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İÇİNDEKİLER

CRAFTING ATMOSPHERE: SONIC DESIGN IN NONLINEAR GAME WORLD

İdil ÖZDEMİR[1]

1. INTRODUCTION

Abstract cinema has its own place in the world of movies, as it engages people through its intense application of sound and picture. Liberating itself from traditional storytelling, it employs light, color, and sound to express emotion and challenge viewers in its own unique way.

Pure cinema, often referred to as "visual music," is a cinematic form that prioritizes the aesthetic and expressive qualities of the medium over conventional storytelling, such as Oskar Fischinger's (1900-1967) and Norman McLaren's (1914-1987) animated short films. By focusing on the inherent properties of the cinematographic frame, pure cinema invites the viewer to engage with the medium in a more immersive and introspective manner. The importance of this approach lies in its capacity to challenge the conventional perceptions of cinema, pushing the boundaries of what is considered "acceptable" or "meaningful" within the art form.

One of the key aspects of pure cinema is its sound design. The integration of sound, often in the form of ambient soundscapes or experimental compositions, plays a crucial role in shaping the viewer's experience and immersion. The absence of a traditional narrative structure allows the sound to take on a more

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prominent role, becoming an integral part of the visual experience.

Immersion is one of the most important aspects of the game experience (Cairns, Cox, & Nordin, 2014). One interesting definition of immersion in the context of video games differentiates between some aspects of immersion. Sensory immersion concerns the audio–visual presentation of the game and how real-world stimuli are overpowered by the game stimuli, and players become focused solely on the game world (Ermi & Mäyrä, 2005).

The game "Exo One" (2021) by developer Exbleative provides an opportunity to examine how its audio-visual elements produce a sensory immersion and atmospheric experience within the study of film. It stands out in its minimalist visual style, exploration gameplay, and innovative approach to traversal mechanics. The soundscape is a fundamental element of the game, blending ambient music with environmental sounds to generate the feeling of exploring other worlds.

This research adopts the "diegetic/non-diegetic" framework to analyze the selected video game, in comparison to the related films, as an attempt to construct a conceptual platform between the film and video game universes. In the audiovisual media, referring to the relationship between the sound, music, and the narrative universe wherein they exist on screen by using the terms "diegetic" and "non-diegetic" has grown into standard usage. At their core, these concepts refer to the spatial and temporal integration of audio elements within the depicted fictional universe.

The third term imported into film musicology by Claudia Gorbman that has become common, though slightly less so than "diegetic" and "non-" or "extradiegetic" music, is "metadiegetic" music: "music we understand as 'narration by a secondary

narrator'" (Gorbman, 1987, p. 22). As Heldt (2013, p. 120) mentioned, "in Genette's terms, this is 'internal focalization.' The character's mind serves as the lens through which the narration is focused, without the narration relinquishing control over the telling. The character does not become the narrator, but rather remains the focal point of the narration's attention."

Acclaimed French film theorist and composer of experimental music Michel Chion's seminal work on the relationship between sound and image in cinema has provided a fundamental understanding of the concepts of diegetic and non-diegetic sound. Chion's "Diegetic" theory can be better understood in Table 1 below:

Table 1. The space in the screen
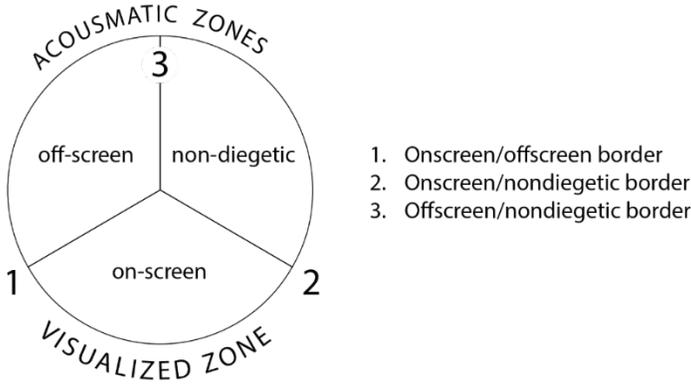
Resource: *Chion, 1994, p. 74*

Game designers often use both in-game (diegetic) and external (non-diegetic) sound elements to shape player experiences, directing attention and evoking emotions. Diegetic voice acting, for example, adds depth and realism to a game's world, making it feel more immersive. As Ertan (2025) points out:

> "This distinction is crucial for understanding how audiences experience immersion and narrative coherence

since the placement of sound inside or outside the narrative space influences perception, identification, and emotional engagement. Considered within the frameworks of video games and cinematic audio-visuals, diegesis troubles traditional distinctions: music can shift back and forth between background score and interactive elements that the player directly engages with, thereby impacting narrative meaning and emotional response." (p. 24)

However, analyzing the diegetic soundscape of a game by employing meta-diegetic sound and the comparison of similar video games in this context is relatively rare; therefore, this paper seeks to contribute to the field by bridging this disparity.

2. METHODOLOGY

Diegetic's inherited concept of "diegesis" has been a fundamental aspect of narrative theory, serving as a crucial tool for understanding the structure and dynamics of storytelling. Diegesis refers to the world or the narrative space within which a story takes place, as opposed to the non-diegetic elements that exist outside the narrative realm. "Despite its presence in several domains, narrowing it into a singular definition of narrative is tricky. One reason is that various schools on narrative define it in multiple ways" (Varadarajan & Dutta, 2022, p. 172).

The narrative designer is responsible for crafting the player's experience of the fictional world, and in the medium of computer games, the feeling of "being-there" or embodied presence is a unique characteristic that distinguishes it from other narrative forms, such as books and films.

In the discipline of narrative studies, the diegetic-non-diegetic vs. diegesis debate has been of interest and scholarly

dispute for centuries. 'Diegesis' refers to the world of the narrative or fictional world provided in a work, whereas 'diegetic-non diegetic' refers to the complexities that arise when boundaries between the story and its telling are blurred. On the other hand, as Cuadrado, Lopez-Cobo, Mateos-Blanco, and Tajadura-Jiménez (2020, p. 2) mention, "taking into consideration the diegetic vs. non-diegetic approach, Grimshaw (2008) found that diegetic sound provides a higher level of immersion, whilemusic increases immersion and reduces tension and negative affect."

Additionally, the concept of "meta-diegetic sound", also known as the sounds imagined by characters within the film, such as memories, hallucinatory sounds, subconscious and distorted events, can also be taken into account. This observation prompts a reexamination of the assumptions underlying the traditional understanding of sound in film, shifting the focus towards a more nuanced and multidimensional perspective.

An example can be given from the ending scene in Alfred Hitchcock's Psycho (1960), where Norman Bates hears his mother's voice in his head, which is a key moment that reveals the psychological complexity of his character. The diegetic analysis chart of the last moments of the film can be seen in Table 2 below:

Table 2. Diegetic Analysis of the ending scene in Alfred Hitchcock's Psycho (1960)

Diegetic	Meta-Diegetic/Non-Diegetic	Diegetic/Non-Diegetic
Police officers talk among themselves about giving Norman a blanket. Door closing and walking sounds.	Norman hears his mother's voice stating the murders were his doing. Sorrowful music accompanies.	Sorrowful music turns to a doubtful one, keeps accompanying, and intensifies. Towing chain sound.
Visuals		
The police office, the corridors of the police station, policemen sitting and walking around.	Norman sits in a jail cell, wrapped in a blanket.	Marion's car, which contains her remains and the stolen money, is retrieved from the swamp.

In short, learning about diegetic, non-diegetic, and meta-diegetic sound in games and movies teaches us how audio aids in storytelling, emotion, and world-building. Sound design in video games is even more interactive, where diegetic and non-diegetic sounds react to the action of the player to further facilitate interaction. Meta-diegetic sound that reflects a character's inner life adds one more level of emotional depth.

While most games reviewed here rely on environmental sound effects and diegetic music to establish an emotional connection, Exo One stands out by using sound to convey the inner anguish and trauma of the protagonist. In addition to simply enhancing immersion, so does this enhance the emotional impact of the game. By cleverly integrating its use of sound into the narrative fabric of the game, Exo One provides an even more interior, psychologically rich sonic experience, quite different from the others.

3. THE SONIC WORLD OF EXO ONE

Exo One takes players on humanity's first journey beyond the Solar System, placing them in the cockpit of an alien spacecraft like no other. The ship utilizes three physics-based modes of locomotion—rolling, gliding, and flying—to allow players to generate momentum as they glide through vast skies, oceans, and alien landscapes.

