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HOW GANDHI WENT NUCLEAR: POTENTIALITY OF THE ARCHIVERSE IN *CIVILIZATION VI*

"Nuclear Gandhi" is a surprising and controversial image of the Indian leader Mahatma Gandhi. Often portrayed against the backdrop of nuclear explosions, his poses and styles clearly suggest awe and admiration for the ongoing mass destruction. This image is related to Sid Meier's *Civilization VI* – one of the most influential video games in the history of gaming. The aim of the article is to analyze this particular case study and consider processes from many different angles that led to the emergence of this controversial phenomenon. To do so, the notion of archiverse is introduced – an assemblage (after Jane Bennett) of all cultural, political, economic and technological archives performed by the user. By following the connections between different and often seemingly distant data and contexts, it is possible to propose an archive-centric perspective for video game studies.

Keywords: new materialism, media culture, archive, game studies, assemblage, software studies, art and science

INTRODUCTION

"Nuclear Gandhi" is a surprising and controversial image of the Indian leader Mahatma Gandhi. Often portrayed against the backdrop of nuclear explosions, his poses and styles clearly suggest awe and admiration for the ongoing mass destruction. Alternatively, he is juxtaposed with some nihilistic quotes about nuclear weapons. This particular cultural trail is related to the fanbase of the *Civilization* video game series, but numerous references in pop culture or comments from people outside the world of video games – such as in an

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interview with Elon Musk (Hamill, 2019) – testify to its impact on contemporary media culture. This image has become a significant element of the language of memes and GIFs, but it is also a source of numerous intertextual references (Figure 1 presents author's collage made from fans illustrations). The aim of the article is to analyze this particular case study and consider cultural, technological and social processes that led to the emergence of this controversial phenomenon. The research method of analyzing the video game series is based on a speculative perspective, followed by taking a "research in motion" approach. The article itself will emerge as an assemblage of entangled technological, cultural, economic and social archives, showing interpenetrating spheres of interaction among working objects. Jane Bennet in the second chapter of her book *Vibrant Matter* gives an extensive description of her understanding of the phenomenon of assemblage: "The distinctive efficacy of a working whole made up, variously, of somatic, technological, cultural, and atmospheric elements", they have various sources and sites of agency, and generate mobility which resists full translation, where "human and nonhumans live and act in open wholes that pulse with energies" (Bennett, 2005, pp. 447–461). Just like Mieke Bal's "wandering notions" (Bal, 2012), this text is a record of Mahatma Gandhi comprehended as a multidimensional object that is constantly changing, adding to and redefining itself. The specificity of the discussed issue is also reflected in the structure of the article – we are proposing one out of a multitude of paths that can be chosen in the research for the analysis of subsequent connections, contexts and interdependencies among the archives. We want to emphasize that this is not the only path, nor is it the best one. Each part of this case study is a tangled yet still autonomous part of the overall analysis.

Figure 1. "Nuclear Gandhi" fans illustrations collage

GAMEPLAY AND PROTOCOLS IN *CIVILIZATION VI*

One way to start analyzing the "Nuclear Gandhi" phenomenon is to understand its origins in the video game environment. Created in 2016 by Sid Meier, *Civilization VI* is the latest release in one of the most important series in the strategy games category in the history of this medium. In addition to the undoubted impact on media culture, singular versions have repeatedly been a source of academic reflection on imperialism (Poblocki, 2002), post-colonialism, and the use of video games in education (Ford, 2016). *Civilization VI* is the sixth release, not counting additions and expansions, in the main publishing axis. Every subsequent release of the game is not a continuation of the previous version, but an improvement in the content and gameplay mechanisms available in the gameplay. Despite the passage of almost three decades since the premiere of the first version in 1991, the character of the gameplay has surprisingly remained very similar to previous versions. After Alan Emrich, it can be described as a 4X strategy game, in which the game is played according to the pattern present in the genre. After choosing one of the human civilizations and its leader (this choice is important for the gameplay as it provides various bonuses and changes to the rules of the game), each player starts his first turn on a slightly uncovered map, which he can gradually explore with the help of available reconnaissance units. Meanwhile, the point of the game is to establish new cities that allow a player to use the surrounding natural resources, build infrastructure and transform the terrain according to the gameplay goals. The range of the number of players in single gameplay is set between 2 and 12 (depending on the initial settings). It is very likely that at some point there will be an armed conflict between the civilizations' units and cities. Opponents' cities can be seized and incorporated under the aegis of the player's own civilization, which is an alternative path of development to peaceful expansion.

The above activities are undertaken in order to fulfill conditions for achieving one type of victory, either scientific, cultural, religious, diplomatic, or military. There are many paths to victory, two of which are pacifistic (scientific and diplomatic), two dominated by influence (cultural and religious), and one involving the conquest of other civilizations by force.

As mentioned earlier, before starting the game, each player must decide which civilization and which leader she or he will be representing during the game. This choice significantly affects the strategies available for achieving different types of victory conditions. The perks of selecting certain civilizations and leaders give a player greater opportunities to achieve the conditions for certain types of victory. The variation of individual civilizations and leaders is much more significant for AI players. Aside from these advantages, each leader is equipped with specific protocols of behaviors and preferences used during the game, available to the player in the form of narratively presented "agendas". Each agenda suggests what reaction players can expect from a given AI leader in particular states of the gameworld. Each leader is simultaneously equipped with two agendas: the first is visible and possibly consistent with the historical description of a given character, while the second is randomly selected and is hidden from the user. Discovering the second agenda requires the user to take certain types of actions (espionage operations) during the gameplay.

GANDHI IS NUCLEAR HAPPY

The in-game encyclopedia in *Civilization VI* has not even a tiny note about the terrible fate which Mahatma Gandhi will seal for world civilizations in the final phase of the game. The historical entry is a collection of facts about his life, political activities for peace and his influence on the development of contemporary social philosophy. Neither is there anything surprising to be found in the description of his special *satyagraha* ability. *Satyagraha* is inspired by a particular form of nonviolent resistance or civil resistance coined by Mahatma Ghandi and developed throughout his life. As Gandhi describes it:

> Its root meaning is holding on to truth, hence truth-force. I have also called it love-force or soul-force. In the application of satyagraha, I discovered in the earliest stages that pursuit of truth did not admit of violence being inflicted on one's opponent but that he must be weaned from error by patience and compassion. For what appears to be truth to the one may appear to be error to the other. And patience means self-suffering. So the doctrine came to mean vindication of truth, not by infliction of suffering on the opponent, but on oneself (Gandhi, 2000, p. 91).

Further analysis leads to Gandhi's unique agenda called *Peacekeeper*, which as the leader bonus closely matches Gandhi's pacifist biography profile. Both the goals and resources of the AI-led Gandhi are focused on achieving victory in a peaceful manner. There is one exception to this coherent structure: the hidden agenda. The game code shows that Gandhi as a leader has a 70% chance that his hidden agenda will be *Nuclear Happy* – the script responsible for prioritizing the development, proliferation and use of nuclear weapons. The chances in AI-led Gandhi are much higher than in any other leaders' hidden agenda. Consequently, it is not easy to bring about a state of war with India during the game, but if somebody does, the player can expect brutal retaliation with weapons of mass destruction. The rules of the game design lead to the emergence of user strategies which treat Gandhi as a potential nuclear threat. The user, taking into account the danger from Gandhi, reproduces the idea that is one of the pillars of "Nuclear Gandhi". The phenomenon of reproducing ideas by following established rules in a video game has been described by Ian Bogost as procedural rhetoric. Procedural rhetoric leads to the production of a narrative not through text, image, or sound, but precisely the rules governing the relations between the game objects.

In this way, two completely contradictory narratives about Mahatma Gandhi are constructed during the game. On the one hand, a narrative based on historical information contained in the in-game encyclopedia, user knowledge, facts and ideas described in numerous source materials. It is a narrative about a man who rejected the concepts of violence and retaliation in line with the *satyagraha* strategy. The second narrative creates a completely different picture of Mahatma Gandhi, to some extent consistent with the first, but which under the right conditions radically negates all the former ideals in favor of a nuclear retaliation policy (against the principle of peaceful resistance). The former and the latter, set in harsh contrast, are conducted simultaneously. This leads to a cognitive dissonance, which

Clint Hocking describes as ludonarrative dissonance (Hocking, 2007). The state of strong tension between the two mutually exclusive versions of narrative is an important factor that allows performing the archives responsible for "Nuclear Gandhi". It is worth noting that not every example of ludonarrative dissonance leads to emerging phenomena like "Nuclear Gandhi". In *Civilization VI* Mahatma Gandhi is not the only leader figure that may be seen as controversial. With the release of the *Rise and Fall* expansion, a new playable civilization was introduced – *Cree Tribe*, led by Chief Poundmaker. The developer's decision was criticized by Poundmaker Cree Nation Headman Milton Tootoosis, who initially expressed enthusiasm about the concept of including his tribe in the game, but after seeing the way it was implemented, said:

> It perpetuates this myth that First Nations had similar values that the colonial culture has, and that is one of conquering other peoples and accessing their land. That is totally not in concert with our traditional ways and world vie (Smith and Sturino, 2018).

For some reason, the implementation of *Cree Tribe* is generally perceived as faulty design and cultural appropriation, not an amusing paradox like in the case of "Nuclear Gandhi". To address this problem, it is necessary to refer to the category of credibility. The dissonance in "Nuclear Gandhi" is obvious – it is difficult to not see the irony of the presentation. That is why it is safe from an educational and cultural point of view. The ludonarrative dissonance in the presentation of *Cree Tribe* is far more subtle and difficult to recognize. That is why it is considered a vessel for dangerous ideology and an issue to address in public media. In the case of "Nuclear Gandhi", the contradictions in the narrative were strong enough to separate "Nuclear Gandhi" from Mahatma Gandhi and let the former evolve autonomously.

The evolution of "Nuclear Gandhi" creates a distinctive set of connections between heterogeneous elements. Whether analog or digital, material or immaterial, those elements first and foremost are indexes of something else, referring to previous knowledge, experience, and subjects. By picking any of those elements, what one generally gets is the entity called an archive – a term intensively discussed within the past fifty years.

The word 'archive' is derived from the Greek word *arkheion,* which means in its neuter form, among others, "the residence or office of the chief magistrate", and in the plural "the public records" (Leavitt, 1961). The term 'archive' designates a site as well as its content (Giannachi, 2016, p. 3). The term *arkheion* originates from the root word *arkhē*, which came to be used to mean "beginning", "first place", "the government", or "magistracy". From those meanings Jacques Derrida introduced the nature of the archive, based on combining two principles: "the principle according to nature or history, there where things commence – physical, historical, or ontological principle – but also the principle according to the law, there where men and gods command, there where authority, social order are exercised, in this place from which order is given-nomological principle" (Derrida, 1995, p. 1). For Derrida, "archive" is inherently connected with political power. It is a presencing tool, a system based on selection, categorization, preservation, and mechanicalization.

INDEXATION IN THE *CIVILIZATION* ARCHIVES

The *Civilization* series archives are no exception here. As a historical strategic turn-based video game, equipped with a godlike perspective, it enables players to create alternative history timelines. It reinforces certain historical, social, political, and geographical concepts that have mainly been developed in Western culture. As a simulation it has an impact on human players' perception of the world, while simultaneously enabling players to feel decisive while making their choices in the gameplay. The *Civilization VI* archives refer to aspects of real-world science: climatology, atmosphere, biosphere, demographics, cultural identities, and cultural systems. They are expressed in various types of leader characters, map tiles, application languages, voice-over , infrastructure, icon design, soundtrack, and objects distilled from other archives – condensed and codified into the game development. The narrative of *Civilization VI* is a complex collection of ideas, but it omits such important issues as women's rights, discrimination against minorities, and genocide, among many others. Only selective elements of the external (cultural, historical, political, etc.) archives are included in the game design. Just as Michel Foucault writes, an archive is the system of functioning of its elements. It can be called the first law of what can be said, also governing the appearance of its elements as unique items (Foucault, 2010, p. 129). Further considerations of the *Civilization VI* archives will also deal with another important notion of the French philosopher – the archive 'emerges in fragments, regions and levels' that can be described from within or in its totality (Foucault, 2010, p. 130).

The *Civilization VI* video game mechanisms deploy earlier concepts derived from the strategy board game genre. *Civilization VI* performs visual concepts such as the honeycomb pattern of hexagonal "squares", which have accompanied the visuality of the game since *Civilization V*. This effective way to divide space was already present in Project Rand war games: the Ground War Game and Air War Game described by John Nash and R.M. Thrall in 1952. Project Rand was held by RAND Corporation as an American nonprofit global policy think tank offering research and analysis to the United States Armed Forces, including through new methods for strategic analysis and war gaming. Moreover, Sid Meier's experience in the game industry began with combat flight simulators and military strategy games. Designer experience expressed in the product characterization is part of the archives repository along with the whole game design. Inside the game archives we can also find effective psychological design aspects expressed in the game code. Rewards and punishments, win probability, and difficulty levels must be well-designed to make gameplay exciting and pleasurable for future users. Those mechanisms are derived from research focused on increasing sales and game popularity.

As specified earlier, to win the game players can lead their civilizations along paths other than wars and military actions. Still, to win the game someone has to have the best score in one of the possible achievements, which also creates a specific pathway in the experience of the players.

The archives mentioned above are connected with others, produced through different means and indexing to other elements. Forums, blogs, and online platforms made by game

users also make up part of the collections and accumulations of the archives. These archives are based on free voluntary work, where players' agency plays a major role in creating repositories. This collaborative space of records creation is made possible by network connection. While only a particular version of events was to be made public, the figure and agency of the archivist is to be emphasized. Traditionally archives were used to serve particular bureaucratic purposes and archivists were seen as safeguards, not owners, of this power. Archive records were derived from "stable, mono–hierarchical institutions", although a crucial change came with the mid-1980s and emerging new information technology. Digital records started to be created within "unstable institutions'', which indicates the role of the archivist as an active shaper of functions and transactions performed on the repository (Giannachi, 2016, p. 11). To paraphrase Hal Foster's notion of archival turn (Foster, 2004, p. 4), for users of the *Civilization* series the ideal source and space of creation is the mega-archive of the Internet. The archives of *Civilization VI* are not only constituted on platforms, stations, blogs, and forums: fans are constructing game improvements through creating additional design and script content. These improvements are called mods – developed through modding, a term derived from the practice of modifying game elements. Thanks to Brian Reynolds and Soren Johnson, co-designers with a background in modding and hacking code in popular games, since *Civilization II* capabilities for user interruptions have been constantly extended. Focusing on the mods scene of *Civilization*, designers split the game's engine into two code bases: the major graphic engine and non-gameplay code written in compiled C++ together with game play and rules written in interpreted language, which enabled seeing immediate changes while game modding (Kaltman, 2014, pp. 108–109). Those changes led to an easier entry threshold for active participation of the modder community. The results of their work are often used by the Fraxis production team and there is no doubt that users constitute a great part of the game development engine. Mods such as *Ahimsa – Gandhi Reworked*, *Gandhi Mod* or *Warmonger Gandhi* change the behaviour of both the human leader and Gandhi AI, removing Gandhi AI's nuke trait or setting him up as more aggressive than it is coded in the original version. The modding user of the *Civilization* archives is both its creator and propagator.

Nevertheless, the digital and virtual environment reinforces archives as a generative tool for global production months before users' operations on a released game. Narration about an upcoming product is present prior to early access or an official release coming out. Once the game production is announced by the company, the archives starts circulating, filled with objects of knowledge. It is not the gameplay that is the starting point in running the performativity of the archives. Marketing strategies that activate speculation about upcoming releases work on many layers of information collections. Personal and private, public and global levels are moved by this "first place". From one point of view, advertising affects the emotional relations of players and broadens discussion on online forums. On the other hand, sales predictions influence further marketing decisions, promotions, production of game-inspired gadgets, etc. Descriptions of "Nuclear Gandhi" in game reviews also influences those layers of information collections, such as "Let's take a ride through the world where [...] Mahatma Gandhi threatens to use nuclear weapons!" (Bhaskar, 2016). Reviews

are often used in marketing strategies to reinforce positive perceptions of the game, while increasing the range of the product and gaining new fans. The intentions standing behind promotion of the game contribute to the development of the archives.

PROLIFERATION OF THE *CIVILIZATION* ARCHIVES

For Jenkinson and Schellenberg archives are not collected. "They came together, and reached their final arrangement, by a natural process: are a growth; almost, you might say, as much an organism as a tree or an animal" (Stapleton, 1983, p. 77). In terms of the *Civilization VI* archives, the processes of both accumulation and collection can be observed. The archive is no longer undoubtedly a physical site, but a dynamic virtual concept, a network of nodes capable of reprogramming itself depending on its values and users. Game code is gaining not only new fragments of algorithms, classes, and functions, but already existing elements are re-programmed, adjusted to new necessities. The game is also expanding due to accumulation. Building upon Jenkinson's comparison of archive expansion to tree growth, parts of the *Civilization VI* archives, like users forums and blogs, narration around the game development, statistics, and free and fan versions of the game are adding new branches into the archives repositories. As observed earlier, even the game narration is based on branches – like a civilization technology tree that is expanding in a linear way, dividing itself in the following steps for a few more branches. A technology tree is drawn once again with every new gameplay, by agency of the algorithms, enabling slightly different, unknown narrations to appear. The starting point, after the first initiation of the archive-producing machine, can be hard to find in a plethora of connections. Even this "first place", considered as the will of creators to produce a game, is not a first archive, because it is built on a previous archive of experiences of the producers, cultural and technological development, etc. However, it is hard to claim that like in Deleuze and Guattari's rhizome, the pivot is lost (Deleuze and Guattari, 1987, p. 7). The individual archive is constructed upon its strata, revealing layers of information, allowing the privileged reader to discover occurring connotations (Giannachi, 2016, p. xviii).

LIMITED ACCESS OF THE ARCHIVES

While the world experienced a crucial shift from the industrial and bureaucratic era to digital economies based on computers and database technology, there was also a change in setting up the rules for archives, along with their construction and accessibility (Giannachi, 2016, p. 9). During this period, the influential archival theorists Hilary Jenkinson and Theodore Schellenberg introduced important notions on the changing position of the archive in global circulation. Like Jean-François Lyotard, they underlined the role of the knowledge-commodity, which for Lyotard became "the principle force of production" (Giannachi, 2016, p. 9).

Digital technologies created fundamentals for fast growing databases of information, fostering governmental power, global production, and education, and producing new spaces for sharing knowledge. So whatever is included in *Civilization VI* accumulations and collections, it gains wider range due to digital means of production. Although archives have become more open than previously, they have not become entirely democratic tools. Their access is limited, only open for those who know how to gather information and how to read them. In the *Civilization VI* archives repository there is a wide range of knowledge, tools, and commodities within the game to which players have limited access due to the overwhelming information and data that come along with *Civilization*. As well, everything that is outside the main thread of the narration – additional screenplays, the world map builder – is less visible than the main path designed by the production team.

There are multitudes of indexed objects in the *Civilization* archives that seem to be loosely related to the game itself. Gameplay, articles, video reviews, and research study are constituted upon and tightly related to indexed physical hardware and internet infrastructure. *Civilization I* was programmed as a three-megabyte IBM PC computer game, released first for Amiga 500, DOS operating systems, Super Nintendo Entertainment System, and Sega Genesis game consoles. It was programmed with the use of 640K memory computer capabilities and 16-color EGA graphics. The possibilities of the hardware also determined the design of the Gandhi leader image – Ghandi in a certain pose was created in *Civilization I*, and this image is used through the following versions of the game.

The hardware mentioned above is just a small part of a huge collection of cables, wires, circuits, mouses, keyboards, hard disks, graphic cards, floppy disks, home computers, laptops, earphones and many more that were and are still used in game production. Hardware parts, products of mining industries, are linked to the whole gaming industry (sales, actual game play, personal client equipment, etc.), archived in physical and online shops, company storehouses, and production companies. Technological progress is enabling technical media culture to exist and flourish while producing electronic waste on an unimaginable scale. Undersea fiber-optic cables and telecommunication companies are providing a distributed information superhighway, through which multiplayer gameplay and game updates are made possible. In *Civilization VI* data about network conditions are visible in Frames Per Second (FPS) rate and Ping readouts in gameplay. We assume that hardware and internet infrastructure is indexed in many different archives, extending those mentioned above.

PERFORMABILITY OF ARCHIVES

The *Civilization* game series is designed for human players, but they are not the only ones who are running the archives. The AI built into the game is a crucial part of the system, enabling many mechanisms to happen, especially single player mode with AI competitors and their design as part of the overall game experience (Figure 2 presents one of the functions used in writing Civilization VI AI). Game AI is also used by many players as a source of

knowledge on how to achieve the best score through observing AI against AI gameplay. So the performativity of the archives can be run almost without the participation of human players. This minimum plan keeps things going just after choosing the appropriate option in the game panel. In the model plan, when the human player is fully active in front of the screen, it is interesting to notice AI leaders operating under different rules than leaders played by human players. As Soren Johnson said in GoogleTechTalks in 2010 about *Civilization VI* AI, human players have a wider palette of options during the game play. Moreover, AI cheating is not linear, although it is supposed to be felt as fair gameplay. In *Civilization I* AI gets free wonders, and in the game there is a line of code that will cause AI to declare war against a human player if two conditions are fulfilled: the human player is in the lead and it is year 1900. "Nuclear Gandhi" AI-leader behaviour is of course to be mentioned here too, although it is hard to state whether it was intended script or a bug.

```
int CvPlayerAI::AI_techValue(TechTypes eTech)
{
	int iValue = 1;
	iValue += getTeam().getResearchProgress(eTech); // which technology to research first
	if(getTechInfo(eTech).isIrrigation()) // does this technology provide Irrigation?
	{
		iValue += 400; // adding value to overal sum
	}
	if(GC.getTechInfo(eTech).isOpenBordersTrading()) // does it enables Open Borders?
	{
		if(getTeam().getHasMetCount()>0) // has AI met any other player?
		{
			iValue += 400; // adding value to overal sum
			if(getTeam().getNumCoastalCities()>0) // are Coastal Cities present (enables trading)?
			{
				iValue += 400; // adding value to overal sum
			}
		}
	}
	return(iValue + getGame().getRandNum(2000)); // random noise
}
```

Figure 2. Short script of Soft-Coded AI from *Civilization IV* (from Soren Johnson GoogleTalk)

When considering the *Civilization* archives it is also worth mentioning other code collections and accumulations. Unrelated to the Fraxis company, AI and Machine Learning (ML) projects use *Civilization* as a testbed for new developments in computer science. A project led by Regina Barzilay at MIT uses machine learning word association to teach a computer how to play civilization through using the game manual (Geere, 2011). The Arago Company created the HIRO AI product, which can beat some human players in the Freeciv game, a free version based on *Civilization* (Etherington, 2016).

ARCHIVERSE AS AN ASSEMBLAGE

Given the above analysis the important conclusion emerges: "Nuclear Gandhi" is not an object. Nuclear Gandhi is a process resulting from the performing of numerous cultural, social, technological and political archives. It should be perceived as a process because its meaning and contexts depend on ever-changing archives belonging to a common assemblage, the composition of which may change over time. In other words, in order for a process called "Nuclear Gandhi" to traverse from potential to actual mode, it is necessary to perform different objects of individual archives. Through mutual interactions between them, the process of "Nuclear Gandhi" is able to occur. The assemblage of the archives that allow Nuclear Gandhi to happen is an archiverse.

