

Lost in Transmediation. Transmedial Adaption of Videogames and GDNA Theory

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If you have any interest in the history or future of video games, it's almost a set text: the videogame equivalent of Breaking Bad, James Joyce' Ulysses or The Wire. [Metal Gear Solid is] an action adventure series, a stealth game, a once-in-a-console-generation technical showcase, an ultra-budget AAA game, an idiosyncratic, medium-defining work reflecting the personality of its creator and auteur Hideo Kojima [...].

(Dawkins 2015, 9)

ABSTRACT – Videogames and their transmedial adaptations share common persuasive messages. Their rhetoric is diverse, encompassing political as well as economic messages for the players. Yet, the possibilities to analyze the translation from videogames towards other media is so far limited. Without a systematic approach to address all circumstances behind videogame-rhetoric, the resulting insights for their transmedial satellites are difficult to compare. Therefore, this paper introduces the *GDNA* model. The *Game Dynamic Narrative Analysis* is crafted as a holistic approach. Based upon the notion of videogame as artificial orator (*homunculus digitalis*), it compares videogames analysis with DNA sequencing. Identifying rhetoric sequences within a game's genome is marked by the interplay between those elements specific to games (like procedural rhetoric) and those transferred from other fields (like speech act analysis or visual rhetoric). Thereby, the *GDNA* model unifies narratological and ludological perspectives of game studies through incorporating both positions into every rhetorical analysis of games. As a result, it grants better understanding how game-specific elements are treated in their respective transmedial translation. In order to illustrate this, the *Metal Gear Solid* franchise was examined. *Metal Gear Solid* demonstrates different strategies for transmediation. With

novelizations, comic books, digital graphic novels, audio drama and analog board games, the storyworld of Solid Snake and Big Boss became accessible for a wide audience. However, Hideo Kojima's legacy contains a unique element that poses a problem to transfer from its videogame origin: *immersion fractures*. Those speech acts directly address the player and persuade her to change gameplay behavior. Examining scenes from the first two installments with the *GDNA* model illustrates that *immersion fractures* require specific adaptations to preserve their specific messages. Their respective novels, comics and digital graphic novels addressed this challenge quite differently. However, some messages got lost of in their transmediation.

1. INTRODUCTION

Hideo Kojima is considered a creative mastermind. Since the worldwide success of *Metal Gear Solid (MGS)* in 1998, Kojima became one of Konami's figure heads. Not only does the *MGS* brand enjoy critical acclaim, it sparked a transmedial effort unmatched for Konami at the time. With novelizations, comic books, digital graphic novels, audio drama and analog board games, the storyworld of Solid Snake and Big Boss became accessible for a wide audience. Meanwhile, not all aspects of the videogame franchise could be successfully transferred across the transmedial landscape. One of *MGS'* key features are *immersion fractures*, in which the game addresses the player directly. Those unique moments are present in every *Metal Gear Solid* game. As such, they are discussed here in regard to their transmedial satellites. Yet being "respectful to the DNA of the property" (Makuch 2016) turns out to be a challenging task, especially with Kojima's legacy. Its "DNA" needs to be analyzed and understood in context. When Ludwig Wittgenstein characterized the similarities between games as "family resemblances" (1958, 32), he introduced the notion that games "form a family" (ibid.). They share "various resemblances" (ibid.), yet every family member is unique. Expanding upon this idea, the hereby introduced model focuses on the *DNA* of videogames.

Genetics enable a new perspective on the transmediation of videogames. DNA serves as the carrier of all genetic information for living creatures. No matter how complex or simplistic a being seems, the required data are stored in this universal format. Two strands and four base pairs suffice to encode the blueprints of life. Deriving from the idea of videogame

AIs as *Homunculi Digitalis*¹, videogames can be imagined as artificial life forms with their own unique set of decoded information, *GDNA*. Accounting for the ever-growing complexity of videogames and their embedded codes, this paper suggests a new theoretical model that helps to deepen the understanding of videogame rhetoric and thereby transmedia literacy: the *GDNA* model.

This essay opens with a critical review of rhetorical videogame analysis. Despite promising developments, there is no structurally sound model for dissecting videogames for their persuasive strategies. The *GDNA* model shall close this void. The paper explains the model's basics and how it separates rhetorical analysis tools according to the medium-specific abilities of videogames. In order to demonstrate its value, the *MGS* franchise will be examined. More specifically, *immersion fractures* featured in the first two installments are analysed.

2. RHETORIC, VIDEOGAMES AND TRANSMEDIA

Rhetorical research still lacks a unified model for videogame analysis. Taking a look at Routledge's *Introduction to Game Analysis* by Clara Fernández-Vara (2014), a wide array of analysis types has been established, ranging from journalistic (181-187) over historical (188-192) to interpretative (207-209) ones. Among the wider array of rhetorical theories only the procedural is briefly discussed (131-133) as an area of analysis. Ian Bogost (2007) originally introduced this theory as "a technique for making arguments with computational systems and for unpacking computational arguments others have created." (3) As an analytical tool it helps to understand, for example how *The McDonald Videogame* procedurally argues against the business practices of the eponymous fast food chain (29-30) or how *Grand*

¹ The primary assumption behind the *homunculus digitalis* theory is that a game's AI is a compensatory measure accounting for the physically absent rhetorician. Being unable to communicate his message to every potential player in person, the AI becomes his proxy. Like its alchemistic counterpart, the *homunculus digitalis* is an artificial ersatz-human that seize to exist outside its protective shell (in this case the game) (Dwulecki 2017, 159). Structurally, it shares many notions with Espen Aarseth's *intrigant*, "an immanent adversary who inhabits rather than transcends the game" (Aarseth 1997, 127). However, being "not motivated by a particular outcom[e]" (114) differentiates the *intrigant* from the *homunculus digitalis*, whose sole purpose it is to facilitate the persuasion of the player.

Theft Auto: San Andreas communicates conservative values (113-118). Bogost's work inspired many research projects investigating aspects of procedural rhetoric from immigration (Cleger 2015) over climate change (Burch et al. 2016) to religion (Šisler 2016) and many more².

However, when Fernández-Vara ignored rhetorical analysis (with its historical tradition dating back to ancient Greece) as its own type, she did rightfully so. Procedural rhetoric is just a partial adaptation of the Aristotelian trias (Arist. I, 2, 3.1356a) formed out of *logos* (logical arguments), *pathos* (arousal of emotions) and *ethos* (speaker image). Bogost based his theory solely on *logos* (Bogost 2007, 18-19) and neglected its equally important counterparts. His central idea of procedural enthymemes states that games deliver the first part of a syllogism "that the player literally completes through interaction." (43) However, it does not explain how videogames can procedurally stir emotions or create credibility through status. Criticism has already been raised, but only certain gaps are about to be closed. For instance, Katherine Isbister (2016) proposed with *How Games Move Us* a game design approach to *pathos* strategies, however without a focus on the rhetorical impetus of persuasion. *Ethos* is even less discussed with either very specific case studies (Wallin 2007), or non-rhetorical approaches found in transmedia discourse (Klastrup and Tosca 2004), or focused on its marketing implications (Dwulecki 2018). Hence, from a neo-Aristotelean perspective, there is no complete videogame-specific adaption of Aristotle's theories, which is a void of lesser degree considering the vast history of rhetorical research with its plethora of analytical tools. Yet, the lack of any analytical model for dissecting videogame rhetoric in a structured and therefore comparative manner is truly problematic.