The game emphasizes exploration, blending surreal environments with an atmospheric electric guitar soundtrack. Story fragments are revealed through vocal narration, deepening the sense of mystery. By combining simple controls, stunning visuals, and immersive sound design, Exo One delivers a meditative and otherworldly experience. A screenshot from the game can be seen below in Figure 1:

Figure 1. A Screenshot from Exo One

Resource: *Exo One, developed by Exbleative (2021)*

Players pilot the alien craft using a gravity-based system to traverse extraterrestrial terrains. Rolling accelerates movement on planetary surfaces, gliding maintains momentum, and flying enables long-distance travel. Mastering the seamless transition between these modes is key to exploring diverse environments. A luminous beam in the sky serves as a guide, helping players navigate the game's nonlinear adventure. The journey involves traversing surreal planetary landscapes, interacting with alien structures, and gathering energy to progress. Each planet presents unique challenges shaped by its gravity and environmental features. The ultimate goal is to uncover the secrets of the alien technology and push toward the climactic end of the interstellar journey.

The narrative follows the ill-fated Jupiter Flyer mission, which ends in disaster when the crew encounters a mysterious alien energy, resulting in the ship's destruction and the loss of all aboard—except for the protagonist. A year later, the protagonist unexpectedly returns to Earth in a lifeboat, shocking everyone, including their grieving partner, Clara.

Aliens send schematics for a new ship, which NASA builds, but it fails without the protagonist as the pilot. After convincing NASA, the protagonist embarks on a journey to alien worlds filled with advanced technology. Along the way, the aliens help fix the ship when needed. The goal is to reach a black hole that manipulates time, allowing the protagonist to return to Jupiter and save the original crew. The mission succeeds, and the crew safely returns to Earth. The game ends with the protagonist exploring the clouds of Jupiter aboard their alien craft, offering a reflective and open conclusion.

Exo One comprises ten distinct levels, each presenting unique challenges influenced by the terrain. However, the soundscape remains consistent across all levels.

For instance, the first mission, "Sagan IV", like other missions, begins and ends with the sound of blowing wind, accompanied by fragmented and echoing voice messages from the previous crew, with some alien and signal sounds. These distorted voice mails are challenging to comprehend, so subtitles are provided. These voices provide fragmented details about the previous mission and the alien spaceship. For example, one of the subtitles from the game reads:

"...radio telescopes have received an extraterrestrial signal containing plans to build a spherical, exoplanetary probe..."

The visuals during this segment depict planet Earth. Following this introduction, the sound of thunder rumbling is heard. With each rumble, an image of the previous crew wearing their astronaut suits is displayed. The voicemail and the sound of blowing wind persist as the game transitions to the first planet, Sagan IV. Here, players take control and begin learning how to navigate the spherical alien ship, gradually mastering its unique mechanics.

The voicemails can be interpreted as meta-diegetic sound due to their lack of a tangible source within the game world and the hallucination-like blurry visual effects accompanying them. This portrayal aligns with auditory hallucinations, and they can arise from a variety of factors, both physiological and psychological.

As a result, the previous crew's voicemails, occasionally accompanied by alien signal-like sounds, constitute the primary meta-diegetic auditory elements in Exo One. These sounds serve as a bridge between the protagonist's inner psyche and the external mysteries of the game's universe, enhancing the surreal and introspective atmosphere.

During gameplay, the primary diegetic sound is the persistent wind, complemented by the sounds of the ship's movement and its contact with the terrain. Additional diegetic elements include the digital typing sound that corresponds to informational text displayed on the screen, as well as environmental audio cues like the sound of water and other natural elements. Together, these sounds create an immersive atmosphere that anchors the player in the game's alien landscapes.

The primary non-diegetic sound in Exo One is Rhys Lindsay's evocative soundtrack. It is integral to the game's atmosphere, blending ambient, minimalist, and experimental elements to complement the vast, surreal landscapes and introspective tone of the narrative. The soundtrack focuses on creating an expansive and ethereal soundscape, mirroring the cosmic and otherworldly environments of the game. The use of long, sustained tones, reverb-heavy textures, and layered ambient drones evokes a sense of mystery and solitude, reinforcing the player's emotional connection to the vastness of space.

Lindsay's soundtrack uses sparse melodies and evolving harmonics, often avoiding traditional resolution to mirror the

protagonist's uncertain journey and the lingering sorrow of the previous crew's failed mission. The music dynamically shifts between serenity and tension, reflecting the rhythm of exploration and the challenges players encounter.

The soundtrack adapts in real time, subtly changing based on player movement and progression. During high-speed moments, the music builds intensity with rhythmic or pulsating layers that sync with the ship's acceleration. In contrast, slower, more reflective segments are accompanied by subdued, atmospheric tones that emphasize stillness and wonder.

Lindsay blends synthetic and organic elements, weaving together electronic pads, deep drones, and glitch-like textures with softer, almost human-like sounds. This fusion captures the game's central themes of technology and nature, enhancing the sense of an alien yet strangely familiar world. The minimalist approach to instrumentation allows the soundscape to breathe, creating space for diegetic sounds like wind and terrain interaction to coexist seamlessly with the music.

In this respect, the audiovisual construction recalls the abstract-spatial logic evident in *The Monk and the Fish* (Michael Dudok de Wit, 1994), where atmosphere and architecture significantly contribute to musical visualization. As Ertan (2021) notes:

> "Therefore, while the atmosphere and architecture make their contribution to music visualization, the main characters almost act as abstract elements. Even the monk himself seems like a soft-edged triangle, with a little sphere on the top rather than a character. As a result, his works are usually formed of abstract, figurative, and spatial layers in the context of spirituality and mostly Baroque music visualization" (p. 90).

Similarly, Lindsay's score does not foreground character (sphere) psychology in a conventional narrative sense; rather, it transforms the protagonist into a perceptual node within a broader sonic-architectural system. The character, much like the monk described above, becomes an abstracted presence embedded in atmosphere and spatiality. This reinforces the game's experiential focus, where sound operates less as accompaniment and more as an architectural layer shaping the player's spiritual and spatial immersion.

To visually represent the diegetic components of Exo One, the chart below categorizes each sound element alongside its corresponding visual representation in the game in Table 3:

Table 3. Diegetic Components of Exo One

Diegetic Sound	Visual Representation
Wind	Vast, open landscapes; flowing terrain surfaces.
Ship Movement and Ground Contact	The alien ship rolls, glides, or bounces on planetary surfaces.
Digital Typing Sound	On-screen informational text appears in a futuristic font.
Water Sounds	Rivers, oceans, or other visible liquid bodies in the environment.
Environmental Factors	Dynamic weather effects like rain, storms, or changing terrain.
Non-Diegetic Sound	**Visual Representation**
Soundtrack by Rhys Lindsay: Synthetic and organic elements, blending electronic pads, low-frequency drones, and glitch-like textures with softer, almost human-like tones.	Surreal, cosmic visuals; atmospheric transitions, planetary landscapes.
Meta-Diegetic Sound	**Visual Representation**
Fragmented voicemails (echoed, distorted) of previous crew accompanied by alien signal-like sounds.	At the beginning and end of each mission, the sequence includes entering the planet and exiting through monoliths, accompanied by a corridor-like effect as light passes. The sudden appearance of photos of the previous crew follows this.

4. DISCUSSION: A COMPARATIVE ANALYSIS OF EXO ONE

Exo One takes players on humanity's first journey beyond the Solar System, placing them in the cockpit of an alien spacecraft like no other. The ship utilizes three physics-based modes of locomotion—rolling, gliding, and flying—to allow players to generate momentum as they glide through vast skies, oceans, and alien landscapes.

Mood has been addressed by music scholars stressing the importance of sound for the control and manipulation of player mood and emotion as well as establishing an immersive gameworld (Collins, 2008, pp. 133–136; Herzfeld, 2013, p. 149; Whalen, 2004). Games similar to Exo One include Journey (2012) and Flower (2009) by Thatgamecompany, both of which offer emotionally rich, atmospheric experiences with distinctive soundscapes. The Aery series (2020) by EpiXR Games UG also focuses on exploration and relaxation, while Scorn (2022) by Ebb Software is darker and more aggressive in tone. Each of these games shares some similarities with Exo One in its immersive worlds and experimental sound design, although they all differ in narrative intensity and emotional impact.

