

UNIVERSIDADE FEDERAL DE UBERLÂNDIA

LEONARDO BESCHIZZA



**EXPLORING THE METRO 2033 VIDEO GAME ADAPTATION: FROM
STORIES TO EXPERIENCES**

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Translation

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Examining committee:

Prof. Igor A. Lourenço da Silva – UFU
Advisor

Lara Talhaferro, MA – UFU
Co-advisor

Prof. Cynthia Beatrice Costa – UFU
Member

Prof. Stefano Paschoal – UFU
Member

Uberlândia (MG), July 12, 2019

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ABSTRACT

The present work is aimed at analyzing the adaptation of the Russian novel Metro 2033 into the video game of the same name. The analysis was performed in a parallel sequence from the novel and the game and focused on the portrayal of conflict in both media. Given the interactive nature of video games as a medium, a model (JÄRVINEN, 2009) was employed to investigate how narrative content embedded in the game structures is communicated to its players. The analysis provides insight into some tendencies regarding what type of elements were prioritized for adaptation.

Key words: adaptation; intersemiotic translation; Metro 2033; novel; game.

RESUMO

O presente estudo propõe uma análise comparativa da adaptação do romance *Metro 2033* para o *game* de mesmo nome. A análise foi realizada entre um trecho do livro e sua cena análoga no *game*, com foco na representação dos conflitos em ambas as mídias. Devido à natureza interativa dos *games* como formato midiático, um modelo (JÄRVINEN, 2009) foi utilizado a fim de verificar de que forma elementos narrativos integrados às estruturas dos *games* são comunicados aos jogadores. Os resultados da análise apontam algumas tendências relativas a quais tipos de elementos narrativos foram priorizados para a adaptação.

Palavras-chave: adaptação; tradução intersemiótica; *Metro 2033*; romance; *game*.

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1. INTRODUCTION

Adaptation is commonly referred to as the process (and the product alike) of rendering narratives between different semiotic systems, such as a novel adapted into film. The term is also attributed to the repurposing of a text—not necessarily written, but text in its ampler sense—in order to reach a new audience or function towards a different objective, such as in a version of the bible meant for children.

Although such definitions may seem enough for conceptualizing the adaptation practice, they do so only superficially. For instance, the boundaries separating adaptations from works that simply take inspiration from other media have not been well established on a scientific level, to the point that Hutcheon (2006, p. 170-172) dedicates an entire section of her theory to the discussion of what should not be considered an adaptation. Another obstacle would be the highly subjective nature of the process, which depends mostly on the creativity of its conceiver, rather than on a pre-established set of rules. One way that has been used to approach adaptations and eventually gain deeper knowledge in the field is to analyze source works and their adaptations with a view to exploring how they function in each medium (HUTCHEON, 2006).

The purpose of this senior thesis is to investigate how certain elements of a source novel were remodeled in its video game adaptation. More specifically, it tackles video game *Metro 2033*, developed by Ukrainian studio *4A Games* and published in 2010 by *THQ Inc.*, as an adaptation of a homonymous novel by Dmitry Glukhovsky. As the author describes it, the novel is the result of a collective project carried out by him with inputs and support from his readers:

Before it became a printed book, it had been an online project. In 2002, I published the text using my own website and made it interactive. I started to write new chapters and publish them live while getting feedback from the audience on every chapter.¹

The project was a hit in Russia, reaching over two million readers, which led to its publication in printed format in 2005 (see Figure 1). Two sequels were published subsequently: *Metro 2034* in 2009, and *Metro 2035* in 2015 (see Figure 1). Although

¹ Interview available at: <https://venturebeat.com/community/2010/03/31/metro-2033-interview/>. Access on: July 3, 2019.

the titles might suggest a direct relationship between the three novels, *Metro 2034* does not follow the plot line of *Metro 2033*, focusing mostly on different characters. The sequel to the events of *Metro 2033* is narrated in the third novel, *Metro 2035*, which also features some characters from the second novel.

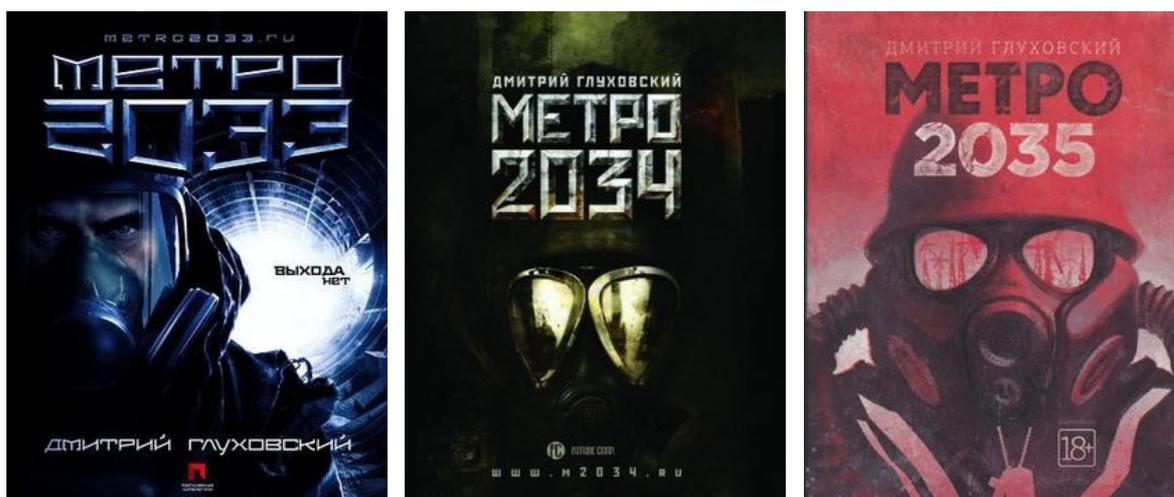


Figure 1 – Original Russian covers for the three Metro novels by Dmitri Glukhovskiy.

Source: Wikipedia²

To expand the universe of his novels, Glukhovskiy created on his website what he describes as a “broad, international, cross-language, cross-author experience of collective creation”³. This initiative was named *The Universe of Metro 2033*. It was launched in late 2009, and over 50 books to date have been published under its label by authors from all around the world, all supported by Glukhovskiy himself:

I’m inviting new, unpublished authors to write their own spin-offs and sequels with their own characters and names, and they’re posting [their work] on Metro2033.ru, along with their music compositions and their pictures. There is a popular vote, and those that get into the top five get a chance to get published.

According to Glukhovskiy, he was approached by the game developers in 2004⁴, when the novel was an internet project, to adapt the book into a video game. When asked in

² Metro 2033: https://en.wikipedia.org/wiki/Metro_2033. Access on: July 3, 2019

Metro 2034: https://en.wikipedia.org/wiki/Metro_2034. Access on: July 3, 2019.

Metro 2035: https://en.wikipedia.org/wiki/Metro_2035. Access on: July 3, 2019.

³ Interview available at: <https://www.vg247.com/2010/02/25/interview-metro-2033s-dmitry-glukhovskiy-and-huw-beynon/>. Access on: July 3, 2019.

⁴ See footnote 2.

an interview about his engagement in the game development, the author stated his part was “that of keeping the story consistent and making sure the senses and meanings of the book are there.”⁵ He also wrote all dialogues and contributed with some ideas to game design. The game *Metro 2033* was released in 2010, followed by two sequels, *Metro: Last Light* (2013)—which also had Glukhovsky as a script writer—and *Metro: Exodus* (2019) (see Figure 2). Having most of its dialogue and story outline written by Glukhovsky, *Metro: Last Light* was initially supposed to be adapted into the third book of the series (*Metro 2035*); however, the idea was abandoned by the author.