A rhetorical model of videogame analysis is a vital cause also for transmedia research and its literacy. Transmedia is here understood as a type of storytelling in which "integral elements of a fiction get dispersed systematically across multiple delivery channels" (Jenkins 2007). While it can certainly be argued that this research gap is irrelevant for any other discipline than rhetoric, this assumption would underestimate the economic, political and individual power behind rhetoric and how it transpires from videogames through its transmedial satellites to each of its recipients. Any rhetorical case arises from a firm belief or conviction, called *zertum*,

² The academic social network *ResearchGate* counted 479 citations alone for Bogost book *Persuasive Games* (Bogost 2017).

and an individual willing to enforce the resulting claim (Knappe 2000, 76). The academic discourse depicted so far has no doubt that videogames can transmit persuasive messages. Other parties read the same signs of the times and responded accordingly. Former US-president Barack Obama's election campaign in 2008 positioned early voting promotion in 18 videogames to target ten battleground states, including Ohio, North Carolina, and Florida (Itzkoff 2008). Marcus Schmulzke (2012) called this transmedial expansion into the realm of videogames the "future of political advertising" (348). A similar conclusion was made by the private sectors, resulting in intensive product placement, in games like *Splinter Cell* (Totilo 2009), *Metal Gear Solid* (Ashcraft 2010), or most prominently *Final Fantasy* (Ashcraft 2015). The last one is especially noteworthy, with its extensive transmedial effort. The CGI-movie *Kingsglaive: Final Fantasy XV* displayed similar product placement techniques as its mothership medium by strategically displaying an Audi R8 (Nelva 2016) for improved perception. Some products, like the *Nissin Cup Noodles*, made their way throughout the entire storyworld, including the original net animation *Brotherhood: Final Fantasy XV* (Sato 2016). *Final Fantasy* illustrates how the rhetoric of product placement is extending throughout the series. Videogame rhetoric percolates through its channels to other media and spreads messages beyond digital borders. Yet, it is difficult to assess how and with which required alterations this process is most effective without a reliable framework to analyze such transmedial strategies. This paper introduces a model to unify the above mentioned rhetorical perspectives and presents a coherent, systematic approach called the *GDNA model*.

3. THE DIGITAL DOUBLE-HELIX AND THE PERSUASIVE FACTOR

GDNA stands for *Game Dynamic Narrative Analysis*. This model serves as an analytical tool and is emblematic for its unifying line of thought. The core image for the *GDNA* model is the DNA double helix. Watson and Crick (1953) described it in *A Structure for Deoxyribose Nucleic Acid* as follows: "The structure has two helical chains each coiled round the same axis" (737). The helix form of DNA originates in the opposing direction of its two strands (ibid.). The element of opposing forces inspired the imagery for *GDNA*. The study of videogame rhetoric is characterized by the necessity to consider narratological and ludological aspects and shares similarities

with Aarseth's (2012) ludo-narratives. These positions encapsulate the two primary loci for rhetorical analysis. *GDNA* consists out of three basic components: (1) the narrative strand and (2) the game strand and (3) the rhetorical sequences that arise from the specific combination of the formers' respective base pairs³.

On the one side, the game strand hosts computation-related and therefore medium-specific rhetorical practices, like procedural rhetoric. As a "practice of persuading through processes" (Bogost 2007, 3), it operates on the media-specific abilities of videogames. The game strand in *GDNA* encapsulates all mechanics and processes that are inherently tied to structured play. It is meanwhile not exclusively reserved for procedural rhetoric; it is simply a quite prominent example. However, the ludic strand does not exist in a vacuum. Its actions are explained, contextualized and incentivized through communicative acts located in the narrative strand.

On the other side, the narrative strand is a space closely related to classical rhetoric. Through the simulative power of computers, videogames are capable to mimic all kinds of media, ranging from books to movies and beyond. The individual rhetoric of each of these media is equally present in videogames. The verbal rhetoric of speech acts or the visual rhetoric of a game's design are represented in this strand. The term narrative in *GDNA* is deliberately chosen because it shall emphasize the allegorical dimension of a game's storyworld.

Rhetoric is understood in this model as a dynamic force. Narratological and ludological approaches to game studies are often understood as opposing – if not antagonistic – interpretations (Neitzel 2014), but rhetorical activity in videogames cannot be fully understood by choosing sides. There are no speech acts in a videogame that do not have either a procedural subsystem (like the dialog systems in *Mass Effect*, *Heavy Rain* or *Until Dawn*) or inform the player (and thereby her actions). Equally, there are no procedural rhetoric mechanics (be it economic ties in *Tropico* or character stats in *Shin Megami Tensei - Persona*) that have no impact on the storyworld. This co-dependent duality is expressed in the term *dynamic* in

³ *Base pairs* are to be understood as the smallest building bricks of videogames. They include (among others) mechanical (like movement patterns), artistic (with the specific design of objects), or textual (as characters' speech acts) aspects and their combination allow to create individual game sequences, like levels or stages, or general meta-systems, such as control schemata or saving functionality.

GDNA. In ancient rhetoric theory, rhetoric was understood as the powerful capacity (*dynamis*) that enabled the change of opinion within the rhetorician (Arist. I, 1, 2; Knape 1998, 878). This dynamic is usually associated with a human orator, however GDNA is based on the notion of the *homunculus digitalis*. A videogame's AI serves in proxyship of its creator and communicates the intended messages. With this understanding of an ersatz-orator, the emblematic nature of GDNA becomes visible. Examining videogames in regard to its rhetorical *dynamis* means analyzing its DNA⁴.

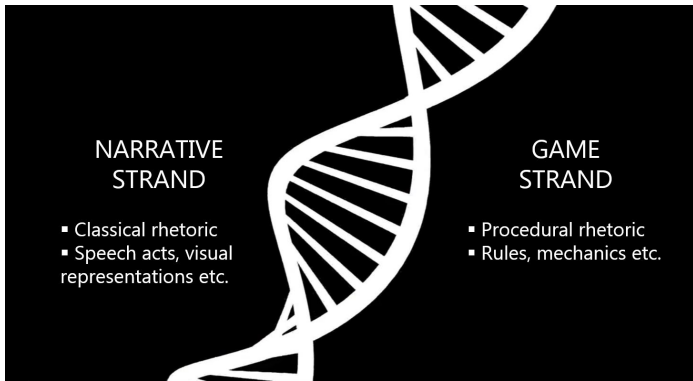


Figure 1. The GDNA Model - Game Dynamic Narrative Analysis.