An archiverse is secondary to the process that is updated within its framework. It cannot be described until the researcher's entry point into the assemblage is determined. From that point, the archiverse potentially expands endlessly, both in spatial and temporal terms. This multidimensional expansion means that the archiverse goes beyond the standard category of the object and requires a different approach. Timothy Morton, writing about ecology from the perspective of new materialism, uses the concept of a hyperobject to describe objects that are "so massively distributed in time and space as to transcend spatiotemporal specificity" (Morton, 2010). Hyperobjects are objects which have a vitality to them, but it is impossible to touch them as a complete material object. From a slightly different perspective Ian Bogost uses the example of ethics to describe his understanding of the term. In *Alien Phenomenology* he writes that "ethics itself is revealed to be a hyperobject: a massive, tangled chain of objects lampooning one another through weird relation, mistaking their own essences for that of the alien object they encounter, exploding the very idea of ethics to infinity" (Bogost, 2012, pp. 78–79). Effects of hyperobjects may be experienced even if they cannot necessarily be touched.

Individual archives belonging to different archiverses may differ significantly from each other, as does the nature of the interdependence between them. However, it is possible to designate several common properties for each archiverse. These properties are decentralization, speculativeness, dynamics and continuity. Each of them are described briefly further in the text.

A. DECENTRALIZATION

An archive does not have a fixed, hierarchical structure. For the purposes of analysis, it is possible to take a specific point or object as an entry point, but it can be in a different place each time. Any apparent hierarchy of linking archives is the result of temporary reorganization movements in the course of research. In this analysis, it is justified to adopt the "Nuclear Gandhi" process as the entry point into the assemblage of archives in the archiverse. However, every time an analysis is conducted, the entry point and configuration of influences in the assemblage could be significantly different (Figure 3 represents one of the possible configurations of analysing the Nuclear Gandhi archiverse). Nevertheless, there is no doubt that this arrangement would be the result of performing the same assembly of archives as in the first case.

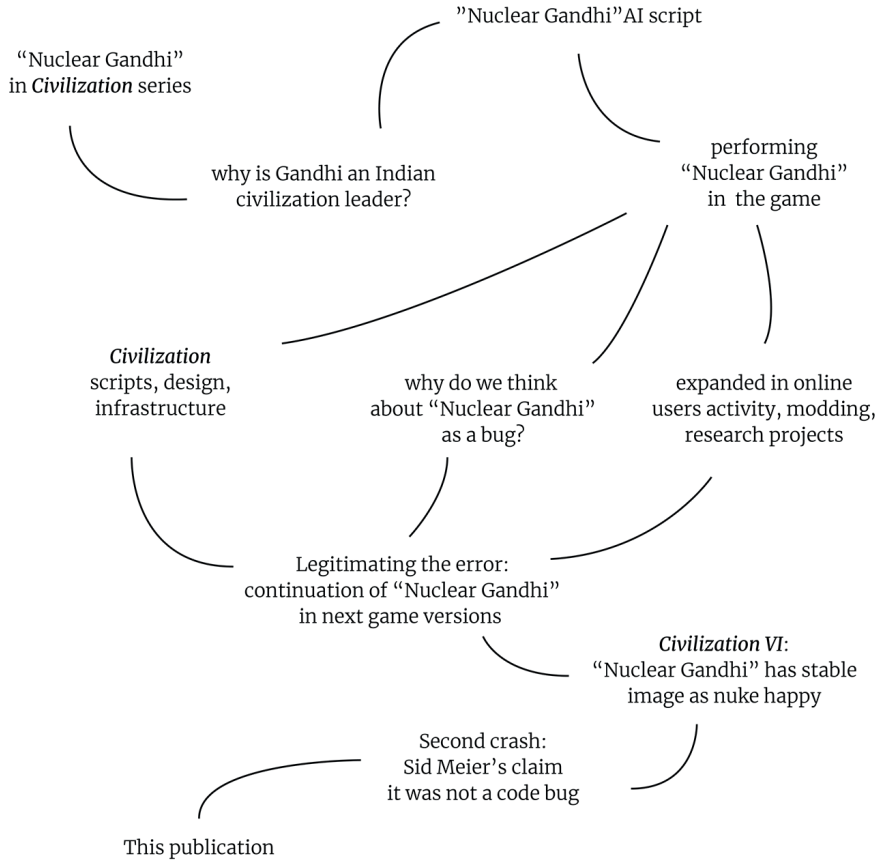

Figure 3. One of the possible paths of analysing the Archiverse

B. SPECULATIVENESS

Initially, the archive is potential. The phenomena and processes occurring within the archives are updated during the assembly of the archives. Depending on which archives are included and which are omitted, the current form of the analyzed process may manifest itself in different ways. The archiverse with all its potentialities remains an autonomous entity regardless of how it is perceived, but its current forms directly depend on the movements that perform it. The timeliness of the archive is always a temporary condition.

C. DYNAMICS

One of the challenges of conducting research on contemporary digital phenomena is the enormous scale of their dynamics. Phenomena become outdated in less time than is needed to

investigate them. Anyone who tries to observe and describe such phenomena is doomed to use past narratives of those phenomena. For this reason, a very important property of the archives is their open dynamics. An assemblage of archives is always open to its potentialities, both in the face of archives joining and disconnecting from it, and in the face of transformations of the objects that make up these archives. The game code of *Civilization VI* is constantly being performed, in the form of official updates and additions provided by the publisher, creators and users of fan modifications (who constantly make changes to its structure), as well as in the form of individual gameplay acts in which both hardware and software modify data. When researching the movements of the performing archives, it is extremely important to take into account its dynamic, pulsating and time-changing character.

D. CONTINUITY

This last characteristic leads to the last point, dealing with continuity. The archives are in a constant jitter between the potential and the present. This movement means that the archives should be understood as an ever-updating process that never stops and never ends. Regardless of how Nuclear Gandhi is up to date, the archives that led to its creation will continue to be performed in future *Civilization* updates, in the form of texts, gameplay strategies, data stored on servers, and the memories and preferences of players, which have the potential to be causative in further transforming the archives.

CONCLUSION

The main principle of conducting research on an archiverse is to take into account both conditions that determine the structure of the archives: their actual state and their potential state. The continuous "research in motion" of a hyperobject is constantly reconfiguring and expanding with new information, connections, and archives. The autobiography of Sid Meier presents another branch of connotations in the "Nuclear Gandhi" archiverse. Published in September 2020, the autobiography touches upon memories related to the game design of *Civilization*. As Meier claims, the "Nuclear Gandhi" code bug was an intentional act – everything that happens during the gameplay was as intended by the design. Meier does not, however, reveal the motivation behind the "Nuclear Gandhi" design, as he writes: "it's one of those mysteries that it's almost fun to keep mysterious".

Sid Meier's statement, however, does not contradict the archives previously attached to the archiverse. This new information merely shifts one of the many archives containing the narratives about "Nuclear Gandhi" from its potential to its actual state. Countless elements of the archives emerge from this additional archive layer, and this leads to an even more dynamic performativity of the archiverse. Meier's statement again emphasizes that archives cannot be read in isolation and that the means of transmission of information have crucial influence on how archives, within the archiverse, are constituted.

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LOST WORLDS OF *ANDROMEDA*

The paper offers a reading of *Mass Effect: Andromeda* (BioWare, 2017) vis-à-vis lost world romance (also dubbed "lost race romance", or "imperial romance"), a late-Victorian era novelistic genre originating from H. Rider Haggard's *King Solomon's Mines* and serving as a major tool for British Empire propaganda and a source of early science-fiction conventions. We claim that the narrative failure of this ill-received game stems from its adherence to the rigid principles and forceful themes of the genre and the colonial and imperial imaginary informing it. Our analysis aims at highlighting the way 19th-century novelistic convention can be remediated as contemporary digital games, and to expose the link between the imperial imaginary and the ways in which open-world digital games are structured, on both the narrative and gameplay levels, even when they do not directly refer to the historical colonial legacy.

Keywords: imperialism, science fiction, colonialism, game studies, digital games, Victorian novel, *Mass Effect*

MASS EFFECT: *ANDROMEDA* AND THE VICTORIAN LOST RACE ROMANCE

The aim of this paper is to explore ways *Mass Effect: Andromeda*, the ill-received (Metacritic – *ME: Andromeda* (PC) reviews, 2020) sequel to the critically acclaimed *Mass Effect* trilogy introduces tropes of the lost world romance, a Victorian literary genre born in the shadow of the scramble for Africa. The reason behind such a reading is threefold. First, we aim to demonstrate the historical roots of the imaginary of common mass-market

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big-budget games, and to point out their relationship with the adventure novel tradition, in a spirit already highlighted by several scholars analyzing the interactions between 19th-century literature and gaming (Fuchs et al., 2018; Majkowski, 2016a, 2016b; Vella, 2015). Second, we wish to look beyond the obvious settler/colonial ideology of the game in question to explore the inevitably tangled relationship between imperial ideology and colonialism in fiction (see Fuchs et al., 2018).

We also have a third goal: to supplement the growing body of work analyzing the way mass-market, high-budget games cater to and reinforce the imperial ideology of the industrialized West by perpetuating myths of cultural superiority and benevolence of Western rule disguised as a narrative of anti-conquest (Pratt, 1992) or understood in terms of the "white man's burden" through the usage of fantasy and science fiction aesthetics. Although a such perspective is not completely alien to digital-game analysis, it is worth pointing out that most existing postcolonial research focuses mainly on two issues: the representation of real-world races and the historical colonial past (Berger, 2008; Harrer and Pichlmair, 2015; Höglund, 2008; Martin, 2016; Shaw, 2015; Šisler, 2008), and the imperial legacy of strategy games (Euteneuer, 2018; Magnet, 2006; Mukherjee, 2017). In both cases, the research aims at either criticizing the medium as inherently colonial and beyond redemption (Breger, 2008; Fuchs et al., 2018, Harrer, 2018), or seeking how digital games could introduce postcolonial subjectivity (Apperley, 2018; Ford, 2016; Hammar, 2017; Lammes, 2010; Lammes and Smale, 2018; Mukherjee, 2015) and struggle to bring a critical perspective to the colonial legacy (Hammar, 2017; Felczak, 2020).

With our attempt, we wish to move into slightly different territory. Instead of focusing on the logic of the imperial and colonial political and economic praxis replicated in game rules and informing game narratives, we address fictitious motifs inherited by contemporary science-fiction games from 19th-century adventure novels for boys (Hanson, 2002; Mathison, 2008; Rieder, 2008). We are aware, of course, of the relation between the novel and imperialism (Said, 1994), although with this paper we are more interested in how seemingly discredited tropes can be rejuvenated by remediation (Bolter and Gusin 1996) as a digital game.

THE IDEOLOGICAL STRUGGLE OF THE *MASS EFFECT* SERIES

The paper most directly addressing the issue we raise in this analysis is Michael Fuchs, Vanessa Erat and Steven Rabitch's reading of the fantasy-themed computer role-playing games (cRPG) *Dragon Age* and *Mass Effect* trilogies from the Canadian studio BioWare, the direct precursor of the title we analyze here (2018). While pointing out the inevitable imperial undertones of both series, both series acknowledge they are conscious of this entanglement and are trying (albeit failing) to address the issue within the game narrative. The authors praise the first *Mass Effect* game for depicting humans as an upstart secondary power trying to throw their weight in a galaxy ruled by an alien species far more developed, and for open criticism of the in-game Earth's aggressive colonial policies. They point out, however, that the promise is undelivered: on a gameplay level, *Mass Effect* remains a conservative, militaristic game of resource accumulation and forceful destruction of any opposition. Both

tendencies gradually grow with the subsequent parts of the trilogy, as humanity (personified by the game protagonist) grows into the role of galactic Messiah, not only destined to save all sentient organic life from the invasion of ancient conscious machines, but also to resolve the numerous conflicts the alien races are struggling with. It is worth noting that this tonal shift started when the producer, the Canadian studio BioWare, was purchased by the US--based game development giant Electronic Arts, a change well in line with Fuchs, Erat and Rabitch's argument highlighting the relationship between digital games and the Empire in Hardt and Negri's sense (2000) as a major reason behind games' reliance on colonial ideology. Following Dyer-Witheford and de Peuter's seminal work (2009) they consider mainstream digital games to be "a paradigmatic media of Empire – planetary, militarized hypercapitalism" (Fuchs et al., 2018, p. 1484), claiming that "neoliberal heirs to the empires of the past control the means of production and dissemination of mass media, effectively making players of cRPGs «serial imperialists»" (Fuchs et al., 2018, p. 1477).

We agree with this position, echoed by numerous scholars claiming that basic gameplay modes of cRPG games, revolving around exploration of a supposedly unknown land – "a virgin territory"[1] – and appropriation of various treasures are inherently tied to the colonial imaginary (Felczak, 2020; Lammes, 2010; Mukherjee, 2015; Majkowski, 2016b, 2018). Therefore any attempts to introduce anti-colonial or anti-imperial narratives are inevitably contested by the way the game is played; as Fuchs, Erat and Rabitch put it, while "video games' narrative layers often critique imperialist tendencies and aspirations, players are made to play empire" (Fuchs et al., 2018, p. 1492).

Despite this limitation, it is however possible to read an anti-imperial narrative in further instalments of the *Mass Effect* trilogy. Even though it puts a human hero at the center of the plot, it never contests the early-established idea of humans being among the least advanced races, challenging the concept of scientific advancement as a mandate to govern over savage cultures – a concept central to imperial ideology (Mignolo, 2003; Rieder, 2008). Not only does it frequently side with the less-advanced civilization (such as the war-like Krogans) to criticize the devastating effects of paternalistic interventions or poke fun at the concept of cultural superiority (e.g. by introducing Salarians, a race of science-loving amphibians), but the central plot revolves around the protagonist's efforts to resist seizure of their homeworld by the technologically superior beings.

The antagonists, artificial beings known as the Reapers, are not simple conquerors: they operate on a higher calling, trying to save the galaxy from certain doom, and offer their own version of salvation to all sentient beings. Their basic modus operandi is, however, unlimited appropriation: They harvest sentient beings as a resource, reducing less advanced races to either zombie-like slaves or simple biomass. Finally, they are revealed as a force secretly manipulating the scientific development of organic races, to bring them to the point where they become the very threat the Rippers are trying to save the galaxy from. In this way the sentient machines justify the cycles of genocide and appropriation as an inevitable necessity. Therefore, it is the antagonists who rely on colonial ideology in the *Mass Effect* trilogy, despite presenting the protagonist as a savior. Such a premise allows for a (somewhat generous)

[1] See (McClintock, 1995) for further discussion of gendered metaphors in imperial and colonial discourses.

reading of the *Mass Effect* trilogy as at least an attempt to reverse the imperialistic tropes of science-fiction RPGs in the vein introduced by H.G. Wells' anti-colonial manifesto, *The War of the Worlds* (Rieder, 2008).

Mass Effect: Andromeda, a sequel released after a five-year hiatus, is a game with a much more unsettling narrative premise. Here, humankind arrives in the new galaxy with the explicit aim to colonize it, regardless of the native population. Even though it is framed as necessity –humans and other sentient races arrived at Andromeda galaxy to avoid certain extinction at the hands of the Rippers – the lack of regard for possible natives is profound. Humans crossed the vast void of space and the ocean of time (the journey took 600 years to complete) with the manifest destiny to find a new home. The meticulous directives governing the process of colonization lack any clear instructions for dealing with native cultures – it is thus up to the player to enact forging relationships with aliens, quite neatly divided between two races: one of noble savages, and the other of dangerous savages (see Rieder, 2008; Roszczynialska, 2001). This plot seems to be directly at odds with the main topic of the trilogy and makes *Mass Effect: Andromeda* a game hard to swallow, as the protagonist of the new title is given a task quite similar to what motivates the Reapers: to deliver various non-human races through technology and teach them a new, better way to live while appropriating their resources.

To justify such an uncritical stance on colonial practices, *Mass Effect: Andromeda* introduces a series of easily-recognizable narrative tropes, already tested as a moral justification for imperialism and colonialism in adventure fiction. On the surface level, they tie the game to the Western genre and the myth of settling the Americas: humans (and other races from the trilogy) are set as pilgrims crossing the unconquerable ocean to avoid doom in their homeland. There is a conflict between the freedom-seeking settlers and the administration still following the rules and procedures of the "Old Worlds". Finally, the two sentient races of Andromeda galaxy can be interpreted as a heavily stereotyped depiction of the native population of the Americas, with the Plains Indians, a noble yet backward culture of high spirituality seeking communion with nature, and the "evil native empire" of Central and South America, conventionally (and inaccurately) depicted as bloodthirsty and governed by half-mad priests. This interpretation is reinforced by how the protagonist assumes the title of Pathfinder – a clear reference to the third installment of James Fenimore Cooper's *Leatherstocking Tales*. Moreover, early in the game the protagonist finds an edition of the journals of Lewis and Clark, a supposed memento of her historical predecessors.

By introducing the Lewis and Clark memoirs (1803–1806), the first overland expedition to traverse North America and reach the Pacific Ocean on behalf of the US government, the game not only highlights the continuity between the fictional Pathfinder of Andromeda Galaxy and real-life historical figures, thus contributing to the idea that drive behind playing digital games is similar to the urge driving European explorers to Americas, as analyzed by Fuller and Jenkins (1995). It also subtly hints that it is humanity's manifest destiny to take over the newly discovered star cluster, much as the Lewis and Clark Expedition fueled the concept of the USA's dominance over North America as the country's manifest destiny (Miller and Miller, 2006).

It is our claim, however, that those Western tropes – although readily available – are quite shallow and mostly limited to casual references. The main plot is built upon another

adventure genre, that of lost world romance (also dubbed "last race romance" or "imperial romance"[2]). It is not an accident the title "Pathfinder", alluding to the prose of an American frontier romance writer, is superimposed on the protagonist's surname, Ryder. Although sometimes understood by fans as a reference to Sally Ride, the first American female astronaut (Mass Effect Fanon Wiki, 2019), it can be also read as allusion to H. Rider Haggard, the most famous author of the lost world romance, sometimes considered the inventor of the genre (see Hanson, 2002; Katz, 2010; Monsman, 2006). Such an interpretation seems valid, as the main plot of *Mass Effect: Andromeda* follows a central premise of the Victorian genre: Following a cryptic map, the protagonist stumbles upon remnants of a surprisingly advanced culture in the heart of an untamed wilderness and turns out to be uniquely suited to unlocking the mystery of the lost land, owing to technological and moral superiority which the native guardians of the treasure lack.

WORLDS THAT TIME FORGOT

The popularity of the lost world romance in Victorian fiction starts with the surprising success of two early adventure novels: R.L. Stevenson's *Treasure Island* in 1883 and H. Rider Haggard's *King Solomon's Mines* in 1885. Both build upon a similar premise of Englishmen travelling to a distant and exotic land in search of easy gain. Following a mysterious map, the protagonists bypass numerous dangers in search of the hidden and fabled treasure (Daly, 2007; Mathison, 2008). There is one important difference, however: In Stevenson's novel, the central conflict is class-based, as a party of English gentry clashes with lower-class pirates over a pile of Spanish gold. Haggard does not allow for his Englishman to squabble over diamonds from King Solomon's mines, describing the conflict as an internal issue of the indigenous population which the protagonists become involved in by accident. In this way the struggle over the treasure is turned into a larger framework of imperial policy, as white people's ability to resolve local frictions and bring peace to the Black population of Africa becomes inseparable from the appropriation of African treasures (Daly, 2007; Katz, 2010; Mathison, 2008; Roszczynialska, 2001). In Haggard's subsequent novel, *She* (1887), cementing the rules of the genre, the financial gain is omitted. The real treasure Horace Holly and Leo Vincey bring from their African escapade is both intellectual and moral: they have discovered an unknown and mysterious culture in the heart of the continent while resisting the temptations of the flesh thanks to their English common sense.

Haggard's novels originated the genre rules followed by dozens of novels published between 1890 and 1914, with Arthur Conan Doyle's *Lost World* (1912), Rudyard Kipling's *The Man Who Would Be King* (1888), Francis Atkins's *The Devil Tree of El Dorado* (1897),

[2] Even though the most widespread term seems to be "lost race romance", in this paper we use the less prominent "lost world", as the former term highlights discovery of hitherto unknown (usually white) races and focuses on the racial anxieties of the late Victorian society. For our reading, the spatiotemporal aspect of the genre, as well as its relation with the "fantasy of appropriation" is of equal importance, and we believe the less popular name better captures the spirit of the genre. See (Daly, 2007; Hanson, 2002; Mathison, 2010; Katz, 2010; Rieder, 2008) for further discussion.

Edward Markwick's *The City of Gold* (1896), and D.L. Johnstone's *The White Princess of the Hidden City* (1898) serving as the most prominent examples. The heavily conventionalized genre served as popular entertainment as well as an important element of imperial propaganda (Katz, 2010; Mathison, 2008; Hanson, 2002), addressing the anxiety regarding the imminent fall of the British Empire resulting from the decline of the adventurous and enterprising spirit among late-Victorian Britons. While providing a narrative framework for justification of colonial practices (Katz, 2010; McClintock, 2013; Roszczynialska, 2001), the novelists were also weaving the mirage of quick economic and social advancement to be found in the colonies (Daly, 2007; Mathison, 2008) as well as promoting athleticism and survivalism, as opposed to the moral apathy and lack of physical prowess supposedly plaguing Victorian society during the Boer Wars (Hanson, 2002). Finally, by introducing the motif of the mysterious and unknown white people and the legacy of their lost civilization, lost world romance provided an easy way to reconcile the scientific racism which considered non-whites as inherently inferior (Rieder, 2008; see also Mignolo, 2003) with the archaeological evidence of grand non-European civilizations, while addressing deeply ambivalent attitudes toward cultural hybridization within the British Empire (Hanson, 2002). Finally, it served as a showcase of the empire's geographical span, with much emphasis put on accurate depiction of colonial flora and fauna and local customs, to present the young readers of London the wonder and excitement of the exotic lands ruled over by the queen (Daly, 2007).

In his analysis of a way the colonial ideology informed early science fiction novels, John Rieder (2008) claims that the widespread appeal of the lost world romance genre as well as its ability to address such a diverse range of issues stems from its heavy reliance on imperial ideology. The author offers analysis of this ideology through Slavoj Zizek's concept of ideological fantasies, understood as fiction shaping social realities, and he analyzes four such fantasies providing justification for colonial practice and informing the themes and motifs common in this literary genre. The fantasy of progress equates cultural difference with scientific and social advancement, reducing non-Europeans to children yet to reach maturity (and in need of protection provided by "adult" Britons). The fantasy of discovery allows treating any unmapped territory as unsettled or even empty of human life, and therefore ready to be claimed. The fantasy of the missionary assumes destruction of a native way of life to be a beneficial gift of true civilization. Finally, the anthropologist's fantasy considers non-European civilizations as remnants of the past, as if tribal cultures of Central Africa or the Americas were living museums of European prehistory (Reider, 2008, pp. 30–32). It should be added that the lost world romance justifies British interference with non-European cultures by employing a strategy first developed in diaries of real-life explorers, what Mary Louis Pratt calls the narrative of anti-conquest (Pratt, 1992). Here, the European protagonist of the story is a messianic figure, exposing himself to various dangers and suffering hardships at the hands of local chieftains and warlords not for personal gain, but to advance science and bring the oppressed local population the gift of civilization. Any prize he claims in the process is therefore morally justified as earned through sacrifice: Allan Quatermain and his friends can claim diamonds from King Solomon's mines only after they personally end Twala and Gagool's rule of terror and reinstall the rightful heir to Kukuanaland's throne.

As we demonstrate below, *Mass Effect: Andromeda* follows the narrative of the lost world romance almost to the letter, introducing several tropes of the genre. It features a selfless explorer as the main character, a map leading to the lost treasure, a strange and ancient culture ignorant of its own past, rediscovery of a lost civilization by rational European minds, and a race of evildoers ready to make ill-use of the hidden treasure (Daly, 2007; Mathison, 2008). It also structures the first contact with space aliens along lines drawn by the genre: the humans are technologically superior but lack the moral strength the noble savages possess, and only the alliance of those two can overthrow the dangerous indigenous empire ruled by religious fanatics (Rieder, 2008). Ethical justification for this imperial perspective on the local population is embedded in the quest structure, presenting the protagonist's trials as a form of beneficial anti-conquest (Pratt, 1992). Finally, the environment is presented as unknown and exotic, in need of being surveyed, tamed and exploited.

