, "[d]igital games exemplify Empire's mobilisation of 'immaterial labour'," insofar as the activities of "making and playing games combine the range of qualitative features of immaterial labour: scientific know-how, hi-tech proficiency, cultural creativity, human sociability, and cooperative interactivity"(de Peuter and Dyer-Witheford). Nowhere is this discernible more clearly than in *The Sims*, where the player is given the task to micro-manage the psychological and physiological needs of a virtual character, or 'sim'. This is achieved by choosing a 'career track' for one's sim, the completion of which will allow her to live comfortably and purchase the products required to show off her status.

It has been argued that this can be seen both as a celebration and a parody of consumer capitalism (see Kline, Dyer-Witheford and DePeuter), but what is more important is that this structure involves the player in a narrative of co-dependency that mirrors that of care workers and their charges. This 'affective labour' – often performed for free by family members or at starvation wages – supplies the model for all immaterial labour (see Hardt and Negri), including the 'free labour' that increasingly replaces paid labour in the immaterial economy of the internet (see Terranova). The player of *The Sims* is thus trained to do demanding labour without proper remuneration.

In the light of this, it is hardly surprising that the players' free labour formed an integral part of *The Sims*' business model. Players were encouraged to create their own clothes, furniture, vehicles, etc. for the game, and in 2001, Will Wright estimated that "something like 80 percent to 90 percent of the stuff that you can use in 'The Sims' is straight from the fans" (Becker). This draws attention to the fact that *The Sims* is not a commodity at all, but rather a meta-commodity, which serves as a production facility for an endless stream of virtual commodities. This business model, in which the players are an integral part of the production process, would later be brought to perfection in massively multiplayer games.

Globalized Gaming

The globalization of video games can be seen to begin with the establishment of global production networks in the mid- to late 1990s (Johns). This development also provides a partial explanation for the fact that the compartmentalized video games market – in which Japan, the United States and Europe remained partially isolated from each other due to different technical standards (e.g. PAL vs. NTSC) as well as linguistic and cultural

[17] For a discussion of the 'expansion pack economy', see (Nieborg).

barriers – begins to converge around the same time. The most visible sign of this consolidation was the phenomenal success of the Japanese collecting game *Pokémon*.

Pokémon started with two Nintendo Gameboy games (*Pokémon Red* and *Pokémon Green*[18]) in 1996 (Game Freak); they were followed by *Pokémon Yellow* (1998), *Gold* and *Silver* (1999), *Crystal* (2000), *Ruby* and *Sapphire* (2002), *FireRed* and *LeafGreen* (2004), *Emerald* 2004), *Diamond* and *Pearl* (2006), and *Platinum* (2008). The original series spawned several spin-off video games (e.g. *Pokémon Pinball, Pokémon Mystery Dungeon*) as well as a series of films, television shows, a trading card game, and a plethora of merchandising items encompassing everything from underwear to dinnerware.

The basic gameplay of *Pokémon* is based on the capture and training of creatures called *pokémon* (a contraction of the Japanese *poketto monsutā*, 'pocket monsters'); when they are strong enough they can fight other *pokémon*. While there is a single-player mode, player-vs.-player battles are a central element of the gameplay, and the game's goal – expressed in the slogan "Gotta catch 'em all"[19] – can only be achieved by trading with other players. The game explicitly targeted school children, and thus mobilized existing peer networks to spread 'virally' throughout its intended audiences.

With 50 million units[20] sold in the original Gameboy series alone, *Pokémon* is the second-most successful game series in video game history,[21] and has made its mascot Pikachu as recognisable as Mickey Mouse and Mario among its target audience.[22] This success depended not only on the strong peer group ties (and the concomitant peer pressure) as well as the 'pester power' of school children, but also on the simultaneous mobilization and erasure of Japanese identity. As Koichi Iwabuchi explains, "there is an inherent difficulty in ascribing a distinctive 'Japaneseness' to Pokémon and then rationalizing this 'Japaneseness' with the contradictory process of transnational cultural consumption" (Iwabuchi 61).