Like DNA sequencing, the GDNA model is meant to identify the specific combination of elements and how they work together. The individual inquiry can be focused on specific aspects of the game. Analyzing chapters, cut-scenes, or mechanics always require considering the narrative *and* game strand. Matthew Wilhelm Kapell's *The Play Versus Story Divide in Game Studies* (2015) followed a very similar approach by collecting essays that equally investigated narratological as well as ludological aspects for each game. However, the GDNA model suggests a structured approach for this endeavor. Analyzing specific parts (*base pairs*) and how they are embedded

⁴ Further terminological adaptations are left out for the sake of simplicity. Further work could focus on the procedural differences between partial (genes) and holistic (genome) approaches, the differentiation which parts to leave out (introns) and which to include (exons) and how transmedial satellites of videogames might resemble mRNA.

(in narrative and game strands alike) allows to gain a deeper understanding of its dynamic (meaning rhetorical) interplay.

The GDNA model can be applied in various ways. Generally, it structures rhetorical analysis of videogames to declutter its intricate interplay. The social links in *Shin Megami Tensei - Persona 4* (Atlus 2008) grant the player benefits by engaging in social activities. On the narrative strand side, each bond is a small contained interpersonal story between the protagonist and another individual. The game strand rewards the player for spending time with another character by offering advantages for exploration, round-based fights and the JRPG-grinding mechanics. This synergetic effect emphasizes the importance of friendship as means to overcome obstacles and is expressed in such rhetorical sequences present in *Persona 4*. More specifically for transmedia purposes, GDNA allows to identify the unique combination of brand features, for example in *Tomb Raider*. The narrative strand always focuses on the story-arc of the intelligent and enduring archaeologist Lara Croft and her search for lost artifacts. The ludic strand encapsulates the combination of spatial puzzles and action sequences. The rhetorical sequences reveal themselves through the gameplay that allows the player to experience how Lara surpasses her foes equally on the physical as well as intellectual level. GDNA qualifies as an analytical tool to compare videogames with its transmedial satellites. It offers a structural model for videogame rhetoric. The distinct separation between the media-specific game strand and storyworld focused narrative strand is complemented by their interplay in the rhetorical sequences. Altogether, these allow to identify which compensatory measures are likely required to sustain rhetorical messages throughout transmedial universes.

4. KOJIMA'S SIGNATURE – IMMERSION FRACTURES

Immersion fractures are rhetorical segments present in every *Metal Gear Solid* game. Kojima frequently implements sections into his games that seemingly contradict what is widely considered the holy grail of videogame design (Pulsipher 2008): immersion.

Kojima' *immersion fractures* are understood as “all phenomena that deliberately deconstruct the immersive effects of videogames and replace it with the direct address of the gamer” (Dwulecki 2017, 162). For a better understanding, it is useful to consider the often-cited immersion-definition

brought forward by Janet Murray:

Immersion is a metaphorical term derived from the physical experience of being submerged in water. We seek the same feeling from a psychologically immersive experience that we do from a plunge in the ocean or swimming pool: the sensation of being surrounded by a completely other reality, as different as water is from air, that takes over all of our attention, our whole perceptual apparatus. (Murray 1997, 98-99)

Murray's metaphor already encapsulates a conspicuous thought. For persuasive communication, the realms of fictional and actual world are clearly separated (like water and air) (Knape 2008, 898-890). Transmitting messages from one to the other is a complicated endeavor. If the message is not clearly framed as a call to action for real-life, it disappears next to all the other speech acts in the fictional frame; the transmission fails. Within Murray's allegory, the player would never reach the water surface. Likewise, a too brisk message might permanently destroy the immersion. Metaphorically speaking, the player would not just be pulled to the surface, but instead ejected out of the water and stranded on the next beach. Reestablishing immersion would require far more effort, while the player might even discontinue the play session. Both, overly timid and aggressive approaches, hold the risk to miss their communicative goals. Therefore, rhetorical messages require a highly calibrated action: *immersion fractures*.

In the concrete case of videogames, this means that an immersion fracture occurs within a game session by consciously breaking the fictional/ludic frame and establishes for a short instance a direct contact with the player. In a manner of speaking, the game characters stop interacting with each other and instead start addressing to the gamer. (Dwulecki 2017, 162)

If immersion is visualized as the player being submerged in water, then *immersion fractures* are a very specific movement within it. *Immersion fractures* drag the player right to the water's surface, allow her to shortly draw breath and then rapidly drag her even deeper than beforehand. *Immersion fractures* communicate persuasive messages during a small timeframe and intensify the immersion after being successfully completed the first time (Dwulecki 2017, 163).

A simple example for an immersion fracture takes place early in the first *Metal Gear Solid* (Konami Computer Entertainment Japan 1999) game. The protagonist Solid Snake has a conversation via codec with his commander Colonel Campbell and receives the command to contact another field-operative, Meryl. Her frequency is “written on the back of the CD case” (GhostFoxGaming 2016, 0:04-0:06). The requested information is not embedded into the game, but in its cover. The gamer has to realize that the required CD case is not located in the diegetic world of Solid Snake, but lies right next to the player (Dawkins 2015, 45). The *immersion fracture* is constituted through the shift in reference frame (the player - not Snake - is addressed) and the rhetorical imperative to seek out the codec frequency. The attempt of recreating this element with the transmedial counterparts reveals the complexity behind such a seemingly small operation. The imperative speech act and the requested information are both located within the narrative strand. Verbal rhetoric is utilized to activate the player; however procedural rhetoric is in place as the gatekeeper. The narrative strand is easily transferred. Instead of the CD case, the information could for instance be printed on a book cover and the phrasing accordingly altered. The game strand however is more complicated. In a commonly designed book, this process would not work. The reader simply keeps reading further. However, with a book in which chapters would not be logically ordered, just a code could reveal at which page number the story continues. This scene is not present in any transmedial satellite of *Metal Gear Solid*. The following examples are and display a higher order of complexity. GDNA will allow to illustrate the individual rhetoric of these cases in the narrative and game strand and their respective connection.

The examples will be analyzed in regard to their transmedial counterparts. Unlike Jenkins’ demand for “unique contribution to the unfolding of the story” (2007) by each medium, these texts primarily retell the original *MGS* story arc. Nonetheless, the henceforth dissected scenes reveal two fundamental operations of transfictionality: “expansion” and “displacement” (Doležel 1998, 207). The former “extends the scope of the protoworld by filling its gaps, constructing a prehistory or posthistory, and so on” (ibid.). The first *MGS* novel as well as the comic start their narrative with scenes (the Snake’s birth and respectively his abduction right before the game’s opening) only mentioned not displayed in the mothership text. The latter “constructs essentially different versions of the protoworld, redesigning its structure and reinventing its story” (206). Such differences occur

especially around *immersion fractures* and results in the collision or contradiction among transmedial satellites and their respective storyworlds.