As a science-fiction themed role-playing game, *Mass Effect: Andromeda* is well-equipped to present such a narrative, inheriting lost world romance conventions from both the narrative and gameplay genres. As analyzed by numerous scholars (Frelik, 2017; Rieder, 2008; Suvin, 1983), the imperial and colonial imagination embodied as lost race romance provided the foundation for the science fiction genre. Even the famously anti-colonial H. G. Wells novel, *The War of the Worlds*, did not abandon colonial logic; it just reversed it. Lost world romance was also a direct influence on American pulp fiction, with Edgar Rice Burroughs *Princess of Mars* (1912) bringing the genre logic to another planet, and Haggard's racial anxieties and pessimism regarding the inevitable decline of any human empire informing the heavily-racialized sword and sorcery genre, which, in turn, heavily influenced the creators of *Dungeons and Dragons*, the first tabletop RPG, published in 1974 (Peterson, 2012). This is of course true for all science fiction RPGs, sharing the same double legacy. The readiness of *Mass Effect: Andromeda* to embrace imperial tropes and ideologies is striking, especially given that the *Mass Effect* trilogy made an effort to distance itself from it, at least on the narrative level.

Below we analyze the way four fantasies informing imperial and colonial imaginary of the lost world romance are fully articulated in the main plot of *Mass Effect: Andromeda* and are reinforced by the way the game is played.

THE FANTASY OF PROGRESS: THE NOBLE HEROINE OF ANDROMEDA (AND HER PET AI)

After a six-hundred-year journey from the Milky Way to Andromeda Galaxy, Sara Ryder[3] wakes up in Ark Hyperion to find that humanity's assumed new home planet can no longer be colonized for two reasons: the presence of hostile aliens called the Kett, and changes in the planet's atmosphere. She joins her father, a Pathfinder of humanity on a scouting mission on the

[3] The player can choose between binary genders of the protagonist, playing as male or female - the unchosen option is presented in-game as the protagonist's twin, still in cryogenic stasis. The player can also freely choose the protagonist's name. To avoid confusion however, in this paper we assume the female Sara Ryder to be the default protagonist of the game, with the default male Scott Ryder as her frozen twin.

planet's surface, and fights the Kett. During the mission, the Pathfinder team finds a mysterious, ciphered map and cleans the planet's atmosphere with ancient terraforming infrastructure. Sadly, Sara's father sacrifices his life to save hers, and the protagonist inherits his position as a Pathfinder. Sara has to adjust to her new position and responsibilities: From now on she will have to make the decisions establishing the future of humanity in Andromeda Galaxy.

As a Pathfinder, Ryder's main goal is to explore the planets of a new galaxy and determine their potential as possible future homes for humanity. Being the first human being to explore the planets, she faces difficult choices, such as how to exploit available resources or whether the new colony should become a scientific unit or a military base. In this way Sara is making a statement about humanity's attitude toward the Andromeda Galaxy, although the choice is usually limited to more or less aggressive exploitation, and she cannot decide to abandon attempts at colonization.

This narrative premise is surprisingly synchronized with the gameplay: by building the story on exploration and colonization, the game manages to avoid the tension between the fast-paced story of many open-world games and the thorough exploration of the space the game demands (Majkowski, 2016a). Controlling the Pathfinder, the player is constantly scanning the environment to gather scientific data and pinpoint natural resources, both serving as currency to buy "scientific advancements" in the form of more effective weaponry. The other common activity is to fight numerous dangers, from aggressive animal life to hostile aliens, and to discover the ways leading to further areas to explore. The last major activity is to have prolonged colloquies with various NPCs, both accompanying the Pathfinder in her quest and met during the exploration. In this way the game distinguishes three categories of objects: the natural world, to be explored, described and subsequently exploited, and hostile natives and benign natives, highlighting the ability to have a proper conversation as the basic way to distinguish between these two. Not only does this division follow a clear imperialistic logic of manners being the measure for humanity (Anderson, 2016; Bhabha, 2012; see also Majkowski, 2018), it also introduces the tight connection between the adventurous quest and voyage of discovery, characteristic of the lost world romance. Ryder is put in the same position as Allan Quatermain, who claims in the faux introduction to King Solomon's Mines: "I discovered eight varieties of antelope, with which I was previously totally unacquainted, and many new species of plants, for the most part of the bulbous tribe" (Haggard, 1907, p. 6).

After her father's death, Sara inherits a god-like AI technology called SAM, supporting her in these tasks. Not only does it help her to scan the environment and learn about her surroundings, but it also gives her access to the technology of a mysterious, long-lost and highly advanced precursor race known as the Remnants. This nearly miraculous technology is unavailable to anybody else, including native scholars. Even Moshae Sjefa, a native researcher who has devoted her life to studying Remnant technology, cannot measure the information easily obtained by SAM. With SAM's technological AI support, Sara quickly gets access to power far beyond reach of the Angaras and Ketts (see below). She is able to activate and command ancient terraforming structures considered to be mere strange ruins by both local races. This way she, and she alone, can control the climate of entire planets, making them more habitable. She is also the only one capable of deciphering the map leading to Andromeda's hidden treasure.

Not only is the technological advantage of the European explorer a common trope in the lost world romance, but also the trope of heredity, which is quite directly repeated here. And as in Victorian prose, inheritance is understood both literally and figuratively. First, Ryder inherits the key to the mystery from her adventurous forefathers in a double form: an artifact and the ability to decipher its meaning thanks to her to intellectual and scientific superiority. In this way she is similar to the protagonists of Haggard's *She*, decoding the mysterious Sherd of Amenartas inherited by Leo Vincey. Equally important, however, is the figurative inheritance: by commanding Remnant's technology (on both the narrative and gameplay levels), Ryder proves to be the only worthy successor to the ancient, superior race the inferior locals cannot aspire to. This mirrors the racial anxiety of Victorian romance, highlighting the whiteness of advanced African or American fictitious civilizations and in this way presenting the British Empire as a rightful ruler over colored people unworthy of the imperial heritage (Hanson, 2002).

To further justify the legitimacy of the inheritance of the Remnants, the game presents the command Ryder holds over the ancient technology as an easy solution to the major problems that had been plaguing the native races for centuries. Most grand quests on alien planets culminate with the player turning on terraforming devices and restoring the global ecological balance. As Gerald Farca claims, *Mass Effect: Andromeda* fits into the new trend of presenting critical utopias, which outlines the gameworld as "promising but flawed" and – regardless of whether the future will be better or worse – resting upon actions taken by the protagonist, who must negotiate with other parties to reach an agreement (Farca, 2019). Indeed, Ryder is the one who can resolve all conflicts, eliminate the dangerous race which cannot be reasoned with, and bring about a utopian age of peace and cooperation to the Andromeda Galaxy. Again, however, it is possible through replacing the chaotic and barbaric leaders of the local population with Ryder's enlightened companions, the equivalent of installing a European's manservant as the King of Kukuanaland in *King Solomon's Mines*.

THE DISCOVERER'S FANTASY: EXOTIC PLANETS OF ANDROMEDA

One of the main missions of *Mass Effect: Andromeda* is to find a planet for the human race to colonize. This is why Sara Ryder inherits the title of Pathfinder – she is responsible for mapping and exploring the unknown planets and determining their settlement potential. This search for a new home is presented as a part of the continuum of human history, the result of our noble thirst for exploration. As Alec Ryder, the father of the protagonist, states at the beginning of the game: "This path began a long time ago. A course paved through human history that took us across continents, oceans, and ultimately... to the stars". Moreover, motivating his team with a speech in the game introduction, he claims:

> I chose each of you for the Pathfinder team, not just because you're talented and passionate. But because you're dreamers, like me. We dream of exploring the unknown, of finding the edge of the map – and then discovering what lies beyond. When people look back on this – and they

> will – they'll remember we didn't give up. We kept dreaming that our first, few faltering steps in Andromeda were the beginning of everything they know. We only get one chance to be first. So let's go make history.

This speech frames conquering a galaxy already inhabited by other sentient races in terms of passion, dreams and historical imperative. It simply does not matter that all those planets are already settled by Angaras or Ketts: they still need to be discovered and tamed with technology inherited from the Remnants, the original owners of the galaxy. It is utterly unavailable to the other races, who are oblivious to their planet's hidden potential and therefore unfitting to be considered humanity's equals.

Even though the game makes feeble attempts at worldbuilding while presenting alien planets, it is limited to flying rock formations and giant glowing mushrooms on Eos, the first planet to be identified as a potential human colony. Other worlds Ryder explores bear a striking resemblance to areas surveyed by British 19th-century explorers and popularized as a setting of the lost world romance: there are two planets covered with sandy deserts resembling the Sahara, a humid jungle dubbed "a garden world" similar to the tropical rainforests of Africa and America, an uninviting frozen wasteland corresponding to polar regions, and twisted passages and canyons similar to northern Persia and Afghanistan.

Although the planets are already inhabited, they still need to be studied and mapped by the protagonist[4]. Not only does the local population lack the knowledge and technology to exploit raw materials (which makes them useless for the natives and therefore free to take for the human colonizers), but they also have trouble exploring the surfaces of the planets and making them habitable, as they are plagued by ecological disasters and dangerous Remnant technology only the Pathfinder can tame. During her stay on the planet's surfaces, Ryder not only probes the surroundings to learn more about the new world and how to live there, but she also establishes scientific and military units on the surfaces of the planets and, most importantly, uses the AI to exploit the ruins left by the ancients for everyone's benefit. The mechanism Michael Fuchs, Vanessa Erat and Stefan Rabitsch analyze in regard to the original *Mass Effect* trilogy is multiplied here and made the basic task of the protagonist: by making the "unknown both known and knowable" the player character "engage[s] in imperial acts of taking possession (e.g., mapping and naming), and/or establish[es] (or help[s] establish) new nodes of imperial control (e.g., camps, trading posts, and garrisons)" (Fuchs et al., 2018, p. 1482).

THE MISSIONARY'S FANTASY: THE LOST RACES OF ANDROMEDA

Andromeda Galaxy is inhabited by three races: the Remnants, Ketts and Angaras. The Remnants are a synthetic race of animal-like machines with impressive ancient structures filled with powerful technology scattered throughout the galaxy. As their name suggests, they were abandoned a long time ago by their ancient creators. Because no one can control

[4] Due to space constraints the relationship between in-game cartography and imperial ideology is not explored here: see Majkowski (2016a, 2016b) for further discussion.

this mysterious technology, it is hostile toward every other life form and prevents local races from taking full possession of any planet. The species of machine-like beings is described as mysterious, in possession of great power and animated by incomprehensibly advanced technology the evil Ketts have been trying to understand and monopolize for years – yet with no results. It is also common knowledge that whoever subdues the Remnants and possess their powers will dominate the Andromeda Galaxy as a worthy successor of an ancient legacy – an equivalent of legends and prophecies of a lost heir, commonly exploited in Victorian lost world romances, from *King Solomon's Mine* to *The Devil-Tree of El Dorado*. There is no doubt that the protagonist of the game, the human race's representative, is the one to tame it thanks to technological advantage, as analyzed above. Even though the Remnants are presented as extremely potent and completely mysterious within the game narrative, with the gameplay neither is true: they pose a mild threat at worst and are easy to defeat, and their presence quickly leads into a series of discoveries, robbing the Remnants of any mystery.

Moreover, as they are governed by the game engine, there is no difference on the technological level: the hostile remnant NPCs are a product of the technology rendering every other object in the game. This is of course to be expected, although the dissonance between the narrative premise and the technological reality highlights the fundamental difficulty of introducing anything "alien" to the digital game: Everything that appears onscreen has to be a part of the common system, replicating the systemic logic of the Enlightenment that provided intellectual and moral justification for the rise of colonial empires in 18th Century (Mignolo, 2003; Pratt, 1992). Again, it is an unintended product of technological limitations, but it neatly highlights the way open-world games are doomed to reinforce imperial logic.

The second race, the Ketts, are the main enemies encountered by the player on various planets, and rival colonizers. Just like humans, they are not native inhabitants of Andromeda – they invaded the galaxy years ago and are at war with other races, trying to take control over them and the Remnants' technology. However, what makes the Ketts different from the benevolent human colonizers is the inherent violence of their culture, the fanatical devotion to their leader called Archon, and their religious rituals. As the race is unable to breed, they reproduce through exaltation, an artificial process treated as a sacred ritual which only the "chosen" members of other races can partake in. They capture and transform other species (mainly Angaras) to enlarge their own army. The difference serves as a justification of humanity's colonial project, depicted as peaceful and undertaken in concordance with the natives, as opposed to forceful unification offered by the Ketts. This way the game introduces another important aspect of lost world romance ideology, inherited from Haggard: the criticism of direct colonial rule and support for curated native self-government (Hanson, 2002; Katz, 2008; Roszczynialska, 2001). Moreover, their religious fanaticism allows the Ketts to fit neatly into another trope of lost world romance: evil and tyrannical priests, often in possession of magic, that have to be deposed along with their superstitions by European explorers in order to introduce the benevolent light of civilization to the child-like natives (Rieder, 2008).

Finally, there are the Angara people: the pleasant-looking race least hostile to the humans. They display multiple qualities of the "noble savage" trope: a heightened sense of honor, a close relationship with nature, and a deeply passionate disposition, as they value emotion over reason. They are also in a rather difficult position, being simultaneously torn by the

civil war and exposed to endless assaults of the Ketts. In this way their portrayal combines major traits of Victorian romance lost races, from their unusual nobility (Hanson, 2002) to the fact they are simultaneously engaged in conflict with their own rebellious faction and evil priests, both common in the lost world romance (Rieder, 2008). Moreover, the Angara are a people in clear need of the salvation to be delivered by the Pathfinder, a race oblivious to its own history and unable to take care of its own affairs. From the moment the humans arrive at Andromeda Galaxy, the Angaras are on the losing side of the conflict, with the better part of them captured by the Kett army, with Moshae Sjefa, the matriarch scientist studying Remnant technology, among the prisoners.

Every race found in *Mass Effect: Andromeda* requires interference from the human Pathfinder. The Ketts pose a threat to the entire galaxy, and with the power of ancient technology they could become even more dangerous, so Ryder has to destroy them. The dangerous technology of the Remnants, which makes several planets inhabitable and can destroy entire civilizations in the wrong hands, must be subdued to the will of Ryder. And finally, the Angaras are awaiting the savior who will help them out from under the Ketts' dominance and discover their own past. Ryder is that savior.

Curiously, the title of Pathfinder helps Sara Ryder to fit in this demanding position and almost instantly gain the trust of some of the Angaras. Whenever and wherever she appears, new tasks emerge before her, provided by the helpless natives and hopelessly lost colonizers. The protagonist is entrusted to examine the wreck of an Angara spaceship (even if she is still an outsider in their community) as if nobody could do it prior to her arrival. Sara is the one to solve the mystery of the first murder on Nexus Station, the center of the colonizing effort, to suppress a rising riot, and to free numerous Angaras from the Ketts' dungeons. All those actions increase the pool of Andromeda Viability Points, representing Pathfinder's success in making the galaxy livable and increasing the trust of colonizers and Angaras alike. This way the narrative of anti-conquest is introduced: The selfless purity of her actions, not violent conquest, establishes Ryder as the moral and political leader. Therefore, even though the result is quite similar to what the Ketts are trying to accomplish, as the galaxy is converted to Ryder's moral standards and cultural values this outcome is justified by its noble means.

THE ANTHROPOLOGIST'S FANTASY: THE HIDDEN TREASURE OF ANDROMEDA

Following the tropes of Victorian lost world fiction, *Mass Effect: Andromeda* builds its main plot around a quest for hidden treasure. Even though Meridian, the object of everyone's desire, is not introduced at the beginning of the game but later on, the mysterious map introduced early already suggests finding the treasure will simultaneously fulfill the main goal of the protagonist: Humanity will find a new and secure home for the human race and tame the advanced technology. Ryder's personal gain is thus equated with the benefit of all.

The treasure hidden in Andromeda Galaxy is the heart of the Remnant civilization and the most important element of the legacy of the ancients. Meridian is a planet-like construct, connecting each piece of Remnant technology and storing forgotten data about the galaxy. It

is not only strongly protected by defense weapons and special layers covering the sphere, but it also provides ideal living conditions for human colonies and the tools necessary to complete the inhabitation of other planets. The Meridian's real nature is mysterious and impossible to explain with knowledge available to other species – it could be very well considered a magical artifact. One thing, however, is certain: Whoever is the first to find Meridian and master its power will gain secret knowledge and possess advanced technology enabling dominance of the Andromeda Galaxy.

But finding the hidden treasure is not an easy task. As already mentioned, Meridian's location is marked on a ciphered map, which can only be decoded by the same ancient technology. As its rightful owners and creators have disappeared, the treasure is free to be taken by whoever is able to read the map, so Sara Ryder, luckily in the possession of AI technology, can be considered the rightful owner of the treasure and the successor of the ancients. Before arriving at Meridian, though, she has to prove her good intentions and quality of character through a series of tasks, always culminating with activating Remnant terraforming technology and making a planet a site of cohabitation for native Angara and human colonists.

The journey in search of Meridian is therefore based on two important imperial tropes. The first is anti-conquest (Pratt, 1992): The Pathfinder suffers numerous hardships and is wittingly exposed to various dangers to selflessly help people in need, which convinces them to take a favorable stance towards cohabitation in the process, that is, converting them to Ryder's value system by setting an example. Second, the journey itself combines moving in space with swimming against the current of time (see Hanson, 2002; Rieder, 2008), speaking metaphorically, as there is no actual time travel involved. On her numerous quests the protagonist learns about the immediate and distant past of the Andromeda Galaxy as she uncovers secrets unknown even to the native populations. This culminates on the Meridian itself, with Ryder discovering the secret to sentient life: it turns out the Angaras were artificially manufactured by mysterious precursors. This, in turn, removes the last doubt about Ryder taking over the Remnants' technology, as the Angaras are not the descendants of the long-forgotten race, but rather their servants.

As the mysterious technology provides an answer to every problem that Ryder meets on her way during her journey through the galaxy, the Pathfinder's spatiotemporal travel culminates at the cradle of time itself: arriving at Meridian, Ryder simultaneously resolves the past, the present and the future. The artificial planet becomes the future home for the human race, it allows the quick defeat of the Ketts' fleet, brings an end to the long-lasting war, and provides all the answers to the mysteries of the distant past, save for the identity of Meridian's extinct creators, very conveniently left out. With the ultimate treasure of Mass Effect: Andromeda in the possession of a noble human Pathfinder rather than the murderous Kett leader, here dawns the imperial promise of peace and prosperity, instead of the endless war and suffering, as safeguarded by the human race.

Mass Effect: Andromeda, however, allows the player to revisit their own past in a more direct way: As the long-awaited sequel to the beloved game series, it offers an opportunity to revisit the *Mass Effect* universe, offering two important developments over the original trilogy and thus highlighting the passage of time. The first is technical: with a more sophisticated game engine, the game presents better visuals, a refined gameplay experience and a new mode

of experiencing the game space, as the open world replaces the forced paths of the previous installments. The game is clearly a product of more advanced technology, a testament to the progress gaming devices have made over ten years.

On the narrative level, the most significant progress from the original trilogy is humanity's position within the fictional universe. Humans are no longer the least advanced upstarts in the galaxy of alien empires. This time, they possess the ultimate technological edge and the moral qualities to use it. It is the Angaras who occupy the place humanity has in the original trilogy: uncertain of their own future, exhausted by a prolonged war with a technologically superior enemy and only recently learning how to coexist with other sentient races. Humanity itself is more akin to Asari in the original trilogy: advanced, benevolent and in possession of technology so advanced it is almost magical. In this way, the Pathfinder meeting the Angaras revisits the past of humanity as it was rendered in the previous game.

CONCLUSION

Mass Effect: Andromeda was met with a mixed reception from players and critics alike (see Metacritic – ME: Andromeda (PC) reviews, 2020). While praising the combat system, most critics point out the emptiness of the open world and the simplistic story[5], very different from the complex and ethically loaded tale of the original trilogy, with several reviews highlighting the troublesome colonial premise of the game. It is our claim this sense of naive simplicity stems from the way the game follows the genre rules of the lost world romance. In a failed attempt to distinguish itself from the predecessor and offer a more optimistic alternative to complex problems troubling the Milky Way – a fresh start for the survivors of Ripper-caused genocide – it offers yet another journey against the currents of time, towards the half-forgotten and rightfully criticized roots of science-fiction. It is not our place to determine whether this turn toward imperial ideology of the lost race romance is a cynical attempt to exploit the highly politicized climate of the contemporary gamer community, fighting to preserve male privilege (Nieborg and Foxman, 2018), or just an unfortunate byproduct of ill-advised inspiration, amplified by the general tendency of open-world games to rely on tropes of discovery control, easily falling into the imperial imaginary.

Either way, it is remarkable that the game narrative, as it closely follows the rules of the lost world romance genre, does not cause ideological friction between the gameplay and the story Fuchs, Erat and Rabitch (2018) exposed in the *Mass Effect* trilogy, where an attempt to take a stance critical toward imperial ideology was nulled by the gameplay convention. This time the narrative fits the gameplay like a glove: the main plot feels organic, and the conclusion of the central quest is hardly forced. Ryder is fighting for humanity's better future armed with advanced technology and sense of moral superiority, only to reach the desired outcome in the end.

[5] We are leaving out the criticisms regarding the technical side of the game. Even though this is extremely valid in terms of the neo-imperial exploitation of game development workers, as documented by Schreier (2017), it is outside the scope of this paper.

By combining spatial practices already analyzed as colonial legacy (Lammes, 2010; Magnet, 2006) with lost world tropes, *Mass Effect: Andromeda* not only goes to great lengths to justify its own colonial stance, it also serves as a prime example of the direct and indirect relation between open-world digital games and imperial ideology, transmitted through adventure novels (Daly, 2007; Katz, 2010; Said, 1994), science fiction (Suvin, 1983; Rieder, 2008) and visual media (Frelik, 2017) and shaping the way digital games reflect upon the relation between the modern rational subject and the world in terms of mastery and power. This is being met with growing resistance, however, as the unenthusiastic critical reception of the game clearly shows: Game journalism is beginning to cast a more critical eye on the colonial overtones of open-world games[6]. It is also a highly polarizing matter, as it widens the distance between game critics highlighting problematic issues within game culture and gamers focusing on the technology. As the division is frequently painted as gendered one (see Mortensen, 2018; Nieborg and Foxglove, 2018), there is another issue to be raised. Lost race romance served as a didactic tool to introduce imperial masculine values to a generation of British boys (Hanson, 2002; Mathison, 2008). By revitalizing its tropes, games such as *Mass Effect: Andromeda* reinforce the idea of digital games being a pastime for men training to be discoverers and conquerors.

The rarely-experienced concordance between narrative and gameplay allows for a conclusion: by shamelessly following the ideology of British imperial prose, *Mass Effect: Andromeda* unwittingly exposes a similar ideology behind gameplay conventions. With other games of this type dominating the mass market it is therefore possible to claim that regarding gameplay conventions, contemporary mass market gaming has not progressed far from the Victorian boy's bedroom.

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[6] Other examples for this tendency can be found in the reception of Shadow of the Tomb Raider (2018) or Cyberpunk 2077 (2020).

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GAMES IN FRAMES: BETWEEN COMICS AND VIDEOGAMES

The last few years have witnessed a growing interest in both comic book and video game research. As new means of expression, a form of visual communication, and as cultural texts, these media are increasingly converging. This text looks at three types of overlapping areas between comics and video games: two types of games in the form of comics and the adaptation of a comic book to a game. The dominant research perspective in this text is comic studies. The games are analyzed in the light of the theory of comics and the definition of comics. The purpose of this analysis is to investigate tropes in these games at the stylistic and structural levels, and to identify semantic differences between a comic book and a game.