Figure 2. Screenshots from similar games
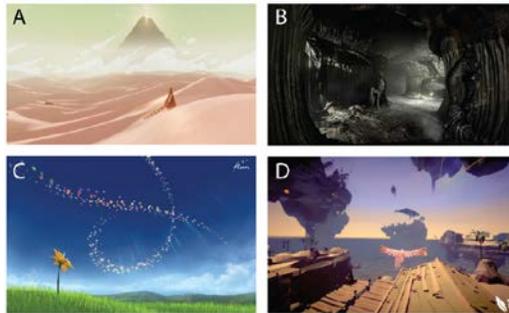
Resource: *A: Journey (Thatgamecompany, 2012); B: Scorn (Ebb Software, 2022); C: Flower (Thatgamecompany, 2009); D: Aery series (EpiXR Games, 2020).*

Exo One stands out in its unique sound design, particularly in its use of meta-diegetic sound, which is not common in other comparable games like Journey, Flower, the Aery series, or Scorn. The best example is the distorted, broken voicemails of the lost crew, which introduce a psychological aspect most other games lack. These voices, blended with eerie alien transmissions, are separated from the physical world, reinforcing the trauma and inner turmoil themes. Blending these, Exo One warps reality from the mind of the protagonist, creating an immersive, emotional audio experience.

On the other hand, Journey, Flower, the Aery series, and Scorn rely primarily on diegetic sound—sound within the game world—and non-diegetic music, which creates atmosphere from outside the narrative. Journey, for example, uses an orchestral score to elicit awe and connection, guiding the player's emotion from outside. Flower's soft, melodic soundtrack responds to the player's interaction, creating a peaceful, meditative atmosphere, but one that does not interact with narrative depth through sound. Similarly, the Aery series offers calming exploration-focused sound design but without Exo One's dynamic and emotionally sophisticated aural narrative.

Scorn takes a different approach, leveraging unnerving diegetic sound—squelching, metallic moans, and eerie atmospheric sound—to unsettle. While highly effective at creating a visceral horror experience, it doesn't delve into the psychological narrative elements that Exo One does with meta-diegetic sound. The sound design in Exo One does more than atmosphere; it mirrors the internal journey of the protagonist, highlighting feelings of isolation, loss, and existential uncertainty.

Emotionally, Exo One's soundscape is more profound than its contemporaries. While Journey and Flower convey a

sense of serenity and wonder with their environmental sound and music, Exo One imbues the sense of existential contemplation. The distorted voices and alien signals give way to mystery and emotional weight, involving the player with the trauma of the pilot and the haunting remnants of a mission that went catastrophically awry. Journey and Flower focus on exterior beauty and sentimental connection, while Scorn goes into horror and unease. Exo One, however, is unique in exploring psychological depth through the use of sound.

With its imperceptible blending of diegetic, non-diegetic, and meta-diegetic elements, Exo One manages to deliver an incredibly immersive and introspective journey. The terrain sounds, wind, and ship audio keep players connected to the environment, and an ambient soundtrack adds emotional depth. What truly sets it apart, though, is the warped voices and broadcasts, which don't just characterize the world but pull players into the protagonist's mind. Where Journey and Flower reach for external wonder, Exo One creates a more internal and psychologically compact experience through its sound manipulation.

Though Journey, Flower, the Aery series, and Scorn boast intense aural landscapes, none integrate diegetic, non-diegetic, and meta-diegetic elements in a way that enhances both emotional and narrative experiences to the same degree as Exo One. Through its distinctive sound design, Exo One is a meditative, immersive experience that considers themes of loneliness, loss, and the psychological effects of exploration.

Similarly, the Qatsi Trilogy (Koyaanisqatsi, Powaqqatsi, Naqoyqatsi) of Godfrey Reggio shares a fascinating affinity with Exo One in their emphasis on visual and aural narrative, making them perfect examples of "pure cinema" and "pure gaming." The Qatsi Trilogy and Exo One employ an abstract, experiential

narrative approach that encourages the viewer or player to become contemplative, and as such, they are compelling counterparts in their respective mediums.

The theory of "pure cinema," explored by Gorbman (1987) and Chion (1994), emphasizes narrative image and sound over dialogue for the purposes of heightened audience immersion. A case in point is the Qatsi Trilogy, which uses evocative visual montages with Philip Glass's minimalist, non-diegetic music to create a rhythmic interchange between sound and image. Likewise, Exo One achieves this feeling of immersion through its graceful, motion-based gameplay and ambient soundtrack that encourages reflection and a feeling of wonder.

As Chattopadhyay (2017) mentions, through the use of sync sound recording and surround design in the digital realm of cinema, similar to any other augmented digital media environment, "spatial presence" is produced to the degree to which an audience "feels that the mediated environment and the objects within the environment that surrounds him or her is real to the extent that the environment responds realistically" (Ahn, 2011, p. 25). By contrast, Exo One employs a combination of diegetic sounds, such as the hum of spacecraft propulsion, and non-diegetic ambient tones to envelop players in its extraterrestrial landscapes. These non-diegetic elements often dominate, serving as emotional cues akin to Glass's compositions in the films.

Chion (1994) defines meta-diegetic sound as aural elements that reflect a character's subjective experience, bridging the diegetic and non-diegetic worlds. The Qatsi Trilogy employs this through the interplay of sound and imagery, particularly in sequences where the music suggests an emotional or thematic interpretation beyond the immediate visuals. Similarly, in Exo One, transitions between planets or moments of accelerated flight

introduce meta-diegetic shifts, where the soundscape reflects the player's altered sense of scale and motion.

The films' soundtracks alternate between awe and tension, mirroring the contrast between humanity's technological achievements and their environmental consequences. In Exo One, the music similarly oscillates, creating moments of tranquility or tension that guide the player's emotional journey across its alien worlds. Music (soundtrack) has intimate links with engagement and participation within the game environment. This has been explored empirically, with one paper finding that for gamers with little experience, the inclusion of background music and sound effects increases immersion, although music was not explored separately (Zhang & Fu, 2015).

Both Exo One and the Qatsi Trilogy leverage pure cinema's principles to immerse their audience in an audiovisual experience. Through diegetic, non-diegetic, and meta-diegetic sound, they craft narratives that transcend words, inviting reflection on humanity's place within larger systems of nature and technology. As immersion is the experience of being deeply involved in a fictional world, it already creates one of the motivations to play video games, as people often report playing video games to discover new things, create a new persona, and escape real-world problems through the game (Yee, 2006).

5. CONCLUSION

"Video games require certain modes of active engagement on the player's part that are beyond what is required by film viewers" (Hart, 2014, p. 276). In this article, the author employed the "diegetic/non-diegetic" framework improved by Michel Chion to analyze the experimental video game Exo One, drawing comparisons with related films and games to establish a conceptual bridge between the cinematic and interactive video

game worlds. The study began with an introduction to the fundamental concepts underlying this analysis, followed by a detailed explanation of the selected approach in the methodology section, supported by relevant examples. Subsequently, the author provided an overview of Exo One before applying the chosen analytical approach, incorporating tables to illustrate key findings. In the discussion section, Exo One was compared to similar games and films to highlight its unique qualities and potential limitations. This comparative approach allowed for a more significant understanding of its narrative and aesthetic form, drawing on broader arguments about the convergence of cinema with interactive media.

The diegetic, non-diegetic, and meta-diegetic sounds in Exo One together work to characterize the intellectual and emotional state of the player. Diegetic sounds place the player within the world of aliens, while non-diegetic soundtracks form the emotional setting and context. Meta-diegetic sounds, particularly the shattered voice messages, contribute a psychological factor that increases the narrative dimension. Together, these sound elements create a cohesive, multi-layered audio experience that adds depth to the game's themes of isolation, discovery, and the haunting consequences of past missions.

As gaming technology moves forward, we'll likely see more games using sound in creative and interactive ways, especially in abstract and experimental titles. Games like Panoramical (2015) by Finji and Proteus (2013) by Twisted Tree and Curve Games already treat sound as a living, changing element, reacting to the player's movements and shaping the world around them. Similarly, Resonair, Monstars, and Stage Games' Tetris Effect (2018) uses music, visuals, and vibration to create a rhythmic, almost hypnotic experience in which everything is synchronized with the gameplay. Titles like Rez and

Tetris Effect demonstrate that sound is not just background, and it can be a significant element of how a game feels and plays.