In order to showcase the problematic issue of translating *immersion fractures* within the *Metal Gear Solid* franchise, GDNA is applied. More specifically, there will be a look at the famous Psycho Mantis fight in *Metal Gear Solid* and the immersion fracturing codec sequences with Colonel Campbell in *Metal Gear Solid 2 – Sons of Liberty* (Konami Computer Entertainment Japan. 2001). Those scenes are predestined for analysis because they actually transpired into several transmedial satellites with books, comics and digital graphic novels. The GDNA model allows for a structured dissection of the scenes and enabled one to understand why narrative replacement and adjustment operations were necessary.

Both scenes are reviewed with the same GDNA scheme: (1) the narrative strand; it will serve as reference frame for all actions taking place within the scene; (2) the game strand; it focuses on analyzing shifts within the game mechanics; (3) the rhetorical sequences; those will allow for a deeper understanding how the interplay between narrative and game strand communicates the rhetorical intent. As analytical tools, textual analysis of speech acts is applied for the narrative strand and procedural rhetoric for the game strands. The rhetorical sequences will finally be compared with their transmedial counterparts.

5. PSYCHO MANTIS, IMMERSION FRACTURES AND NARRATIVES HOLES

The boss encounter with Psycho Mantis has been referred to as “one of the most celebrated moments in the entire history” (Dawkins 2015, 75) of *MGS*. Due to the encounter’s rhetorical focus on immersion fractures, *Metal Gear Solid* contains narrative holes that were closed through its transmedial output.

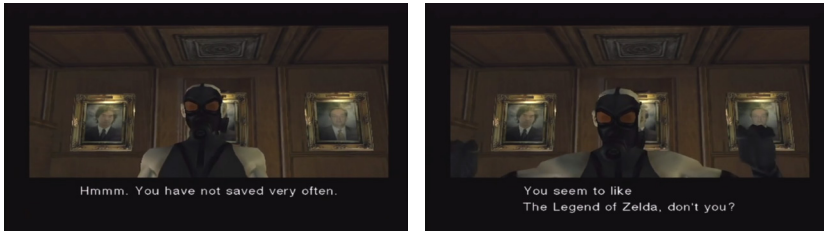
5.1. Narrative Strand

Psycho Mantis is within the game narrative of *MGS* an unsurmountable antagonist. The *MGS* franchise never shied away from the supernatural and

this protagonist encapsulates the paranormal like very few of Kojima's creations. As his name already implies, Psycho Mantis is a psychic. He can read the minds of his victims which allows him to predict their every movement. Furthermore, Psycho Mantis is capable of invading the minds of others and manipulating their actions. Like a puppeteer, he pulls their strings to make them act upon his whim. This applies not only to living subjects, but also to inanimate objects. Mantis' ability to use psychokinesis enables him to weaponize any given object as a projectile. Finally, he can conceal his presence with an optical camouflage (Dawkins 2015, 75). For the player, Mantis is introduced as a fearsome antagonist, which even tries to intimate the player directly.

Psycho Mantis' verbal rhetoric establishes the *immersion fracture*. Shortly after a conversation with the protagonist, Mantis ignores the character's presence and clearly addresses the player. Through reading the memory card, the antagonist is enabled to comment on the player's game library and even commands the player to put her controller to the floor. Activated vibration motors slightly move the controller over even surfaces; Mantis proclaims this as a proof for his telekinetic abilities⁵. All these statements are made possible through a shift of communication frame. The technology-averse protagonist Solid Snake cannot be addressed by any of Mantis' demands. The player is strategically addressed because she has to realize that this fight is not won in the story world of *MGS*, but in the actual world. In order to emphasize this perspective, the following fight is frequently interrupted by a black screen. A green "HIDEO" sign in the upper corner of the screen mimics the visual style of a channel switch on the actual TV set (Dawkins 2015, 116). This visual rhetoric cue serves as a recurring reinforcement for the previously communicated message of focusing on the physical setup of the game console being utilized in the physical world. Unless the player realizes this, Snake is confronted with an invisible, flying, mindreading manipulator of thoughts, actions, and objects who is more than just a match for him. Psycho Mantis' entire existence binds Snake to an inevitable defeat unless the player knows how to translate the received message into action.

⁵ For a more detailed account of Mantis' triad of self-proofing, see Dwulecki 2017,164-165.



Figures 2 and 3. Psycho Mantis expressing his power through the manipulation of the game controller. Screenshots from Metal Gear Solid – Twin Snakes by the author.

5.2. Game Strand

At the beginning of this fight, the player is set up to lose. Snake can use his entire arsenal of gadgets and weaponry, but he will never hit Mantis even once. As the narrative already prescripts, every action by Snake (and therefore the player) is perfectly countered by the “mindreading” Mantis. Gun shots are answered by evasive maneuvers. Explosives are also anticipated and long out-run before their impact could create any damages. Close quarters combat (CQC) is useless against an enemy camouflaging after Snake deceeds a certain safety distance. Despite all game mechanics being at the player’s disposable, the presence of a clearly superior foe renders the all-powerful gamer as a helpless puppet being equally played as all of Mantis’ other victims. The player cannot win under these circumstances and must - quite literally - switch levels of interaction.

To win the boss fight against Psycho Mantis, the player must unplug the *PlayStation* controller and plug it into the second slot (Beatty and Rakotonrainbe 1999, 87). That way, the procedural link between the player’s actions and Mantis reactions are disjointed; the playing field is leveled. After this switch, Snake can hit Mantis with his weapons. The antagonist is still capable to inflict serious damage due to his arsenal of supernatural abilities. Levitation allows him for quick dodges, telekinesis is utilized to weaponize furniture, and the optical camouflage makes it difficult to hit Mantis. Despite being not easy, this boss fight can be won. Yet, it requires the described manipulating of the console’s set-up. However, the game does not require the player to be psychic herself to come up with this stratagem. It is Mantis himself who reveals the crucial weakness.

5.3. Rhetorical Sequence

The game communicates the solution for this encounter through its repeated usage of *immersion fractures*. Understanding Psycho Mantis requires a closer look at the foundation of the GDNA model, the *homunculus digitalis*. In all types of distance communication, the orator suffers from circumstantial limitations (Dwulecki 2017, 158). Being physically not present forces him to anticipate possible situations within the communication process and create generalized responses. Computers enable a shift in the power-tectonic of distance communication. Due to their procedural nature, digital media can adapt to the individual circumstances (Bogost 2007, 44; Dwulecki 2017, 159). As long as the rhetorician anticipates all imaginable variants of a given situation, the created digital text can customize responses on a need-be basis. Within the rhetoric of videogames, the *homunculus digitalis* was suggested as a way to comprehend the game's AI as an artificial proxy for distance communication. While the creator of the game cannot sit next to every customer, the *homunculus digitalis* can. Psycho Mantis is one of many visual expressions of the artificial intelligence. Hideo Kojima utilized his digital proxy to communicate relevant gameplay information. However, instead of simply delivering commands, he created *immersion fractures* that persuaded the user to change the field of perception away from the digital and towards the real-world play situation.