According to Iwabuchi, the success of *Pokémon* must be seen in the tradition of earlier Japanese *mukokuseki*,[23] or 'odourless', products such as consumer electronics, and he insists that "the global success of Pokémon has been heavily dependent on partnerships with American corporations" (66). He also draws attention to the fact that *Pokémon* was localized to hide its Japaneseness, and quotes Gail Tiden of Nintendo of America as

[18] Confusingly, *Pokémon Green* was published as *Pokémon Blue* in Europe and the United States. In Japan, *Pokémon Blue* was published as a special edition only available through mail-order.
[19] This slogan concisely sums up the aporetic nature of *Pokémon*: due to the constant stream of expansion packs, it is virtually impossible to catch all *pokémon*, and thus narrative closure is deferred *ad infinitum*.
[20] The single most successful Gameboy game is *Tetris*, with 33 million units sold.
[21] The most successful video game series is the *Mario* series, which encompasses more than 200 games with cumulative 9-figure sales.
[22] Pikachu has appeared as a balloon in Macy's Thanksgiving Day Parade in New York, on a Nippon Airways Boeing 747, and on the cover of *Time* magazine in 1999. There are two theme parks dedicated to Pikachu, one in Nagoya (Japan) and one in Taipei (Taiwan).
[23] The Japanese term *mukokuseki* translates roughly as 'without nationality', and describes products that bear no discernible trace of their cultural origin.

saying: "We try hard to keep American children from thinking Pokémon as being from Japan. […] We want Pokémon to become global characters that children all over the world will find familiar" (69).

Similar processes of 'glocalization' can be observed in the development of the genre of the massively multiplayer game (MMOG), from *Ultima Online* (Origin Systems) to *World of Warcraft* (Blizzard Entertainment). The pioneering game of the genre, *Ultima Online*, relied on a recognizably Western, medieval iconography, and, as a result never reached more than 250,000 subscribers. On the other hand, early Korean MMOGs such as *Lineage* (NCSoft), despite its medieval setting, never succeeded outside of Korea.[24] The first 'global' MMOG was Sony's *EverQuest* (Verant Interactive), which became popular not only in the United States and Europe, but also in Korea, Taiwan and China.

However, while *Lineage* reached more than three million subscribers, *EverQuest* peaked at about 450,000 subscriptions. Therefore, it was not until *World of Warcraft* was launched in 2004 that massively multiplayer games went truly global. Within four years, the game attracted more than 10 million subscribers, with near-parity between Western and Asian players. While some critics, most notably *Ultima* designer Richard Garriott, saw the success of *World of Warcraft* as the result of the game being a "remake of EverQuest" (Schiesel), it must also be attributed to the game's *mukokuseki* design and Blizzard's business acumen.

World of Warcraft's visual style mixed the Tolkienesque medievalism of *Ultima Online* and *EverQuest* with the cuteness of Japanese *manga* or Korean *manhwa*,[25] and thus created a product without a discernible cultural odour. The business model ingeniously deployed different regional tactics in the United States and Europe, Korea and China, which took into account the local economic conditions. While the game was sold as a boxed product with a 'free' 30-day subscription in the United States and Europe, it was offered as a free download in Korea. In China, where individual ownership of computers is still relatively rare, CD keys were provided to the owners of internet cafes. In all territories except China, additional game time could be purchased through credit card payments or by purchasing pre-paid game cards.

In addition to this, *World of Warcraft* enveloped its players in an 'epic' narrative – a struggle between two factions for the control of the game's fictional world, which was impossible to resolve due to the fact that the rules prevented both all-out war and

[24] According to some critics, *Lineage* and *Lineage 2*'s failure to captivate Western audiences is a result of its 'collectivist' values. As a *Lineage 2* reviewer explains, "[t]he game […] expects a collectivist audience with the ability and drive to work together. In the Western world, where we hold individualism above community, players have a hard time meeting many of the game's goals which require teamwork" (Genender).

[25] Damon Chandler traces the 'cartoonification' of Warcraft to the second part in the series, and adds that apart from "visual improvements, developers began forming unique cultures and personalities among the races through use of audio. The troll's dialogue mentions voodoo in a Jamaican accent, while the Dwarven demolition team barks at the player in Scottish accents" (Chandler 3).

rapprochement between the Alliance and the Horde.[26] Two expansion packs, *The Burning Crusade* (2007) and *The Wrath of the Lich King* (2008), ensured the loyalty of existing customers, and levelled the playing field for new players. While many long-time players have criticized Blizzard for 'dumbing down' the gameplay of *World of Warcraft* over the years, this has proved a successful strategy for attracting new players.