More recent titles, such as Manifold Garden (2019) by William Chyr Studio and NaissanceE (2014) by Limasse Five, develop it further with the use of subtle, ambient soundscapes to develop the perception of infinity, recursion, and dream-like exploration. As technology continues to evolve, game audio will probably become more reactive and immersive, adapting to players' actions and emotions in real-time. With the introduction of procedural sound design and spatial audio, next-generation abstract games can push these limits even further, using sound not just to tell a story, but to change the way we experience movement, space, and interaction itself.

In the future, sound will do more than enhance games; it will shape how players experience and interact with them on a deeper level.

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DİJİTAL OYUN TASARIM SÜRECİNDE KÜLTÜR MİRASININ YENİDEN YORUMLANMASI: YEREL HİKÂYELER

Burak DERVİŞOĞLU[1]

1. GİRİŞ

Dijital teknolojilerin, küresel ağların ve etkileşimli medyanın toplumsal hayatın her katmanına nüfuz ettiği çağımızda, toplumların kolektif belleğini ve kimliğini oluşturan kültürel miras, eşi görülmemiş fırsatlar ve değişimlerle karşı karşıyadır. Dijital arşivler, sanal müzeler çevrimiçi bilgi platformları, somut ve somut olmayan kültürel miras unsurlarının belgelenmesi ve evrensel ölçekte erişilebilir kılınması için devasa bir potansiyel sunmaktadır. Ancak bu dijitalleştirme süreçleri, nötr bir veri aktarım mekanizması değildir. Süreç, kültürel eserlerin özgün bağlamlarından koparılması, homojenleştirici küresel kültür endüstrisi içinde ticarileştirilmesi ve anlamsal derinliğinin sığlaştırılması risklerini barındırabilmektedir (Koçak & Yılmaz, 2022).

Bu dinamik ve karmaşık gerilim hattının merkezinde, çağdaş dönemin en baskın kültürel üretim formlarından ve deneyim alanlarından biri olan dijital oyunlar yer almaktadır. Milyarlarca dolarlık bir endüstriye dönüşen dijital oyunlar, artık salt birer eğlence aracı olarak değil; karmaşık anlam yaratma süreçlerinin, tarihsel temsiliyetin ve güçlü birer kültürel aktarım mekanizmasının başat aktörleri olarak analiz edilmektedir

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(Symeonidi, 2020). Özellikle yerel efsaneler, mitler ve diasporik göç hikâyeleri gibi kuşaktan kuşağa sözlü veya pratik yollarla aktarılan miras unsurları, dijital çağın hızlandırılmış tüketim alışkanlıkları karşısında kırılganlaşmaktadır. Dijital oyunlar, sağladıkları oyuncu aracılığı ve etkileşimli yapılarıyla bu mirası pasif arşiv nesneleri olmaktan çıkarıp, yeni nesiller için yeniden yaşanabilir deneyimlere dönüştürme potansiyeli taşımaktadır (Calleja, 2013).

Bunwith birlikte, kültürel mirasın etkileşimli bir deneyime dönüştürülmesi, basit bir "dijitalleştirme" veya dışsal ödüllere dayalı yüzeysel bir "oyunlaştırma" eyleminden çok daha fazlasını gerektiren, multidisipliner bir yeniden yorumlama sürecidir. Tarihsel ve kültürel bir anlatıyı, onun sosyolojik derinliğini ve etik değerlerini aşındırmadan bir oyun dünyasına entegre etmek; oyun tasarımı, anlatıbilim, folklor ve insan-bilgisayar etkileşimi disiplinlerinin eşgüdümlü çalışmasını zorunlu kılar. Gillings'in (2001) vurguladığı gibi, sanal ortama aktarımda asıl mesele yaratılan kopyanın ontolojik olarak ne kadar fotogerçekçi göründüğü değil, yaratılan deneyimin mirasın taşıdığı ruha, mesaja ve gerçeğe ne kadar yakın olduğudur (Gillings, 2001).

Bu çalışmanın temel amacı; yerel hikâyelerin ve kültürel mirasın dijital oyunlara dönüştürülmesi sürecinde kültürel, etik ve estetik boyutları gözeten, kapsayıcı yaklaşımları içeren bütüncül bir metodolojik çerçeve sunmaktır. Bu doğrultuda araştırma, küresel oyun endüstrisinden seçilen başarılı ve tartışmalı kültürel miras oyunlarını incelemekte; ardından standart MDA (Mekanikler, Dinamikler, Estetik) çerçevesini "Kültürel Rezonans" odaklı olarak yeniden yorumlamakta ve bu yeni modeli Köroğlu Destanı vaka analiziyle desteklemektedir.

2. LİTERATÜR TARAMASI VE KAVRAMSAL ÇERÇEVE

2.1. Eleştirel Miras Çalışmaları ve Yetkilendirilmiş Miras Söylemi

Kültürel miras, geçmişin durağan bir yansıması değil; günümüzde aktif olarak inşa edilen, yorumlanan ve hakkında siyasi/kültürel mücadeleler verilen dinamik bir alandır. Laurajane Smith (2006), mirası anıtlar ve fiziksel alanlarla sınırlayan hegemonik bakış açısını "Yetkilendirilmiş Miras Söylemi" (Authorized Heritage Discourse - AHD) olarak kavramsallaştırmıştır (Smith, 2006). AHD, mirası uzmanların kontrolünde olan, korunması gereken yüce ve dokunulmaz nesneler olarak tanımlar. Bu otoriter yaklaşım, yerel halkların, azınlıkların ve somut olmayan kültürel mirası anlama ve yaşatma biçimlerini marjinalleştirir.

Dijital oyunlar, eleştirel miras çalışmaları bağlamında AHD'yi sarsan en güçlü güncel araçlardan biri olarak yorumlanabilir Oyunlar, mirası anlatıdan çıkararak etkileşime girilebilir, değiştirilebilir ve oyuncunun eylemleriyle yeniden üretilebilir bir formata taşır. Bu yönüyle oyun tasarımı, mirası demokratikleştiren ve çok sesliliğe açan bir pratik olarak öne çıkmaktadır (Symeonidi, 2020).

2.2. Tarihsel Oyun Çalışmaları: Doğruluk ve Otantiklik

Dijital oyunların mirası nasıl temsil ettiği, son yıllarda tarihsel oyun çalışmaları adıyla bağımsız bir disiplin doğurmuştur. Adam Chapman (2016), oyunların tarihi temsil etme biçimlerini analiz ederken çok kritik bir ayrım yapar: tarihsel doğruluk ve tarihsel otantiklik/sahicilik (Chapman, 2016). Tarihsel doğruluk, kronolojik olayların, mimarinin ve silahların birebir ve olgusal kopyalanmasına odaklanır. Buna karşın tarihsel otantiklik, geçmişin sosyo-kültürel ruhunu,

dönemin inanç sistemlerini ve marjinalize edilmiş duyguları oyuncuya geçirebilmeyi ifade eder.

Michał Mochocki (2021) ise rol yapma oyunlarını doğrudan birer "miras pratiği" olarak kabul eder (Mochocki, 2021). Mochocki'ye göre oyuncuların tarihsel veya mitolojik materyalle etkileşimi salt bir kurgu tüketimi değil, ulusların ve toplulukların kimlik inşa ettiği devasa anlatıların kişisel düzeyde yeniden canlandırılmasıdır.

2.3. Prosedürel Retorik ve Etkileşimli Dijital Anlatılar

Gordon Calleja'nın (2013) Dijital Oyunlarda Anlatısal Katılım teorisi, oyunlardaki hikâyenin iki düzlemde incelenmesi gerektiğini öne sürer: Tasarımcı tarafından önceden kodlanmış anlatı ve oyuncunun kurallar bütünüyle girdiği etkileşimden ortaya çıkan anlatı olarak yorumlanabilir (Calleja, 2013).

Bu etkileşimi kültürel bağlamda anlamlı kılan temel unsur Ian Bogost ve Miguel Sicart tarafından tartışılan prosedürel retorik kavramıdır (Bogost, 2007; Sicart, 2011). Prosedürel retorik, oyunların sadece görsel veya metinsel olarak değil, kuralları ve mekanikleri aracılığıyla argümanlar öne sürdüğünü ve anlam ürettiğini belirtir. Örneğin, bir kültürel miras oyununda şiddet bir mekanik olarak çıkarılıp yerine diplomasi veya ikna konulduğunda, oyunun prosedürel retoriği barışçıl ve dekolonyal bir kültürel aktarım gerçekleştirmiş olur.