The interplay between verbal and procedural rhetoric renders this gameplay moment unique. The player has to understand that Mantis is communicating to her and not the protagonist. She has to understand that every demonstration of power is an implicit hint towards the *PlayStation* console. Mantis subtly nudges the player towards this message. At first, he reads the memory card, by commenting on playstyle (with kill counts, save frequency etc.) and then on other games played on this console. The memory card was usually located right above the controller slot and therefore the gaze of the baffled player might slide right towards the solution. Then Mantis manipulates the controller, he actively demonstrates his direct link to it. In turn, the player demonstrates the completed act of persuasion by changing her play pattern (*behavior change*; Knape 2013, 89). With the switch of slots, she does not simply cut the procedural connection to Mantis, but establishes the new procedures that verify she understood the delivered information. She discontinued her playthrough, switched her field of activity by setting the controller aside and altered the console's setup.

When the gameplay continues, the required process is fulfilled and persuasion in the sense of altered behavior took place. However, this media-specific constellation created a problem for transmediation.



Figures 4 and 5. Psycho Mantis reading the player's hard drive.
Screenshots from *Metal Gear Solid*.

5.4. Transmedial Satellites

All transmedial outputs had to translate the fight against Mantis media-specifically. The novelization of *Metal Gear Solid* by Raymond Benson (2009) drastically changed the scene. Instead of the conversation between Mantis and Snake, the reader is presented a consecutive line of hallucinations. Set in a distorted version of a theme park of his childhood, Snake is now confronted with illusions of his mentor Master Miller, his potential love interest Meryl, and his late father Big Boss (Benson 2009, 146-151). Also, any reference to the fruitless attempts to hurt Mantis before the relocation of the controller are missing. Benson replaced the *immersion fracture* with insights to Snake's character. The original rhetorical message was designed to persuade the player to alter the controller configuration. The book cannot imitate this highly medium-specific set-up, due to its lack of procedurality.

The omission is the result of a narrative hole. While the *immersion fracture* per definition momentarily dissolves the immersion just in order to re-intensify it afterwards through the moment's outstanding uniqueness, Benson was confronted with a lack of information about the intradiegetic events while the player changed slots. If the player paused the game for the exchange, the played time continued while the story time froze. The game-world literally changed its entire set of rules within the blink of an eye. The

punctum of the moment lets the player forget that the game never offers a reasoning why suddenly the insurmountable Mantis becomes vulnerable (Barthes 1981, 26; Dwulecki 2017, 163). The book attempts to mimic the psychological aspect. Instead of creating a complicated play with the book pages or hidden messages, the novelization operates as a transfictional expansion and creates a storyworld still close to the videogame source's material. It is focused on the concept that Snake mentally outperforms Mantis with his higher willpower, like the player did by literally going beyond the restrictions of the digital world and manipulated the game in the physical one. Therefore, Benson's modification has a certain mimetic quality to it.

The comic took a slightly different route. Written by Kris Oprisko and illustrated by Ashley Wood, the comic mainly used original dialogs with only little changes.

"The plotline [...] is true to the source material. So true in fact that almost everything is included aside from one or two codec conversations from the game which told you about things like what button to press." (Lipscombe 2012). Among these few significant alterations are the omitted CD case scene described earlier and the Psycho Mantis scene. It was placed in issue #7 and #8. This split allowed the author to create a cliffhanger (Oprisko, Garner and Fraction 2014, 176-179) in which Psycho Mantis threatens to telepathically force Meryl to shoot herself. Hence, the comic strategically altered the dramatic pacing in order to create a purchase impulse.

In #7, the comic diverges from the original narrative strand right at the start of the conversation. The comic book shows how Master Miller comes to rescue Snake by killing Mantis before he can even start his machinations (165). While fighting together, Snake is repeatedly requested to share sensitive information (171, 173). After Snake realizes an impossible inconsistency (173), the illusion breaks. Mantis created a succession of fake events for Snake and the reader alike. This approach is centered on Psycho Mantis' make-believe. The illusion is less obscure impression pieces in short succession, but rather a logical storyline trying to lure the comic book reader to believe the same as Snake (temporarily) did. Through an unframed shift of diegetic level, leading in and out of a hallucination, the player perceives the same illusions as Snake. This play with frames at least partially recreates aspects of the *immersion fracture*. The reader's flow experience is likely to be disturbed when the realization takes place that there have been two diegetic levels in place. However, this decreased immersion has no

rhetorical intent and therefore the deployed displacement is purely interesting from a narratological perspective.

In #8, aspects of the game strand are incorporated. The fighting segment in which Snake has to evade telekinetic attacks (in form of flying furniture) is displayed. However, also the comic creates an alternate explanation for Snake's success. In this case, Mantis inflicts severe hallucinations that Snake would burn alive (183) followed by illusions of approaching dead enemies (184)⁶. Also in this scenario, Snake shoots Psycho by overcoming his mental machinations.

Metal Gear Solid: Digital Graphic Novel is a digitized version of the comic book. The most significant changes are voice overs, added sound and visual effects, music and animation (DerfsonicGaming 2013a, 00:57:37-00:58:06). This dynamization in combination with the visuals moves the experience closer to the videogame source material and makes reception easier. It just shares the same alterations as the comic book and has no further adjustments, unlike the next example.

Psycho Mantis offered a unique experience. As the GDNA model highlights, there is an intricate connection between verbal speech acts and procedural rhetoric at place that influences the player behavior. This *immersion fracture* was crafted for a console setup.

Its transmedial expansions filled the resulting narrative gap with reasonable success.

6. GW AND THE IMITATION GAMES

The hangar scene in *Metal Gear Solid 2* employed a rhetoric of doubt. "Everyone is lying to you. Trust no one. Nothing is as it appears." (Dawkins 2015, 60) is a quintessential summary of the experience in *Metal Gear Solid 2 – Sons of Liberty* (short *MGS2*). It is marked by a specific shift within its narrative. Through a series of dialogs, protagonist and player venture through a mist of deception and discover the true nature of the protagonists' mission. However, the transmedial satellites fail to communicate the

⁶ This might be a direct reference to *Metal Gear Solid 3 - Snake Eater*. In the boss fight against The Sorrow, a telepathic medium just like Mantis, the player is confronted with soldiers killed so far in the game (Dawkins 2015,114). For a more detailed analysis (Dwulecki 2017,160).

rhetorical message embedded in the game and rob these of the unique persuasive power.

6.1. Narrative Strand

The described scene can be considered a rite of passage. Leaving literally everything behind, the protagonist Raiden has no defenses, but his mere athletic body. After successfully completing this level, he encounters Solid Snake, who explains the full magnitude of the machinations in place. Raiden is an unknowing pawn in the scheming of the secret society *The Patriots*. Their so-called *Selection for Societal Sanity* (or in short S3) plan aimed for a digital solution to manipulate society in general and any given individual's perception. All this is executed by GW, a supercomputer that is designed to interpose between all internet communications and serves as a censor that could manipulate or even delete any form of digital data (KefkaProduction 2013, 03:16:56-03:19:50). At the beginning of this scene, the player is oblivious to all these circumstances and believes to be part of a regular FOXHOUND operation. Raiden is directed by GW's highly advanced AI impersonating Colonel Campbell, who was in command during the *Shadow Moses Incident* in the previous game. Consequently, the player is likely to believe this character, as Campbell was the trusted guide for Solid Snake. Throughout the course of this section, Raiden is stripped from all this support, realizes the true nature of his commander and begins his fight against his former puppet masters.