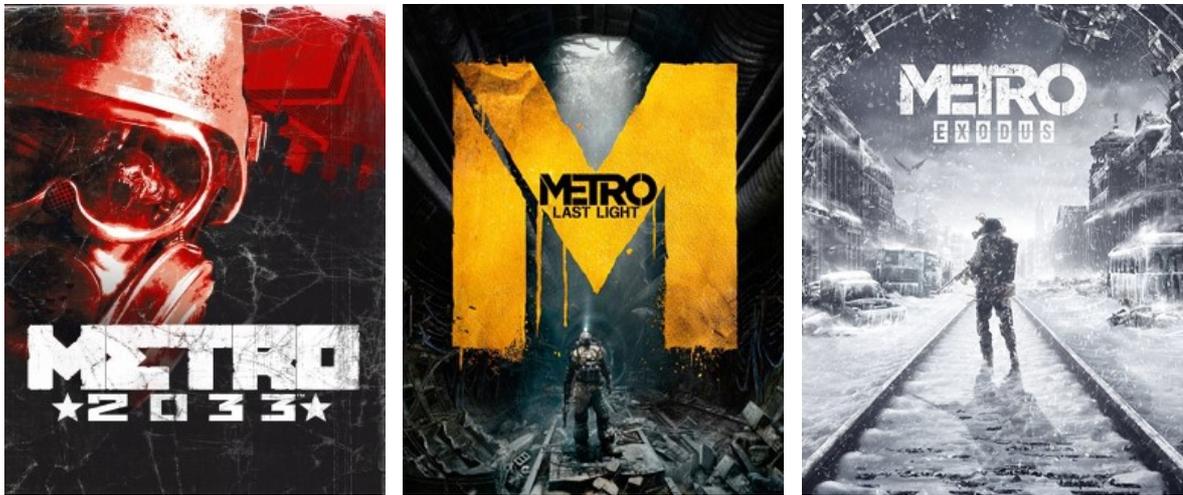


Figure 2 – Original cover art for the Metro games.

Source: Wikipedia⁶

An important factor when discussing adaptations, as suggested by Eco (2003) and Hutcheon (2006), is who performs it, and what motivations are involved in such endeavor. As such, *Metro 2033* adaptation makes for an interesting research object, considering Glukhovsky’s engagement in the game creation and the fact that he had just finished writing the novel by the time the game was under development. Looking at the author’s statement in the previous paragraph regarding his role in the adaptation, it seems there was a clear intention of keeping the game “close”—to some degree—to the novel from a narrative perspective.

⁵ See footnote 1.

⁶ Metro 2033: [https://en.wikipedia.org/wiki/Metro_2033_\(video_game\)](https://en.wikipedia.org/wiki/Metro_2033_(video_game)) Access on: July 3, 2019.

Metro: Last Light: https://en.wikipedia.org/wiki/Metro:_Last_Light. Access on: July 3, 2019.

Metro: Exodus: https://en.wikipedia.org/wiki/Metro_Exodus Access on: July 3, 2019.

Even though the novel and the game diverge in several ways in their presentation, as expected for such different medium types, both share the same setting and the main plotline, along with most of the important characters. Glukhovsky himself said in an interview⁷ that the book has a lot of undertones, such as mysticism, social criticism, existentialism, and political satire, which he and the developers managed to feature into the game, albeit not as well described as in the novel.

Computer games are a completely different genre, with their own rules, and it's as impossible to get a 500-page-thick book into a computer game as it is getting it into a 90-minute movie. You have to cut something. The important thing is to preserve the spirit.⁸

Metro 2033 is set in a post-apocalyptic future, 20 years after a nuclear strike in Moscow had led the city's remaining inhabitants to take refuge in the underground metro system tunnels. Mutated creatures have emerged from the extremely radioactive environment on the surface, posing a considerable threat to mankind. Having settled in the tunnels, the mankind had turned the subway stations into independent micro-states, each having their own economy, political alignment, religious beliefs, etc., creating a complex social structure consisted of several factions.

The story revolves around a young man named Artyom, resident of one of the stations, which is being threatened by creatures from the surface referred to as the dark ones. One day, a man named Hunter visits Artyom's station, and upon gaining knowledge of its predicament, decides to go check the breach from which the creatures are supposedly coming. Before leaving, Hunter tells Artyom that he might not survive his mission, instructing him to go to a distant station named Polis and deliver a message to a certain man if he does not make it back by the next day.

As Hunter does not return from his mission by the stipulated time, Artyom is impelled to journey to Polis and deliver the message, in hope of saving his station. Along his path through the dark metro tunnels, Artyom encounters other characters and faces a number of dangerous situations, eventually making it to his destination. After delivering Hunter's message, Artyom is presented to a group of highly resourceful men, the rangers, who decide to aid him in his efforts. The rangers propose they journey to an old underground military compound which might contain a missile

⁷ See footnote 2.

⁸ See footnote 2.

launching apparatus they can use to destroy the creatures' nest. Finally, Artyom and the rangers make their way to the compound, secure the missiles, and manage to fire them at the nest, ending the storyline.

The novel is narrated by a third-person voice and has a considerably slow pacing, with a lot of internal monologues by the protagonist, very large dialogues, and extensively detailed descriptions. The obstacles in Artyom's path come in the form of psychological adversities, such as growing fear of the unknown as there is no way of knowing exactly what to expect from the tunnels he traverses, constant darkness, hostility from other characters, strange dreams, and internal conflicts, generating an increasingly oppressing environment. In contrast, the video game was built as a first-person shooter. The player controls Artyom in a first-person perspective, as if seeing through his eyes, and is constantly swarmed by enemies—creatures and humans—being forced to engage in combat against them, which is a rare event in the book.

This senior thesis aims to investigate how the psychological pressure seen in the source novel is adapted into a physical combat experience in the target game. The underlying assumption is that looking into the game from the perspective of its medium could shed light upon the motivation for such adaptation. More specifically, such assumption is tackled through a comparative analysis between one section from the novel and its representation in the game.

This work is divided into five chapters including this Introduction. Chapter 1 provides the theoretical framework. Chapter 3, which is further divided into two parts, contains an overview of both novel and game, and provides a comparative analysis of the material. Finally, chapter 4 is devoted to the final remarks, including limitations and suggestions for further research.

2. THEORETICAL FRAMEWORK

This chapter provides the theoretical framework of this thesis. The chapter is divided into four sections, each devoted to a major concept, namely, adaptation, narrative, conflict, and conditions for emotional response.

2.1 Adaptation

Jakobson (1959/2012), when looking into translation from a deeper linguistic standpoint, divides it into three types: intralingual translation (1), interlingual translation (2), and intersemiotic translation (3). As suggested by its very name, intersemiotic translation, or transmutation, occurs when signs from a semiotic system A are recoded through signs from a semiotic system B.

In expanding Jakobson's (1959/2012) concept, Eco (2003) states that meaning, i.e., semantic matter, cannot be easily reinterpreted between different semiotic systems without being expanded, shrunk, or even modified to a high degree. Eco (2003) posits that in transmutations—or adaptations, as it is commonly referred to—the source object goes through a process of interpretation and manipulation, subjective to the person or group of people carrying it out. Finally, the author proposes an adaptation, as an entirely new object, has a complementary relationship with its source, rather than being its substitute.

The concept of adaptation can be approached from three perspectives:

First, seen as a *formal entity or product*, an adaptation is an announced and extensive transposition of a particular work or works. [...]

Second, as a *process of creation*, the act of adaptation always involves both (re-)interpretation and then (re-)creation; [...]

Third, seen from the perspective of its *process of reception*, adaptation is a form of intertextuality: we experience adaptations (as adaptations) as palimpsests through our memory of other works that resonate through repetition with variation. (HUTCHEON, 2006, p. 7-8)

As such, even though the idea of proximity or fidelity can be pursued in adaptation practice, it should not be mandatory. Nor should adapted products, given their connection with another work, be judged under such perspectives (HUTCHEON, 2006).

Hutcheon (2006, p. 14) suggests different media relate to their audiences in distinct ways, which she names *modes of engagement*:

They are, in different ways and to different degrees, all “immersive,” but some media and genres are used to tell stories (for example, novels, short stories); others show them (for instance, all performance media); and still others allow us to interact physically and kinesthetically with them (as in videogames or theme park rides).

Each mode of engagement provides a particular way of providing information. Interactive media in general and video games in particular enjoy their own ontological status when compared to *telling* and *showing* media, as suggested by Wolf (2014, p. 127): “Instead of existing as a set of recorded words, images, and sounds, video games exist in the present tense, as mathematical models within a computer’s memory, ready to be incarnated as interactive imagery.” The fact that narrative sequences in video games are directly tied to the player’s actions inside the game rule system can make the medium a potentially challenging target for adaptation from other types of media, especially when the focus lies on the story.

As to the engagement modes analyzed in this senior thesis, Hutcheon (2006, p. 13) suggests *telling* a story entails “to describe, explain, summarize, expand; the narrator has a point of view and great power to leap through time and space and sometimes to venture inside the minds of characters.” In contrast, in the *interactive* mode, the “physical nature of this kind of engagement entails changes both in the story and even in the importance of story itself” (HUTCHEON, 2006, p. 13).