Keywords: comics, comic books, comic studies, comics and video games, *Florence*, *Liberated*

INTRODUCTION

Interest in comic book studies and video game studies has been growing in Poland for the past two decades. In terms of forms of expression and visual communication, as well as cultural texts, these media have become increasingly intertwined. Not only does it create an interesting entertainment phenomenon, but it also generates new fields of study and academic analysis.

Both comics and video games belong to a class of hybrid and multimodal media[1]. However, there are ongoing academic disputes over their hybrid nature (Backe, 2020; Goodbrey, 2014). Moreover, the two media are embedded in the universe of popular and visual-verbal culture (in comics, the verbal aspect is much more pronounced, while in video games *verbum* is often an equally important element). Because games and comics are immersed in popular culture, it is natural for them to interact: games tend to be based on comics, and (in the vast majority)

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[1] Particularly on the level of material – comics are visual-verbal (static) media, videogames combine audible with visual-verbal (dynamic) elements.

comics tend to be based on games. However, as noted by Rauscher, Stein and Thon (2020, p. 2), research interest in the relationship between comics and video games is still residual. Even though games first came to be based on comics in the 1970s, research on this subject is still relatively rare.[2]

This is especially evident in relevant Polish academic circles, where examples of combining comics studies with game studies are scarce. This is an interesting phenomenon, as in everyday practice these fields have been interconnected since the 1990s. For years the press market in Poland has witnessed a growing number of trade magazines devoted to the combination of video games and comics.[3] The largest and oldest comic book festival is a festival of both comics and games (International Festival of Comics and Games in Łódź)[4]. However, the scientific journal *Homo Ludens*[5], devoted exclusively to games, has not published a single article referring to comics from (any) game studies perspective. The topic has not been discussed in either the few game studies monographs or in special issues of journals. In research into comic books the situation is similar: not a single issue of the scientific magazine *Zeszyty komiksowe* (*Comics Notebooks*)[6], which publishes comic book research in the form of thematic issues, has been devoted to the combination of comic books and games. The only two texts which have appeared in comics studies anthologies were written by Paweł Panic (2014) and Andrzej Klimczuk (2011), and no monograph on the topic can be found. Neither has this problem been widely discussed in the worldwide subject literature, especially when compared to analyses of the relationship between comics and other media. In journals of comics studies (the perspective I adopt in this paper) articles on the topic in question appear sporadically, scattered across different titles, and they mostly present only descriptive comparative analyses. In 2020 the first monograph on the subject, entitled *Comics and Videogames. From Hybrid Medialities to Transmedia Expansions* (Rauscher et al., 2020), was published in English. In addition, Daniel Goodbrey wrote his doctoral dissertation on *The Impact of Digital Mediation and Hybridisation on the Form of Comics* (Goodbrey, 2017), but it has not yet appeared in print. In this text, Goodbrey discusses numerous forms of new media digital comics. In the "Game Comics" chapter he defines game comics in a very specific and distinct way, naming and analyzing them, separating them from other comics games.[7] I mention his dissertation

[2] An Atari game based on Superman was released in 1979. In the early years of interaction between these media, it was more common for the comics to accompany the game.

[3] The magazine "Świat Gier Komputerowych" (1992–2003) published comics by the well-known Polish comics author Śledź; Robert Adler and Tobiasz Piątkowski debuted in "Magazyn Cyberniekulturalny" (1997–2001); "CD-Action" featured, *inter alia*, Marek Lenc (since 1996). These are just examples of magazines which had a significant impact on the development of game journalism in Poland.

[4] Its initial edition was held in 1991, first as the National Convention of Comics, then as the International Comics Festival (1999), and finally it was changed into the two-branch International Festival of Comics and Games (since 2009).

[5] A periodical of the Polish Association for Game Studies published since 2009 by the Faculty of Modern Languages, Adam Mickiewicz University in Poznań.

[6] Published since 2004 by the Institute of Popular Culture in Poznań, Adam Mickiewicz University in Poznań and the NOVA comics library (UAM).

[7] Goodbrey selects games such as "A Duck has an Adventure" or "Icarus Needs" and calls them "game comics" – these are particular games built of segments.

because, although his research is close to mine, I do not fully agree with his definition of game comics.[8]

I emphasize that the following study is of a preliminary nature. The dominant research perspective adopted in this article is comics studies, and games studies are treated as an additional point of reference. Nor do I analyze games from the perspective of narrative research. I focus on three different games which in distinct way correspond with the comics, and which were chosen for these features: First, all three were launched in the period immediately preceding my research, in 2018–2020[9], and thus they have the attributes of novelty and relevancy. Second, from a research perspective it was crucial for me that each of them represents a different game genre and treats the idea of comics as their basis. Therefore, a common substantial element which corresponds with the subject matter of comics studies can be found in all of the discussed games. At the same time, each of the games uses the comics source material differently, as will be presented in detail in the course of the analysis. Finally, my selection was also based on the intentions of the games' creators, who indicated themselves that their affinities to comics made their products unique.

The games I analyze in the light of comics theory and the definition of comics are:

– "Florence" (2018) created by the Australian studio Mountains and published by Annapurna Interactive. This game was released as an interactive story. The game's creator, Ken Wong, describes it as a wordless comic.[10]
– "XIII" (2003; 2020)[11] originally developed and published by Ubisoft, a remake of the 2003 game released in 2020. It should be noted that the script, music, and voice acting are the same in both versions. This game was considered a breakthrough in the history of comic book games and was particularly appreciated for its visual layer. It is a first-person shooter videogame based on a well-received graphic novel series; the game exploits the structural elements of comics.
– "Liberated" (2020), an independent action-adventure video game, developed by Polish studio Atomic Wolf and published by Walkabout Games. The game features hand-drawn interactive art in the style of noir comic books, with the intention of making the player feel as if they were inside an actual graphic novel. The creators deem it "the world's first truly playable graphic novel" (Lane, 2020).

[8] Goodbrey writes: "game comics have been identified as a format of comic that exhibits some of the key characteristics of a game and uses some of the key characteristics of the form of comics in its gameplay." Goodbrey focuses on the mechanics of their gameplay and the use of space within the two forms (Goodbrey, 2017, p. 127). I do not define "game comics" as a genre, what I do is to study the relation between comic books and games in three different types of games. In the context of the following paper it is worth referring to the above-mentioned chapter because Goodbrey analyses another genre, different from those I have chosen.

[9] The game "XIII" is a remake of the game launched in 2003. According to critics, it is one of the most important comics games. For the purposes of this paper I comparatively analyze both versions.

[10] Ken Wong describes "Florence" as a non-violent comic about love (https://www.theverge.com/2017/10/24/16533918/florence-iphone-game-announce-ken-wong-interview).

[11] The new version of "XIII" received very unflattering reviews (32–39 metascore on Metacritic – www.metacritic.com) while the original 2003 version has a generally favourable 73 metascore. There was also a game called "XIII: Lost Identity" released in 2011, and it was created as a game of the HOPA (hidden object puzzle adventure) genre.

All three games are considered by their creators to be groundbreaking, combining the two media in question and deepening the experience of the presence of comics in the game.

This paper presents preliminary research on the comics formula in games. The analysis takes a closer look at the overlapping fields of video games and comics, and its purpose is to examine the games in terms of tropes at the stylistic and structural levels, and to identify semantic differences between the comics and the games. First of all, I would like to examine the existence and function of the graphic novel elements (especially the structural ones) visible in games. Because the games are analyzed through the prism of comics, the comics features are treated as the most important. The main focus is put on the search for structural elements of comics in the game and the means of their employment. Another important aspect is the turn to the visual and verbal layer. The above directions indicate the analytical key of the paper.

BETWEEN DEFINITIONS

Before proceeding to a more elaborate analysis, a few words about definitions of comics are in order. According to Scott McCloud, comics are "juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer" (McCloud, 1993, p. 9). It should be noted that in McCloud's definition comic books are characterized by static images placed side by side, but they are also included in the category of art, as they are intended to evoke an aesthetic reaction. From another viewpoint, graphic novels are defined as a sequential art (Eisner, 1985), being primarily the language of stories (Eisner, 1996). Different semiotic codes are mixed into comic books (Kress, 2001). We can also consider the graphic novel as an "iconotext" (Szyłak, 2014), understood as a combination of words and images in a new entity.

I treat comics as a graphic narrative art form in a visual-verbal discipline. Comics are based on a systemic and structural construction (with different levels of complexity); they use a frame (also called a panel), which is the smallest meaningful entity, and a page. The structure of comics is formed by the layout and the mutual relations between elements such as page, frame, and inter-frame spaces (gutters), which all contribute to the work as a whole (Sęk-Iwanek, 2018). Comics (just like video games) constitute an art which is constantly evolving and, like other artistic disciplines, constantly applying new solutions and inspirations, including those associated with new media.

In existing comparative studies on comics and games the following research categories are utilized: space as time, juxtaposition of images, closure between images, spatial networks, reader control of pacing, tablodic images, and word and image blending (Goodbrey, 2014). The area of my primary interest consists of two main axes of communication around which the games in question are organized: the axis of iconic communication, and the axis of verbal communication. However, one cannot overlook the extra-comic elements present in games, such as the gameplay arrangement and the audio layer.

Games based on dexterity-dependent tasks, action games, and shooters do not relate fully to the poetics of comics, while puzzles and riddles are thought to be consistent with the nature of comics (Rauscher et al., 2020). One can thus assume that a user can find the "comic-bookiness" of a game in its story and fictional narrative. At the same time "[...] the

word 'interactive'' is the key concept that sets games apart from other forms of entertainment" (Newman and Simons, 2004, p. 35). The link with the user present in games is discussed in the literature in other contexts as well. Montfort writes that the narrative of a game depends on the gamer: narrative begins with interaction (2005, pp. 23–24).[12] The role of the reader's interaction with comics is highlighted by many researchers, from Scott McCloud (1993) (who used the term "closure") and Will Eisner (1985; 1996) (who underlined "context"), through Thierry Groensteen (2007) ("general arthology") and Benoit Peeters (1991) (*four types of relationships on the narrative-composition axis*), to Jerzy Szyłak (1999; 2000; 2014) (*evolutions of the concept*), Wojciech Birek (2014) ("sylvic forms"), Michał Wróblewski (2016), and Paweł Gąsowski (2016) (*cognitive approach*).

Definitions of the video game often refer to concepts such as "interaction", "user interface", "input device", "feedback", and "platform".[13] Jesper Juul enumerates the following features of video games: (1) rules, (2) variable, quantifiable outcome, (3) value assigned to possible outcomes, (4) player effort, (5) player attached to outcome, and (6) negotiable consequences (Juul, 2005, p. 36). Jesse Schell defines a game as "a problem-solving activity, approached with a playful attitude" (Schell, 2008, p. 37). Perhaps the simplest definition of video games was provided by Nicolas Esposito: "A videogame is a game which we play thanks to an audiovisual apparatus and which can be based on a story" (Esposito, 2005). For the purposes of this study I have adopted Esposito's perspective as the most capacious.

In this regard it is also worth considering the seminal definition of a play proposed by Huizinga (1938) in his theory of games and play. Moreover, Niklas Schrape refers to Katie Salen and Eric Zimmerman who describe the creation of meaningful play and the ability to put the game in broad contexts as the most important element of the game. Schrape treats the game as a system and sees the players' activities as essential for the game's entirety. He stresses the interpretative context of games, although he also notes that, "It is important to point out that this conception of meaning is not identical with meaning as used in literary interpretations" (Schrape, 2008, p. 112). He emphasizes a whole set of possibilities of connotations.

In this paper the analysis of games is focused on comic books, their structure, compositional elements, and the verbal layer. The definitions I employ very broadly define both comics and games:

- a comic as a graphic narrative visual-verbal art form (text),
- a videogame as a game which we play thanks to an audiovisual apparatus and which can be based on a story.

In order to examine the comics formula present in the selected games, I pay particular attention to structural, visual and verbal elements. At the same time, I treat Juul's features of videogames as reference points when I ask whether or not the games lose any of their basic functions or elements.

[12] It should be noted that narrative theory in games is widely discussed in the literature on the subject. Game researchers particularly praise the theories developed by Janet Murray and Espen Aarseth, among other game and folk researchers. In view of this text, however, it will be more important to study components of the comic book conducted by the comics theorists mentioned in my paper.

[13] Those concepts are present both in the popular and academic understanding of games. It is enough to consult the Wikipedia term "video games" to see them employed.

"FLORENCE" – A COMIC BOOK RESEMBLING A GAME

The first game to be analyzed is the widely acclaimed interactive story and videogame "Florence" (2018), which can be accessed from mobile devices, Nintendo Switch and PC (Win and macOS). On April 4th 2019 "Florence" won the BAFTA Game Award for Mobile Game. This is noteworthy evidence of the game's popular and critical success.

"Florence" resembles an interactive graphic novel with elements of a game. It is realized in the convention of a comic, but one within the genre of the novel of manners. The plot revolves around the story of a young woman, Florence Yeoh, who matures to fulfill her social roles. The protagonist is in the process of an internal change as she struggles to deal with her past while reconstructing her own identity. In the game-comic she meets a man, Krish Hemrajanich. That meeting is necessary to strengthen Florence's internal need for change. The game is centered around the protagonist's choices along her path in life. Florence is an office worker who – following her mothers' advice – deals with digits and numbers, although in fact she would rather become an artist.

The creators directly indicate that "Drawing inspiration from 'slice of life' graphic novels and webcomics, Florence is intimate, raw and personal."[14] The plot follows a classic novel structure, first depicting Florence's sad days, and then a change which brings a life filled with another person, love and passion. Subsequently, after a year, we witness the protagonist's crisis and breakdown. What remains is the change which occurred in the main character.

The game story is divided into chapters and subchapters which present Florence on her path of change. Due to its structure, the game main menu resembles a table of contents – therefore, even at this basic level, a reference to the comic book can be observed (it must be noted that videogames often exploit this feature). From an aesthetics standpoint the game is rendered in a convention of comic-book drawings. All structural elements indicative of a comic book are present in it: an entire page, the frame, the inter-frame gaps (gutters), and speech balloons. The story is told in a form of sequential frames. The technique used in the game employs not only static drawings, but also dynamic motion comics. During most parts of the game, the player deals with static images which only mimic movement (for example, by objects moving in relation to one another – motion comics). The game elements are only minimally interactive, like a map which when touched shows pictures from a Polaroid camera (an interesting pop culture trope in itself); the player must then shake the photo in order to develop it and pin it to the map. The order in which specific tasks are completed is irrelevant, as are the time the tasks take and the amount of energy the pictures require to be moved or "developed".

There are a few mini-games (or tasks) implemented in "Florence", such as puzzles in speech balloons, "scratch cards" in sketches, and colorful collages. Sometimes the user has to tap something. The only really creative mini-game is the collage, as the other activities are very simple. The tasks concerning the sketches do not have to be performed in a very precise manner, which indicates that the gameplay is not conclusive, and the main focus is on the narrative. The most demanding mini-games are the puzzles in the speech balloons. Some mini-games contain interesting references to new media such as Instagram (although

[14] Retrieved from: https://annapurnainteractive.com/games/florence [21.05.2021].

no company names are explicitly used), online shops, the "like" function, and sales diagrams. The game sometimes requires no action on the part of the player. During the "Let Go" chapter the player must not touch the screen and has to wait until the ghost of the ex-boyfriend remains behind and finally disappears.

In terms of construction, the game is more similar to a comic book (or even a picture book) than to a videogame. It uses static or semi-static images that are shown on the screen like frames on a panel. No typical game dynamics or gameplay elements are present. "Florence" has a table of contents accessible from the menu where the content is divided into acts and chapters, each bearing its own title. This makes it more similar to a book than a graphic novel.

The game's first chapter is played automatically – it is composed of charts, and the images scroll to the right. In the second chapter the movement of panels and frames is integrated with the movement of the user's hand (scrolling up). Both of those chapters are almost monochromatic, with only a few colorful accents. One of them is Florence's box of keepsakes that transports her to specific memories from her childhood. At the age of seven, Florence Yeoh is a character living in a world of colors, where everything is vibrant.

The drawings in "Florence" stem from a strong iconization, simplicity, universality and subjectivity (McCloud, 1993, p. 46). The colors used reflect a creative, and not a realistic, palette (Czaja, 2016, p. 168).

The third chapter requires the user to turn the mobile device over and use a horizontal wide shot, to see an anonymous urban space presented in shades of grey, lacking colors. Interestingly, the photos viewed on a smartphone are colorful, so it can be assumed that Instagram life is more exciting and colorful than the actual reality of the protagonist. The colour yellow (important for its symbolic value of joy, new life, and youth) is introduced by the appearance of musical notes. Music brings Florence joy, and with it her world becomes colorful again.

In the subsequent frame the first speech balloon appears. It is a vehicle of an interesting narrative and structural element, as the balloons are composed of puzzle elements. At first, they are small and grey – symbols of shyness, they are as shy as the first sentence the future lovers utter to each other. These speech balloons then come to indicate the growing closeness between them. The closer the characters come to each other, the better they understand each other and the more the speech bubbles change. They tend to consist of fewer puzzles, as the communication between the characters becomes clearer. The relationship moves to the level of high-context communication.

Another stylistic procedure used to reflect their conversations is the shape of the puzzle elements, which change during an argument. The traditional rounded jigsaw puzzle pieces become angular and then sharp.

Many chapters open and close with the same motif, using a frame narrative structure. In general, specific places and everyday life activities are essential to the game. These things change according to the context and the mood of the situation, such as while eating (together or alone) or while brushing their teeth (as a morning routine or a shared toothbrush cup).

The characters are voiceless throughout the game, even during a heated mother-daughter fight, when we can "see" the voices but cannot recognize any of the words being spoken. It must be noted that "Florence" is, in essence, silent – the audio-narrative layer is not present. It is also devoid of any verbalized dialogue. All of the portrayed conversations are unspecified,

expressed in empty speech balloons. Emotions of the uttered words are evidenced by the shapes of the puzzles which the player uses to build balloons, and the speed of their appearance. Only telephone conversations with Florence's mother introduce a verbal layer, in the form of a mini-game. Text appears as subtitles in pictures, and this is the only manifestation of verbality in the game in the field of active gameplay.

The game is based on the story, images, and music. The game's moody instrumental soundtrack is another crucial element of its construction. Most of the reviews highlight the soundtrack's quality, approving of its significant role in both the narrative and user engagement.

In comic books, the reader's eye movement is determined by the author. There must be a logical and structural order which leads the receiver from frame to frame in the course of the story. This is the so-called choice of flow constructed by a cartoonist. The reader is also free to choose a different way of exploring the work; for example, by first looking at the entire page, all frames at once, and only then focusing on details. The player of a game, however, does not have the opportunity to choose the order of frames, or to look at the entire chart at any time. The frames and charts progress one after the other, and the user has no choice in viewing their order of appearance.

There is no possibility of losing the game, and the player is not encouraged by any results, points or statistics. The task completion time is also irrelevant. The player's effort is minimal, the game has minimal rules, it is very intuitive, and the gameplay is simple and friendly. The end-game solution is not variable, and – as one cannot lose – the players do not pay attention to final outcomes. In spite of that, the game has the impact of a real-life experience. There is a simple, universal story behind it, which works very well in popular culture. "Florence" is a game which emotionally engages its players its story.

A game's mechanics, story, aesthetics, and technology can be described by means of Schell's definition, mentioned earlier. Schell also highlights another important feature, namely that a game can be seen as "a problem solving activity, approached with a playful attitude" (Schell, 2008, p. 37). However, problems meant to be solved are absent from "Florence", which means that a crucial gameplay element is missing here. If we look at "Florence" through Jesper Juul's approach to videogame features (Juul, 2005, p. 36), it becomes clear that the game lacks a crucial element. Player choices do not generate outcomes, and player effort is minimal. However, Juul also notes that "[...] the classic game model is no longer all there is to games" (Juul, 2005, p. 53), and this allows the existence of "borderline cases". In my opinion "Florence" is such a borderline case.

To sum up, "Florence" is a role-playing game with a deliberately minimized level of gameplay and a very high level of immersion. The assumptions of its authors, who wanted to create a "comic book without words", determines the way of transmission and the shape of aesthetic solutions. It actively employs structural elements of comics, such as pages (also splash pages), frames, gaps, and speech balloons, using them as basic components.

What warrants attention is the fact that the iconic communication axis is realized in comic-book stylistics. "Florence" is designed as a mute game and a mute story, with no discernible verbal components (except for table of contents and menu – yet they are outside the field of the game), and thus the verbal communication axis is essentially not employed. The only signifiers of speech are the wordless speech balloons.

XIII – FROM A COMIC BOOK TO A VIDEOGAME – GAMECRANISATION

The second game to be analyzed is based on "XIII" (Thirteen), a Belgian action-adventure graphic novel series by Jean Van Hamme and William Vance (drawings and scenario).[15]

The comic's titular protagonist suffers from amnesia and is seeking to discover his vague past – the story is inspired by Robert Ludlum's book "The Bourne Identity". "XIII" is a long-running comic series: It first appeared in 1984 in the weekly Franco-Belgian comics magazine "Spirou" and has been published ever since. The popularity of this title has yielded several adaptations.[16] What is most important, the storyline of the first five volumes was adapted into a videogame in 2003 to critical acclaim and commercial success, which led to another adaptation: In 2020 a remake of the *XIII* videogame was released, yet this time to a much more muted reception.

The 2020 "XIII" game prologue utilizes an embedded multimedia narrative structure (a story within a story). The game begins with a film screening, where the film is interlaced with the comics. It is worth noting that the remake here uses the scene from the original version of the game – during the "screening" the player is watching the original intro to the 2003 videogame, a clear reference to the original. A comic book (volume) appears on the screen, followed by the presentation of whole pages and frames. A shot which becomes frozen, minimized on the screen and extracted with a frame has its own tradition in film history: "Admittedly, in cinematographic terms, this style is called »split screen« or »multi-dynamic image technique«, but the grid-like composition of the images is strongly reminiscent of comic strips and one could call this sequence an »animated comic«" (Lippitz, 2019, p. 118). The introduction has a retrospective character, and the motif of memories often recurs throughout the game. Most of the protagonist's memories are presented in black and white frames but are colorful in some cases. Because of that, the stylistics is not explicitly legible to the player/viewer. An onomatopoeic "CLICK" occurs at the beginning and the end, and thus forms the first frame of the narrative structure.

Subsequent chapters begin with panels which are divided into frames and labelled with titles. Animated and moving scenes appear, where the screen is divided into rapidly changing frames. The inter-frame spaces are black, and transparent in terms of meaning.

In the course of the game both thoughts and conversations can be heard, because thoughts are shown in speech balloons and voiced. The balloons are rectangular in shape, and some have direction markers. When the NPCs are killed by the protagonist's bullets, they utter a sound indicated by onomatopoeia typical of comic books. Some of the onomatopoeic words used in the game are: the "arrrrr" last gasp, "boom" for an explosion , the "crack" of breaking glass,

[15] There are two terms relating to the adaptations of film, literary, and comic works to the videogame format in the Polish language. The first one, *gradaptacja* (game-adaptation), is constructed by combining the words "game" and "adaptation". The second one, *egranizacja* (game-screening), is a playful way of using the words "screen version" and "game", as only one letter in the word *ekranizacja* (adaptation) is substituted and where the affix "e-" connotes virtuality. Both terms are used in the genre discourse.

[16] 2008 saw the release of the TV film "XIII: The Conspiracy" (with Val Kilmer and Stephen Dorff). A subsequent TV series was produced in 2011 entitled "XIII: The Series".

and the "click, click" of a switch. These words are in large font, directly on the background, unconfined by speech balloons. Other graphical elements signifying emotions and senses, typical of comics, are employed. Surprise is shown through "sense indicators" (they were most often used in Spider-Man comics to exhibit the spider sense), often rendered as multiple lines radiating from the protagonists head.