The sequence begins with protagonist Raiden's release from the torture chamber. Deprived from any of his gear, including any kind of clothing, he has to traverse a hangar within Arsenal Gear. This giant battle station serves as the mobile bunker for GW. Up to this point of the game, GW is portrayed as a hypothetical threat on the verge of realization. These Potemkin villages start to crumble now. When passing through the door, a codec scene starts. Those usually serve a line of communication between the operative Raiden and the GW impersonation of Colonel Campbell (called from here on just GW Campbell). From this point onwards, seven independent codec scenes take place triggered throughout the level. The content is ever more confusing for the player due to its constantly increasing absurdity (KefkaProduction 2013, 03:56:25-04:03:40). A virus is slowly destroying GW's functionality and causes system failures. These express

themselves in the codec conversations. At first, the connection with Colonel Campbell seems to be disturbed due to some sort of static. The first dialog establishes that Raiden never meets Campbell in person and is spiked with insinuation regarding the true nature of the situation at hand.

One scene is particularly striking because it is a clear *immersion fracture* with rhetorical intent. In the second codec conversation, the GW Campbell seemingly instructs Raiden to do the impossible (KefkaProduction 2013, 03:57:51-03:58:09):

Colonel	Raiden, turn the game console off right now!
Raiden	What did you say?
Colonel	The mission is a failure! Cut the power right now!
Raiden	What's wrong with you?
Colonel	Don't worry, it's a game! It's a game just like usual.
Rose	You'll ruin your eyes playing so close to the TV.
Raiden	What are you talking about!?

Similar to Psycho Mantis, the GW Campbell shifts the communicative reference frame. Raiden has no game console anywhere close to his vicinity, a statement doubly obvious due to him being utterly naked. Yet, it is Raiden that reconfirms the shift with his replies. All of his questions are ignored by the Colonel as well as (the equally impersonated) love-interest Rose. Raiden's presence is shoved into the background. This *immersion fracture's* message is quite unique. The Colonel addresses the player with the imperative to abort her gaming activity.

6.2. *Game Strand*

The gameplay is massively reduced. In this section, the game strand has primarily a supportive function. The naked protagonist covers his private region constantly with his hands. The result is a strong limitation of gameplay options. Without any weapons and unwilling to use his hands, Raiden cannot kill or drag enemies (Martin 2002, 166-167). Furthermore, the option to hang off ledges for stealth purposes is also removed. The player feels the vulnerability through all those boundaries; only further increased by the constant interruption by the codec. The player has to traverse a guarded area and is prevented from doing so by the rogue GW Campbell. This interplay between narrative and ludic strand visualizes (*objection sub oculus*) the rhetorical message at hand.

6.3. Rhetorical Sequence

This *immersion fracture* is designed to encourage disobedience. It begins right with the first sentence of the transcribed dialog. It violates not only the videogame convention to restrict all instructions to the intradiegetic realm, but with its counter-intuitive claim. The game seemingly wants to be not played anymore. Raiden's response reaffirms the actual rhetorical strategy of the conversation: confusion. This situation can be understood as what Joachim Knappe (2015) calls the *Othello-reactive*. The orator purposefully creates a state of confusion in which the recipient doubts previously fixed opinions in order to overcome those and establish a new inner certainty. In *MGS2*, this means the player has to overcome the belief that the instructions by Campbell are trustworthy and start to disobey his orders. Assuming a player that conforms instantly to the Colonel's demands, takes a break, and returns to the game the day after, she would be confronted inevitably with the very same game dialog scene again. Obedience is therefore not a viable option. The player has to disregard the Colonel's and Rose's arguments. In order to reinforce this idea, the offered reasons are actually parodies of real-life conversations. Sentences like "it's (just) a game" or "you'll ruin your eyes" are stereotypical expressions brought up to minimize emotional impact of the engagement with games. Those statements are purposefully used to provoke disobedient behavior. They play with the lacking societal acceptance for games as pastime. In an act of displayed sovereignty, the player has to oppose GW with its pseudo parental control ambitions.

In a nutshell, the narrative strand of the hangar level is at first glance just a rite of passage, with a protagonist being oblivious to his own situation as a puppet, overcoming the confusing challenge to decipher the cryptic yet revealing comments of his manipulators until the moment of revelation, and freeing himself from the shackles of his situation. Shifting communication frames force the player to reconsider her position within the game and wider situation at large. These media-specific acts of communication will prove to be a breaking-point for any transmediation effort.

6.4. *Transmedial Satellites*

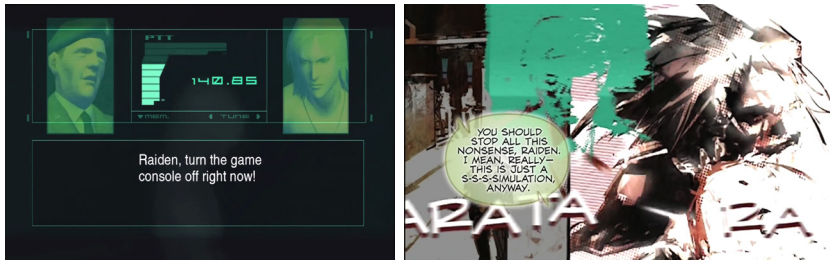
The transmedial translations of *MGS2* turned out to be unable to reproduce the games message. The book adaptation of *Metal Gear Solid 2 – Sons of Liberty* tried and failed to mimic its source material. The narrative strand, with its verbal rhetoric, is transferred to such a high degree that it hurts the rhetorical message. Comparing the dialog sequence analyzed above with its novelization counterpart, a striking resemblance reveals itself. The only change in the dialog is that the GW Campbell does not demand to “turn the game console off right now!” but “the simulator” (Benson 2009, 258). This direct transfer is faithful to its source, however destroys simultaneously the inner workings of the deployed rhetorical strategy. As described above, the provocation in the game works because it plays with media prejudice. Especially Rose’s statement “You’ll ruin your eyes playing so close to the TV.” (Benson 2009, 259) loses all its context sensitive meaning and transmutes into the dada-esque. This is especially unfortunate considering that banning specific books has a long tradition (Darnton 2015) that could have been used to preserve the sense of directive and disobedience. Without the reference to societal judgment, the emotional appeal to encourage defiance is weakened.

It can be inferred that the implied audience of Benson’s book is supposed to have already played the game. In this case, the equal text replaces the *immersion fracture* with an impulse to reminiscing. Meanwhile, the game strand messages essentially evaporate behind the constant dialog. The reader follows very closely the deterioration of GW, but the constant tension through the codec-induced stop-and-go experience disappears. The gameplay mechanic designed to emphasize the lack of control and vulnerability is hardly present in the text. However, the comic book also misses its chance.