2.2 Games and Narrative

How to relate video games and narrative is a longstanding point of contention between theorists (ARSENAULT, 2014, p. 476). Aarseth (1997, p. 5) contends, “to claim that there is no difference between games and narratives is to ignore essential qualities of both categories,” but “the difference [between games and narratives] is not clear-cut, and there is significant overlap between the two.”

According to Arsenault (2014, p. 476), a seemingly well accepted standpoint is that the traditional tools of narrative theory cannot account for the specificities of games:

While it is certainly feasible to study select stories or some narrative figures and tropes, in and of themselves, rather than the means by which they are put into play by the unique properties of the video game, doing so tells us nothing about games themselves [...] (ARSENAULT, 2014, p. 479)

A similar point of view is proposed by Pearce:

It is very important to understand that narrative has a profoundly different function in games than it does in other narrative-based media [...] although there is much to be learned from traditional narratives, and a great value in drawing comparisons between the two, without understanding the fundamental differences, the discourse becomes ultimately irrelevant because it entirely misses the fundamental point of what games are about. (PEARCE, 2004, p. 144)

Further, Herman and Vervaeck point to games as a distinct narrative system that is not reducible to content:

It is the way in which a story is narrated that turns it into what it is. Those who insist on denying the importance of the method of narration by reducing a story to content might just as well go to the movies or watch television because both of them can offer similar content. (HERMAN; VERVAECK, 2005, p. 7)

Juul (2005) proposes the key element to game structures is their set of rules, which specifies limitations and affordances within a game. The rule system of a game is also responsible for defining its goals and providing challenges to the player, while competing with the fictional dimension for the player's attention. Still, both dimensions are complimentary to each other, which leads to Juul's (2005 [s.p.]) conclusion:

Video games are a combination of rules and fiction. Rules are definite descriptions of what can and cannot be done in a game, and they provide challenges that the player must gradually learn to overcome. Fiction is ambiguous—the game can project more or less coherent fictional worlds that the player then may imagine.

As such, the analysis in chapter 3—where it pertains video game elements—is based on a framework that allows for identifying the channels through which *meaning*—as in information/narrative elements—can be conveyed during gameplay. Following Hutcheon's premise that the modes of engagement have a crucial part in defining how adaptations are performed (2006, p. 12), it is proposed that understanding how video games communicate with players would be essential if they are to be compared to other media.

2.3 Conflict

Molded by the game rule system, conflict—even in an open, abstract sense—is the central dynamic in games as the representation of challenge (SIITONEN, 2014, p. 166). It permeates gameplay, often through numerous agents, providing a constant stream of challenge and keeping players engaged in the game. Siitonen (2014, p. 167) refers to “solving conflicts as answering a very basic need in players. [...] They] want to understand it, and ultimately, to be able to control it. In many cases, the final goal of players is to solve the conflict, or somehow find a balance to an unbalanced situation.” Hence,

[...] a game should afford the player a level of meaningful interaction within its system. This is what makes a game playable. However, it is the level or grade of this interactivity that has an influence on whether a game is not only playable, but also enjoyable. (SIITONEN, 2014, p. 167)

Conflict systems are also tied to games’ mechanics. For instance, game rules normally revolve around a set of *core mechanics* that represent the essential “moment-to-moment” activity of players (SALEN; ZIMMERMAN, 2004). The core mechanics of a game define how its conflicts are resolved in general, establishing, thus, the repetitive behavior of gameplay.

2.4 Embodiments and emotional response

Järvinen proposes (2009) a method for analyzing “how the so-called eliciting conditions for emotions are embodied into game designs,” i.e., “which objects, agents, and events in games potentially trigger emotions that are significant and meaningful in the light of the play experience as a whole” (JÄRVINEN, 2009, p. 85). Since *emotions/emotional responses* are not tangible, they are not defined in the model. Yet, the conditions for eliciting them are objective and can be easily identified in video game interactions. According to the model, *emotions* are represented in a spectrum from positive to negative, their value being determined by how desirable or undesirable their eliciting condition is to the player.

As emotion theorist Keith Oatley's insight illustrates, one of the key forms of enjoyment that games offer originates from how games impose goals on players: by setting up goals in stylized, fantastic, temporally limited, and/or larger than life form, games condense features of routine nature of everyday life for entertaining purposes. The subsequent result is that the road that players take in trying to attain those goals is beset by emotions, that is, by valenced reactions towards events, agents, or objects in the game. Depending on the game, such appraisals may range from judging one's own or fellow players' performances, outcomes of goals, rule procedures, narrative sequences, and so on. Appraisals may be positive or negative, or something in between—the intensity and valence of an emotion depends on many contextual factors, as we shall see. (JÄRVINEN, 2009, p. 86)

The method focuses on three distinct elements of game design: events, agents, and objects, each relating to the player in a specific manner, and therefore, eliciting a specific type of condition for emotional response. Events are described as causal sequences, basically actions and outcomes. Agents refer to entities—generally enemies, other characters, or even the game itself as the governor of rules—that act upon the player. Finally, objects are entities that can be relevant to the game or to the player, like a weapon, a functional item, or even elements not directly related to the rules such as game graphics, a specific sound effect or the level design. According to Järvinen (2009, p. 97), understanding how these elements function within the game design can provide valuable insight into players' experiences in a game world.

The model consists of five types of emotional response, based on their triggering conditions, each having a positive and negative valence, as well as a degree of intensity, as mentioned previously: (1) *prospect-based emotions* are associated with the prospect and outcome of *events* in their relation with the game goals; (2) *attribution emotions* are reactions to the actions of *agents*; (3) *fortunes-of-others emotions* come in the form of empathy—or counter-empathy—towards the fate of other character in the outcome of an event; (4) *attraction emotions* are evoked by the liking or disliking of an *object* in the game; (5) *well-being emotions* do not seem to have a specific condition for triggering. They relate to a sense of delight or dissatisfaction towards *events* that have some significance to the player.

A visual representation of the model is shown in Figure 3. The scheme portrays the way conditions for emotional response are structured in a logical—rather than chronological—sequence. It starts from central elements—events, agents and

To complement the system of conditions for eliciting emotions, Järvinen (2009, p. 92-93) points to a set of four *global* variables that relate to the player's propensity to emotionally respond to the game stimuli. The variables are described as *global* since they represent the player's "attitude" towards the game as a whole, thus affecting the entire experience in the form of modules for intensifying the elicited *emotions*. Variables are described as follows:

Sense of reality

This variable has to do with how much one believes the emotion-inducing situation is real. Thus, it is quite relevant in contexts of entertainment and fiction. In the particular contexts of games, the variable can be understood as the degree to which players get "immersed" or "engaged" in a game world and/or the social contexts that the game is being played in.

Proximity

This variable is dependent on how close in psychological space one feels to a situation that triggers an emotion, for example, the intensity of the feeling of success or failure regarding one's performance in the game. Intensity regarding proximity seems to be modulated by the player's identification with goals, in particular.

Unexpectedness

This variable relates to information about the situation, that is, how surprised one is by the emotion-inducing situation; how surprised or shocked the player is regarding a particular outcome, or about unexpected information that a new game state reveals, about opponents, goals, or the game environment.

Arousal

This variable has to do with general psychological and cognitive readiness to experience emotions, and how much one is aroused prior to the situation. For example, the level of arousal affects how the player perceives her abilities to perform in the game, or it can function as a baseline factor affecting how much she cares about the outcome to start with, and so on.

Although such variables would require an empirical framework to be applicable, they shed light upon how different gameplay experiences can be dependent on who is playing, even within the same set of conditions for emotional response. Moreover, considering the game under scrutiny in this thesis is an adaptation, one can assume the arousal and proximity variables can directly benefit the experience of those who are familiar with the source book. This reinforces Hutcheon's (2006, p. 9) argument that part of the audience for adaptations see them as a chance to revisit the source material.

Järvinen also points to a third aspect he deems relevant to gameplay experiences, an aesthetic dimension that cannot be fully assessed through the model for emotional response.

The aesthetic nature of play experiences—whether it involves performing, appreciating the design and composition of game characters and environments, or being fascinated with the simulated minds of game characters—is an important aspect of the antecedents of pleasures and eliciting conditions for emotions in games.