The game's story is based on a comic book; it has specified goals and is presented in frames. The protagonist, the eponymous number XIII, awakens not remembering anything and finds himself entangled in intrigue. The game concentrates on the gradual exposure of the protagonist's identity and is based on moving to subsequent levels. Even though the narrative is not as deep as in the graphic novel, the game's story is legible and interesting. The player is focused on a task and a path leading to its completion. The gameplay structure is linear, and the player's choices do not impact the events. The game mechanics are not complicated: "XIII" is a first-person shooter game with elements of stealth and action. The player can change the dynamics of the gameplay, and while the game is agile it allows for a broad exploration of space.

Sometimes during the play comic-styled frames are visible, which are used to zoom on a thing or to present objects beyond our field of vision. Smaller frames appear in the corners of the screen (both static and dynamic, i.e. animated) and serve the purpose of introducing new objects into the action space, such as an incoming helicopter or running adversaries. However, this is executed inconsistently and accompanies only some situations, and the frames may seem even more random because they are not always fully linked with sound. It seems that the application of this narrative element does not stem from the logic of the game or the tradition of the game narrative. In a similar fashion, during conversations an avatar of the protagonist's interlocutor appears in a frame located in the upper portion of the screen. Despite that, the game is sub-interactive, as the communication with other characters is only residual and the story is linear. The game lacks the narrative dynamics of a comic. The graphic novel "XIII" has an extended plot and numerous dialogue sequences. The story is to some extent based on relations between characters, and it uses classic instruments and tropes: a courageous and daring agent, beautiful women, political intrigue, corporate plotting, war, passion and victory. The narrative in the game is significantly simplified and the relations with NPCs are limited to forms necessary to the development of the plot. The potential of the original story is not exploited, either on the scenario level or in the structure of the game.

The original Belgian comic book is drawn in an American style, in a realistic convention, yet both versions of the game vastly differ from their comic book archetype in terms of graphic design. The 2003 version, which was considered a technological and stylistic breakthrough at that time and garnered good reviews for its artistic style, was created using a technique called "cel-shading", a type of non-photorealistic rendering designed to make 3-D computer graphics appear flat. This technique can make an image look like a comic book drawing, sketch, or animation. Using this technique a characteristic paper-like texture can be imitated. Using a variety of methods, a designer creates black ink outlines and contour lines. This design is somewhat similar to *ligne claire*, a technique used in comics to outline the contour with a clear, black line. Hergé introduced this style in "Tintin" – in comics of this type the image is completely flat; in the game shading is added to make the image more

dynamic and multi-dimensional. For a more pronounced effect, the frames appearing on the screen utilize Ben Day dots. In the refreshed 2020 version, however, the images lose their comic-like nature, and the graphics are simplified and flattened. Despite better technological possibilities, the game creators did not attempt to apply new techniques, neither on the level of deepening the comics-like experience nor on the level of gameplay, so the critical response was much more negative than for the original. However, for the purpose of the game analysis in this study it can be concluded that the game contains six distinctive features (Juul, 2005): it is based on defined rules, the definition of the goal is understandable (quantifiable outcomes), there are values associated with each outcome, effort is needed on the part of the player, the player is invested in the outcome, and negotiable consequences are present. Many different measures were employed to aesthetically mark the game's origins in comics. Chapters begin with comics-like pages, while entering into frames (by means of closeups) moves the action to new destinations. Comics frames also introduce different perspectives and planes of viewing the same object.

The XIII videogame splendidly developed a repertoire of icons in its axis of iconic communication, which relate to the game's predecessor: comic books. Apart from the choice of image creation techniques, structural elements common to comics are also present, such as frames, pages, and even a page-turning visual effect. Numerous signifiers of emotions and onomatopoeic signs are used. The onomatopoeia relates to the verbal plane as well. It is the verbal communication axis that the speech balloons and narrative panels revolve around. Therefore, it seems that the work, while unquestionably being a videogame, bears visible characteristic features of a comic-book narrative. And while it is not a game with a thoroughly comic-book gameplay, and its "comic-bookiness" is confined to the visual and aesthetic layers, the presence of comics is introduced effectively and explicitly.

"LIBERATED" – A PLAYABLE COMIC BOOK

The last game to be discussed in this paper is the Polish game "Liberated", released in 2020. It was intended to be a truly playable comic book. To implement the idea, an original script was created, and a comics-like style was applied. At the same time, the whole thing was adapted and transformed into a videogame.

Of all the games discussed in this text, this one adopts comics material to the greatest extent. A telling measure used by its creators is a specific take on a common videogame feature – the "story mode" difficulty setting. In "Liberated" the story mode is called the "Reader" game mode.

The game is divided into four parts, presented in the form of successive issues of comic books. The first shot in the game, showing a comics cover, is followed by a shot of a turning page. This measure, consistently applied throughout the game, deepens the sense of reading activity (the player can even hear the rustle of the turning pages).

Each page presents a chart with empty frames which are gradually filled as the action develops. The frames are surrounded by a white, transparent inter-frame space. Some frames use a measure known as motion comics, used in the other two games discussed here and

stemming from online comics. Some of the frames, mostly horizontal ones, freeze the plot for longer. They are gameplay frames in which the player actually performs specific tasks and controls the character. The gameplay is conducted in the form of 2D animation with elements of side-scrolling, action-adventure gameplay. The game includes stealth, logic puzzles, and fragments of platform games. The chosen aesthetic form is a hand-drawn black and white game in the *noir* style.

The game has a rather complicated plot in which the player impersonates different characters – in subsequent parts of the game the player learns the story from different sides of the conflict. The comic tells a story set in a dystopian cyberpunk world whose government ruthlessly rules and manipulates society by means of new media, particularly social media and user data collection. The plot is built around a terrorist attack on a school in which many children were killed; the attack was the beginning of changes and of introducing a controlling computer system. In the course of the game, the player impersonates, among others, a character who accidentally finds himself in the middle of a conflict between the authorities and an anarchist resistance group. During the game we play characters of all options.

The game shows clear inspiration from comics such as "V for Vendetta" and Frank Miller's "Sin City". The creators themselves talk about wide-ranging research which included a variety of games using comics themes, but also literature, feature films and TV series.

The game is accompanied by sound – fairly neutral background music, and natural sounds like city noise, sirens, and sounds of different objects. The sound of the dialogue, in turn, depends on the language version and it can be disabled. The sound of the dialogue in English is redundant because of the verbal messages expressed in speech balloons. In the Polish language version, the lack of sound in the dialogue enhances the effect of immersion in the comics atmosphere.

In addition to narrative panels and dialogue balloons, visualized onomatopoeias are – on a mode similar to the previous games – located within the frame space without framing. The game also includes the aforementioned mini-games, simple logic puzzles. Puzzles are accompanied by a separate interface, as they are solved on the screen of a smartphone held by the character. This feature resembles one used in "Florence".

At some points, the game selection tree is expanded, and the player can choose options for the character's behaviour, such as an arrogant or polite attitude, or being in the mood for conversation or for escaping. However, these selections do not change the final solutions: regardless of the decisions the character will go to a particular place, although the length of the route may vary.

The gameplay is very close to the natural rhythm of reading comics. Most of the time we see subsequent frames in close-up, but after playing a double chart (two adjacent pages) we can usually look at the whole chart in its entirety. All the six game features enumerated by Juul can characterize this way of gaming.

At the same time, the game's creators have consistently applied all structural elements of comics – from references to serial graphic novels, through charts, frames, inter-frame spaces, speech bubbles and narrative panels, to almost static images. The adopted visual convention and the use of hand-drawn images bring the game even closer to a realistic comic in the American style. Thus, we may mark all the elements of comics on the axis of iconic

communication[17]. The second axis refers to verbal communication – in addition to speech balloons and narrative panels, there are onomatopoeia, neon signs and inscriptions on walls, billboards, and bulletin boards in the city space. Since this is a cyberpunk game, computer interfaces, AI, and all sorts of monitors are frequently used. All the verbal messages are located on the level of gaming, not in the interface or the game menu. The area of the axis of verbal communication encompasses numerous different elements.

CONCLUSIONS

The history of video games has witnessed numerous games inspired by comics. They have explored the potential of comics in various ways. "While many action adventures and platformers do indeed appear much closer to animation than to traditional comics, one can also find more than a few videogames that do not just draw on stories told by comics but also (or primarily) work to evoke the combination of words and pictures in panels and panel sequences that defines comics' mediality" (Rauscher et al., 2020, p. 2). "Comic-bookiness" in video games can be explored in many different ways, and new levels of interconnectedness in this field can be constantly unveiled.

This paper presents preliminary research on the comics formula in games. All three games were released in recent years, but due to the graphic form (3D) and the same plot in the 2020 "XIII", I also analyzed the original game from 2003.

I adopted the perspective of comics studies, and thus the research determinant in the paper stems from comics theory.

As an analytical key, I used the search for structural and material elements (visual and verbal) of the comics. The analyses of the games were organized around two main communication axes: the axis of iconic communication, and the axis of verbal communication. Although these codes are the main subject of my analysis, I tried not to omit extra-comics elements present in the games, treating determinants indicated by Juul as points of reference in this case. A brief conclusion can be found at the end of each subsection. At the same time, it can be assumed that all three games analyzed in this study can be classified as being of the "progression game structure" type. "In progression games, the player has to perform a predefined set of actions in order to complete the game" (Juul, 2002, pp. 323–324). They have a linear plot which leads to one specific outcome.

"Florence", "XIII" and "Liberated" are playable stories provided to users via an audiovisual apparatus. At the roots of these games one may find the material of comics, which determines their style and organizational measures.

The value of studying the links between comic books and games relies on the awareness of communicative relations which appear when using interactive media. Comics tools of content delivery provide communicative power which might enrich the artistic and cognitive potential of games. At the same time, characteristics of comics applied to videogames do not evoke the need to redefine the concept of the game. Games with comic book elements or

[17] Especially if 'comics' is defined broadly, embracing hypertext comics, motion pictures, and interactive comics.

features remain games. The case of "Florence" indicates a wide array of narrative, stylistic, and structural capabilities stemming from comics which can be employed by game makers. This shows that the structural or stylistic elements of comics can be used in a non-literal way, and the game does not have to copy the aesthetic formula of the comics.

The authors of "XIII" used the comic book that inspired the game in a very selective way, both in terms of the plot and the comics material. The game does not employ all the structural elements of the comics. As mentioned above, components such as speech balloons and visualized onomatopoeias are redundant in relation to the sound layer. Frames or charts introduced to the games have aesthetic and semantic meaning – they function as reminders of the original work. The use of the cel-shading technique brings the visual layer closer to the comics aesthetics, although this effect is lost in the remake, owing to the change of drawing technique. Nevertheless, "XIII" is an example of a game in which the applied comics accents are implemented on the level of gaming; they do not constitute a mere interlude between subsequent stages of the game. Given the historical context and the potential of the adopted solutions, "XIII" is the starting point for more games inspired by the structure of comics or for "gamecranisations".

The structural and semantic potential of the comics is used to the greatest extent in the game "Liberated", where the creators implement the volume, chart and frame. Moreover, they simulate a real reading of the graphic novel, accompanied by movement and gameplay. Although similar treatments had already been introduced to games,[18] it had not been done to such an extent. Moreover, in the discussed case the whole game is based on this concept. Its creators draw attention to the fluid choice of flow, to the need to slow down the rhythm in favor of comfortable reading of speech balloons. "A really big [challenge] was just getting a good ratio [...] Shoot off too far in either direction and you end up with either a visual novel or an action game that just has comic book cutscenes" (Lane, 2020).

Numerous comics-based components are gathered around both the axis of iconic communication and the axis of verbal communication in "Liberated". Atomic Wolf studio intends to develop works on the synergy of comics and videogames: "Continue exploring this direction of bringing comics over to a new medium – not just video games with bits and pieces of comic book flavor, but simulating the whole comic book experience that's then enriched with sound, motion, choices, and honest-to-god enjoyable gameplay" (Lane, 2020).

The presented study was carried out from the perspective of comics research (particularly common in Polish comics studies). However, taking into consideration the opportunities offered by game studies, the perspective of exploring the mutual influences between comics and video games seems to be extremely interesting and vast. The above issues and, I hope, also the areas identified in this text will encourage further reflections and analyses, which may lead to the development of new paths of development and expression in the media in question. I believe that the interactive potential of games can be one of the directions for the development of digital comics genres.

[18] A similar feature can be found in an episode of "What Remains of Edith Finch", the acclaimed 2017 adventure game. In the chapter "Barbara" the main character finds a comic book, and can read it, which allows the player to view one of the stories in sequential graphic format, typical of comic books.

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"IF THE DOG DIES, I QUIT": *BLAIR WITCH* AND THE PROBLEMS OF CONTEMPORARY PSYCHOLOGICAL HORROR GAMES

This paper highlights the manner in which contemporary psychological horror games rely on repetitive storylines and plot twists, resulting in predictability of new titles, and the way in which this negatively affects immersion and players' emotional investment. Through examining the game *Blair Witch* (2019), developed by the Polish studio Bloober Team, and its inclusion of an animal companion, the article demonstrates how shifting the players' affective identification from the avatar to the companion character can cause players to overlook the shortcomings of the game. At the same time, by juxtaposing *Blair Witch* with other similar digital game texts, the paper showcases how linearity and reliance on predictable tropes in a game can be masked by the effective inclusion of an interesting companion with appropriate mechanics.

Keywords: Blair Witch, contemporary psychological horror games, psychological horror games, Digital Games, companion character

INTRODUCTION

The goal of all horror fiction, no matter the medium, consists in scaring the target audience. The emotions of the audience consuming horror texts are supposed to "mirror those of the positive human characters in certain, but not all, respects" (Carroll, 1990, p. 18). Even if the audience knows all too well that monsters are not real, the terrifying creatures portrayed in the text which compel the protagonist to recoil and cry out in terror are expected to elicit responses from the audience which converge with those reactions. This feature is the most significant aspect of the horror genre (Carroll, 1990, p. 18). Digital games are a particularly good medium for the horror genre for a variety of reasons. They can offer unique mechanics and gameplay to express altered realities or supernatural forces (Rouse, 2009, p. 17) and make use of typical horror conventions, including limited and erratic information available to

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the protagonist or locations full of dangerous creatures and inexplicable phenomena (Rouse, 2009, p. 19). The interactive nature of the medium means games can offer the players an actual embodied threat (Perron, 2009, pp. 125–126), which contributes to immersion, insofar that the players' expectations are matched by what the game environment has to offer, thus creating a sensation of direct presence (Kubinski, 2014, pp. 133–134).

Psychological horror games constitute a specific subgenre which places emphasis on the emotional and psychological states of the protagonists to achieve the effect of scaring the players. The narratives of such game texts usually concern the memories, fears or anxieties of the characters, involving events and enemies which are symbolically significant. Consequently, such games rely to a greater extent on their storylines to create immersion. While earlier psychological horror games (such as the first four installments of the *Silent Hill* franchise [1998–2009], *Eternal Darkness: Sanity's Requiem* [2002], *Sanitarium* [1998], or *Amnesia: The Dark Descent* [2010]) additionally included elements of survival horror games – namely escaping monsters, limited supplies, and the threat of dying – contemporary psychological horror games show an increased tendency to employ a different strategy, settling for slightly varying versions of the same tropes, mechanics, and story development. The majority of the titles published in the last decade labeled as "psychological horror" can be described as walking simulators with elements of puzzles and item collection; they are usually based on a fully linear or predominantly linear story revolving around a character, typically male, harboring dark secrets, and confronting the symbolic manifestations of their past. The result of such consistency is the predictability of new games – the more games use the same story with only very minor differences in every subsequent iteration, the more possible is it for the target audience to become even more familiar with the most characteristic plot points, which they can learn to anticipate. This article aims at examining the game *Blair Witch* (2019) developed by the Polish studio Bloober Team – more specifically, the way in which the game uses an animal companion – with the goal of illustrating the above tendency and its repercussions.

Blair Witch is a first-person psychological horror game published in 2019. Its premise consists in a familiar story of a character (Ellis, a former police officer and war veteran) suffering from repressed trauma and PTSD, traversing a haunting mysterious location (the woods in Burkittsville), being led ever further away from tangible reality by supernatural clues and occurrences, and becoming increasingly lost and helpless. His only point of reference is his emotional support dog, Bullet, and the only way of contacting the outside world is his phone. Of these two, only Bullet is consistently reliable and helpful.

As stated above, contemporary psychological horror games display certain tendencies, and discussing *Blair Witch* as a representative thereof can shed light on the nature of those tendencies and, more importantly, their significance. What makes this particular game worth examining is that it includes an animal companion – a German shepherd – a fact which not only obscures the mediocre aspects of the overall premise of *Blair Witch,* but also makes the game stand out among other titles of the subgenre. Without the presence of the animal companion, *Blair Witch* comes across as an unremarkable adventure, since it relies on a decidedly linear, predictable narrative with only minor variations between the available endings. As a result, the game fails to make the players care about the protagonist, creating, in turn, a situation where *Blair Witch* performs serviceably as a broadly defined horror game, but not

necessarily as a psychological horror game text or even a survival horror game – seeing as it does not employ any survival horror specific mechanics such as an actual threat (which would result in taking damage), limited resources (such as batteries or, in this particular case – dog snacks), or at least proper chase sequences. In other words, it is the presence of the dog that makes *Blair Witch* not only more engaging, but also memorable as a game, if not as a story.

The game begins with Ellis, accompanied by Bullet, entering the cursed forest of Black Hills in order to join the search for Peter, a missing nine-year-old boy. Despite the fact that other search parties have already departed – and the fact that both his ex-wife Jess and his friend Sheriff Lanning advise against this endeavor considering Ellis' childhood trauma, which is related to those woods, and his PTSD stemming from his war experiences – Ellis ventures on alone in hope of finding the boy. Before long, with the help of Bullet, he comes across Peter's baseball cap, and – despite Lanning's clear objections – has Bullet follow the trail immediately, without waiting for the others. The two become briefly separated, which results in Ellis experiencing PTSD-related hallucinations, but he recovers once they are reunited, and presses on deeper into the woods. Eventually, he finds a camcorder and several videotapes which seemingly alter the reality around him, causing a certain object to materialize out of thin air and restore other objects to their former states – both of which Ellis uses to continue his search for Peter as increasingly bizarre events unfold around him.

It must be noted that *Blair Witch* is quite effective in its use of traditional horror themes and motifs. The game makes good use of a fairly commonplace setup wherein the protagonist becomes lost in an unfamiliar, dangerous forest inhabited by monstrous, apparently hostile creatures. The convention of this particular narrative, even if not very unique, is executed properly; the sound design of the wind, with rustling leaves and cracking twigs, creates an atmosphere of uneasiness and ever-present threat, while the woods are aesthetically convincing and provide suitable ambiance, not to mention a believable environment for the players to get lost in as the sun sets slowly and visibility drops. The complete isolation of the protagonist, in terms of both his immediate surroundings and his increasing removal in time and space from other human characters as the story progresses, as well as the increasingly supernatural nature of events, as reflected in the mechanics and the graphical user interface, suit the formula well.

THE CONVENTIONAL: *BLAIR WITCH* AS ELLIS'S STORY

In fact, the problematic aspects of *Blair Witch* all stem from its features as a psychological horror game. While games as a medium are conducive to horror – especially the survival horror subgenre – matters become more complicated in psychological horror texts, where a connection with the protagonist is usually not only anticipated, but also desirable for better understanding of the story and, often, of the gameplay mechanics as well.

Works of art and culture texts in general can draw the attention of the audience to specific aspects of the portrayed characters and their circumstances in order to influence of the emotions of the audience members (Eder et al., 2010, p. 55). Games are no different in this regard. Engagement, specifically affective engagement, is best understood in the context of "the perspective between characters and their audiences" (Eder et al., 2010, p. 55). However,

in the case of digital games the issue is more complicated than just "a simple matter of direct identification" (Salen and Zimmerman, 2003, p. 453); the player "relates to [the] game character through the double-consciousness of play," which allows for an "intense and emotionally immersive" relationship, but also frames the game protagonist as "a tool, a puppet, an object for the player to manipulate" (Salen and Zimmerman, 2003, p. 453).

While the player never loses sight of the instrumental aspect of the character, in certain genres – such as narrative adventure or mystery drama – an emotional investment is required for the game to generate the appropriate experience. Such games tend to draw the player's attention to what is meant to lead to involvement: the characters' body language, expressions, behavior, and interactions with other characters (Eder et al., 2010, p. 55). In contrast to older, previously mentioned psychological horror games – and some newer ones – *Blair Witch*, like many contemporary psychological horror game texts, employs the first-person perspective; this means that unlike protagonists such as James Sunderland in *Silent Hill 2*, Senua in *Hellblade: Senua's Sacrifice* (2017), or Daniel Noyer in *Song of Horror* (2020), Ellis is almost never on screen. The player cannot, therefore, see his facial expressions or read his body language, a fact which translates into an inability to discern the emotional state of the character beyond the dialogue originally included in the game. Such determination would be immensely useful in a game revolving around the character's psyche, and it would allow the players to understand their own feelings concerning the protagonist: "feeling for them," ranging from sympathy to antipathy, or "feeling with them" – namely, empathy (Eder et al., 2010, p. 55). The shortcomings of *Blair Witch* in this respect point to one of the most significant formal limitations of the currently most popular formula in contemporary psychological horror games.

Another issue in *Blair Witch* is the question of the suspension of disbelief. While it is not uncommon for horror fiction protagonists to be irresponsible, especially in cinema texts, it would seem that such a set-up is a little less commonplace in games. Usually, the characters set out to battle demons, either real or metaphorical, with a clear, if sometimes misguided, goal in mind: find a wife or a daughter, a friend, sometimes a dog. The horror genre is known for its fantastic scenarios, from the quest to meet with a long-dead wife, like in the aforementioned *Silent Hill 2*, to revisiting a now-abandoned orphanage to find clues about a missing brother (*Palmyra Orphanage*, 2019). In other scenarios, the unsuspecting protagonist might be suddenly threatened by a monster or monsters and must find a way to escape. However, *Blair Witch* combines the convention of the unexpected monster threat with the metaphorical inner journey the protagonist must undertake to face their inner darkness, resulting in quite inconsistent characterization. Ellis is introduced to the player from the start as a character with "health issues" (*Blair Witch*, 2019), and he suffers from hallucinations as early as twenty to thirty minutes into the game; he has joined the search for the missing boy despite being advised not to do so due to his PTSD, but having found the initial clues, he ventures into the woods on his own without waiting for any backup. He accepts the reality-changing videotapes after uttering only one feeble comment, and he proceeds deeper into the forest without ever questioning whether the clues he is following might be hallucinations as well. He disobeys Sheriff Lanning's instructions because he is intent on following objects

that materialize out of nowhere, and apparently sees nothing strange about explaining this thought process to Lanning:

> ELLIS:
> Ellis to base! Peter didn't run away! He was kidnapped! I found a tape! It shows the man who did it! ... [T]hose tapes, they make things appear... There's no time, Lanning! We have to find the kid. He's in serious danger! (*Blair Witch*, 2019)

At the same time, he quickly disregards all the other visions concerning his past in the war, for example, a late comrade-in-arms calling him on the radio, stating firmly "No. You're not real" (*Blair Witch*, 2019)[1]. This unquestioning acceptance of some events and objects and decisive rejection of others signals to the players that some events and items are more important to the story progression than others. As such, *Blair Witch* showcases how clumsy psychological characterization will push the suspension of disbelief to the limits even when the setup and environment strive for utmost realism. This is an issue for a psychological horror game, where narrative flaws have a more lasting emersive effect (Kubinski, 2014, pp. 133–134) on the gameplay experience than any ludic flaws related to graphics or mechanics (Kubinski, 2014, pp. 134–135). If the player does not find Ellis' story compelling, they are unlikely to perceive the whole experience as satisfying.