Several researchers (e.g. Castronova) have noted that the significant investment of time required to reach the end-game of an MMOG effectively creates a lock-in effect, which prevents players from quitting the game. This has also give rise to a moral panic discourse in mainstream media about the 'addictiveness' of *World of Warcraft*. However, considering that researchers such as TL Taylor cite a number of cases in which MMOGs are beneficial rather than detrimental to players' social lives and psychological well-being (see Taylor), claims that a significant number of players are addicted to *World of Warcraft* seem difficult to uphold.

What is more worrying is the fact that games like *World of Warcraft* create vast transnational virtual societies, in which the providers' powers are hardly curtailed by real-world legislation or the players themselves (see Burke; Humphreys; Malaby). As I have argued elsewhere, (Kücklich "Virtual Worlds") this structure – in conjunction with way a business model built upon the exploitation of players' 'free labour' – allows us to regard MMOGs as 'social factories' (Tronti), where "the relationship between capitalist production and […] society, between the factory and society, between society and the state, become more and more organic" (quoted in Cleaver).

Half a century after their inception in American research labs, video games have developed into a powerful biopolitical technology of control. In so doing, they have increasingly liquefied as a medium, and almost entirely transcended the commodity form. Instead, they have become a common good without commonality, a public good without publicity.[27] And it is because of this lack of publicness and commonality that MMOG players remain a 'mass without criticality'[28] – i.e. a multitude of atomized individuals, unwilling to overcome their real or perceived differences, unable to 'make things public' (see Weibel and Latour).

Conclusion

Of course, this contingent historical moment must not be seen as the end of computer game history. It would be presumptuous to assume that the current developmental stage of the video game forms the target of a techno-teleological trajectory, and such an assumption would limit the scope of future analyses. Indeed, it is already possible to

[26] The members of the Alliance (Draenei, Humans, Dwarves, Night Elves, and Gnomes) cannot communicate with the members of the Horde (Blood Elves, Orcs, Tauren, Trolls, and Undead), and they can only fight each other on player-vs.-player (PvP) servers or in specially designated areas.

[27] This formulation intentionally echoes Virno's characterization of the public intellect as a form of "publicness without a public sphere" (Virno 40).

[28] "A Mass without Criticality. Virtual Worlds, Social Networks, and their Discontents" was the title of a talk I gave at the *re:publica'08* conference, and is available as a podcast at <http://asset.re-publica.de/audio/rp08-tag1-2018h-a_mass_without_criticality.mp3>.

discern the first stirrings of future developments in the forms of contemporary video games. The latest Nintendo products, for example – with their focus on mental agility, health, and fitness – already seem to indicate an even more extensive collusion between the video games industry and biopolitical forms of government.

However, I am convinced that the theoretical concepts and methodological tools developed in this paper will contribute to sustain the critique of video game production and consumption that this 'imperial turn' necessitates. Most importantly, I think the foregoing argument shows that a historical perspective that relates video game history to socio-political developments is able to shed light on connections that are often hard to see from a purely technological, cultural, or ludological point of view. In my opinion, this is a strong argument for contextual, rather than essentialist, approaches to video games.

The concept of a narrative economy within video games proved to be a theoretical tool of considerable analytical power. Although some of the games analysed in this paper must be considered as non- or proto-narrative (e.g. *Spacewar* or *Space Invaders*), they could be shown to possess narrative economies, even when the narrative capital required to keep these economies afloat was 'borrowed' from elsewhere. In games with a more pronounced narrative structure, the narrative economy could be seen to depend increasingly on players' labour.

It also became evident that it makes sense to speak of a 'biopolitical turn' in the development of video games, which can be said to have started with *Doom* and to have found a mature form in *The Sims*. It is in these games that the players' labour increasingly shows characteristics of 'affective' or 'immaterial' labour, which is provided free of charge. Therefore, it seems to make sense to regard such games as meta-commodities, which provide platforms for the production of virtual 'assets'.

The biopolitical turn took place at the same time as the global turn in video game production, and the analysis of *Pokémon* made it possible to see that the globalization of gaming depended on complex processes of cultural translation. It also drew attention to the fact that the liquefaction of the video game medium, which can be seen to begin with *Doom*, finds its logical continuation in *Pokémon.* The concept of liquid and solid mediality, which provided an argumentative thread throughout this paper thus proved to be a reliable indicator of the medium's commodification.