Even though the attraction emotions in the OCC model can be interpreted to account for aesthetic appreciation, I believe that the “magical” qualities of video gameplay needs [*sic*] to be addressed in more detail. One reason for this is that games cannot be objectified from the perspective of play experiences—they are also about aesthetically appreciating events and agents, and thus go beyond attraction emotions geared towards objects. (JÄRVINEN, 2009, p. 94-96)

The key argument for the distinction between aesthetical stimuli and the *attraction emotions* in games is that *objects* represent a practical utility for the player, while aesthetic elements stand for a higher “qualitative diversity.” Accordingly, Järvinen (2009) proposes such stimuli would function in a similar manner as the variables previously mentioned, by “intensifying and/or modifying the emotional responses in particular ways.” However, aesthetic stimuli produce *local* effects rather than *global* since they are related to specific elements in the game.

Finally, Järvinen (2009, p. 102) proposes the emotion potential for a given sequence in a game may be designed in accord to narrative principles, so as to lead to a specific effect, similar to how music is used in movies. Hence, this assumption serves as premise for the analysis described in the third chapter of the present work, as it provides a solution for accessing the narrative elements embedded in the game system and evoked through player interaction.

3. ADAPTATION ANALYSIS

This chapter provides the analysis. The first section contains a general overview of the novel and the game, each described separately. The second section contains the analysis itself, preceded by a detailed description of the analyzed fragments.

3.1 Overview

This section provides a general overview of the novel and the video game under scrutiny with a view to providing context for a better understanding of the subsequent analysis. Even though both of them follow the same basic plot line, each has its own form of presentation and story unfolding.

This thesis is based on the English translation of the book, by Natasha Randall (digital version) published by *Gollancz* in 2010, as well as on the *Redux* English-language version of the game published by *Deep Silver* in 2014. The *Redux* version is a remake of the original game, described in its store page as follows:

Metro 2033 Redux is the definitive version of the cult classic 'Metro 2033', rebuilt in the latest and greatest iteration of the 4A Engine for Next Gen. Fans of the original game will find the unique world of Metro transformed with incredible lighting, physics and dynamic weather effects. Newcomers will get the chance to experience one of the finest story-driven shooters of all time; an epic adventure combining gripping survival horror, exploration and tactical combat and stealth.

All the gameplay improvements and features from the acclaimed sequel 'Metro: Last Light' have been transferred to Metro 2033 Redux – superior AI, controls, animation, weapon handling and many more – to create a thrilling experience for newcomers and veterans alike.⁹

This version was chosen over the original one as the latter has been discontinued in the market.

⁹ Steam store page. Available at [https://store.steampowered.com/app/286690/ Metro_2033_Redux/](https://store.steampowered.com/app/286690/Metro_2033_Redux/). Access on: June 20, 2019.

3.1.1 The novel

As mentioned in chapter 1, *Metro 2033* is set in a post-apocalyptic Moscow, where the remnants of mankind have taken shelter in the metro system tunnels for 20 years. Groups of people have settled over numerous stations, establishing what could be seen as microstates built over a range of political ideologies, economic systems, and religious beliefs. Still, the tunnels are not danger free, as the destruction caused by the bombs had resulted in several flooded areas, numerous cave-ins and destroyed stations, among other conditions, which serve as a way in for creatures and hazards generated on the irradiated surface. Also, no reliable method has been available for communication between most of the stations, leaving their residents in a state of isolation, oblivious to what happens in other areas of the metro, and thus, afraid of venturing through the tunnels. As information circulates basically through the accounts of occasional travelers and trading caravans, a stream of rumors and scary stories has been spread throughout the stations. Such stream is a widely explored element in the book.

The social ecosystem of Glukhovsky's world is another central aspect of the novel. As the stations developed, they began to form alliances, establish trade routes, control their borders, and even wage wars. Among the numerous factions emerging from this process, three stand out as the most influential, namely: the Hanseatic League, a conglomerate of stations focused on trading and economic power; the Red Line, a group of stations governed under the communist ideals of the old Soviet state; and the Fourth Reich, comprised of those inspired by Nazi principles. The struggle between these groups, along with their own influence over smaller stations, further increases tension in the metro population.

The protagonist, Artyom, is a young man who has spent most of his life in the tunnels. Raised in a relatively peaceful station, he is portrayed as an impressionable, naïve person who has a strong sense of justice. The story is reported by a third-person narrator limited to Artyom's perspective, thoughts, and feelings. Consistent with the protagonist's extensive interest and curiosity regarding life in the tunnels, the narrator thoroughly describes a number of details about the places Artyom goes through and the way people manage to live in such places. Artyom's personality is a strong narrative focus, resulting in lengthy monologues and meticulous exposition of his feelings

towards other characters and the overall oppressing environment to which he is subject during his journey. Due to his lack of experience and knowledge about the workings of the metro, Artyom often relies on help from other characters he meets along his path. In general, such companions have extensively developed personalities, portrayed through their dialogues and Artyom's impressions.

By the end of his journey, the protagonist has gone through a variety of adversities. These can be simple ones, such as gaining knowledge of a collapsed tunnel which makes him change his route even without a passport to enter a specific station. They can, too, be menacing adversities, such as having to go to the surface and face creatures, being subject to mysterious phenomena or being captured by hostile factions. He is also constantly psychologically affected by the harshness of the metro, as well as his helplessness when facing it.

Artyom himself never happens to see or face the creatures threatening his station, the dark ones, but they are described by some characters as very resilient and apparently psychic. It is known that they come from a place on the surface close to Artyom's station. Upon fulfilling his mission, Artyom, in the novel's last scene, watches the missiles flying towards the creatures' nest from the top of a tower on the surface. At this moment, he suddenly comes to realize through a vision that the dark ones meant to help mankind and were trying to communicate with him all along. Coming to his senses, the protagonist watches melancholically as the nest burns, which marks the end of the story in a tragic tone.

3.1.2 The game

Metro 2033 is designed as a story-driven first-person shooting game that places the player in control of Artyom, as if seeing through his eyes (Figure 4). The story is presented in a linear single-player campaign, with two possible endings. The game employs several narrative elements from the novel, especially its setting and main plot line. Still, it unfolds some events and perspectives of its own, including: some places Artyom passes through on his way to the Polis station, along with the challenges he faces in his path; non-depiction of some secondary characters from the book; events unfolded by Artyom's encounters with hostile factions and so on. In addition, it remarkably suppresses the narrative voice from the novel.



Figure 4 – First-person perspective
Source: screenshot by the author.

The story is structured through levels, each working like a chapter. Levels are structured to have a fixed beginning and end point, which leads to linearity in the story, as the succession of levels cannot be modified by the player's actions. Still, some levels provide several ways to reach the end point, and it is up to the player to decide what playstyle to employ.

Every level has a brief introductory monologue from Artyom in its loading screen. The monologues also pop up in a feature called Artyom's diary (Figure 5), which is accessed through the game pause menu. Almost every level contains from one to four diary's notes scattered through it. Once the player collects individual notes, they become available in the diary at any time.

Notes are presented in written text. Along with the monologues from the loading screens, as well as the introductory and the ending cutscenes, they are the only instances in which Artyom's thoughts about his experiences are exposed in the game. In all cases when Artyom's mind is exposed, his game avatar is not under the player's control.