Symeonidi (2020), oyun tasarımının kültürel kurumlarda basit bir iletişim aracı olmanın ötesinde, doğrudan aktif bir küratöryel müdahale olduğunu savunmaktadır (Symeonidi, 2020). Kültürel mirası temel alan bir oyun, hakim tarihi anlatılara karşı oyuncunun eylemliliğiyle alternatif perspektifler sunabilen bir alandır.

3. KÜLTÜREL MİRASIN KÜRESEL DİJİTAL OYUNLARDAKİ TEMSİLİ: KARŞILAŞTIRMALI ANALİZLER

Araştırmanın bu bölümü, kültürel mirasın, mitlerin ve yerel hikâyelerin modern video oyun endüstrisinde nasıl ele alındığını küresel örnekler üzerinden analiz etmektedir.

3.1. Ortak Üretim ve Tasarım: Never Alone, Tchia ve Umurangi Generation

Geleneksel oyun endüstrisinin temel handikaplarından biri, yerel kültürleri onlara danışmadan, dışarıdan (top-down) bir bakış açısıyla metalaştırmasıdır. Buna karşın, Alaska'nın Iñupiat yerlileriyle ortaklaşa geliştirilen Never Alone (Kisima Inŋitchuŋa, 2014) oyunu, somut olmayan kültürel miras dijitalleşmesinde bir yer edinmektedir. Geliştirme sürecine yerel hikâye anlatıcıları, topluluk liderleri ve yaşlılar doğrudan yön vermiştir. Oyun, somut olmayan kültürel mirası koruyan dinamik bir dijital arşiv işlevi görmekte ve geleneksel kemik oymacılığı gibi sanatları çevre tasarımına doğrudan entegre etmektedir.

Yeni Kaledonya kültüründen beslenen Tchia (2023) ise, adanın bitki örtüsünü, müziklerini ve dünyada sadece 12.000 kişinin konuştuğu Drehu dilini oyuna taşır. Tasarımcılar etik bir kararla, kültürel unsurları fantezi bir çerçevede eritmiş ve yerel inançlara karşı olası bir saygısızlığın önüne geçmek için kurgusal bir takımada tasarlamıştır.

Māori kültürünü merkeze alan Umurangi Generation (2020) oyunu ise, Yerli Fütürizmi ve dekolonyal oyun tasarımının en çarpıcı örneklerinden biridir. Oyun, Māori sembollerini Batılı bir çerçeveye oturtmak yerine doğrudan Māori mantığı ve dünya görüşü üzerinden inşa edilmiştir. Oyuncu, fotoğraf çekme mekanikleri üzerinden iklim krizi, kolonyalizm ve neoliberal politikaların yarattığı yıkıma tanıklık eder.

3.2. Psikolojik Otantiklik, Mitoloji ve Çevresel Anlatım: Hellblade ve Bramble

Kültürel miras, bazen toplumların en derin korkularını ve psikolojik durumlarını mitler üzerinden kodlar. Hellblade: Senua's Sacrifice (2017), Kelt ve İskandinav mitolojisini (Helheim, Hela) arka plan alarak ağır psikoz yaşayan bir Kelt savaşçısının zihnine odaklanır. Oyun, nörobilimcilerle ve psikoz hastalarıyla ortaklaşa geliştirilmiş; semptomlar oyunun görsel, işitsel ve mekanik unsurlarına yedirilmiştir. Hellblade, mitolojik mirasın mental sağlık gibi modern kavramları empatiyle aktarmak için nasıl kullanılabileceğini kanıtlayan bir duygusal otantiklik örneklerindir.

İsveç merkezli Bramble: The Mountain King (2023) ise, İskandinav doğa folklorunu (Näcken, Skogsrå, Troller) karanlık bir eko-gotik atmosferde işler. Orman sadece bir dekor değil, doğanın tekinsizliğini ve uyarıcı halk hikâyelerinin felsefi alt metnini yansıtan çevresel bir anlatıcıdır.

3.3. İcat Edilmiş Gelenekler ve Kimlik: Ghost of Tsushima ve The Witcher 3

Oyunlar, ulusal efsaneleri küresel birer fenomen haline getirme gücüne sahiptir. Ghost of Tsushima (2020), 1274 Moğol istilasını işlerken, tarihi gerçeklikten ziyade Akira Kurosawa filmlerinin estetiğine ve Edo döneminde romantize edilen bushidō (samuraylık onuru) kavramına dayanan bir icat edilmiş gelenek sunar. Oyun, tarihsel bir rekonstrüksiyondan ziyade, popüler kültürün samuray imgesini tatmin eden bir Batı-merkezli oryantalist rüya olarak da yorumlanabilir.

Avrupa bağlamında The Witcher serisi, Batı'nın Anglo-Sakson fantezi tekelini kırarak "Slav Fantezisi" alt türünü yaratmıştır. Polonya folklorundan beslenen oyun, yalnızca yerel bir edebiyatı dijitalleştirmekle kalmamış; aynı zamanda Polonya'nın kendisini Batı popüler kültüründe konumlandırması

açısından epistemik bir itaatsizlik ve postkolonyal bir kültürel savunma aracı olarak analiz edilmiştir.

3.4. Diasporik Kimlik, Göç ve Duygusal Emek: Venba

Kültürel miras sadece anıtlardan ibaret değildir; gündelik ritüeller, yemek kültürü ve göçmen deneyimleri de yaşayan birer mirastır. 1980'lerde Kanada'ya göç eden Tamil bir ailenin hikâyesini anlatan Venba (2023), yemek pişirme mekaniklerini kültürel bellek ve diasporik kimlik inşası için kullanır. Zarar görmüş geleneksel yemek tariflerini annesinden kalan defterden çözmek, kaybolan mirasın onarılmasını sembolize eder. Akademik literatürde Venba, geleneklerin aktarımında kadınların üstlendiği duygusal emeği ve göçmen çocuklarının yaşadığı kültürel ikircikliliği oyun mekanikleri ile kusursuz bir şekilde eşleştiren güçlü bir metin olarak değerlendirilebilir.

3.5. Kültürel Sermayenin Dönüşümü ve Temsiliyet Yükü: Black Myth: Wukong ve Raji

Çin edebiyatının temel eserlerinden Batıya Yolculuk üzerine inşa edilen Black Myth: Wukong (2024), geleneksel mitolojinin ve felsefenin çağdaş endüstri standardıyla dijitalleştirilmesinde önemli yer kaplamaktadır. Literatürde bu oyun, kültürel sembollerin yüksek bütçeli bir formatta yeniden yorumlanarak kültürel sermayenin ekonomik sermayeye dönüştürülmesinin ve Çin yumuşak gücünün küresel yayılımının en güçlü örneği olarak yorumlanabilir (Wu, 2025).

Hint ve Bali mitolojilerinden beslenen bağımsız yapım Raji: An Ancient Epic (2020) ise, 18. yüzyıl Pahari resim sanatı stilini oyunun görsel tasarımına doğrudan entegre eder. Akademik çalışmalarda bu oyun, Batı dışı stüdyoların kendi kültürlerini anlatırken karşılaştıkları temsiliyet yükü bağlamında incelenmektedir. Oyun, Hint kültürüne içeriden ve saygılı bir bakış sunarak mimari mirasın dijital sanatta görsel bir arşiv olarak nasıl yaşatılabileceğini örneklemiştir.

3.6. Eğitsel Bir Araç Olarak Çatışmasız Keşif: Assassin's Creed Origins - Discovery Tour

Oyunlaştırma ve miras eğitiminin kesişimindeki en radikal pedagojik örneklerinden biri, Assassin's Creed Origins (2017) için yayınlanan Discovery Tour modudur. Geleneksel aksiyon ve şiddet odaklı mekanikleri tamamen devreden çıkaran bu mod, Antik Mısır dünyasını tarihçiler ve Mısırbilimciler rehberliğinde gezilebilen yaşayan bir sanal müzeye dönüştürüldüğü söylenebilir. Bu model, yüksek bütçeli dijital oyunaların ticari bağlam dışına çıkarılarak sürdürülebilir bir eğitim ekosistemine dönüştürülebileceğini göstermektedir.