While *Pokémon* could still be characterized as a commodity – albeit a commodity that becomes increasingly intangible – massively multiplayer games such as *World of Warcraft* must be seen as post-commodified. Rather than to see them as commodities, it makes more sense to regard them as 'social factories', in which the players' labour plays an increasingly central role in creating and maintaining social relations, and thus in keeping the game playable. They can be regarded as virtual societies without a social contract, which deploy the tactics of the control society to keep players 'in their place'.

References

Aarseth, Espen. *Cybertext - Perspectives on Ergodic Literature*. Baltimore: Johns Hopkins University Press, 1997.

Agamben, Giorgio. *Homo Sacer. Sovereign Power and Bare Life*. Trans. Daniel Heller-Roazen. Meridian. Eds. Werner Hamacher and David E. Wellbery. Stanford: Stanford University Press, 1998.

Allison, Anne. "Cuteness as Japan's Millennial Product." *Pikachu's Global Adventure. The Rise and Fall of Pokémon*. Ed. Joseph Jay Tobin. Durham, NC: Duke University Press, 2004. 34-52.

Anderson, Tim, et al. *Zork*. Los Altos Hills, CA: Personal Software, 1980.

Atari. *Asteroids*. Sunnyvale, CA: Atari, 1979.

---. *Pong*. Sunnyvale, CA: Atari, 1972.

Becker, David. "The Secret Behind 'the Sims'". 2001. *News.com*. March 22 2007. <http://news.com.com/The+secret+behind+The+Sims/2008-1082_3-254218.html>.

Blizzard Entertainment. *World of Warcraft*. Irvine, CA: Blizzard Entertainment, 2004.

Bongco, Mila. *Reading Comics: Language, Culture, and the Concept of the Superhero in Comic Books*. Oxford: Taylor & Francis, 2000.

Burke, Timothy. "Play of State: Sovereignty and Governance in Mmogs". 2004. September 12 2007. <http://www.swarthmore.edu/SocSci/tburke1/The%20MMOG%20State.pdf>.

Bushnell, Nolan, and Ted Dabney. *Computer Space*. Mountain View, CA: Nutting Associates, 1971.

Caillois, Roger. *Man, Play and Games*. Trans. Meyer Barash. Urbana and Chicago: University of Illinois Press, 2001.

Cantor, Muriel G., and Suzanne Pingree. *The Soap Opera*. Thousand Oaks, CA: Sage, 1983.

Carroll, Lewis. *Alice's Adventures in Wonderland*. London: Macmillan, 1865.

Castronova, Edward. *Synthetic Worlds. The Business and Culture of Online Games*. Chicago and London: University of Chicago Press, 2005.

Chandler, Damon. "Living, Charming, Epic: The World of Warcraft Aesthetic". 2008. <http://www.richardcolby.net/files/WoWAesthetic.pdf>.

Cleaver, Harry. "The Inversion of Class Perspective in Marxian Theory: From Valorization to Self-Valorization." *Essays on Open Marxism*. Eds. W. Bonefeld, R. Gunn and K. Psychopedis. Vol. 2. London: Pluto, 1992. 106-44.

Core Design. *Tomb Raider*. London: Eidos Interactive, 1996.

Crowther, Will. *Adventure*. 1975.

Cyan Worlds. *Myst*. San Rafael, CA: Brøderbund, 1993.

Darcy, Jane. "The Disneyfication of the European Fairy Tale." *Issues in Americanisation and Culture*. Eds. Neil Campbell, Jude Davies and George McKay. Edinburgh: Edinburgh University Press, 2004. 181-96.

de Peuter, Greig, and Nick Dyer-Witheford. "A Playful Multitude? Mobilising and Counter-Mobilising Immaterial Game Labour." *Fibreculture* 5 (2005).

Deleuze, Gilles. "Postscript on the Societies of Control." *October* 59 (1992): 3-7.

Deleuze, Gilles, and Félix Guattari. *A Thousand Plateus. Capitalism and Schizophrenia*. Trans. Brian Massumi. London and New York: Continuum, 2004.

"Doom [Video Game]". 2005. *Wikipedia*. January 8 2009. <http://en.wikipedia.org/wiki/Doom_(video_game>.

Feltes, Norman N. *Modes of Production of Victorian Novels*. Chicago: University of Chicago Press, 1986.

Fiske, John, and Jon Watts. "Video Games: Inverted Pleasures." *Australian Journal of Cultural Studies* 3.1 (1985): 89-104.