This is where the character of Bullet comes into play, both literally and figuratively. The dog provides the players with an alternative object of emotional engagement; as the content creator AngryJoe explains:

> The problem is, I just don't like Ellis. I'm not interested in his story. I love his fucking dog, though. The dog, Bullet, he's a good boy! ... And the game does get bonus points, because yes, you can pet [him]! (AngryJoe Show, 2019).

The point made by AngryJoe indicates the twofold effect of Bullet's presence on the way the players experience *Blair Witch* as a horror game text. On the one hand, as a sentient, friendly

[1] This situation is even more problematic since the narrative includes cut-scenes and scripted events, as well as many minor items, meant to refer specifically to Ellis' PTSD – a mental condition, which is a motif that in and of itself tends to be exploited in horror games (a phenomenon widespread to the point where it justifies the existence of Asylum Jam, a 48-hour-long game jam held between years 2013 and 2017, which aimed at challenging game developers to explore the limits of the horror genre without relying on harmful mental health stereotypes, including setting of a story in psychiatric institutions or basing the horror on the perspective of a protagonist suffering from some mental condition). Narrative-wise, this inclusion serves little to no purpose, given that Ellis is a character who had already experienced some undisclosed childhood trauma in the Black Hills forest and could not face the guilt over having shot an unarmed teenager during his time in the force. Furthermore, neither Ellis' skills nor his inventory reflect his past as a veteran with PTSD, which means that this aspect of his character has little impact on the gameplay experience itself (Lankowski et al., 2003, p. 7). He does become nervous when his emotional support dog wanders off, but apart from a couple of interactive and non-interactive cut-scenes when he initiates contact with Bullet, there is no particular mechanics to call Bullet over for the specific purpose of having him comfort Ellis. All of the above elements point to the significance of trauma while at the same time missing the emotional target, even though the player's emotional investment throughout the game depends on their investment in Ellis' personal drama.

being they can see on the screen he draws more of their attention and emotional investment than Ellis. On the other hand, the player is familiar with the convention, so Ellis' fate does not constitute much of a mystery, which means, in turn, that only Bullet is susceptible to harm, seeing as he is not only a mere companion but also an animal. As a result, it may be inferred that an avatar switch to complete the game (like, for example, in *Song of Horror*, where the player can choose to continue as Etienne if Sophie dies, or René if something happens to Erica) is highly unlikely, if not even impossible. For those reasons. the players might actually show more interest in Bullet's well-being than in Ellis' well-being, growing disconnected from Ellis as a horror protagonist. Players very rarely, if ever, speak of Ellis, but usually almost immediately react to Bullet, saying things ranging from very short, categorical assertions such as "If the dog dies, I quit" (John Wolfe, 2019b) or "If the dog dies, I riot" (8 Bites, 2019), through slightly more dramatic claims like "If you take away Bullet, I'm taking your game away from my hard drive," (8-BitRyan, 2019b) to decidedly emphatic statements: "This dog cannot die. At all cost, this dog must live" (Albert_Fn_Wesker, 2019). In fact, the players seem to care less about Ellis' emotional turmoil and stress, and more about Bullet being upset about a twig figure Ellis encounters early on in the game or his disappearing out of Ellis' sight.

THE CHARMING: BULLET'S PLACE IN *BLAIR WITCH*

Bullet is by no means the only dog in the world of digital games. Players tend to be sympathetic towards animals, especially dogs, in horror games, regardless of whether they are well developed, or only briefly introduced, such as Calliope in *Maid of Sker* (2020) or the dog in *Resident Evil 4* (2005). Bullet plays a much more significant role in *Blair Witch* than those pets; he has his own set of mechanics, complete with a user interface, and an item dedicated just to him – snacks. His appearance is customizable, allowing the player to change the color of his fur, eyes, and reflective collar, which engenders feelings of intimacy with the animal.

The player can interact with Bullet through the use of five commands – they can summon Bullet, order him to seek, stay or stay close, or – most importantly – pet Bullet or reprimand him. The command most integral to both the gameplay and story progression is "Seek," which allows the player to show various items to Bullet, prompting him to guide Ellis to the subsequent locations in the game. The players seem to appreciate such guidance in the gameworld of Blair Witch, as they often comment on the subjective feeling that they get lost without Bullet's help (GamerGirlRegina, 2019).

Bullet is a non-human character, but one that quickly inspires a feeling of familiarity. The dog is programmed with a number of realistic animations, which allow him to spontaneously sit or lie down of his own accord, roll around in the grass and weeds or dig in the ground; occasionally he even runs off into the forest, disappearing from the players' sight, which is a behavior rarely seen in animal or human companions in horror games, regardless of their function or independence – Hewie in *Haunting Ground* (2005), Ellie in *The Last of Us* (2004) or Ashley in *Resident Evil 4* might occasionally lag behind, but will not run off ahead of the protagonist or stop to sniff (in case of an animal companion) at something. Furthermore, the fine animation gives Bullet the expressive body language and face typical of real dogs,

which means that he can both show his own emotions and attitudes as well as react to the emotions (Emmerich et al., 2018, p. 146) and attitudes displayed by Ellis, embodying the qualities of a companion which offers a meaningful emotional relationship that players tend to value (Emmerich et al., 2018, p. 149). These features contribute to the players' perception of Bullet as a realistic animal with his own free will; this is particularly visible in case of letsplayers, who at times will stop speaking to their audience for long periods of time and talk exclusively to Bullet (8-Bit Ryan, 2019a, 2019b), addressing him directly:

> Let's go over here, Bullet. [...] Bullet! Bullet? Whatya barking at? Whatya barking at, boy? What is it? What is it, where are you going? What is it? Something's in there. [...] We've got to get in there. We're gonna get in there, boy, we've just got to figure out the combination (JazzyGuns, 2019).

The manner in which the letsplayer JazzyGuns repeats short, simple questions and uses words of endearment like "boy" resembles the way in which one would address a real animal. The same attitude is reflected in the players' approach to the mechanics of petting and reprimanding Bullet; although the majority of players will eagerly pet him even without a good incentive, the "Reprimand" command seems to make them positively uneasy, prompting them to either reject the possibility of being mean to Bullet altogether, or be torn as to whether or not they should scold the dog in order to prevent him from getting hurt.

Another aspect of Bullet's character that emphasizes the way in which his presence shifts the emotional reception of *Blair Witch* as a psychological horror game consists in the balance of power in the relationship between him and Ellis. In horror games, the relationship between a protagonist and a human companion usually involves both mechanics and narrative design revolving around either assistance or protection. Assisting characters, like Ellie in *The Last of Us* (2005), will aid the protagonist; an escorted character, such as Ashley in *Resident Evil 4* (2005) will usually seek shelter or simply cower in face of danger instead of assisting or attacking. In contrast, the fact that Bullet is a dog – Ellis' dog – puts the two characters in a rather distinct relationship. Ellis is responsible for Bullet insofar that since he expects Bullet to follow his commands, every action he makes Bullet take – which might potentially bring the dog to harm – is Ellis' responsibility. By making players experience the emotional burden of weighing the possible consequences of their command choices, *Blair Witch* finds another way to harness the emotional power of game texts (Isbister, 2016, p. 40). However, this still means that the players' emotional investment lies in the dog companion, and not in the protagonist of the story – for example, when Bullet disappears for the first time, following the scent of Peter's cap, the players' immediate fear is not for Ellis, but for Bullet, as they suspect that inevitably "something dreadful is going to happen to [him]" (CJUgames, 2019).

Although dogs appear as positive characters in numerous horror game texts, in the context of this paper it is worth mentioning at least one more prominent dog companion – Hewie in *Haunting Ground* (2005). Bullet and Hewie share a number of similarities: both are important for the character's emotional well-being (as can be seen in gameplay in *Blair Witch* and in Fiona's "comment" section in *Haunting Ground*) and both come with quite sophisticated mechanics allowing the player to issue commands to the animal. However, their function in the respective stories and gameplay is vastly different. Fiona runs into Hewie by accident,

and he seems to be the only creature she can trust as they both try to escape the castle they are trapped in. Meanwhile, Bullet is brought along by Ellis as his emotional support dog, and his function is supposed to be comforting Ellis.[2] And yet, if the character of Hewie were completely removed, *Haunting Ground* would still function as a game, apart from a couple of inessential puzzles. Bullet, conversely, dominates the game, both in terms of emotional impact and gameplay design, to the point whereupon his removal from *Blair Witch* the game would be reduced to a text almost identical to many other contemporary psychological horror games – a walking simulator with elements of puzzles and item collection.

THE FLAWED: *BLAIR WITCH* AS A CONTEMPORARY PSYCHOLOGICAL HORROR GAME

Blair Witch shares its premise (apart from the aforementioned differences) with a substantial number of other games labeled as psychological horror, which can be grouped together according to their specific structure. This type of game revolves around the characters facing their inner darkness and this, more often than not, comes as a revelation to the protagonists themselves and is intended to be received as such by the player as well; this effect can be achieved through the use of a character suffering from amnesia (like Alex in *Silent Hill: Homecoming*, 2008), suppressing a terrible memory (Joe in *Downfall*, 2016), suffering from some sort of mental illness (Jonathan in *Inmates*, 2017) or hallucinating (Dr McClein in *Roots of Insanity*, 2017).[3] Most players tend to associate this particular structure with the 2001 game *Silent Hill 2,* which is admittedly the best-known and most critically acclaimed game employing this structure. Ever since, many games have emulated this premise, with better results (as can be seen in *Detention* (2017), where the symbolic phantoms of Ray's guilt are not woven into the game world as much as they form it, or in *Downfall*, where the revealing of Joe's guilt depends on his acceptance of his role in his wife's death and is based on dialogue with other characters, not on some uncovered evidence), or worse (including

[2] Unlike Bullet, Hewie can perform attacks and charged attacks to assist Fiona in fights, and he needs to have his stamina and health restored periodically. Bullet, on the other hand, never engages in combat, and does not need healing (it is also worth noting that in contrast to more action-oriented games, such as *Fallout 4* (2015) featuring the dog companion Dogmeat, or *Dead to Rights* (2002), which includes a K-9 partner Shadow, there are no attack options for Bullet, or even options to make him do specific things such as carrying items – although Bullet's proper training allows him to help with the search, which is emphasized in the gameplay). Even the dog snacks seem to have minimal effect on his wellbeing. Instead, as has been mentioned, the player is encouraged to interact with Bullet through emotive actions, including petting, for which there are four different animations, including one belly rub.

[3] The difference between such games and games like *Hellblade: Senua's Sacrifice* or *Layers of Fear* (2016) is that in the latter the avatar's dark past is slowly revealed to the player, the characters themselves consciously and voluntarily undertake their journey to face their demons, for better or worse – Senua sets out to battle her darkness in order to bring her beloved back from the dead, while the Artist rummages through his house in a demented pursuit of perfection. In the former games, the characters are invariably surprised at the revelation concerning either their past actions, or the relevance of their past actions to the current events.

Devotion (2019) or *Someday You'll Return* (2020), where in both cases the protagonist is an obviously neglectful father trying to redeem himself in some otherworldly dimension after having contributed to his daughter's death).

Unfortunately, the situation in which the narrative design and the actual virtual environment are structured around a representation of the disturbed mind of a guilty protagonist instead of around the actual depicted world has become so overused that players have grown overly familiar with the applied themes and strategies; these, in turn, become incorporated into their metagame knowledge. The issue here is not so much the moral alignment of the protagonist as the manner in which the proliferation of similarly structured horror games affects the player's attitude and expectations. When they start playing *Infliction* (2018) or *The Beast Inside* (2019), in the former they immediately suspect that Gary is the one who is responsible for Sarah's death, or in the latter assume that the stranger who kills Emma in the opening scene is actually Adam. Subsequently, some players will become desensitized to the premise of a character coping with guilt or anguish after having hurt someone close to them or having killed someone (John Wolfe, 2019), and perceive the games based on that premise as repetitive "we killed them, as it turns out!' storylines" (John Wolfe, 2018). Others might still be entertained by yet another variation of the same story, but nevertheless notice the predictable pattern, immediately sensing that there is "something wrong with [the] character" (8-BitRyan, 2019).

However, the crucial difference between the contemporary games which try to recreate the effect *Silent Hill 2* had on the players and that very title is the fact that the player had at the very least six hours to get to know James Sunderland, observe him fight, flirt, attempt to reason with other characters, and even try to save them or kill them. In many contemporary games that use this structure (most of which are either independent projects or the so-called high production value games) the players get less time with the protagonist, and the majority of interactions with other characters (if not all of them) tend to be shown in flashbacks, increasing the psychological distance (Cohen, 2001, p. 251) between the player and the story of their avatar.

This situation creates two major problems for a psychological horror narrative, both of which *Blair Witch* illustrates well. First, the knowledge of the player must be processed from the perspective of the protagonist so that it can be transformed into empathic emotions (Cohen, 2001, p. 251); second, in horror especially, the emotional state of the audience should, as previously mentioned, mimic that of the protagonist (Carroll, 1990, p. 18). The fact that the players tend to gravitate towards paying attention to Bullet rather than to the actual protagonist of the game demonstrates that they are not, in fact, processing the story from Ellis' perspective. *Blair Witch*, like other games characterized by this specific problem, starts employing the necessary clues – the dog tags symbolizing Ellis' war experience, psychiatrist's notes pointing to the childhood trauma – rather early on, but the players, lacking familiarity with the character, rely on their metagame knowledge to interpret them instead. In fact, in the case of Blair Witch and other similar games, the players' metagame knowledge of the formula actually allows them to accurately guess or predict the coming events or the "twist" of the story, as well as the meaning behind some items and scripted events. This means that the moment Ellis picks up the dog tags and voices his disbelief regarding

the nature and origin of the tags, the players are already proverbial miles ahead of him and the revelation the game is moving towards. As a result, *Blair Which* exemplifies one of the major problems contemporary psychological horror games struggle with to a greater or lesser degree. If a game is meant to rely on a twist which reveals the protagonist's past to the players in a shocking, dramatic manner, and it sheds light on the events and objects encountered so far, it is beyond doubt a major problem when that twist comes as no surprise to the players. Furthermore, a situation in which the players know more than they are expected to know at a given point, and in many cases more than the character does (Cohen, 2001, p. 251), thus remaining psychologically distanced from that character (Cohen, 2001, p. 251), makes identifying with the character difficult. The perspective of the character is not required, so empathetic emotions (Cohen, 2001, p. 251) are never formed; the events and the meaning of discovered materials and items are instead processed almost exclusively from the players' perspective. In practice, this means that the players go around collecting various clues and interpreting them according to their own logic and metagame knowledge, while Ellis (or any other protagonist of similarly designed games) experiences each potentially emotionally meaningful moment on his own, as the players merely look on, even during the finale of the game. In contrast, those playing *Silent Hill 2* usually experience a mix of complex emotions in key moments of the game, especially towards the end – genuine shock, sadness, and even some sort of vicarious shame or guilt – seeing as until the point when it is revealed that it had been in fact James himself who had murdered Mary, the players have been cheering for and siding with James as the protagonist and (crucially) their avatar.[4]

CONCLUSION

It is safe to assume that the fact that players consider *Blair Witch* to be a flawed but satisfactory horror experience – even if it shares a number of shortcomings with other contemporary psychological horror game texts – is related to the way the players focus on the protagonist's dog so intensely both in terms of emotional attachment and involvement in the story. It is not so much about how a German Shepherd distracts the players from the protagonist, but rather how effectively the employment of a solid, competent inclusion of a dog companion with appropriate mechanics raises a decent but predictable by-the-book game above mediocrity, masking its linearity and its reliance on predictable tropes.

As a character, Bullet offers a proverbial breath of fresh air into a stale formula, introducing stakes and tension. The presence of a cheerful, trusting animal companion affects *Blair Which* as a horror narrative in a twofold manner: first, it dulls the atmosphere of danger and

[4] As explained by the user blank fairy: "the reason why SH2 had such a huge impact on me was because of all James and I went through together. I got attached to him because we were both just a couple of suckers going through a terrifying time together and utterly and hopelessly confused about it all. [...] So that's why when I finally found out the twist, I felt so shocked it was almost suffocating." https://silenthillforum.com/viewtopic.php?p=393738#p393738 [11.09.2020].

terror, since players not only can but are essentially encouraged to interact with another living being, and actively seek comfort in its presence; since Bullet can express emotions but cannot communicate verbally, his presence does little to fuel Ellis' subjective fears related to his nightmare (like a human character could by asking questions or commenting on sounds or items). As such, he dampens the potential for horror instead of increasing it, as far as convention is concerned – even if he does not offer any help in the form of attacking or at least distracting the enemy, he most definitely lessens the feeling of loneliness (Emmerich et al., 2018, p. 146), being regarded by some players as "simply one of the best parts of the game" that "also kind of takes away a lot of the tension," since they feel "safe with Bullet around" (AngryJoe Show, 2019).

Second, given that the vast majority of players assume that Bullet, unlike Ellis, might die before the end of the game, they become not only attached to Bullet, but also protective of him – and, as a result, their affective identification shifts from the actual protagonist of the game to the companion character. This means that the potentially extensive range of complex emotions the audience of horror fiction conventionally experience becomes lost and is reduced to the intense stress of worrying about Bullet. While the tension itself works in favor of horror game texts (Rouse, 2009, p. 20), and even the emotional investment in Bullet alone facilitates emotional investment in the game as a whole (Russell, 2016, p. 114), there is no real connection with, closeness to, or any particular sense of liking (Bopp et al., 2019, p. 313) that the players might have for Ellis. And while the players of *Blair Witch* might at least become invested in Bullet's fate or admire the interesting mechanics, in other contemporary psychological horror games the lack of identification with the character is a major problem for a horror text. With way too great a reliance on hallucinations, delusions, flashbacks and manifestations, the story might either become too obvious for the players to become engaged in, or too difficult to follow, disrupting the immersive experience. In both cases, the game text will lack one of the essential pleasures a horror text can provide: fascination and curiosity concerning the impossible (Hoedt, 2016, p. 13), one that allows the audience to endure the terror of the content they are consuming so that they can discover the resolution of the story (Carroll, 1990, p. 192). Psychological horror games, which are structured around a specific formula, face an even more difficult task, seeing as they must offer something new and truly shocking in order to leave a lasting impression on their audience (Phillips, 2005, p. 7), and if they fail at doing so, falling back into routine and predictability, they risk disengaging prospective players.

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REACTIVE GAMES AS AN EXAMPLE OF EXTENSIVE USE OF EVOCATIVE NARRATIVE ELEMENTS IN DIGITAL GAMES: THE CASES OF *DWARF FORTRESS* AND *RIMWORLD*

There are many types of digital games – some focus more on new gameplay mechanics while others focus more on new ways to tell and deliver their stories. Some games, in their goal of creating more engaging narratives, push the environmental storytelling and evocative narrative elements to their limits, allowing for a unique emergent narrative experience for players. Consequently, players now recognize a specific type of game, calling them, "reactive games", in which the events and story of the gameworld occur without the need for the input of the player, who instead must react to the events and problems the game sends their way. This article presents two examples of reactive games which create a unique gameplay experience by exploiting the limits of environmental storytelling, evocative narrative elements, and emergent narrative: *Dwarf Fortress* and *RimWorld*.

Keywords: environmental storytelling, evocative narrative elements, emergent narrative, reactive games, gameworld

In today's digital games, it is increasingly common for the gameworld or a game's virtual environment to play a more significant role in both the gameplay and the players' experience of the game, in some genres more than in others. In fantasy and simulation games in particular, certain important aspects of digital games' virtual environments, and the gameworlds themselves, are related to how game texts tell their stories (Murray, 2017). There is also a specific type of game which creates a very unusual gameplay experience by exploiting this relationship between gameworld and narrative through the game mechanics or gameplay style. These games use environmental storytelling and evocative narrative elements to create emergent narratives, which makes it seem like the players only react to the game; because of this perception many players refer to the gameplay style of these games as "reactive gameplay," and the games themselves "reactive games".

In reactive games the gameworld appears to be more autonomous than in other game genres, as the micronarratives within specific locations in the gameworld are not inactive

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regardless of whether the player is present to observe them. There is also no central avatar around which the whole story, narrative, and – to some degree – the virtual environment of the game would revolve. This creates a distinct impression that the player is merely a guest in the world of the game: they can influence the virtual environment of the game and interact with evocative narrative elements in it, earning great potential for the emergent narratives, but the events and, in consequence, stories in the game change and evolve throughout the gameworld regardless of the presence of a player. The aim of this text is to discuss selected elements of the above-mentioned characteristics of reactive games through analysis of the games *Dwarf Fortress* (2006) and *RimWorld* (2016).

GAMEWORLD, VIRTUAL ENVIRONMENT, AND NARRATIVE ELEMENTS

To discuss the emergent narrative and its relationship to the gameworld, it is first necessary to define several terms and concepts for the purpose of clarity and flow of this text. The first term that needs to be defined is "virtual environment". According to Gordon Calleja,

> virtual environments are computer generated domains which create a perception of traversable space and afford the exertion of player agency. They are populated by objects and often human or AI controlled entities with whom players can interact (Calleja, 2009).

In the context of digital games this definition can be treated as identical to that of the term "gameworld", so the terms "virtual environment" and "gameworld" are used interchangeably in this paper. It is also important to note that Calleja argues that the players' interaction with the virtual environment is the main force generating the stories in digital games – except for several aspects of the gameplay or gameworld like scripted events or cutscenes (Calleja, 2009, pp. 1–3). This important relation between the players' interaction with the virtual environment of games to create stories or narratives is closely related to another important term in the context of this article, environmental storytelling.

The definition of the term "environmental storytelling" most suitable for this analysis is that proposed by Don Carson:

> the story element is infused into the physical space a guest walks or rides through. In many respects, it is the physical space that does much of the work of conveying the story the designers are trying to tell. Color, lighting and even the texture of a place can fill an audience with excitement or dread (Carson, 2000, pp. 1–3).

Even though Carson's definition stems from his experience as a park designer, this definition is also effective in the context of digital games, as their players also move through various spaces (e.g. the levels in a first person shooter game) specifically designed for the particular games. The function of environmental storytelling consists in the game designers using the virtual environment of a game as one of the tools conveying the story of the game. Many academics have considered different ways in which environmental storytelling can be used

in creating and maintaining a game narrative, and based on those, Fernández-Vara highlights two main ways to do so: "one, the narrative shapes the space, and navigating it constructs the narrative sequence; two, the player must piece the story together, interpreting the objects and events in the space" (Fernández-Vara, 2011, p. 3). Henry Jenkins further points out another crucial trait of environmental storytelling, stating that it "creates the preconditions for an immersive narrative experience" (Jenkins, 2004, p. 123), and can be in itself used by game designers to prepare the players for the game experience. This aspect of environmental storytelling is especially easy to spot in many various horror games, for example some locations in the gameworld of *Song of Horror* can be easily recognized by players as backdrops for a Gothic horror story. Jenkins also presents several ways in which a narrative can be created by the means of environmental storytelling:

> In the case of evoked narratives, spatial design can either enhance our sense of immersion within a familiar world or communicate a fresh perspective on that story through the altering of established details. In the case of enacted narratives, the story itself may be structured around the character's movement through space and the features of the environment may retard or accelerate that plot trajectory. In the case of embedded narratives, the game space becomes a memory palace whose contents must be deciphered as the player tries to reconstruct the plot and in the case of emergent narratives, game spaces are designed to be rich with narrative potential, enabling the story-constructing activity of players (Jenkins, 2004, p. 129).

In a context more specific to game design, "environmental storytelling" is defined by Richard Rouse III as "the little stories told through the world itself" (Rouse III, 2010). Rouse highlights how the virtual environment of a game should be designed to make immersion into the gameworld easier for the players, and to enhance the game narrative itself; he stresses the significance of the location backstory and its relevance to the main story of the game – whether the location is merely a setting, or if the story of the given space supports "the theme or tone in some unique way" (Rouse III, 2010).