4. YÖNTEM VE YÖNTEMSEL YAKLAŞIM: TASARIM ODAKLI ARAŞTIRMA VE KAPSAYICI MODELLER

Yukarıdaki dijital oyun analizleri, kültürel mirasın dijitalleştirilmesinin çok katmanlı bir metodoloji gerektirdiğini göstermektedir. Bu çalışma, nitel veri analizi ile tasarım pratiklerini birleştiren tasarım yoluyla araştırma desenini benimsemektedir. Yöntem üç temel sacayağı üzerine inşa edilmiştir:

Kapsayıcı Tasarım ve Ortak Üretim Çerçevesi: Avrupa Birliği Ufuk programı kapsamındaki i-Game projesi, kültürel oyunların salt ticari stüdyoların tekelinde ve yukarıdan aşağıya üretilemeyeceğini savunmaktadır. Bunun yerine çalışma; müzelerin, yerel toplulukların ve bağımsız geliştiricilerin açık kaynaklı bir platformda bir araya geldiği ortak üretim modellerini örneklendirir. Sürece dahil edilen açıklanabilir yapay zeka oyun içi karakterlerin ve kültürel metinlerin tarihsel doğruluk ve etik çerçevede şeffaf bir biçimde denetlenebilmesine olanak tanır (Kosti vd., 2025).

Kültürel Etkileşim İçin Sezgisel Değerlendirme: Kültürel miras temalı oyunların etkililiği, geleneksel yazılım testlerinden farklı değerlendirme metrikleri gerektirir. Kültepe Arkeolojik Alanı için geliştirilen sanal gerçeklik oyunu üzerinde yürütülen çalışmalarda, miras, tasarım ve insan-bilgisayar etkileşimi uzmanlarıyla "Eşzamanlı Sesli Düşünme" ve "Sezgisel Değerlendirme" testleri yapılmıştır. Analizler, mekansal ve görsel tasarımın ötesinde, asıl kritik eksikliğin "anlatısal tutarlılık" ve "duygusal rezonans" alanında olduğunu ortaya koymuştur. Bu bulgu, oyun mekaniklerinin kültürel duyguyu aktaracak şekilde tasarlanması gerektiğini örneklemektedir (Zhao vd., 2025).

Kültürel Miras İçin Uyarlanmış MDA Çerçevesi: Araştırmanın özgün modeli, Hunicke ve diğerlerinin geliştirdiği standart MDA (Mekanikler, Dinamikler, Estetik) tasarım modelinin kültürel hedeflere uyarlanmasıdır. Standart MDA eğlenceyi maksimize ederken, bu çalışmanın önerdiği "Kültürel MDA" modelinin birincil hedefi tarihsel empati" ve kültürel rezonanstır. Bu modelde meydan okuma, yerini kültürel karmaşıklığı anlama çabasına; ifade ise kültürel yorumlamaya bırakır (Hunicke vd., 2004).

5. ÖRNEK ÇALIŞMASI: KÖROĞLU DESTANININ KÜLTÜREL MDA ÇERÇEVESİNDE KAPSAYICI TASARIMI

Geliştirilen "Ortak Üretim Destekli Kültürel MDA Çerçevesi"ni ve uluslararası oyunlardan elde edilen ve anlatısal çıkarımları ampirik bir düzleme taşımak adına, Türk kültürel mirasının köklü epik anlatılarından Köroğlu Destanı taslak bir modele dönüştürülmüştür.

5.1. Hikâye Seçimi ve Kapsayıcı Tasarım Gerekçesi

Köroğlu Destanı, oyun tasarımı için gereken ontolojik çatışmayı (Bolu Beyi'nin zulmüne karşı adalet arayışı) doğal yapısında barındırır. Tıpkı Never Alone ve Tchia projelerindeki yerel katılımda olduğu gibi, destanın dijital aktarımı tek bir sesin egemenliğinde olmamalıdır. Anadolu, Kafkasya ve Orta Asya'daki farklı varyantları yansıtmak adına yerel halk bilimcilerin ortak üretimiyle geliştirilmelidir. Bu yapı, oyunu Symeonidi'nin (2020) belirttiği çok sesli, demokratik bir küratöryel platforma dönüştürür (Symeonidi, 2020).

5.2. Uyarlanmış Kültürel MDA Çerçevesinin Uygulanması

Oyunun anlatı mimarisi, Calleja'nın (2013) teorilerinden beslenerek, oyuncuya ana görevler arasında keşif özgürlüğü sunan "İnci Dizisi" yapısında kurgulanmıştır (Calleja, 2013).

- **Estetik (Duygusal Hedefler - Tarihsel Otantiklik):** Tıpkı Ghost of Tsushima'da samuraylık veya Hellblade'de mental tahribatın yaşatılması gibi, Köroğlu oyununda temel estetik "Tarihsel Empati" ve adalet arayışıdır. Oyuncu, salt eğlencenin ötesinde halkın güvenini kazanmanın ağırlığını hissetmelidir.

- **Dinamikler (Prosedürel Retorik ve İkilemler):** Oyuncunun eylemleri hızlı fayda sağlasa da adil eşkıya itibarını zedeleyebilir. Bu dinamik, ahlaki bir prosedürel retorik (procedural rhetoric) oluşturarak somut olmayan kültürel mirasın etik değerlerini oyun sisteminin kuralları haline getirir.

- **Mekanikler (Sistem Kuralları ve Etkileşim):** Venba'nın yemek pişirmeyi, Umurangi Generation'ın fotoğraf çekmeyi kültürel bir eylem kılması gibi, Köroğlu'nda da "Aşık Atışması" temel bir diyalog ve

çatışma çözme mekaniği olarak tasarlanmıştır. Çevresel anlatım mekanikleri ise Bramble oyununda olduğu gibi doğanın ve mimarinin sessiz anlatıcılığına dayanır. Ayrıca, i-Game projesinin vizyonuyla uyumlu olarak (Kosti vd., 2025), oyundaki yerel halk diyalogları açıklanabilir yapay zeka tarafından denetlenebilir bir tarihsel veri setinden örnek alır (Kosti vd., 2025).

6. TARTIŞMA: DİJİTAL EKOSİSTEMDE SÜRDÜRÜLEBİLİRLİK VE KÜLTÜREL KORUMA

Kültürel miras oyunlarının uzun vadeli varoluşu, teknolojik, sosyal ve ekolojik sürdürülebilirlik tartışmalarını merkeze almayı zorunlu kılar.

Teknolojik Sürdürülebilirlik ve Arşivleme: Dijital karanlık çağ tehlikesi, bugün üretilen oyunların on yıl sonra oynanamaz hale gelmesi riskini taşır. Bu bağlamda akademik literatür, video oyunlarının tıpkı edebi eserler gibi yasal koruma ve arşivleme statüsüne kavuşturulması gerektiğini savunmaktadır (Rowe, 2025). Açık kaynaklı mimariler ve i-Game platformu gibi birlikte çalışabilir veri standartları bu sürdürülebilirlik için kritik öneme sahiptir (Kosti vd., 2025).

Sosyolojik Etki ve Aidiyet: Venba ve Umurangi Generation gibi yapımlar göstermektedir ki, dijital oyunlar diasporik kimliklerin, göçmenlerin ve yerli halkların kültürlerini korumaları için güvenli siber-mekanlar yaratmaktadır. Turizm boyutunda ise, iyi tasarlanmış kültürel oyunların yerel mirasa karşı anlamlı bağlılık geliştirdiği, ziyaretçi motivasyonunu içselleştirdiği ve sürdürülebilir kalkınmayı desteklediği kanıtlanmıştır (Camuñas-García vd., 2023).