The comic had a better footing and equally missed the point. Released 2006-2007, these second series kept Ashley Woods for illustration, but changed its writer to Alex Garner. The comic book adaptation sticks in general quite close to the original phrasing of the game. However, the comic delivers visual cues far earlier than its source material. Codec sequences are here not interrupting the flow of events (Oprisko, Garner and Fraction 2014, 510-515). Instead, they function as virtual overlays that emphasize the synchronicity of actions. Within the hangar scene, the graphic novel changes already the look of Colonel Campbell with the first dialog. His portrait is

shown in a darker and more distorted version alluding to its hidden nature (510). However, the comic misses its option to create a similar *immersion fracture* as the game. Comics suffered for a long time under similar societal prejudice as videogames had all the chances for a promising statement (Scole 2017). However, it fully dropped the *immersion fracture* and instead replaces it with a Raiden having a murderous frenzy after hearing that Rose has been kidnapped (Oprisko, Garner and Fraction 2014, 513-515). These displacements clearly indicate the creation of an independent storyworld that dropped the narrative and ludic strand of its source. Neither rhetorical messages of defiance nor gameplay of defenselessness are present anymore. This change did not undergo unnoticed by critics (Lipscombe 2012).

The digital graphic novel goes a step further and accentuates the technological aspect by combining this change with static effects in regard to sound and visual (DerfsonicGaming 2013b, 2:10:43-2:10:59). While the analog version clearly displays compensatory measure to communicate the *realm of individuation* (Knappe 2008, 898; 890), the digital one tries to compromise between mothership and satellites. It utilizes the visual materials from the graphic novel, yet combines it with dynamic effects. Therefore, the digital graphic novel claims a hybrid position. Both transmediations display a distinct faithfulness to the original source. However, their individual media-specific limitations hurt the rhetorical message of their source. Neither critique on societal prejudice against videogames nor the message of disobedience remained.



Figures 6 and 7. The request to turn off the game console in a codec conversation, and 'Simulation' replacing the game console reference in the digital graphic novel. Screenshots from *Metal Gear Solid 2 – Sons of Liberty* and *Metal Gear Solid 2 Digital Graphic Novel*.

Sons of Liberty's rhetoric successfully subverts game conventions. A verbal rhetoric that is designed to rile the player up against given commands and procedural measure to make her feel vulnerable emphasize the appeal of disobedience. GDNA illustrated that the interplay between narrative and game strand were not quite as intrinsically bound to the videogames, but their transmedial counterparts still missed the rhetorical mark.

7. "KEPT YOU WAITING, HUH?" – CONCLUDING THOUGHTS TO GDNA AND MGS

Translating a non-linear narrative into a linear three-act structure is like making a song out of a painting or a sculpture.
– Kirk Kjeldsen

As demonstrated with the *Metal Gear Solid* saga, the translation of videogames into different narrative forms is truly difficult. Especially *immersion fractures* pose a challenge to any transmediation attempt. Narrative holes require filling and rhetorical messages should be preserved. A rhetorician has a wide tool set (*organon*) for these tasks and with the GDNA a model to structurally apply them to videogames. The Game Dynamic Narrative Analysis serves two purposes. It is an analytical model to describe how narrative and ludic elements create synergetic effects and allow for rhetorical activity. Furthermore, GDNA serves as a strong metaphor to re-contextualize different aspects of game studies. Creating rhetorical operation-spaces not by emphasizing opposing but complementary factors, both strands are vital to gaining a deeper understanding of rhetoric within videogames. As the two samples demonstrate, the GDNA model allows the generation of new perspectives for transmedia research by tracing down these translation issues that any transmediation of videogames has to face. With this model in place, no more rhetorical scholars and only persuasive messages should be lost in transmediation.

REFERENCES

- Aarseth, Espen. 1997. *Cybertext - Perspectives on Ergodic Literature*. Baltimore: The Johns Hopkins University Press.
- Aarseth, Espen. 2012. "A Narrative Theory of Games". FDG 12 Proceedings of the International Conference on the Foundations of Digital Games: 129-133. doi: 10.1145/2282338.2282365.
- Ashcraft, Brian. 2010. "Metal Gear Solid: Peace Walker Product Placement Explained!" Kotaku.com. Last modified September 4. <http://kotaku.com/5513122/metal-gear-solid-peace-walker-product-placement-explained>.
- Ashcraft, Brian. 2015. "Let the Final Fantasy XV Product Placement Begin!" Kotaku.com. Last modified March 13. <http://kotaku.com/final-fantasy-xv-features-coleman-camping-gear-1691226545>.
- Atlus. 2008. *Shin Megami Tensei - Persona 4*. Tokyo: Atlus.
- Barthes, Roland. 1981. *Camera Lucida*. New York: Farrar, Straus & Giroux.
- Beatty, Liam and Stéphane Rakotondrainbe. 1999. *Metal Gear Solid - The Official Strategy Guide*. London: Piggyback Interactive.
- Benson, Raymond. 2008. *Metal Gear Solid*. New York: Ballantine Books.
- Benson, Raymond. 2009. *Metal Gear Solid 2: Sons of Liberty*. New York: Ballantine Books.
- Bogost, Ian. 2007. *Persuasive Games*. Cambridge: MIT Press.
- Bogost, Ian. 2007. "Persuasive Games: The Expressive Power of Video Games". Researchgate.net. Last accessed 29.06.2017. https://www.researchgate.net/publication/273947142_Persuasive_Games_The_Expressive_Power_of_Video_Games.
- Burch, Ethan, Jeremy Fernsler, Robert Brulle and Jichen Zhu. 2016. "Echo Chamber: A Persuasive Game on Climate Change Rhetoric". CHI PLAY Companion 16: 101-107. doi: 10.1145/2968120.2987741.
- Cleger, Osvaldo. 2015. "Procedural Rhetoric and Undocumented Migrants: Playing the Debate over Immigration Reform". *Digital Culture & Education* 7 (1): 19-39.
- Crick, Francis and Watson, James. 1953. "A Structure for Deoxyribose Nucleic Acid". *Nature* 171 (3): 737-738. <https://www.nature.com/nature/dna50/watsoncrick.pdf>.
- Darnton, Robert. 2015. *Censors at Work: How States Shaped Literature*. New York: Norton & Company.
- Dawkins, Daniel, eds. 2015. *A Hideo Kojima Book - The Ultimate Guide to Metal Gear Solid 1987 > 2015*. Bath: Future Publishing.