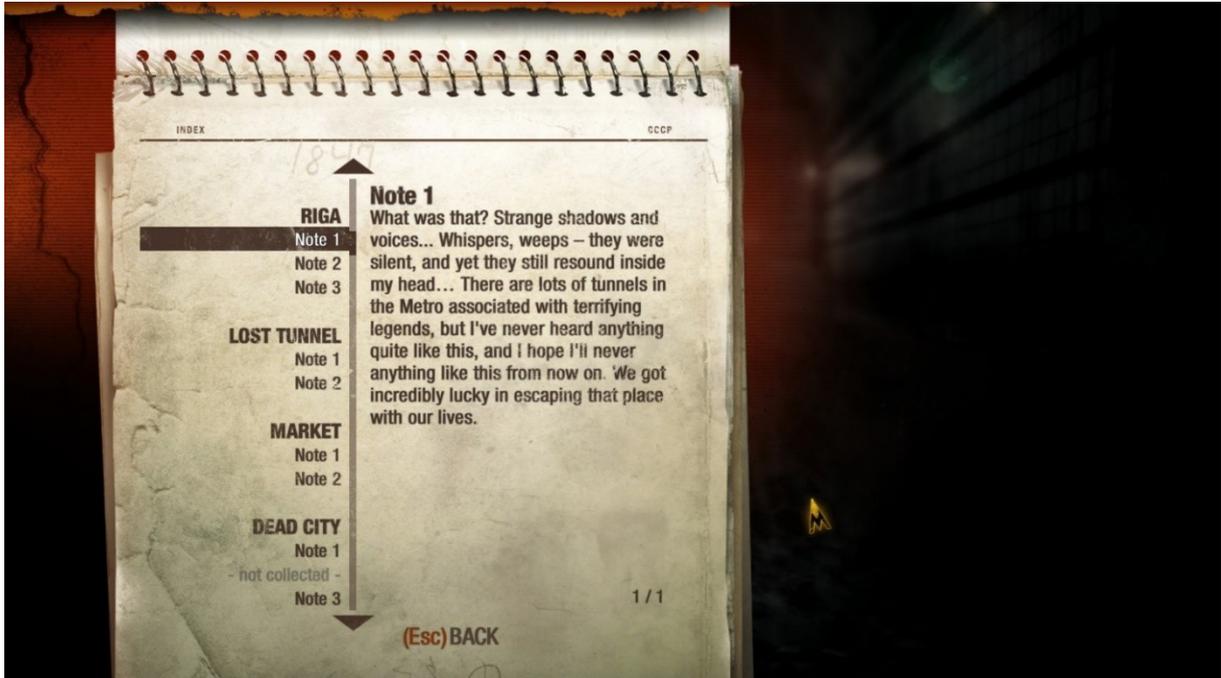


Figure 5 – Artyom's diary feature

Source: screenshot by the author.

By taking part in a shooting game, the player is essentially challenged through combat. *Metro 2033*, however, also features some other mechanics to amplify the combat tension. Each level has a number of checkpoints which are not visible to the player. Upon death, the player returns to the last checkpoint s/he has encountered. There is no limit to the number of deaths, which result from exceeding a limit of damages, including enemy attacks, radiation exposure, tripwire traps, and toxic air. Damage is indicated by a red glow on the entire screen, which flashes increasingly faster as the character approaches death.

Players can heal damage by using a first-aid kit, activated by pressing a determined key. First-aid kits, as well as any other utility items, guns and ammunition, can be scavenged throughout the levels or bought from merchants at neutral stations. Depending on the difficulty setting the player chooses at the beginning of the game, supplies will be scarcer, which makes exploration of the game virtual space in search of supplies a key factor to survivability. The avatar's items can be seen at the inventory feature (Figure 6) and include first-aid kits, gas masks, gas mask filters, three types of grenades, throwing knives, and different types of ammunition. Currency in the game is a special type of ammunition referred to as "military-grade" obtained through

scavenging or trading or given to the player by other characters as a reward for helping them. Military grade ammunition can also be loaded on some weapons, making them deal more damage to enemies.



Figure 6 – Inventory feature

Source: screenshot by the author.

Enemies are characters controlled by the game artificial intelligence. In *Metro 2033* enemies can be either mutated creatures or humans. The game features a variety of creatures, some of which are not portrayed in the novel, and each has a specific combat behavior towards the player avatar. Human enemies are mostly bandits and members of hostile factions, such as the Nazis. Humans enemies can carry several types of armor, and they are equipped with a wide range of guns, including grenades in some cases. Combat can vary to some degree depending on the weapons the player chooses to use and what type of enemy against whom s/he engages. There is also a *sneak* mechanic that makes it possible for players to approach and kill enemies silently or even avoid combat entirely on some levels by passing enemies unnoticed.

The game features two possible endings, both with their own take on the one in the book. In the novel, Artyom finds out through a vision that the dark ones do not mean to harm mankind but is not able to stop the destruction of their nest. In the game,

however, the protagonist either does not realize the dark ones' purpose and ponders about his decision while their nest burns, which is the "official" ending that leads to *Metro: Last Light's* storyline; or he does come to the realization of their intentions and shoots the missile guiding system, saving the creatures from destruction. The peaceful ending is achieved through a hidden system in the game referred to in the game wiki as "moral points system":

Moral Points form a hidden system in the Metro Video Game Series that follows Artyom's progress and affects the ending of each game. This system is never explained to the player and its mechanics can only be speculated about. As Metro is about Artyom's journey and him seeking to understand the world around him, the game rewards the player by guiding Artyom through experiences that help him better understand the metro and its strange phenomena.

It is commonly understood that every time Artyom gets a moral point, the screen flashes light blue and whispers or the sound of water dripping can be heard. When Artyom loses a moral point, the screen darkens, and an ominous sound can be heard. There are more opportunities to gain moral points than to lose them, and moral points that are gained and lost are speculated to vary in severity. Moral points can be gained through making morally correct decisions, being stealthy in certain levels, but can also be awarded for exploring every part of the map to get weapons and supplies. The best way to gain moral points is to knock out enemies and spare lives when possible – doing so will almost always activate the good endings.

There is no telling how many moral points are required to get the good ending since the statistics are hidden; however, making wrong choices or going loud in the levels that require stealth will likely cause the player to not gain enough moral points to trigger the good ending.¹⁰

A specific cinematic scene plays, followed by the credits, depending on what ending the player achieves.

3.2 Analysis

The present analysis targets the representations of a parallel section in both media, which is in the novel's chapter 4 and in the game level *Chase*. The scene corresponds to a moment when Artyom and a group of companions are subject to the influence of a phenomenon—which leads to a conflict—in the tunnels between the stations *Alekseevskaya* and *Rizhkaya* (Riga in the game). The fact that the player has his/her

¹⁰ Metro Video Game. Available at: https://metrovideogame.fandom.com/wiki/Moral_Points. Access on: 20 June 2019.

movements restricted in this part of the game accounts for a linear succession of events that provides for a more clear-cut, through comparison with the novel. The game diary feature, which provides the protagonist's first-person accounts of his journey and his surroundings, is not considered as a source of direct meaning in this analysis, since it is not part of the game virtual space, i.e., it is accessed as optional content in the pause menu.

According to Mäyrä (2008, p. 107), first-person shooting games can provide the player with “a strong sense of ‘being there’ herself, as no mediating character is brought to the centre of attention”—as opposed to games in which the character is controlled from other perspectives such as third-person view. Following this premise, it is assumed that given the lack of a narrative voice to impose Artyom's inner self on the player, s/he would imprint his/her own motives and desires onto the protagonist's avatar in the game, thereby being able to experience the fictional world himself/herself. This relationship between player and avatar is further explored by Rehak (2003, p. 106, italics as in the original):

The video game avatar would seem to meet the criteria of Lacan's *objet petit a*. Appearing on screen in place of the player, the avatar does double duty as self and other, symbol and index. As self, its behavior is tied to the player's through an interface (keyboard, mouse, joystick): its literal motion, as well as its figurative triumphs and defeats, result from the player's actions. At the same time, avatars are unequivocally other. Both limited and freed by difference from the player, they can accomplish more than the player alone; they are supernatural ambassadors of agency.

It seems arguably possible, then, to trace a parallel between the player in the *Metro 2033* video game and the protagonist from the novel and compare them, as a means for contrasting storytelling and interactive experiences. To this end, Järvinen's (2009, p. 85) model for analyzing the embodiment of game elements as potential agents for eliciting emotions seems to be a useful measurement tool for player experience in video games. As such, this analysis focuses on observing the relationship between narrative and game design, and ultimately, if—or how—meaning is conveyed to the player through his/her interaction with the game rules, mechanics and aesthetic elements. As the most significant aspect of video games as medium is their interactive mode of engagement, the study of adaptations into video game may focus on their relationship with the player. The underlying assumption is that narrative elements from

the book are, to some degree, adapted into the game in the form of stimuli elicited by elements of game design.

A key concept in studying video games is conflict, a component directly tied to the player's goal. "The key dynamic is often that of restricting or opposing the actions of the player" (SIITONEN, 2014, p. 167). Looking at the *Metro 2033* game as an adaptation, it is apparent that its approach to conflict is potentially more direct—established mostly through the use of enemies as a way to provide challenge—than that of the novel, which is oriented to exploring the protagonist's inner self. Therefore, the present analysis is conflict-driven, considering the significant role of conflict in the *Metro* narrative (for both media) and its close relationship with the interactive dimension in video games. By understanding how the game works as a channel of communication with its player, it is expected to draw conclusions on the way content from the book is presented in the video game medium.