7. SONUÇ

Bu çalışma, küreselleşme dinamiklerinin ivme kazandırdığı kültürel erozyon ve endüstrileşmenin dayattığı tek tipleştirici, homojenleştirici baskılar altında var olma mücadelesi veren somut olmayan kültürel mirasın, dijital oyun ekosistemleri aracılığıyla nasıl yeniden yapılandırılabileceğine odaklanmaktadır. Geleneksel koruma paradigmalarının ve statik müzecilik anlayışının, yaşayan bir pratik olan kültürel mirası dondurarak bağlamından koparma eğilimine karşılık; bu araştırma, etkileşimli dijital anlatıların ve oyun tasarımının sunduğu dinamik, etik, kapsayıcı potansiyeli merkeze alan disiplinlerarası, bütüncül bir metodolojik çerçeve sunmaktadır. Küresel oyun endüstrisinde öne çıkan (*Never Alone, Ghost of Tsushima, Black Myth: Wukong, Tchia* ve *Venba* gibi) nitelikli bağımsız ve ana akım yapımların derinlemesine analizi, oyunlaştırma olgusunun epistemolojik bir dönüşüm geçirmesi gerektiğini açıkça ortaya koymaktadır. Kültürel mirasın dijitalleştirilmesi; yüzeysel puan tabloları, rozetler veya dışsal ödül mekanizmalarına indirgenmiş sığ bir pazarlama stratejisi olmanın çok ötesine geçmelidir. Aksine bu süreç, geçmişin çok katmanlı, çelişkili ve karmaşık sosyolojik doğasını oyuncuya deneyimleten, yapısal bir empati mekanizması olarak işlev gören "prosedürel" ve aktif bir "küratöryel" etkileşim tasarımına evrilmelidir.

Eleştirel miras çalışmaları merceğinden bakıldığında, kurumsallaşmış, yukarıdan aşağıya dayatılan ve "yetkilendirilmiş" hegemonik miras söylemlerinin dışında bırakılan, marjinalize edilen veya yok olma tehlikesiyle karşı karşıya kalan çok sesli yerel anlatıların korunması ancak yeni metodolojilerle mümkündür. Bu bağlamda, oyuncu ve topluluk aracılığını merkeze alan "Ortak Üretim" modelleri, kültürel unsurların hak ettikleri derinlikte dijital ortama aktarılmasının ön koşuludur. Dışarıdan dayatılan, oryantalist veya kolonyal anlatı

kalıpları yerine; yerel toplulukların, kültür taşıyıcılarının ve o kültürün organik öznelerinin oyun tasarım sürecine aktif, eşitlikçi birer paydaş olarak katılımı, tarihsel ve kültürel otantikliği sağlamanın yegâne epistemolojik yoludur.

Çalışma kapsamında literatüre önerilen ve *Köroğlu Destanı* örneği üzerinden ampirik bir zemine oturtulan "Kültürel MDA (Mekanik, Dinamik, Estetik) Çerçevesi", standart, yalnızca eğlence odaklı ve tüketim eksenli endüstriyel tasarım pratiklerini yapıbozuma uğratmaktadır. Bu model;

- Tarihsel Empati: Oyuncunun, tarihsel öznelerin sosyo-kültürel koşullarını içselleştirmesini,

- Kültürel Rezonans: Oyun içi deneyimin, gerçek dünya kültürleriyle anlamlı bir titreşim ve bağ kurmasını odağına almaktadır.

Bu yenilikçi model, kültürel ve ahlaki kodları salt birer görsel tema olarak kullanmak yerine, doğrudan oyun mekaniklerinin bizzat içine kodlamaktadır. Böylelikle kültürel verinin, oyunun kuralsal sistemiyle ontolojik bir uyum ve bütünlük içinde çalışması garanti altına alınmaktadır.

Gelecekteki akademik araştırmaların ve endüstriyel girişimlerin, önerilen bu kavramsal ve ampirik yapıyı daha da ileriye taşıması alana önemli katkılar sunacaktır. Özellikle;

- Açıklanabilir Yapay Zeka (XAI): Statik diyalog ağaçları yerine, bağlama duyarlı ve kültürel nüansları kavrayabilen dinamik anlatı sistemlerinin geliştirilmesi,

- Prosedürel İçerik Üretimi: Kültürel veritabanlarından beslenen ve kendini tekrar etmeyen, organik dünyaların yaratılması,

- Genişletilmiş Gerçeklik (XR): Sanal ve artırılmış gerçeklik teknolojileriyle sağlanan fenomenolojik

mekânsal deneyimin, farklı coğrafyaların miras unsurlarına uyarlanması elzemdir.

Ayrıca bu entegre sistemlerin, uzman odaklı sezgisel değerlendirme metrikleriyle, disiplinlerarası bağımsız kurullar tarafından sürekli olarak test edilmesi ve doğrulanması gerekmektedir.

Bu bağlamda, dijital medyanın ve enformasyon çağının kültürel imgeleri hızla tüketip bağlamından kopardığı günümüzde, oyun tasarımı salt bir eğlence aracı olmaktan çıkıp, güçlü bir "kültürel direniş" ve "kolektif bellek inşası" alanı olarak yeniden konumlandırılmalıdır. Dijital oyunlar, insanlık tarihini camekânlar ardında sergilenen pasif nostalji nesnelerine veya içi boşaltılmış, metalaştırılmış tüketim ürünlerine indirgeyen araçlar olmaktan ivedilikle kurtarılmalıdır. Zira etkileşimli dijital anlatılar ve oyunlar; geçmişin küllerini nostaljik bir rüzgârla savurmak için değil, o kültürel ateşi geleceğin dünyasında yeniden harlamak ve yaşatmak için tasarlanmış; nefes alan, sınırları aşan, demokratik ve yaşayan yegâne çağdaş kültürel ekosistemlerdir.

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WAITING TO PLAY: EXISTENTIAL BOREDOM AND TEMPORALITY IN VIDEO GAMES[1]

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1. INTRODUCTION

Video games have traditionally been conceptualized as a medium promising uninterrupted action, rapid responsiveness, and continuous audiovisual stimulation. However, the evolution of game design has also introduced a notable generic transformation that foregrounds elements seemingly contrary to conventional gameplay, such as inaction and waiting. Waiting mechanics fundamentally reshape the texture of digital experience by temporarily suspending the player's agency or by distributing progress across real-world time. This article examines how waiting mechanics employed in video games may generate an experience of existential boredom in players, drawing on the existential perspectives of Martin Heidegger, Jean-Paul Sartre, and Albert Camus, and analyzes the ontological implications of this experience within a scholarly framework. By addressing a broad spectrum ranging from idle games to narrative structures that impose real-time waiting, the study questions whether digital boredom may function as a form of "existential simulator".

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Video games are commonly defined as interactive systems in which the player's decisions and actions actively transform the game world. Yet contemporary game design increasingly incorporates mechanics that deliberately compel the player to wait, confine progress within temporal constraints, or test patience through repetitive routines. Although such mechanics may initially appear to contradict the notion of "entertainment," they can in fact operate as phenomenological instruments that deepen the player's relationship with time, with the self, and with the game world. Within existential philosophy, boredom is not merely an emotion to be dismissed; rather, it is understood as a fundamental mood through which individuals confront the starkness of their own existence, the possibility of meaninglessness, and the raw flow of time.

Within digital environments, the condition of waiting pushes the player into a state of inaction that brings them to the critical threshold where, in Heidegger's terms, time becomes conspicuously present. When a player waits for an in-game character to open a door, observes the gradual accumulation of a resource, or endures the passage of 400 real days in a game such as The Longing, the experience extends beyond the pursuit of an in-game objective. In such moments, the player encounters the duration of their own existence. This article explores the symbiotic relationship between game mechanics and existential boredom through the theoretical frameworks of three major philosophers and discusses how digital boredom may transform into a moment of awakening or heightened awareness.

1.1. Theoretical Framework: Existentialism and the Phenomenology of Boredom

Within existential thought, boredom functions as a reflective surface through which the individual's position in the world and their unavoidable relation to time become visible. The

perspectives of Martin Heidegger, Jean-Paul Sartre, and Albert Camus provide the theoretical instruments necessary for understanding the psychological and ontological effects that certain game mechanics may produce in players.

1.1.1. Martin Heidegger and the Three Forms of Boredom

Heidegger's analysis of boredom, which distinguishes between being bored by something, being bored with something, and profound boredom, demonstrates that waiting should not be understood merely as a negative feeling but rather as a phenomenological mode that reveals the underlying structure of consciousness (Stafford and Torres Gregory, 2006). In his lectures from 1929–1930, Heidegger subjects boredom to a detailed phenomenological analysis. For him, boredom signifies the "lengthening of time", a condition directly tied to the human mode of being in the world. In Heidegger's thought, profound boredom differs from ordinary tedium that arises from a particular object. Rather, it resembles a state in which one's relationship with the world as a whole is temporarily suspended. This mood can therefore help explain why moments of waiting in games sometimes move beyond mere technical delay and acquire a distinct ontological intensity (Ciocan, 2010). Heidegger distinguishes three different levels of boredom, each corresponding to a different depth of existential experience.