- DerfsonicGaming. 2013a. *Metal Gear Solid Digital Graphic Novel (HD Legacy Version) [1080p]*. Youtube.com. Last modified August 7. <https://www.youtube.com/watch?v=1PHReMw0zVE&t=4134s>
- DerfsonicGaming. 2013b. *Metal Gear Solid 2 Digital Graphic Novel (HD Legacy Version) [1080p]*. Youtube.com. Last modified August 8. <https://www.youtube.com/watch?v=hB8EgZXKG8Y&t=8049s>.
- Doležel, Lubomir. 1998. *Heterocosmica: Fiction and Possible Worlds*. Baltimore: The Johns Hopkins University Press.
- Dwulecki, Sven. 2016. "Building the future and keeping the past alive are one and the same thing'. A rhetorical analysis of the Metal Gear Solid-Saga". In *More After More. Essays Commemorating the Five Hundredth Anniversary of Thomas More's Utopia*. Edited by Ksenia Olkusz, Michał Kłosiński, Krzysztof M. Maj. Kraków: Facta Ficta.
- Dwulecki, Sven. 2018. *Der Mastermind - Eine Kommunikatorrolle des Marketings*. Kraków: Facta Ficta. In print.
- GhostFoxGaming. 2016. "Metal Gear Solid - Meryl Codec Frequency - First Conversation With Snake" Youtube.com. Last modified 26.03. https://www.youtube.com/watch?v=41sitUsd_TE.
- Isbister, Katherine. 2016. *How Games Move Us*. Cambridge: MIT Press.
- Itzkoff, Dave. 2008. "Obama Ads Appear in Video Game" NYTimes.com. Last modified October 14. <http://www.nytimes.com/2008/10/15/arts/15arts-002.html>.
- Jenkins, Henry. 2007. "Transmedia Storytelling 101" henryjenkins.org. Last modified March 21. http://henryjenkins.org/blog/2007/03/transmedia_storytelling_101.html.
- Kapell, Matthew Wilhelm. 2015. *The Play Versus Story Divide in Game Studies*. Jefferson: McFarland.
- KefkaProduction. 2013. *Metal Gear Solid 2 - The Movie [HD] Full Story*. Youtube.com. Last modified October 13. <https://www.youtube.com/watch?v=I5AunfmI8bs&t=15743s>.
- Klastrup, Lisbeth and Susana Tosca. 2004. "Transmedial worlds - Rethinking cyberworld design". *Proceedings of the 2004 International Conference on Cyberworlds*: 409-416. Los Alamitos, California: IEEE Computer Society.
- Knape, Joachim. 1998. Kairos. Persuasion. In *Historisches Wörterbuch der Rhetorik Vol. 6*, edited by Gert Ueding, 874-907. Tübingen: Max Niemeyer.
- Knape, Joachim. 2000. *Was ist Rhetorik?* Stuttgart: Reclam.
- Knape, Joachim. 2008. "Rhetorik der Künste". In *Rhetorik und Stilistik. Vol. 1*. Edited by Ulla Fix, Andreas Gardt, Joachim Knape, 894-927. Berlin: HSK.

- Knape, Joachim. 2013. *Modern Rhetoric in Culture, Arts and Media*. Berlin: De Gruyter.
- Knape, Joachim. 2015. "Das Othello-Reaktiv : zur Funktion des Zweifels im rhetorischen Persuasionsprozess". In *Kognition - Kooperation - Persuasion*. Edited by Frank Duerr, Florian Landkammer, Julia Bahnmüller, 151-180. Berlin: Weidler.
- Konami Computer Entertainment Japan. 1999. *Metal Gear Solid*. Tokyo: Konami.
- Konami Computer Entertainment Japan. 2001. *Metal Gear Solid 2 - Sons of Liberty*. Tokyo: Konami.
- Lipscombe, Kris. 2012. "Metal Gear Solid Omnibus Book Review". TheSixthAxis.com. Last modified January 2. <http://www.thesixthaxis.com/2012/01/02/metal-gear-solid-omnibus-book-review/>.
- Makuch, Eddie. 2016. "Why Video Game Movies Are Often Bad and How to Fix Them, According to Hollywood Vets". Gamespot.com. Last modified February 17. <http://www.gamespot.com/articles/why-video-game-movies-are-often-bad-and-how-to-fix/1100-6434880/>.
- Martin, Michael, eds. 2002. *Metal Gear Solid 2 Sons of Liberty - The Official Strategy Guide*. London: Piggyback Interactive.
- Molleindustria. 2006. *McDonald's Videogame*. Molleindustria. Last modified March 12, 2008. <http://www.mcvideogame.com/index-eng.html>.
- Murray, Janet. 1997. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Cambridge: The MIT Press.
- Neitzel, Britta. 2014. "Narrativity of Computer Games". In the living handbook of narratology. Edited by Peter Hühn et al. Hamburg: Hamburg University. Last modified April 22. <http://www.lhn.uni-hamburg.de/article/narrativity-computer-games>.
- Nelva, Giuseppe. 2016. "Ogle the Beautiful Final Fantasy XV Audi R8: a Peculiar Product Placement". Dualshockers.com. Last modified March 31. <http://www.dualshockers.com/ogle-the-beautiful-final-fantasy-xv-audi-r8-a-peculiar-product-placement/>.
- Oprisko, Kris, Alex Garner, Matt Fraction. 2014. *Metal Gear Solid - Deluxe Edition*. San Diego: IDW Publishing.
- Pulsipher, Lewis. 2008. "Why Immersion Shouldn't Be the 'Holy Grail'", *Gamasutra.com*. Last modified December 19. http://www.gamasutra.com/view/news/112545/Opinion_Why_Immersion_Shouldnt_Be_The_Holy_Grail.php [accessed: 30.11.2016].
- Rockstar North. 2004. *Grand Theft Auto: San Andreas*. New York: Rockstar Games.
- Sato. 2016. "Final Fantasy XV's Latest Product Placement Is With Nissin's Cup

- Noodles". Siliconera.com. Last modified September 19. <http://www.siliconera.com/2016/09/19/final-fantasy-xvs-latest-product-placement-nissins-cup-noodles/>.
- Schmulzke, Marcus. 2012. "Campaigning in the Digital World: Obama's Use of Dynamic Advertisements". *Journal of Information Technology & Politics* 9 (4): 338-351. doi: 10.1080/19331681.2012.700444.
- Scole. 2017. *The Social Stigma of Comic Book Reading*. theArtifice.com. Last modified January 30. <https://the-artifice.com/social-stigma-comic-book-reading/>.
- Šisler, Vít. 2016. "Procedural religion: Methodological reflections on studying religion in video games". *SAGE journals* 19 (1): 126-141. doi: 10.1177/1461444816649923.
- Totilo, Stephen. 2009. "Beat A Man Into A Urinal, Consider Buying Deodorant" Kotaku.com. Last modified November 24. <http://kotaku.com/5411102/beat-a-man-into-a-urinal-consider-buying-deodorant>.
- Vogt-Roberts, Jordan. 2017. "Metal Gear Solid could be first 'great video game movie,' says Kong: Skull Island director". Last modified March 10. <http://www.polygon.com/2017/3/10/14880910/metal-gear-solid-movie-kong-skull-island-director>.
- Wallin, Mark Rowell. 2007. "Myths, Monsters and Markets: Ethos, Identification, and the Video Game Adaptations of The Lord of the Rings". *Game Studies* 7 (1). <http://gamestudies.org/0701/articles/wallin>.