Fuller, Mary, and Henry Jenkins. "Nintendo® and New World Travel Writing: A Dialogue." *Cybersociety. Computer Mediated Communication and Community*. Ed. Steven G. Jones. Thousand Oaks: Sage, 1995. 57-72.

"G-Man". 2005. *The Valve Developer Community*. January 10 2008. <http://developer.valvesoftware.com/wiki/G-man>.

Gagnier, Regenia. *The Insatiability of Human Wants: Economics and Aesthetics in Market Society*. Chicago: University of Chicago Press, 2000.

Gallagher, S., and Seung Ho Park. "Innovation and Competition in Standard-Based Industries: A Historical Analysis of the Us Home Video Game Market." *IEEE Transactions on Engineering Management* 49.1 (2002): 67-82.

Game Freak. *Pokémon (Red and Green Versions)*. Kyoto: Nintendo, 1996.

Genender, Laura. "Lineage 2". 2006. January 11 2009. <http://www.mmorpg.com/gamelist.cfm?setview=reviews&loadReview=38&gameID=46&bhcp=1>.

Goldman, Robert, and Stephen Papson. *Nike Culture: The Sign of the Swoosh*. London: Sage, 1998.

Hardt, Michael, and Antonio Negri. *Empire*. London and Cambridge, MA: Harvard University Press, 2000.

Herz, J.C. *Joystick Nation. How Videogames Ate Our Quarters, Won Our Hearts, and Rewired Our Minds*. Boston and New York: Little, Brown, 1997.

Higinbotham, William. *Tennis for Two*. Unpublished, 1958.

Hobson, Dorothy. *Soap Opera*. London: Blackwell, 2003.

Humphreys, Sal. "Productive Users, Intellectual Property and Governance: The Challenges of Computer Games." *Media and Arts Law Review* 10.4 (2005): 299-310.

Iwabuchi, Koichi. "How 'Japanese' Is Pokémon?" *Pikachu's Global Adventure. The Rise and Fall of Pokémon*. Ed. Joseph Jay Tobin. Durham, NC: Duke University Press, 2004. 53-79.

Jenkins, Henry. *Fans, Bloggers, and Gamers. Exploring Participatory Culture*. New York and London: New York University Press, 2006.

Johns, Jennifer. "Video Games Production Networks: Value Capture, Power Relations and Embeddedness." *Journal of Economic Geography* 6.2 (2006): 151-80.

Kline, Stephen, Nick Dyer-Witheford, and Greig DePeuter. *Digital Play. The Interaction of Technology, Culture, and Marketing*. Montreal and Kingston: McGill-Queen's University Press, 2003.

Kohler, Chris. *Power Up. How Japanese Video Games Gave the World an Extra Life*. Indianapolis, Indiana: BradyGames, 2005.