In the book, the scene under scrutiny takes place at the very beginning of Artyom's journey, on the first time he is exposed to a dangerous situation. He and four other men are going through the rails on a rail cart. Suddenly, Artyom overhears a strange sound:

And so they continued until, after a while, he noticed some kind of strange sound that was getting louder and louder, coming from the tunnel ahead of them. This noise, which had been almost inaudible to begin with, was on the border of audible sound and ultrasound, slowly and imperceptibly gaining strength, so that you couldn't tell when you'd started hearing it. It reminded him of a whistling whisper more than anything -- incomprehensible and inhuman. (GLUKHOVSKY, 2010, [s.p.]

Noticing that his companions do not react to the sound, Artyom becomes scared. He, then, stands up, alarming the other men, who stop the cart to try to hear the sound, to no avail. This makes Artyom doubt his own sanity:

And at that moment a foul sensation crept into his soul, that maybe there was no noise and that's why no one heard it. He was just going mad, he was imagining it out of fear...

The commander gave the signal to stop so that the squeaking of the cart wouldn't interfere and the grumble of boots would die away. His hands crept up onto his machine gun and he stood motionless and tense, listening, and turning one ear to the tunnel.

The strange noise was right there now, Artyom could hear it distinctly, and the clearer the sound became the more attentively Artyom peered

at the commander's face, trying to make out if he could also hear what was filling Artyom's consciousness with ever-strengthening agitation. But the features of the commander's face gradually smoothed out, and Artyom was overcome with a sense of shame. Moreover, he had stopped the group for nothing and had freaked out and alarmed the others as well. (GLUKHOVSKY, 2010, [s.p.])

It is clear in this sequence that Artyom is overwhelmed by a sense of fear and anxiety as the sound becomes louder in his ears. He starts doubting his own sanity and finally tries to dismiss it out of shame when the others have no clue of it. Resuming the journey, Artyom manages to remain calm for a moment, but the sound eventually grows louder and one of his companions complains about his ears itching. Following this statement, the group is affected by a strange phenomenon as follows:

The sound had reached an apogee and then Artyom understood where it was coming from. It was emanating from one of the pipes that lay along the tunnel walls. It had been used as a communication line and who knows what else. The pipe was burst and the torn black muzzle was emitting this strange noise. It was coming from the depths of the pipe and as Artyom tried to figure out why there were no wires, nothing, just complete emptiness and blackness, the commander stopped suddenly and said slowly and laboriously, 'Guys, let's . . . here . . . Let's have a break. I don't feel so well. Something in my head.'

He approached the cart with uncertain steps so he could sit on its edge but he hadn't gone a step before he dropped like a bag to the ground. Zhenya looked at him in confusion, rubbing his ears with both hands and not moving from his place. Kirill for some reason had continued walking alone, as though nothing had happened, not reacting to their shouts. The man at the back sat down on the rails and started to cry helplessly like a baby. The light of the flashlight beamed at the tunnel's ceiling and, lit from below, the scene looked even more sinister.

Artyom panicked. Clearly he was the only one whose mind hadn't been dulled by the sound, but the noise was becoming completely intolerable, preventing any concrete thoughts from developing. (GLUKHOVSKY, 2010, [s.p.])

At this point the event reaches a climax, followed by Artyom recomposing himself and managing in a rush to make his companions return into the cart one by one. First, he slaps Zhenya and orders him to put the passed-out commander in the cart; then he runs to Kirill, shines a flashlight into his eyes, which makes him stop walking and takes him back to the cart. The last man, who is sitting on the floor crying, mentions, upon being urged by Artyom to leave, people that were killed, saying he wants to stay there with them to ease their suffering, but he is soon convinced to return into the cart. The

group, then, successfully leave the place, and the men recover their conscience, but cannot remember what happened.

In the game, the scene is presented in the form of a scripted sequence, a pre-defined series of events that progress in a way that cannot be controlled by the player. In this case, the player's range of possible actions is limited in that his/her character is unable to move, locked inside the rail cart, which is controlled by the game. The cart imposes a pre-established progression pace on the player for the duration of the sequence. Yet, all functions—such as shooting, using items, looking around—but character displacement are available to the player.

The scene starts with Artyom and three companions, Eugene, Boris, and a third, unnamed man sitting in the rail cart. The tunnel is slightly illuminated by luminescent mushrooms sprouting from the walls. Eventually, Boris complains about a headache and orders Eugene to help the third man at moving the cart so that it goes faster. The third man, then, says they should leave the place soon, as shown in Figure 7.



Figure 7 – Artyom's companions: Eugene (on the player's side), Boris (sitting) and the unnamed man.
Source: screenshot by the author.

The man's dialogue line makes reference to "they"/"them," all unknown to the player and to the other characters in the scene, who, in turn, ask him what he means. The mention of such unknown entity(ies) is clearly similar to that of the crying man in the book. Furthermore, upon looking around the cart at this moment, the player can see shadowy humanlike silhouettes (Figure 8). When asked about who "they" are, the man replies with a question, "can you hear them weep?", during which a high-pitch sound plays for a short moment.

Eugene, then, asks him again about what he means by "them," turning afterwards to Boris who has his head down. At this moment a blueish sparking body of light appears in the tunnel behind their cart, floating towards it, and the player character's vision begins to blur. Boris weakly inquires what is happening, and Eugene complains about his head. As the sparking body of light approaches (Figure 9), the men pass out and the high-pitch sound starts over. The sound increasingly becomes more intense, until the light finally flashes the entire screen, fading it in white (Figure 10).



Figure 8 – Shadowy human silhouette

Source: screenshot by the author.



Figure 9 – Sparking body of light

Source: screenshot by the author.



Figure 10 – Fading screen

Source: screenshot by the author.

As the screen turns white, a cutscene portrays a dreamlike scenario in which Hunter—the man who sends Artyom to his mission to reach Polis—speaks to Artyom. He says

eliminating the dark ones is crucial to mankind survival while firing against one of them. The creature approaches Hunter and performs a motion with its arms that throws the man to the ground—where several human corpses are lying—without even touching him (Figure 11). As the creature executes its attack, the same high-pitch sound from the last sequence is heard. The monster, then turns to face Artyom, extending its arms in his direction, making the strange sound play once again. The screen starts to fade in white as the creature walks away, only to be shot at the back, supposedly by Hunter. As the dark one falls, the screen fades completely, taking the player back to the cart, which is still in movement, albeit slowly, indicating that the dreamlike event has not left him unconscious for long. At this moment, a tense soundtrack starts to play, which could be interpreted as indicative of action.



Figure 11 – Artyom's vision

Source: screenshot by the author.

Up to this point, Artyom and the player by extension have remained as a spectator while the tension was elicited by the other characters and amplified as the strange phenomenon is materialized in the game world as sensory objects (image and sound). No action was demanded of the player, even though s/he could still control the avatar.

Artyom looks at his companions, noticing all three appear to be unconscious. He shakes Eugene's shoulder, waking him up. The control over Artyom's avatar is given back to the player as Eugene recovers his senses and tries, to no avail, to make the other two men wake up while returning to the cart's lever, putting it back into movement. As the cart gains speed, roars begin to echo from the tunnels behind, making Eugene start to scream in despair as the soundtrack becomes more intense. It is possible, then, to see several creatures emerging from the darkness behind the cart, running towards it, until one of them manages to jump in (Figure 12). This marks the point when the player is required to act, urged by Eugene to shoot at the monsters.