Rouse also points out another significant problem that arises with the use of environmental storytelling, which is both important and problematic in the context of game design time. He emphasizes that "without downtime, players may charge blindly ahead, missing all the environmental storytelling you have carefully set up" (Rouse III, 2010). The severity of this issue depends greatly on the type of the game that is played, as adventure or massively multiplayer online role-playing games (MMORPGs) focus to a greater degree on the exploration aspect of the gameplay than most racer or puzzle games. Nonetheless, any game designer who implements environmental storytelling in their game faces the challenge stemming from the fact that players need time and incentive to explore the gameworld and focus on details and elements of the virtual environment for environmental storytelling to have a chance to work properly.

Linking environmental storytelling (here called "the game's story-world") to the players' experience of the gameplay has also been emphasized by Jan-Noël Thon, who argues that "the importance of video games' story-worlds for the gameplay experience varies across genres as well as from player to player, since different player types focus on different kinds of experience when playing video games" (Thon, 2016, p. 105). Jethro Jongeneel points to

the same connection, accentuating the player's subjective interpretation of both the game's virtual environment and the game's story:

> Compared to storytelling, ES "environmental storytelling" does something powerful that is exclusive to this means of storytelling: it lets each individual consumer of the content, be it book, game, etc., fill in the gaps their own way. [...] ES is a way of telling an incomplete story which the receiver of the story needs to actively interpret. It incites participation by omitting certain aspects of the story. If the story is interesting enough, the receiver of the story will go to great lengths to find out about the missing elements that are not presented. ES is a form of storytelling that incites participation. It makes sure the player is constantly connected to, and reminded of, the story (Jongeneel, 2013).

Not only can the virtual environment as a whole be used to help players immerse themselves into the gameworld or help them create stories during gameplay, but specific singular elements of the gameworld can perform this function as well. Michael Nitsche uses term "evocative narrative elements" in reference to those singular elements which enhance the players' understanding and experiencing of the gameworld that surrounds them. Both Jenkins and Nitsche highlight the active role of the players and their interaction and relationship with the virtual environment of the game and its elements as necessary for the players to understand the game's story or create a certain game narrative. As Nitsche points out:

> Narrative is a way for the player to make sense of the in-game situation. The main process happens in the player, but it can be evoked and directed by evocative narrative elements, formed by encounters or situations in the game that prime some form of comprehension. Evocative elements are included in virtual environments to improve the meaning-building process of the player. The elements are not "stories" but suggestive markings (Nitsche, 2008, p. 44).

According to Nitsche, the main task of the evocative narrative elements is not to be a part of the predetermined or scripted game story or narrative, but to be an incentive for players to create different narratives or to supplement the already existing narrative with those elements. Many games use various types of evocative narrative elements in the form of the so-called "hidden objects" carefully concealed in the gameworld, which have the potential to influence or even change the player's ongoing narrative of the game. Those hidden objects do not necessarily have to be literal objects, like notes or tablets with something written on them. They can also take the form of non-player characters controlled by the AI of the game, who can give players new information that changes the game narrative prior to the point of the players discovering them. Using evocative narrative elements in such a way not only makes it possible for numerous players to experience those games differently – depending on how many of those elements they discover during their gameplay – but it also adds great replay value to those games, as many players will be quite interested in discovering the "alternate" versions of the game story or other endings to those games. The main function of the evocative narrative elements is "to trigger reactions in players in order to help them create their own interpretations" (Nitsche, 2008, p. 44), which renders them rather useless in creating a linear story. As such, many simpler and linear digital games do not use many evocative narrative elements or environmental storytelling to any significant degree (if they use them at all).

All of the terms and definitions above bring us to the last and most significant – in the context of this article – term: "emergent narrative". Henry Jenkins defines emergent narrative as those that "are not prestructured or preprogrammed, taking shape through the game play, yet they are not as unstructured, chaotic, and frustrating as life itself" (Jenkins, 2004, p. 128). Stephanie Jennings rewords Jenkins' definition of emergent narrative to further highlight the role of players' actions: "[r]ather than consisting of pre-written events and characters, emergent narratives are assembled and conjured by the actions of players out of the structures of video games" (Jennings, 2016, p. 146). Both those definitions point out that emergent narratives come into being as a result of the players interacting with the game through the gameplay. As this type of narrative is not pre-structured or pre-written, it often arises – at least to some degree – from the players trying to interact with various or even random elements of the game's virtual environment. In this context, emergent narrative can be even considered to constitute a natural consequence of environmental storytelling, or in other words, the use of the environmental storytelling gives the players a chance, or rather an inclination, to create emergent narratives. Similarly to the case of the environmental storytelling and evocative narrative elements, many games allow for emergent narratives to different degrees, depending mostly on the type and main goal of the game. As mentioned before, puzzle games or digital simulations of card games such as *Patience/Solitaire* do not require environmental storytelling to fulfil their main goal, so naturally players do not have any chance to form emergent narratives while playing them. On the other hand, adventure, role playing games (RPGs) or MMORPG games need environmental storytelling and evocative narrative elements to fulfil their function, so they also have a lot of potential for the emergent narratives to be formed by players interacting with the gameworld and evocative narrative elements spread around the virtual environment of the game.

EMBEDDED STORIES IN THE LIVING WORLD OF *DWARF FORTRESS*

The official Steam page of *Dwarf Fortress* describes the game as "[t]he deepest, most intricate simulation of a world that's ever been created[1]". *Dwarf Fortress* is an independent digital game created by Bay 12 Games. The game has been in a state of constant development since 2002, and the first version playable for a wider audience was released in 2006. Each playthrough of *Dwarf Fortress* starts with creating a world in which the gameplay takes place; these worlds are generated procedurally, creating a fractal global map that looks somewhat similar to a map of the Earth. Players can find all kinds of Earth-like biomes in the gameworld, ranging from the Arctic, to high mountains or flat steppes and swamps and even deserts. The game uses a sophisticated, randomized algorithm with numerous settings for the creation of each world, allowing for a wide range of environments in each gameworld, making each map unique. The world creation also encompasses history and socio-political situations. The algorithm allows players to make choices concerning how long they wish their

[1] Steam *Dwarf Fortress*, https://store.steampowered.com/app/975370/Dwarf_Fortress/ [8.09.2020].

world's history to be, or how many civilizations have a chance to thrive in a specific world. The fact that the world creation algorithm fully simulates the relations between potential civilizations – which means that when setting a very long world history there is a chance that some of the early civilizations to show up in this world can be destroyed by various random events (including a war with other civilizations) by the time the players start their game – is indicative of the autonomy of the gameworld, one of the most important characteristic features of *Dwarf Fortress* as a reactive game.

The main game mode is called "fortress mode"; within it, the player manages a group of dwarves[2]. By indirectly controlling the population of a new settlement, players can construct a fortress in any way they see fit. Even though the game was originally designed with text-based graphics, there are now many graphical modes that switch the text symbols into 2D graphical representations (called sprites) for players to better understand what they see on the monitor. The game itself has no main goals or quests and it is fully open-ended, stressing the emergent narrative characteristic of reactive games. The second mode is "adventurer mode"; within it, players control a single character – the titular adventurer. Gameplay in this mode is also turn-based and open-ended, very reminiscent of the text-based computer roleplay games of the 1980s. In this mode, players can explore various locations, take and fulfil quests for the non-playable characters, or visit abandoned or still active fortresses and towns – if a player has created a fortress in the same world they now play as adventurer, they can also visit their own fortress. For better representation of environmental storytelling, evocative narrative elements, and emergent narrative, this text will mainly focus on the fortress mode.

As mentioned before, in fortress mode the players pick up a location on a world map where they want to start their game, and typically they have access to a small group of dwarves and a certain amount of resources. Even though players can see 2D graphical representation of only one layer, the game works fully in all three dimensions. Characters in the game can fly, swim, climb or jump between numerous layers. The players can freely modify almost all aspects of the virtual environment on the fortress map, although they have to remember that realistic physics still apply, so for example digging too big a space underground will lead to a collapse of the layer above, while ordering one's dwarves to dig close to the lava can lead to an uncontrolled release of lava and the death of the dwarves. The gameplay, especially in the context of wounds and injuries, is very realistic and the most frequent causes of death of dwarves are accidents and player error, rather than at the hands of enemies. Among the frequent mistakes leading to the death of dwarves – especially among new players – is ordering dwarves to dig a multi-layer area while neglecting to order them to dig a ramp or a staircase, stranding the mining dwarves at the bottom of the dig with no way to escape, leading to death from hunger or dehydration.

Dwarves dying due to accidents or player error are actually excellent examples of what happens when a game uses environmental storytelling, evocative narrative elements, and emergent narrative to their limits. *Dwarf Fortress* fully exploits the potential of environmental storytelling in many different ways, one of which takes place during the world creation.

[2] In the latest version of the game there is a way to start a new fortress with population composed of not only dwarves but many different creatures, e.g. elves, goblins or various types of humanoid hybrids of different animals, like 'black bear man' or 'crocodile man'.

Through colour coding and information displayed next to a region on the world map, players receive the first set of information that will influence the story of their gameplay. The place on the world map and type of the terrain in which the players choose to start their fortress will determine the severity or lack of winters, the types of animals the players will encounter on the fortress map, and the level of threat of wild animals and monsters in the region, thus determining the probable emergent narratives. If the players choose a region closer to other fortresses and towns, there will be fewer wild animals and monsters wandering around the fortress map. The further away it is from other settlements, the more dangerous a region is. In the context of game mechanics and gameplay narrative, the choice of the place where players want to start their fortress is a crucial one, as there are regions in the game where trying to establish any permanent settlement on the surface is impossible due to evocative narrative elements specific to them, such as putrid slime, toxic and lethal to any living thing, raining from the sky.

Another, more direct and detailed way *Dwarf Fortress* uses environmental storytelling is in situations where players start their game in the location of an abandoned fortress. In the worlds created in *Dwarf Fortress* there is very good reason why some of the old great dwarf fortresses were abandoned. In many cases the reason is some giant, extremely dangerous monster. Nonetheless, players can try to reclaim fortresses of old and take possession of the treasures left within. In such a case, players do not start on the "clear" fortress map. When players try to reclaim an old fortress the game will load a fortress map with an already built and developed fortress on it. Here one of the most obvious means of environmental storytelling is employed, through various items scattered all over the fortress, empty and abandoned workshops, and, in some cases, skeletons and body parts left where they fell. Moreover, not all of the abandoned fortress is visible to players, so they have to send their dwarves to different parts of the fortress to explore and uncover them. Naturally, this involves the risk of dwarves encountering the monsters which had contributed to the extinction of the previous population and are now inhabiting the place, which puts the dwarves at risk of meeting the same fate as previous denizens.

The emergent narrative mostly manifests in *Dwarf Fortress* during the gameplay on the fortress map. Depending on what region the players choose, they will have access to different resources. Players can extract certain ores only from specific kinds of rocks, while certain items or furniture can be created only from certain materials; for example beds for dwarves can be made only out of wood. This means access to certain resources will determine which items the players can try to specialize in producing in their fortress. A good example of emergent narrative directly connected to the virtual environment is a scenario in which a player has decided to build their fortress in a region where there is no access to iron ore. Without iron ore the players cannot produce iron or steel, which, in turn, makes production of good quality armour and weaponry very problematic and practically impossible on a greater scale. These factors mean that the emergent narrative potential of this specific fortress makes it easier for the player to create a narrative of this fortress as a trading outpost or a simple town, rather than a highly militarized place whose main function is to train soldiers for war and the conquest of other races of that particular gameworld.

The main reason many players consider *Dwarf Fortress* to be a game in which players mostly react to the gameworld around them is the way in which the game uses evocative

narrative elements. In this game those elements mostly do not consist of items hidden away, waiting for the players to discover them. In *Dwarf Fortress*, the most common type of evocative narrative element is a monster. When stripped to its bare basics, the gameplay of *Dwarf Fortress* can be described as a game in which the players' goal is to take care of a group of dwarves (in standard setting up to two hundred), build a settlement for them, provide for their basic needs (food, drink, clothes, medicine, etc.), and keep them alive, while the gameworld will try to do everything in its power to kill the players' dwarves and destroy their fortress. As mentioned before, depending on the region a player chooses to start in, their fortress will be attacked more or less often by monsters, varying from giants, dragons, rocks, hydras, or forgotten beasts (a type of giant monster living in underground caves specific to *Dwarf Fortress*), to different types of werebeasts and vampires. The arrival of a monster functions as an evocative narrative element forcing the player to deal with the situation. How the player gets through it has a great influence on the emergent narrative of their fortress from that moment on. One unfortunate and very short example of an emergent narrative created by an evocative narrative element in the form of a monster happens when a player fails to prepare any defensive positions or safe spots for their dwarves, and the monster just comes into the fortress and kills every single denizen of the player's settlement. The player's fortress will then be considered abandoned and the player will be forced to either start the game in fortress mode again in a different region or reclaim an abandoned fortress, while their previous one is added to the list of potential starting sites.

Another example of a more subtle evocative narrative element in the game may be found in a message for the player that the corpse of a dwarf drained of its blood has been found. The player then knows that one (or more) of the dwarves living in their fortress, or one of their visiting guests, is a vampire. This prompts and allows for the beginning of an emergent narrative about an investigation to identify the vampire before another dwarf (or person) dies. Furthermore, in some extreme cases, this particular evocative narrative element of a vampire showing up in a fortress may give players an idea for creating a narrative about turning all the dwarves in the settlement into vampires and leading a fortress populated by an army of dwarf vampires[3]. Nonetheless, *Dwarf Fortress* also makes use of a more standard or typical evocative narrative element in the form of items. As mentioned above, the game simulates not only the physical aspect of the gameworld, but also its history, introducing a plethora of micronarratives understood as localized events or short narrative units (Jenkins, 2004, p. 125). The gameworld is thus full of items and characters with their own histories waiting to be discovered. For example, a player's fortress is attacked by a giant wielding a legendary artefact, a bone spear. After defeating the giant, the player can take possession of the item and either keep it in a warehouse, put it on a display, or order one of the dwarves to use it, such as the dwarf that struck the killing blow to the monster. Thus the player encounters a micronarrative about a dwarf being rewarded for their deeds with an exceptional weapon. However, in *Dwarf Fortress* each artefact has its own story which players can explore. It is

[3] An excellent example of a vampire fortress narrative is the main story point of the *Dwarf Fortress* video series called *Honeystoker* by the YouTube content creator Kruggsmash, https://www.youtube.com/watch?v=7HX40DXnst8&list=PLXX7Rp0iXj0nPwER_CwBDYSr0n1fE63KK [8.09.2020].

possible that this particular spear was crafted hundreds of years ago by an ancestor of the dwarf that killed the giant[4]. Moreover, in the history of the item the players might find that one hundred and eighty years ago the creator of the spear was killed by a giant in combat, and the giant then took the spear as a trophy. After several decades, that giant died and the spear was taken by their son (another giant) and that giant was the one to have attacked the player's fortress. In this way a simple story of a dwarf being rewarded for their deeds with an exceptional spear transforms into a tale of a multi-generational feud between a family of dwarves and a family of giants, ending with that particular dwarf avenging their ancestor and reclaiming a family heirloom. Through simulating histories of singular items and characters, *Dwarf Fortress* provides the player with a myriad of evocative narrative elements – in the form of both items and monsters – and possibly endless opportunities and potential for players to experience a multitude of various emergent narratives. Similarly, by making certain types of monsters indigenous to specific biomes, many of the potential emergent narratives in the game are directly linked to the environmental storytelling. For example, if players play in a region with a haunted biome, the characteristics of the immediate virtual environment will provide the potential for emergent narratives regarding ghosts or zombies – every living thing, including their parts, that dies in a haunted biome comes back to life as a zombie or another form of an undead creature – and thus, in a haunted biome players can experience the classic zombie narrative of (literally) being surrounded or besieged by hordes of the undead[5].

The narrative potential of *Dwarf Fortress* surpasses its gameplay and influences even YouTube content creators, who have made numerous types of videos about this game. One type consists of various kinds of tutorial for the game (made by, e.g., DasTactic, Nookrium, and Salford Sal), which explain the basic mechanics of the game or very specific aspects of the gameplay like building and management of the mine carts or pump stacks. Another type consists of uncut and unedited recordings of live game sessions, which can be up to a few hours long (examples include content by BLindiRL, DasTactic, Nookrium, and Salford Sal). One final type of video is the most important in the context of this article: an often heavily edited, story-driven recording of the game. The main goal of the creator of this type of video is not to present the best possible way to play the game, or make a guide, or show how one can play the game – instead they present a series of events that happened during a game session and edit them together to create a cohesive and interesting story. Sometimes, this will cause players to sacrifice effective gameplay for the sake of presenting a better story. A YouTube content creator named Kruggsmash basically specialized his channel to present *Dwarf Fortress* videos of this specific type. As an additional narrative tool – directly resulting from the very limited graphics of the game – he adds hand-drawn images to his videos to better show the audience his vision of the gameworld and various elements of the virtual environment of his fortress, giving an additional layer to the narrative he is creating during gameplay.

[4] In a YouTube video called *Dwarf Fortress: Legendary Stories* a similar example can be found. In this case a dwarf named Momuz kills a cyclops named Legon and named her 'Crossbow' to commemorate the kill, only to be killed nine years later by another cyclops, Omrist, who was Legon's mother. Omrist took the crossbow and made it a family heirloom, https://www.youtube.com/watch?v=98CnBDoyS5I [8.09.2020].

[5] An example of a fortress built in such a biome can be found in the *Dwarf Fortress* video series called *Skullhorror* by YouTube content creator Kruggsmash, https://www.youtube.com/watch?v=BG3e3wYCQU4 [8.09.2020].

FACING THE CHALLENGES OF EVOCATIVE NARRATIVE ELEMENTS IN *RIMWORLD*

Another game considered by many players to be a type of game in which players mostly react to the gameworld is *RimWorld*. On its official Steam page, the game as described as "[a] sci-fi colony sim driven by an intelligent AI storyteller," which "generates stories by simulating psychology, ecology, gunplay, melee combat, climate, biomes, diplomacy, interpersonal relationships, art, medicine, trade, and more[6]". On the basic level of the main game, the goal of *RimWorld* resembles that of *Dwarf Fortress*, as both games focus mostly on the survival aspect of the gameplay and dealing with random events. In *RimWorld*, the players also take care of a group of people and focus on building a settlement and providing all the necessities so their colonists can survive. The most obvious differences between both games lie in the complexity of the graphics and the gameplay. The graphics in *RimWorld* are much more advanced, but, at the same time, the gameplay is much more simplified when compared to *Dwarf Fortress*. Moreover, in *RimWorld* players can take direct control over their colonists and order specific characters to perform specific tasks.

Every game of *RimWorld* also starts with generating a random gameworld for players to play in. Similarly to *Dwarf Fortress,* a gameworld is also created procedurally, with various terrain types, biomes and factions commanded by the game's AI. The game also simulates those factions and many different events on the whole planet, regardless of which region the players choose to play in. Depending on the relation between the AI factions and the players' colony, the game will assign appropriate events for the players; for example, if an AI faction is friendly towards the players, it will send them gifts or traders, but if the faction is hostile, the game will send raids of enemies from that faction to attack players; this illustrates the autonomous nature of the game world of *RimWorld* as a reactive game which focuses heavily on evocative narrative elements and emergent narratives[7].

In *RimWorld*, the evocative narrative elements – similarly to *Dwarf Fortress* – take the form of various creatures and characters showing up randomly on the map of the player's settlement. In many cases, the creatures and people are hostile towards the players and will attack their colony and try to destroy it. The main goal of the players is to survive those attacks long enough to find a way to escape the planet. The evocative narrative elements in *RimWorld* also take the form of random events, other than just enemies attacking the colony, which can vary from animals self-taming and joining the colony or random characters joining the colony, to infections striking the players' harvest, livestock or colonists. If players do not have proper reserves of food or medicine, such events may, as easily as an overwhelming attack, end in the death of all the colonists and, in consequence, the end of that particular actualization of the game. The evocative narrative elements in this game may also appear in the form of items that the players can gain through quests or randomly showing on the

[6] Steam *RimWorld*, https://store.steampowered.com/app/294100/RimWorld/ [8.09.2020].

[7] It is also worth noting that the main menu screen of the game states that *RimWorld* is "A story generator by Tynan Sylvester" (Ludeon Studios, 2018), which quite directly states that the primary goal of the game – at least according to its main creator – is to generate stories.

players' colony map (in *RimWorld* one of the events spawns drop pods on the players' map with random resources or items). However, because of how the game difficulty informs the general value of the items in the colony, finding a powerful or rare item too early in the game will lead to an overly fast rise in wealth of the colony, which, in consequence, will greatly increase the power of the next raid. In such a case, the random rare item, instead of helping the players survive, can lead to the fall of the colony and "game over". The consequences of such random events, as well as the way in which players decide to deal with them, have enormous emergent narrative potential. Because in *RimWorld* the players can directly control all the colonists, and the number of characters in the players' settlement is distinctly lower than those of *Dwarf Fortress*, the loss even of a single character has a much greater impact on both the gameplay and the subsequent game narrative. Oftentimes in *RimWorld* the loss of the only medically trained character may lead to a death spiral of all other colonists, as there is no one left to provide them with medical attention. It works similarly in the opposite situation, as the random encounter or recruitment of a colonist highly skilled in research may give a player the opportunity to greatly increase the tempo in which they gain new technology, which can lead the player's faction to quickly technologically outclass other factions, significantly reducing the danger of their raids. Precisely because of the smaller scale on which the gameplay of *RimWorld* operates, a single evocative narrative element such as the aforementioned loss of a character has much greater impact on the potential emergent narrative in this game, in comparison to *Dwarf Fortress*. One of the consequences of this is much less room for error during *RimWorld* gameplay, and, as a result, the play style of this game may be even more reactive than in *Dwarf Fortress*. Depending on the difficulty level and narrator that the players choose at the start of the game, the time between random events can be rather short, leaving players not much time for preparation to counteract as many potential events as possible, which further pushes players in the direction of a reactive play style.

In the context of this article, the aforementioned greater simplicity in the design of the game mechanics and gameplay elements of *RimWorld* – comparing it to *Dwarf Fortress* – has an intriguing consequence that can greatly influence the potential for forming new emergent narratives in the game. This simplicity allows for easier creation of mods for *RimWorld*, especially the setting conversion mods that change the original gameworld of the game into a different one – very often with a different set of additional rules and settings. Such types of mods add new terrain and biomes to the game during the world creation, as well as providing many new factions appropriate for the new setting. The changes can encompass adding new factions, different items, new playable types of characters, and even whole new technology trees. The new setting may restrict the technology available in the modded gameworld, limiting it only to the tribal and medieval levels, or it may add much more advanced science fiction technology, including that capable of creating sentient androids[8]. Several of the more popular setting conversion mods change the gameworld of *RimWorld* to resemble worlds from known franchises from other media such as *Lord of the Rings*[9], *Warhammer Fantasy*, *Warhammer 40,000*, or *Star Wars*. There are also more historically appropriate mods implementing changes

[8] Retrived from: https://steamcommunity.com/sharedfiles/filedetails/?id=1541064015 [8.09.2020].
[9] Retrived from: https://steamcommunity.com/sharedfiles/filedetails/?id=1400245220 [8.09.2020].

to the game in such a way as to give players, for example, a simulation of commanding a Roman outpost – with all technologies and items changed to fit the classical Roman setting[10]. With setting conversion mods, the potential for environmental storytelling, the evocative narrative elements and emergent narrative of *RimWorld* greatly increase, as player experience of certain types of narratives is possible only through the use of those mods.