Kücklich, Julian. "A Techno-Semiotic Approach to Cheating in Computer Games or How I Learned to Stop Worrying and Love the Machine." *Games and Culture* (2009).
---. "Virtual Worlds and Their Discontents: Precarious Sovereignty, Governmentality, and the Ideology of Play." *Games and Culture* (2009).
LaFeber, Walter. *Michael Jordan and the New Global Capitalism*. New York: W.W. Norton & Co., 2002.
Levy, Steven. "Hey, It's More Than a Game." *The New York Times* July 18, 1993.
Mactavish, Andrew. *Game Mod(Ifying) Theory: The Cultural Contradictions of Computer Game Modding*. Power Up - Computer Games, Ideology and Play Conference. Bristol, 2003.
Malaby, Thomas M. "Coding Control: Governance and Contingency in the Production of Online Worlds". 2006. *First Monday. Special Issue #7: Command Lines: The Emergence of Governance in Global Cyberspace*. September 12 2007. <http://www.firstmonday.org/issues/special11_9/malaby/index.html>.
Marshall, P. David. "The New Intertextual Commodity." *The New Media Book*. Ed. Dan Harries. London: BFI, 2002. 69-82.
Maxis. *The Sims*. Redwood City: Electronic Arts, 2000.
McDonald, Paul. *The Star System: Hollywood's Production of Popular Identities*. London: Wallflower, 2003.
Miller, Andrew H. *Novels Behind Glass: Commodity, Culture, and Victorian Narrative*. Cambridge, MA: Cambridge University Press, 1995.
Morris, Sue. "Wads, Bots and Mods: Multiplayer Fps Games as Co-Creative Media." *Proceedings of the Level up Digital Games Research Conference (Cd-Rom)*. Eds. Marinka Copier and Joost Raessens. Utrecht: Universiteit Utrecht, 2005.
Murphie, Andrew. "Differential Life, Perception and the Nervous Elements: Whitehead, Bergson and Virno on the Technics of Living." *Culture Machine* 7 (2005).
Namco. *Pac-Man*. Tokyo: Namco, 1979.
NCSoft. *Lineage*. Seoul: NCSoft, 1998.
Nieborg, D. B. *The Expansion Pack Economy*. Media Change and Social Theory Conference. Oxford, 2006.
Nintendo. *Super Mario Bros.* Kyoto: Nintendo, 1985.
"Nintendo Records". 2008. *Guinness Book of World Records: Gamer's Edition*. January 8 2009. <http://gamers.guinnessworldrecords.com/records/nintendo.aspx>.
Origin Systems. *Ultima Online*. Redwood City: Electronic Arts, 1997.
Pias, Claus. *Computer Spiel Welten*. Munich: Sequenzia, 2002.
Piercy, Bill. "Stylin' through the Gue". 2006. January 8 2009. <http://solutionarchive.com/Zork1.zip>.
Postigo, Hector. "From Pong to Planet Quake: Post Industrial Transitions from Leisure to Work." *Information, Communication & Society* 6.4 (2003): 593-607.
Ramsey, David. "The Perfect Man. How Billy Mitchell Became a Video-Game Superstar and Achieved Pac-Man Bliss." 2006. *Oxford American*. <http://www.oxfordamericanmag.com/content.cfm?ArticleID=58&Entry=Home>
Ricœur, Paul. *Oneself as Another*. Trans. Kathleen Blamey. Chicago: University of Chicago Press, 1992.
Romero, John. "Reply #5 to Doom Marine's Name". 2002. *Rome.ro Game Talk*. January 8 2009. <http://rome.ro/smf/index.php/topic,1521.msg31827.html#msg31827>.

Russell, Steve, et al. *Spacewar*. Unpublished game, available online at http://spacewar.oversigma.com/, 1961.
Schiesel, Seth. "An Online-Gaming Pioneer Is Back, and This Time He's Banking on Sci-Fi." *The New York Times* November 2, 2007.
Sedgwick, John. "The Nature of Popular Film as a Commodity: The Diffusion of Film in Britain During the Mid-1930s." *Homo Oeconomicus* 17 (2001): 427-40.
Smith, Greg. "Navigating Mist-Y Landscapes: Killer Applications and Hybrid Criticism." *Hop on Pop: The Politics and Pleasures of Popular Culture*. Eds. Henry Jenkins, Tara McPherson and Jane Shattuc. Durham, NC: Duke University Press, 2002. 487-502.
Smith, Matthew J., and Randy Duncan. *The Power of Comics: History, Form and Culture*. New York: Continuum, 2009.
Taito. *Space Invaders*. Chicago, IL: Midway, 1978.
Taylor, T.L. *Play between Worlds. Exploring Online Game Culture*. London and Cambridge, MA: MIT Press, 2006.
Terranova, Tiziana. "Free Labor: Producing Culture for the Digital Economy." *Social Text* 18.2 (2000): 33-58.
Tronti, Mario. *Operai E Capitale*. Turin: Einaudi, 1971.
Valve. *Half-Life*. Los Angeles, CA: Sierra Entertainment, 1998.
Vann, Jerry Don. *Victorian Novels in Serial*. New York: Modern Language Association of America, 1985.
Verant Interactive. *Everquest*. Foster City, CA: 989 Studios, 1999.
Virno, Paolo. *A Grammar of the Multitude*. Trans. Isabella Bertoletti, James Cascaito and Andrea Casson. Foreign Agent. Ed. Sylvère Lotringer. Los Angeles and New York: Semiotext(e), 2004.
Wasko, Janet. "The Political Economy of Film." *Film and Theory: An Anthology*. Eds. Toby Miller and Robert Stam. Malden, MA: Blackwell, 2000. 221-33.
Weibel, Peter, and Bruno Latour, eds. *Making Things Public. Atmospheres of Democracy*. Cambridge, MA: MIT Press, 2005.
Wilde, Oscar. *The Picture of Dorian Gray*. 1891. London: Penguin, 2006.
Wittebols, James H. *The Soap Opera Paradigm. Television Programming and Corporate Priorities*. Lanham, MD: Rowman & Littlefield, 2004.