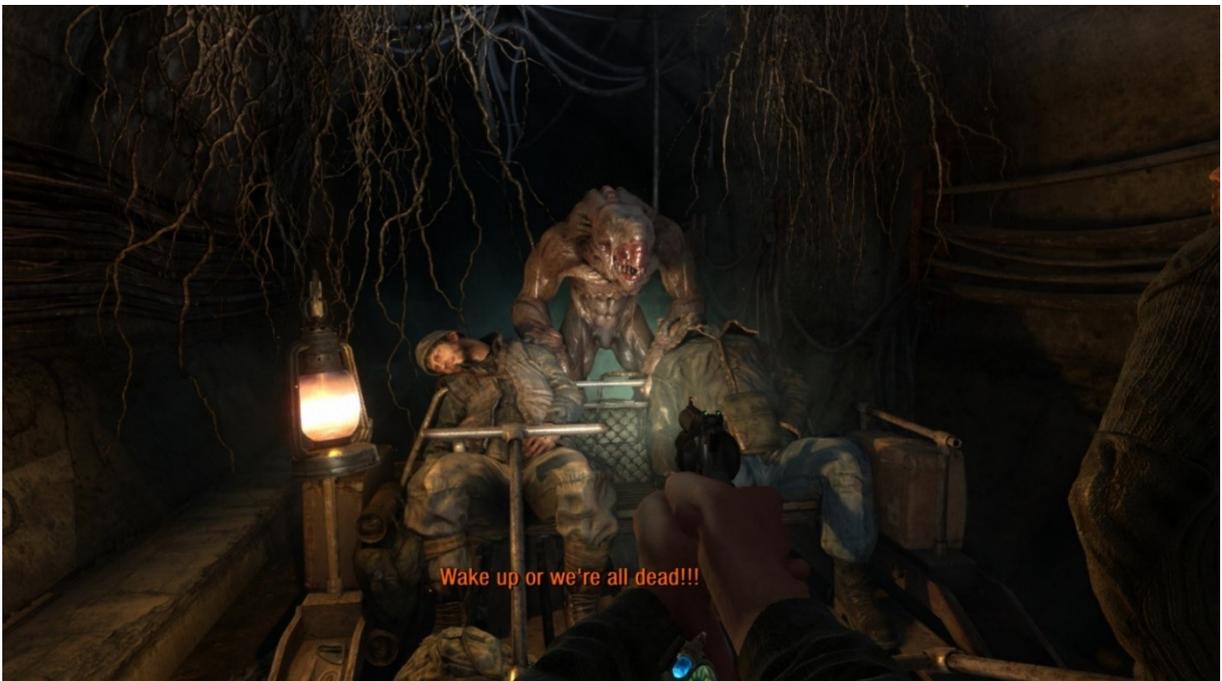


Figure 12 – Beginning of the combat sequence

Source: screenshot by the author.

One by one, the creatures jump into the cart, attacking either Artyom or Eugene, who screams for help when injured. The player, then, is impelled to shoot the creatures in order to survive, until one of them inevitably jumps at Artyom, triggering an event that requires the player to press a button repeatedly. Failing to complete this task results in the player character's death. Fulfilling it triggers an animation in which Artyom takes his knife and stabs the beast multiple times, until Eugene shoots it (Figure 13), releasing the player. Right afterwards, Eugene also gives his weapon to the player,

prompting him/her to kill more monsters. There is also another unavoidable event that triggers at some point during the monsters' assault, in which one of them attacks the unconscious unnamed character and pulls him off the cart.

Finally, as the cart approaches the guard post at Riga's entrance, Boris wakes up, and a scripted event triggers in which Artyom himself is thrown out of the cart by one of the monsters. Upon reaching the ground, Artyom hides under a wooden structure while a group of beasts run past him towards the cart. He, then, leaves the hidden spot, and the player takes back control, having to run toward the guard post, followed by more creatures. At this part, as Artyom is out of the cart, the player can move freely, but if s/he chooses to run against the objective or staying still, s/he will be met by large groups of monsters and killed. Upon reaching the post, he is pulled inside while the guards kill the remaining beasts with a flamethrower, ending the level.



Figure 13 – Eugene saves Artyom

Source: screenshot by the author.

Even though each medium portrays the events from their own standpoint, both seem to have a similar basic structure: tension arises, grows exponentially, and reaches a climax, which is, then, followed by its resolution. On the one hand, tension is built around Artyom and portrayed by his emotions as they are exposed by the narrator in

the novel, until it reaches the climax, represented by the phenomenon that affects his companions. On the other hand, tension originates from the behavior of Artyom's companions in the game: the unnamed man mentions the presence of some unknown "them," which alarms Eugene; and the man's unusual behavior indicates the psychic phenomenon might already be affecting the characters. Hence, tension is generated from external sources in the game rather than in the characters' minds. In the absence of the narrative voice used in the novel to expose Artyom's feelings, the game, in this particular case, makes use of a secondary character, Eugene, to express some of them, along with the strange shadows that serve as one more sign that something is about to happen. Tension escalates through Eugene's despair seeing that something is wrong with the other two men.

The fact that this first part of the sequence does not require action from the player while s/he still has control of Artyom's avatar provides some insight into *Metro 2033's* design choices that can be relevant to understanding the idea of immersion in video games. Considering the first part of the scene in the game, as it does not feature actual gameplay action, it could have been arguably depicted as a cutscene. However, by leaving the player in control of Artyom's eyes and his gun, the game implies they might be needed at any moment. For instance, upon seeing the shadows, the player can be impelled to shoot them, as he cannot be sure whether they are enemies or not. It is also possible that the player completely misses the shadows, simply by not turning the camera to where they show up, since they do not emit any sound.

The point is that, as tension grows in the scene, the player may become anxious, in fear—or hope—that something is about to happen. Had this part of the game been provided as a cutscene, the player would be rendered completely passive, knowing that his/her action is not required, resulting in a less meaningful experience. Immersion can be amplified in a game through design, and it is a powerful tool for molding player experience. According to Rehak (2003), players relate to the game avatar through utilizing it as an agent of their own will over the game world. This dynamic, however, might be jeopardized when the character "intrudes" the player space, generating a sense of "otherness." To that effect, Artyom's character does not have dialogue lines in the game, which is not unheard of in video game theory:

The importance of being able to identify with a game's characters is something of a recurrent theme in video game design manuals; there

is a belief that the stronger the personality of the character, the easier it is for a player to feel alienated from it. The implication—that designers should create characters with only vague attributes, is the opposite of a typical modern literary perspective, where characters are praised for their vivid uniqueness. (EGENFELDT-NIELSEN; SMITH; TOSCA, 2009, p. 180)

Considering the significant role of narrative in the game, it could be suggested that this part of the scene, by providing more context to the story and introducing new visual elements to it (the human shadows, the sparking body of light and Artyom's vision of Hunter), may serve as stimuli for sensory and imaginative immersion of the player, as suggested in Ermi and Mäyrä's (2005) model. Additionally, such visual elements, along with the high-pitch noise, also represent a push in the game design to show them as a manifestation of the novel's mystical undertones, exposing them more intensively to the player. For instance, the phenomenon is described as a sound heard only by Artyom in the novel. Its description is mediated by how the character experiences it: "It reminded him of a whistling whisper more than anything—incomprehensible and inhuman." Here, the sound is described in a vague manner, making it seem more mysterious to the reader.

As the game does not rely on a narrative voice to intensify the sound's qualities, it, instead, pairs the sound to visual effects and exposes the player to them. The use of semiotic resources to arouse the player is referred to by Järvinen (2009, p. 96) as aesthetic stimuli, related to the sensation of pleasure, and can amplify emotional response from players. Even though the materialization of these phenomena might go "against" one of the themes in the novel—Artyom's constantly casting doubt on the reality of such events—their effect between readers and players is, arguably, very similar. For instance, the narrative voice in the book, being limited to Artyom's mind space, cannot reassure the reader whether the sound it describes is real, which may result in curiosity and anticipation towards possible future occasions of similar nature. In the game, the clear amplification of the phenomena—into ghost-like figures, a sparking body of light that floats on its own, and Artyom's vision of Hunter fighting a *dark one*—may also generate curiosity and anticipation, but towards different objects.

The second part of the scene is where the game and the novel stray from each other more dramatically in terms of sequence of events. Yet, from a conflict perspective, their structure is relatively similar. In light of the climax, when his companions

apparently lose their minds, the protagonist is forced to take action. In the novel, he realizes he and his group must move away from the sound source. The other men, who are in a disruptive state of mind, must be convinced or forced to board the rail cart so they can leave, representing, as such, obstacles, or agents of conflict. The resolution is described by the narrator as Artyom going to each man and finding a way to make them enter the cart. This sequence is narrated very straightforwardly, compared to the first part.

In the game, the second part of the scene is where the player faces obstacles and is required to take action. The player regains control over Artyom's avatar—after it awakes Eugene—and a tense soundtrack plays, followed by a roar that echoes from the tunnels. Such features function as indicators that something is about to happen, which can generate anticipation. Tension is amplified by Eugene's despair as he starts working the cart's lever. The creatures begin to appear, sprinting towards the cart until one of them jumps in, and Eugene urges the player to shoot at it, thereby starting a conflict cycle.