CONCLUSION

There is great potential for analysis of games in which almost the entire narrative capacity and elements of virtual environment storytelling lie in the events and stories occurring throughout the whole gameworld regardless of player's actions in a particular location. The discussion of all the above examples from *Dwarf Fortress* and *RimWorld* does not constitute an in-depth analysis of all possible uses and potential of environmental storytelling, evocative narrative elements, and emergent narrative in those games. Instead, the main goal of this article was to emphasize the role the emergent narrative plays in reactive games, with particular emphasis on the specific gameplay aspects which allow for that narrative. Additionally, the two games analysed in this article are especially noteworthy, as they are regarded by players as titles that define the reactive game genre. A closer look at *Dwarf Fortress* and *RimWorld* shows how the use of evocative narrative elements informs the play style to the extent where the players consider such games as belonging to a separate, unique genre. The very unusual and highly reactive gameplay experiences that *Dwarf Fortress* and *RimWorld* create for their players remain unique and deserve close academic analysis. This article is meant to create a potential point of reference for any scholar interested in researching digital games that push their game mechanics and gameplay style to their narrative limits – games in which the gameworld does not "wait" for the player to do something to change it, but appears to develop and transform on its own, inviting them to learn its stories.

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THE FUTURE, THE CRISIS, AND THE FUTURE OF *REPLAY STORY*

The article explores the notion of *replay story* by Janet Murray. *Replay story* – a game telling a story through choices and allowing the player to access all of their outcomes – was supposed to be a step in the process of games becoming the most important narrative medium of a new era. Soon after that, the reasonable critique emerged: not every story can, and should, be told through a *replay story.* Some, mostly tragic ones, can even be highly controversial if told in such form. However, new ways of storytelling through replay have emerged in recent years: New Game +, multiple routes that influence one another, and games that are conscious of previous playthroughs. Three years ago, Ian Bogost stated that the possibilities of development of narrative games had already been played out, and yet, there still is a chance that *replay story* can once again be considered a keystone in the evolution of games.

Keywords: replay story, replayability, replay value, tellability, game studies, digital games, video games

PREMISE

This article explores the notion of *replay story*. First, it focuses on expectations towards *replay story*, its quickly discovered shortcomings, and the ways games limited the possibility of replay or avoided it altogether in order to deal with serious topics. Then, it discusses new ideas for creative use of replay in digital games. Finally, it touches on the relationship between the replayability of narrative games and the tellability of their stories.

THE PLEASURE AND CONTROVERSY OF REPLAY

Early game studies had high hopes for replay. Janet Murray introduced the term *replay story* while describing the possibility of replay as one of the most important narrative capacities

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of games. She wrote that replay gives players endless access to "the 'pullulating' moment, as Borges called it, in which all the quantum possibilities of the world are present" and so they are not only able to choose their path in an interactive story but experience all the possible paths (Murray, 2004).

In fact, control over the narrative is just one benefit of replay. There are more reasons to replay a game. Lucian Smith proposes four: mastery, experience, completion, and impact. Replaying for mastery is based on the will to be the best – or just better – at the game; for completion – to reach the ending, or different endings or access all of the game's content; for impact – to achieve control over the game and be able to change its world; and for experience – for the feelings that a particular game evokes: pleasure, satisfaction, pride, immersion, safety, grief, nostalgia, and other (Smith, as cited in Krall and Menzies, 2012, pp. 461–462). Joseph Krall and Tim Menzies added two more reasons for replaying a game to this list: challenge and social reasons. Replaying for challenge is about re-experiencing the thrill of the obstacles in the game; replaying for social reasons is connected to interacting with other people in the game or interacting with others while participating in game-related activities (watching others play, streaming, etc.) (Krall and Menzies, 2012, pp. 461–462).

It seems that these six reasons for replay boil down to just three. First, there is re-experiencing the text (which is not specific to games). Then there are social reasons. Finally, everything else discussed by Smith, Krall, and Menzies. Because what else is the excitement of overcoming obstacles if not being happy about mastering the game, which then is a way to control the game, have an influence over it, and access all of its content? The core here is control (over the gameworld, over time, over the plot) – the rest are the attempts to achieve this control and the results of exercising it.

Noël Carroll in *The Philosophy of Mass Art* discusses claims that receivers of mass art are passive. One such position is that of Clement Greenberg, presented in the essay "Avant-Garde and Kitsch." Greenberg perceives mass art as passively received, as it does not challenge the audience and requires neither interpretation nor reflection (Greenberg, as paraphrased in Carroll, 2011, pp. 42–43). Carroll disagrees, claiming that all kinds of art require some sort of effort to be processed, and that this effort does not necessarily need to be connected with the difficulty of the form (Carroll, 2011, pp. 44–56). Among many examples of mass art that require the activity of the audience, he brings up video games and karaoke (Carroll, 2011, pp. 52–53). Indeed, video games require players' activity. However, this activity is different from interpretative efforts; it requires a different set of skills (agility, reflexes, decision-making, etc.) and is participatory rather than reflective.

Robin George Collinwood describes mass art as repetitive, in the sense that new texts use the same means that older ones have used to evoke the same responses in a calculated way (as paraphrased in Carroll, 2011, pp. 64). Games can be discussed in accordance with this claim in two ways: on one hand, new games repeat what older ones have established, while on the other, in-game repetitions bring the player the same sense of familiarity and safety as staying within a well-known genre. This narrative safety, combined with participatory activity that may end in controlling the game, can give players what receivers of highbrow art receive from its texts: the satisfaction of moving through its text without feeling lost; a sense of agency (in highbrow art coming from a successful act of interpretation, in games

from overcoming a challenge); and the level of novelty appropriate to the audience depending on their experience, mood, or needs. In this sense, games truly can be what Greenberg calls *kitsch*, *ersatz culture* – means of replacing highbrow art for those who cannot access it.

Clement Greenberg's views, as Carroll points out, were a basis of criticism towards almost every new mass medium arising in the 20th century (Carroll, 2011, pp. 45). Games can fit perfectly into Greenberg's and Collinwood's criticism of mass media (the latter criticized not mass media, but a corresponding phenomenon of *entertainment art*). However, there is no reason for assuming that the participatory effort required in games excludes interpretative effort. To the contrary, the means of participation can be creatively used to create meaning, which I will further discuss in the last section of this text.

Janet Murray in *Hamlet on the Holodeck* described – and partially predicted – the narrative capacities of digital games (Murray, 1997). However, the presence of *Hamlet* in the title suggests the capacity of games to touch upon tragedy, and that one is still under discussion. Gonzalo Frasca, while commenting on the theoretical possibility of designing a game about the Holocaust, claimed that "there is no room [...] for fate and tragedy" in digital games (Frasca, 2000). It is important to clarify what Frasca means by tragedy: his definition does not match with Aristotle's understanding of tragedy as a mimetic representation of events of a certain magnitude, encouraging sympathy and empathy and inviting the audience to process their own sadness or fear through processing the emotions of characters (Arystoteles, 1887, pp. 10–11). Frasca does not discuss fictional tragedies, but real tragic events; however, he relies on Aristotle in the sense that he perceives the capacity of games to evoke tragedy as dependent on their ability to express the unavoidability of fate. "There is no room [...] for fate," he states – because the events in *replay story* can always be changed – and therefore no room for tragedy, either.

It has been widely discussed whether games can successfully touch on tragic topics. There is definitely little room for games about the most traumatic limit situations (*grenzsituation*, as understood by Karl Jaspers, as paraphrased in Mundt, 2014, pp. 169–171), such as the theoretical Holocaust games brought up by Frasca. The reason for that is not the supposed low status of the medium[1] but its mechanics – mostly means of participation and replay, and the control they grant to the player.

While participating in a Holocaust game the player would have to assume a certain perspective. And even assuming the perspective of somebody else than a perpetrator bears significant problems. The way games reward performance would result in one of two scenarios: The game would either punish the failing player with a vision of unspeakable suffering, which would not only be a wrong way to treat them, but also a very wrong way to treat the actual victims, ridiculing them and exploiting their suffering for the means of entertainment. Or the game would reward a winning player with a chance to change the characters' fate. In this case, the events of the Holocaust would become modal – changeable; this modality would not only violate the status of a testimony, as Giorgio Agamben understands it (Agamben, 2008, pp. 146–148), but also suggest that the Holocaust could somehow be *won.*

[1] Such narratives were successfully featured in many new media – e.g., the graphic novel *Maus* – and in lowbrow fiction – e.g. stalag fiction.

The most controversial aspect of employing limit situations such as the Holocaust in digital games, however, seems to be the pleasure to be derived from replaying. It is not, unlike in other media, the pleasure of knowing or experiencing, even as a voyeur. The satisfaction of replay comes from taking over control, mastering the game, and exercising power. Even if the perspective assumed in the game is that of the victims, the pleasure derived from playing comes dramatically close to the pleasure of the perpetrators. The relationship between the player and a Holocaust game, whatever the perspective assumed, mimics the oppression and replays the powerlessness, humiliation, and dehumanization of the victims.

Taking out the possibility of replaying the game is one solution to this problem allowing games – but not *replay stories* – to touch on tragic events. This was proposed by Gonzalo Frasca, who invented OSGON – "one-session games of narration" (Frasca, 1998). OSGON are intended to be impossible to replay, and so they can feature both fate and tragic events, and while they are still ergodic, modal, and games, they are not *replay stories*. An important example of OSGON is *One Chance*, a game from 2010 by Dan Moynihan which employed perma-permadeath. It gave the players one chance to save the world and then stopped them from replaying, leaving them with the ending they arrived at through a series of random choices with unpredictable effects – most probably a tragic ending. OSGON are supposed to be impossible to replay (and are sometimes successful in that). And so a medium "characterized by multiplicity and repetition" (Mukherjee, 2008) develops texts that cannot be re-accessed.[2]

Un-repeatable experiences, however, were not the only answer to the controversy of limit situations in games. Gonzalo Frasca himself designed *September 12th*, a broken serious game that used its mechanics to mirror a circle of violence. The game can be replayed but cannot be won – and it is successful in commenting on its topic in an appropriate yet moving way. As it turns out, the possibility to successfully touch on serious topics does not only rely on limiting the possibility of replay. It might be done by changing the role of replay and taking some amount of power granted by it away from the player.

REPLAY REVISITED

My Memory of Us and *This War of Mine* are two examples of games that manage to use limit situations as their topic and allow replay.[3] The world of *My Memory of Us* is based on German-occupied Poland; it focuses particularly on imprisoning Jews in ghettos. The presentation of the topic, however, is highly metaphorical: it is a story of two children, friends, who try to maintain their friendship in a fictional, dream-like city captured by an army of robots in Nazi-like uniforms. As Aleksandra Mochocka noticed, one of the important ways in which *My Memory of Us* references World War II is through references to other texts about

[2] It seems that games cannot escape repetition even if they are impossible to repeat. *One Chance* is inspired by *Everyday the same dream* and features a few days which resemble one another.

[3] Games that use the war as a circumstance to allow the player to be strong, skillful, or heroic, and do not really aim at expressing the suffering of the victims, are not the subject of this analysis.

war, such as graphic design reminding the audience of *Schindler's List*, or particular scenes and visuals referencing Polish movies about the occupation (Mochocka, 2019). The use of children as main characters makes the game closer to *La vita è bella* or *The Boy in the Striped Pajamas*: the war is seen through the eyes of an innocent, unreliable narrator. Presenting the events as memories and not current events also enhances the surreal, dream-like quality of the game. The experience of war is addressed indirectly; the detachment and symbolism make it easier – and more palatable – to speak of the tragic events.

The quests are also adjusted to the difficult topic. The tasks of the children are not aimed at winning or losing the war – they are more about keeping in touch, which associates the game with the war, but keeps it more focused on noticing and dealing with suffering than on changing history. All this is quite enough to allow *My Memory of Us* to properly speak of the tragedy of war. There is no need to limit the possibility of replay, and so the game employs the mechanic of save and gives players the chance to repeat chosen chapters.

In *This War of Mine* the player controls a group of civilians that try to survive the siege of Pogoren, a fictional city based on Sarajevo. The game can be replayed – and has a high replay value – but there is a limitation to it. There is no save option, so after the death of a character the player either has to go on with other characters, facing the irretrievable and stirring loss[4], or play from the beginning, risking that the random events would not be the same. Playing from the beginning does not make facing the failure much easier; it does not grant redemption, erase the previously achieved ending, or allow the player to patch things up.

The limitation of the possibility of replay, however, is not the only thing that makes the way *This War of Mine* addresses the experience of war right. Another important element of it is the goal of the game – it is not to win the war, but to address and deal with the suffering inflicted through it. Winning is possible through surviving the siege, but it is a bitter triumph as characters are still deeply affected by the war. Doing more than surviving, such as getting more supplies through robbing or killing others, is not rewarded, aside from the reward of knowing what would happen (and sometimes seeing new objects and places). It is impossible to gain a lot of control in the game, and so the position of the player does not come close to the position of a perpetrator. It is mechanically impossible to cross the boundaries of treating the characters with respect.

11 bit studios, the creators of *This War of Mine*, were in fact so successful in designing the mechanics that would prohibit players from humiliating characters – and the people and suffering they refer to – that they were able to release an expansion pack, *The Little Ones*, that added children to the game. This is rarely done in games in which characters can be killed, wounded, die of sickness, or starve, as these things happening to children – more powerless than other characters – would immediately set the players in the position of a perpetrator. Including children is then yet further proof of the tactfulness with which *This War of Mine* manages to deal with a limit situation of experiencing a war.

[4] The characters in the game are fully fleshed out: they have backstories, personalities, and relationships. Their death is too easy and surprisingly permanent, but not impersonal either. When they die, the body remains in the place where they died. Other characters can recognize it.

STORYTELLING THROUGH REPLAY

My Memory of Us and *This War of Mine* prove that replay can be used in games about difficult topics as well, if it is done skillfully. Many more modern games employ replay in creative ways. They are not classic *replay stories*, as they move away from the focus on the choice – *the pullulating moment* – and its possible outcomes and focus on the development of the world through time and acts of playing.

Janet Murray compares digital *replay stories* to film narratives like *Run, Lola, Run* and *Groundhog Day* (Murray, 2004). Such stories involving a character who is given endless access to the same moments in time and a task to discover how to achieve the best possible ending – stories using sequential repetition – are just one type of narrative employing repetition. Another type could be disorder repetition, when the repeated events do not happen because of some higher force or special circumstance allowing the characters to disregard time, but because of some sort of disturbance in how the world, or a character's mind, works. This sort of repetition is harder to use to gain control over the world, because it plays out in a more unreliable manner, and is more like an obstacle itself rather than a way to overcome obstacles. A film example of disorder repetition is *The Haunting of Bly Manor* series.

One Hour One Life, a multiplayer game created by Jason Rohrer, uses replay in a meaningful way. Every player enters the world of the game for just one hour at a time; during this hour a whole life of a character passes from infancy to old age, if they survive until the end and die of natural causes. Players are born to their mothers – other players – and they have children, too. Everything they build in the game stays in it, so the next generations can work on further civilizational growth. Jason Rohrer is a god-like figure, still managing the game and adding new things so the development of its world can resemble the evolution of human cultures. Every life can be accessed just once, but players can play as many times as they wish. Replay, then, is not just a mechanic; it is a literary device – multiple acts of play are a metaphorical presentation of multiple human lives and the way they change the world.

The possibility of replaying the game can be included in the plot on many levels. The plot of *Moirai*, an online game, when it was still accessible, relied on the decisions of the previous player. They had to decide whether to kill a potential murderer, not knowing that they would become him in the next player's game, and that the words they said in the game would be repeated to the next player (Prescott, 2017). The characters of *Undertale* remember the previous playthroughs, especially being killed. This points to the playful oppression happening in digital games, including the oppression allowed through replay. It is allowed – and not necessarily harmful – to exercise one's power over digital characters. Their consciousness, however, is traditionally not a part of the deal. *Undertale* resembles *Westworld*[5], a television series about a simulated Wild West populated with AI robots who gain self-consciousness through suffering being abused and killed multiple times by clients, people having fun in the simulated world. In *Westworld*, however, the robots rally against their owners. The characters of *Undertale* just remind the players of how they have killed them. It may be left unnoticed,

[5] It is also interesting how both texts needed to highlight how their worlds are separate from the human world we know through their titles, which focus on separateness and the peripheral location of these worlds.

or be a surprise, or evoke regret or shame. If it is noticed, it changes the replay and possibly tips the player off to play differently than they played for the first time or than they would if there had not been a change in the game.

Replay can also be used as a mechanic allowing the player to win, but not in a way that it happens in a *replay story*, in which the player can change a previously made decision, or through simply mastering their skill through repetitions. Sometimes, a part of the game or a whole game which ends in failure is indispensable for a future win. *Outer Wilds* is a game in which every playthrough lasts 22 minutes and ends with the sun reaching the supernova stage. The protagonist can remember what happened during each consecutive loop, but the world remains unaffected and replays itself again, letting the player discover what happens every 22 minutes in each place and arrive at a solution. *Braid* allows players to go back in time in every single moment of the game and solve puzzles through moving back and forward in time. At some point, distinguishing between past and present starts to be difficult. Finally, the interactive movie *Bandersnatch* requires the player to choose a specific route and fail; without it, the player does not have crucial information to finish another route leading to the main ending.

REPLAYABILITY VS TELLABILITY

A tellable story, writes Raphaël Baroni, is a story worth telling. The audience perceives a story as a tellable one if its events are out of the ordinary, or the development of its plot is surprising enough (Baroni, 2011). The outcome of being told a subjectively tellable story is the pleasure of uncovering the plot, of the feeling of suspense, of being invested in the plot and rewarded with a satisfying ending. A story repeated multiple times to the same audience might lose in terms of tellability as the novelty wears off; in the same manner, a game replayed multiple times could lose its narrative appeal.

"Replayability," as Krall and Menzies point out, is "a quantifiable measure to the enjoyability of the game. That is, a measure of how long a person can enjoy a game before it becomes boring" (2012, pp. 3). It would seem then that the two most powerful sources of pleasure in games, their replay value and the tellability of their stories, contradict each other. This would create a design conundrum: a game with high replay value would at some point lose so much tellability that it would become boring. A game with low replay value does not offer much pleasure from the beginning. The question is, then, how could a highly replayable game that would not bore players too quickly be designed?

Before exploring possible answers to this question, it is important to narrow the scope of games this dilemma even regards. First, there would be those which feature a story with distinguishable events, more or less significant to the whole game (*Undertale*, *What Remains of Edith Finch, The Legend of Zelda: Ocarina of Time, The Witcher 3: Wild Hunt, Diablo III*). Second, games that do not feature a narrative with distinguishable events even if the story can be superimposed by the player (*Chess*, *Tetris*, *The Sims* series without narrative expansions). There is not much to say about the relationship between tellability and replayability in regard to non-narrative games. Of course, elements of such games could be treated as elements of the story – then the game would retain its tellability for as long as there is a will to replay for

the sake of these elements (e.g., new levels, objects, achievements, or just purely winning). In most cases, however, treating elements of non-narrative games as elements of the narrative seems to be a stretch – and an unnecessary one.

The cause of a particular replay of a narrative game is crucial to the relationship between replaying and tellability of the story. It would seem that games that rely less on the narrative and more on the gameplay, like *Diablo*, would less often be replayed for the sake of exploring the story or changing its ending, and that games relying more heavily on the story, like *The Witcher*, would more often be replayed for narrative reasons. If the game is replayed for the sake of something else than the narrative, then the featured story is repeated, possibly multiple times, and might not be tellable anymore, as the novelty of events and development of the plot wears out. If the game is replayed to change or further explore the story, the opposite happens: new things discovered and changes in the development of the story do not lower tellability, they raise it.

There are some new ideas on how to keep a narrative game tellable, when it is played for reasons unrelated to the narrative.. One of them is New Game +, a mode adding new content after the player finishes the first playthrough. Many newer games use it to some extent: *Horizon Zero Dawn*, *Persona 5*, *Dark Souls 2,* and more (Sawyer, 2020). *The Last of Us 2* lets the player replay the game with a developed avatar they finished their first game with (Avard, 2020). *Layers of Fear 2* invites the player to replay the game in a more relaxed version (moving freely through chapters is now possible) in order to find all of the omitted game's content and some new items which add to the story. Procedural generation of elements, such as the planets in *No Man's Sky*, also make replays fresher and stories more tellable.

Another way to maintain tellability is the variation in possible paths. The older game *Indiana Jones and the Fate of Atlantis* featured three paths: *wits*, *fists*, and *team*. Each path involves the same locations, but the quests are different. *Undertale* follows in its footsteps and offers three basic routes: *neutral*, *pacifist*, and *genocide*, as well as some additions, such as the so-called "hard mode" that can be started with naming the main character "Frisk." It is even more complicated here, as the choice of routes affects further playthroughs (e.g., the genocide path affects all future pacifist routes; giving up the protagonist's soul permanently alters the endings of the pacifist and genocide routes). Both these additions – New Game + and routes – raise the tellability of replayed stories, in some cases so much that new content might be the reason for replay.

However, there are prominent voices still speaking against the point of narrative-based games. In 2017, Ian Bogost commented on the holodeck fantasy in his article "Video Games Are Better Without Stories." He states that there are certain difficulties in the creation of a game truly employing the player's narrative agency. He brings up the example of *Façade*, a game loosely based on *Who's Afraid of Virginia Woolf*. "It was still easily undermined," he argues; for example, by a player who pretended to be a zombie during the whole game and says "nothing but 'brains'" (Bogost, 2017). It is hard to decide what exactly was easily undermined. Was it the player's agency? They seemed to exercise it well enough, though the experience may have been spoiled by other characters' oblivious responses. Or maybe it was the mood of the game that was undermined – but this interpretation relies on the belief that such counteractive play necessarily hurts the game, and that counteractive reading only applies to games (if it is an argument against narrative games and not narratives in general).

Or maybe, finally, such behavior undermines the Holodeck fantasy – a vision of moving freely through the world of fiction that is ready to receive us – and it is indeed a fantasy.

In order to escape the impossibility of fully responding to player's actions, Bogost reports, many games employ environmental storytelling and cast the player as a detective rather than a protagonist of the story. Bogost claims that it is unnecessary, as games like *What Remains of Edith Finch* or *Gone Home* could as well be films or other linear narratives (Bogost, 2017). Marie-Laure Ryan comments on the limitations of the player's role. She claims that the protagonist of a game will always be a type-character, more of a vehicle to explore the world than a narrative-changer. She writes that the reason for this is player's choice: that players would rather play a game like "Russian fairy tales, Alice in Wonderland, Harry Potter, or Sherlock Holmes" instead of potentially tragic, character-driven stories like "Hamlet, Emma Bovary, Gregor Samsa in *The Metamorphosis*, Oedipus, Anna Karenina, [or] the betrayer Brutus in *Julius Ceasar*" (Ryan, 2001). The choice, however, does not seem to be the real reason. As Jesper Jull proved, playing always comes hand in hand with suffering and failure (Juul, 2013), and there are many people ready to experience it in a playful activity. It is more the technical difficulties that such stories face. They have to use a script, and moving with the script, even if it allows choice, is hardly comparable with exercising as much agency as a Shakespearian character. The tellability suffers, and so does the story – as Aristotle wrote, "events with the greatest 'cathartic' effect are those whose development, even though causally connected, are unexpected by the audience" (as paraphrased in Baroni, 2011).

The key to the development of games as a narrative medium is then for them to produce something else than either stories that are good but would we also be fine expressed in other media, or stories aiming at narrative grandeur but limited by their form. It would be strange not to notice everything that does not fall into these categories. First, Ian Bogost does not bring up his procedural rhetorics in this argument, although it is a very important *narrative* device – and one that is characteristic of games. Second, self-conscious games like *Doki Doki Literature Club*, *Bandersnatch,* or *Undertale* might not be able to respond to players whatever they do – and what players can do is limited – but nevertheless they are able to react and comment on players' actions in a meaningful way. And with or without commentary, influencing or trying and being unable to influence the world is still something only a game can simulate. It is unknown whether this can go any further – but the future of *replay story* is still definitely worth exploring.

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