From a conflict system perspective, each enemy in the game represents an agent of conflict, as they can potentially prevent the player from reaching his/her goal. Given the game design structure—a linear sequence of levels, permeated by a storyline—it may be categorized as a game of progression (JUUL, 2005). As such, the player's general goal in the game system is to progress, by reaching the end of each level. Being attached to the rail cart—which moves on its own toward the end of the level—in this sequence, the only obstacle preventing the player's avatar from reaching the end point would be dying. The goal, thus, for this part of the game is surviving, which requires the player to slaughter the beasts before they can kill him/her. The restriction of movement in this sequence also functions as an agent, since the lack of maneuvering deprives the player of his/her ability to evade hits from that specific enemy type, and thus, make him/her more vulnerable. This is an example of the game rule system indirectly exerting agency as a means of intensifying conflict conditions (SALEN; ZIMMERMAN, 2004).

Järvinen (2009, p. 87-88) describes the act of gameplay as a cyclical continuum of—often repetitive—actions performed by the player with the intention of achieving goals in the game. To this end, each enemy that jumps into the cart represents an

event that is appraised by the player and eventually triggers an action. Moreover, every event has inherent potential for eliciting prospect-based emotion, based first on what the player expects from an action and, subsequently, on the result of it (JÄRVINEN, 2009, p. 90). For example, each time a creature jumps into Artyom's rail cart, the player is expected to instantly appraise the situation and choose his/her course of action, which usually translates into shooting at it. The player, then, shoots at the beast hoping it will be hit, with hope being a hypothetical emotion related to the player's prospect towards the action of shooting. The outcome of the shot elicits, then, another emotion, now of the *Attribution* type (considering the player as the *agent*), such as satisfaction if it hits, or disappointment if it misses. This dynamic portrays how conflict can be valuable to video games, given its potential to elicit a constant flow of emotional response on players.

Attribution emotions can also be elicited by external *agents*, for example, when Eugene shoots the monster that jumps on the player's avatar and when he gives the player his shotgun as appreciation. Furthermore, the shotgun itself—as it is objectively more efficient for that specific combat sequence—is considered an object, thus representing a condition for eliciting *Attraction emotions*.

This example sheds light upon another parallel between the novel and the game. In the novel it is made clear that Artyom cares about his companions to the extent of going through the trouble of making each one of them return into the rail cart even though he himself is still affected by the sound. In the game, Artyom's companions partake each in situations that can elicit emotions towards them in the player: Eugene saves the player from the beast and gives him/her a gun; Boris, at the very end of the scene, can be heard telling the guards to wait for the player to reach them before shooting their flamethrower; and the unnamed man tells the group about his life at the beginning of the level and provides some information regarding the political tension between big factions within the metro system. All these situations embody potential for triggering *well-being emotions*, as suggested in Järvinen's (2009) model.

This case is a sound example of how video games can communicate meaning through player experience. Instead of explaining why—or simply telling the player that Artyom cares about these other characters—the game instigates him/her to empathize with them through their actions. Empathy towards the other characters enables the

player to recognize them as *others*, which leads to the possibility of eliciting *Fortunes-of-Others emotions*, which relate to events that affect the characters. For example, the player, upon seeing the unnamed character being thrown out of the cart and likely killed by the creatures, might feel sorry for him. Alternatively, the player can feel happiness when s/he sees Boris and Eugene survive in the end.

The scene under scrutiny can be said to contain *embodiments* of game elements capable of providing conditions for all emotion types proposed in Järvinen's (2009, p. 89-93) model, as well as most external features that can amplify them, working on both ludic and narrative levels. It is possible, thus, to understand why conflict is considered a central element to the gaming experience, given the constant flow of *prospect-based emotions* it can elicit. It also seems to account for the portrayal to the conflict structures of an adapted video game as compared to its source material. This idea can be reinforced with a brief look at other instances of conflict in the novel and in the game as follows:

- Through chapters eight and nine in the novel, in Artyom's first and only direct contact with the Reich faction, he shoots at an officer in a fit of rage, which leads to his being sent to prison and sentenced to death, only to be saved by a small communist group in the last minute. In the game, however, the first time the player meets the Reich (in the level named Frontline), s/he has to go through a section containing several enemies from that faction, after which he is ambushed by two Reich soldiers, sent to jail, and then saved by Rangers. Later in the game, there are three other levels containing dozens of Reich enemies.
- In chapter 14, Artyom must go along a path in the city surface, where he is chased by a pack of creatures. He manages to kill some of them and make his way into the metro alive. In the game, the first time the player crosses the surface on his/her own (Dead City level), s/he faces multiple groups of creatures.
- In chapter 18 of the book, as Artyom and a group of rangers and a child reach the station that leads into the secret military base, they are surprised by a gigantic slimy mass that acts upon their minds, making them move towards it, as if hypnotized. By reaching it, the mass would envelop them, supposedly causing their death. The men try to shoot at it to no avail. The

mass manages to swallow one ranger and the child, before Artyom and the remaining men could escape from its reach. In the level named Biomass in the game, Artyom and a ranger must activate a reactor at the bottom of the military base. Upon reaching the place, several small slime blobs called amoebas descend from the walls and slither towards the player and his/her companion, exploding at contact. These enemies can be killed as any other, unlike the one from the book. At the reactor, a giant biomass launches amoebas at the player, who must enter a crane and guide it towards power nodes to activate the machine. While the player is in the crane, the biomass attacks it, and s/he must activate the nodes quickly.

From such examples, a tendency can be observed that representative elements of conflict from the novel are portrayed in the game as large groups of enemies, providing a constant condition for prospect-based emotions. This seems to show repetition is desirable in the game to some extent. Through repetition players can assess their abilities and check how they develop. An excess of repetition, however, could lead to boredom, which explains why game designs should “provide as rich a space of possibility for conflicts as one can, in order to support a wide range of conflicts” (SIITONEN, 2014, p. 171).

In *Metro 2033*'s adaptation, the game features some creatures that are not described in the novel, such as the ones that attack Artyom's cart. The game also provides a range of weapons—which can be modified through attachments bought from vendors at non-hostile stations—and accessories such as throwing knives and grenades, adding a dimension to the game that is unexplored in the novel. Such additions, among others, provide a degree of variation in gameplay as the player progresses through the levels, potentially remediating the constant repetition of shooting enemies imposed by the game rule system.

Finally, it is possible to observe how the game's emergent structures relate to its narrative structure. As suggested by Salen and Zimmerman (2004, [s.p.]) “when game conflict provides a narrative context for action, your players will help you tell your game's story, infusing their own actions with narrative meaning”. Considering that the novel *Metro 2033* basically depicts a journey through a potentially dangerous place, it does not seem hard to look at it as adaptable into a video game. From an adaptation

perspective, the novel provides a rich set of narrative elements for video game design, and, accordingly, as exemplified in the present analysis, the game expands such elements—the creatures, weapons, phenomena, radiation hazard, etc.— even in dissimilar sequences from the novel rather than implementing new ones.

4 FINAL REMARKS

This work aimed to draw semiotic parallels between Russian novel *Metro 2033* and its homonymous video game adaptation by focusing on the portrayal of conflict in both media. The innate potential of interactive media to immerse the user in their worlds and communicate with him/her through elements of their design required specific methods of analysis. An analytical model provided by Järvinen (2009) was applied to a gameplay sequence in order compare it to its analogue in the novel.

The results provided by the analysis indicate a tendency in the game for externalizing elements that are part of the protagonist's inner self in the novel. Additionally, the nature of conflict in video games and how it relates to the concept of goals and core mechanics in games led to conclusions about how the game under scrutiny expands some elements that are not given much attention in the novel in order to enrich its conflict structures while shrinking others that would be difficult to represent in interactive media. For instance, as the game's core mechanics revolve around shooting enemies, it provides the player with an arsenal of different customizable weapons so s/he can engage combat in various ways, while in the novel the protagonist carries one weapon to which he very rarely resorts. Alternatively, the protagonist has extensive conversations with other characters in the novel whereas he does not have dialogue lines at all in the game, which potentializes immersion.

Järvinen's model proved useful for recognizing conditions for eliciting emotional response from the player within the game structure. To some degree, such a structure simulates some of the feelings related to Artyom in the novel and may be a way of compensating for the suppression of the novel's narrative voice in the game. The model also shed light both on how the readers of the novel can have a more engaging experience with the game considering it is an adaptation and on how the narrative aspects in the game can serve as aesthetic stimuli, potentially enhancing gameplay.

Still, the theoretical foundation used for the analysis lacks depth in its assessment of narrative components, focusing primarily on game specificities as a medium as related to written media. Further studies, therefore, should have a stronger take on the narrative dimension and provide a desirable complementation to the present results.

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