1. Becoming bored by something: This represents the most superficial level. Heidegger illustrates this state with the well-known example of waiting for a train at a deserted station. In such a situation, time is perceived as an obstacle precisely because it seems to pass slowly; the object (the station) fails to deliver what is expected and leaves the individual suspended in a temporal void. In the context of

digital games, loading screens or mandatory transition sequences can evoke a comparable form of boredom.

2. Being bored with something: In this case, boredom is not generated by a particular object. Instead, one participates in an activity, such as attending an evening gathering, in order to alleviate boredom, only to later realize that the activity merely served as a way of "passing the time." Here boredom manifests through the experience of time being consumed rather than meaningfully lived. Idle games operate in a similar manner: by keeping the player engaged through small, repetitive interactions, they effectively conceal or structure this second form of boredom.

3. Profound boredom: At the deepest level, captured in the expression "one is bored", boredom is no longer tied to a specific object or situation. Rather, the individual encounters a pervasive indifference toward the totality of beings. Time ceases to function as a mere instrument and instead appears as the raw condition of existence itself. According to Heidegger, this profound form of boredom constitutes a fundamental mood that makes philosophical reflection possible, as it compels Dasein to confront its own responsibility and freedom.

Heidegger's analysis offers a useful framework for understanding why waiting periods in video games may sometimes generate frustration, corresponding to the first form of boredom, while at other times giving rise to moments of deeper reflection associated with the third. In those moments when time appears to stagnate, the player is not merely confronted with a digital object but with their own temporality.

1.1.2. Jean-Paul Sartre: Consciousness, Nothingness, and Inaction

Sartre's philosophy characterizes the human being as a being "condemned to be free." Human consciousness (being-for-itself) exists, in contrast to objects (being-in-itself), as a form of nothingness or lack. This nothingness generates the continual responsibility of creating one's own essence through action.

Sartre's notion of nausea may be understood as an extreme manifestation of boredom: a moment in which the excess and apparent meaninglessness of existence become visible. In video games, the player is typically engaged in a "project", a mission, objective, or task, that structures and occupies consciousness. When the game compels the player to wait or renders them temporarily inactive, however, this project momentarily collapses. At this point, the player may encounter the form of nothingness Sartre describes; no longer positioned as a "hero" or "warrior," the player becomes simply a consciousness facing the screen.

Sartre's concept of bad faith further criticizes the individual's tendency to evade their freedom by perceiving themselves as an object, such as a waiter performing a role or, by analogy, a game character fully absorbed within a scripted identity. Waiting mechanics can interrupt the player's immersion and remind them that they are not merely an object within the game world. Rather, they are a free consciousness that must decide what to do during the interval of waiting.

1.1.3. Albert Camus: The Absurd and the Sisyphean Cycle

Camus defines the Absurd as the conflict between the human desire for meaning and the universe's indifferent silence in response to that desire. In The Myth of Sisyphus, the figure condemned to push a rock up a mountain for eternity provides a

striking philosophical analogue to the repetitive "grind" mechanics commonly found in games.

For Camus, the most significant moment occurs when Sisyphus descends the mountain to retrieve the rock after it has rolled back down. This pause constitutes a moment of waiting and awareness. During this interval, Sisyphus recognizes both the futility and the tragedy of his task; yet this recognition simultaneously renders him the master of his fate. Waiting periods and repetitive tasks in games may similarly confront the player with the logic of the absurd. The player may either continue within this seemingly meaningless cycle in an act of defiance or acknowledge its absurdity and consciously assume ownership of their action. For Camus, embracing the rock becomes the only way to generate meaning within an otherwise meaningless world.

1.2. Analysis of Game Mechanics

Waiting mechanics appear in game design in a variety of forms. Each of these mechanics transforms the player's relationship with time in a distinct way and can trigger forms of existential reflection.

1.2.1. Idle Games: The Operationalization of Time

Video games constitute hybrid systems situated between the rules of the real world and fictional worlds; consequently, the experience of time within a game often possesses a structure that differs from real-world temporality (Juul, 2005). Idle games (or incremental games) are structured in such a way that progression continues even when the player is not actively engaged with the game. Within these systems, time itself becomes a central resource that is accumulated, calculated, and strategically managed. In this sense, idle games can be examined through two conceptual distinctions proposed by Henri Bergson: duration (durée), referring to the qualitative experience of time as lived and

felt, and operation, referring to the quantitative, rationalized measurement of time).

In games such as AdVenture Capitalist, time itself is consumed as a resource. The player generates value simply by allowing time to pass and waiting for the accumulation of in-game outputs. Although the design logic of idle games often originates from an ironic or critical premise, these structures have been shown to generate experiences of automation, delayed gratification, and simulated labor for the player (Spiel et al., 2019). From a Heideggerian perspective, such systems attempt to avoid profound boredom by filling time with continuous operational processes; yet paradoxically they may lead the player into a deeper sense of emptiness, since the activity ultimately serves no purpose beyond the endless escalation of numerical values).

1.2.2. Real-Time Waiting: The Longing and the Weight of Time

The Longing represents one of the most striking examples of a design that transforms waiting from a minor gameplay device into something resembling an existential simulator. In the game, the player is tasked with waiting 400 real days for an underground king to awaken. In this sense, the experience closely mirrors Heidegger's analysis of profound boredom.

Within the game world, time continues to pass even when the player is absent. Nevertheless, the player may wander slowly through the subterranean environment, read books, or decorate the small cave in which the protagonist resides. The extremely slow movement of the character known as the Shade, along with the echoing footsteps in empty corridors, creates the impression that time itself exerts a tangible pressure on the player. Waiting therefore ceases to function as a mere punishment and instead becomes a mode of existence within the game. Waiting and

temporary blockage are not merely elements that slow down the player's experience; they can also function as design mechanisms that shape the rhythm of returning to the game, the logic of micro-sessions, and the player's sense of anticipation (Alexandrovsky et al., 2019).

At the same time, The Longing offers limited ways to accelerate the passage of time, for instance by improving or embellishing the cave. These mechanics reflect the player's attempts to cope with time itself. In philosophical terms, this can be interpreted as a mechanical analogue to what Sartre describes as the emotional transformation of a situation. The player responds to the anxiety produced by waiting by modifying the surrounding environment. By confronting the player with solitude and the slow unfolding of time, the game generates a distinctly existential form of awareness.

1.2.3. Grind Mechanics and the Absurdity of Repetition

"Grind" refers to the practice of repeatedly performing monotonous tasks in order to obtain rewards or advance within the game. This structure closely parallels Camus's analysis of Sisyphus. As the player repeatedly defeats the same enemies or gathers the same resources day after day, they are confronted with the apparent futility of the activity itself.

According to Camus, Sisyphus can attain happiness when he shifts his focus away from the outcome of his labor and toward the struggle of pushing the stone upward itself. In games characterized by repetitive grinding mechanics, a similar dynamic emerges. If the player engages with the activity solely for the sake of rewards or progression, that is, with an exclusively result-oriented attitude, the experience may lead to a sense of alienation. However, when the player embraces the activity itself, including

the rhythm of repetition and the gradual mastery embedded within the cycle, the player may assume a Sisyphean form of heroism.

1.2.4. Slow Gameplay and the Confrontation with Mortality

"Slow gameplay" refers to a design approach that deliberately reduces the speed of character movement and limits the intensity of interaction. Such games are often categorized as existential games, as they encourage players to reflect on themes such as mortality, freedom, and meaning.

A notable example is The Graveyard, in which the player guides an elderly woman slowly walking through a cemetery before she eventually sits on a bench and waits. This deliberate slowness disrupts the achievement-oriented gameplay loop that players commonly expect. During this period of waiting, the player is confronted with the character's fragility and the implicit possibility of death. In this sense, the experience resonates with Heidegger's notion of being-toward-death, translating this philosophical concept into a digital form. Waiting becomes, in effect, a rehearsal of life's finitude.

1.2.5. Scripted Waiting and the Limits of Agency

Scripted waiting sequences refer to moments in which the player's control is temporarily removed, typically in the form of unskippable scenes or mandatory walking segments. Although these sequences are often criticized within game studies as examples of poor design, they can also be interpreted through an existential lens as representations of facticity.

For Sartre, individuals are thrown into conditions that they did not choose; this constitutes the factual dimension of existence. An unskippable sequence in a game can be understood as the immutable reality of the player's situation at that moment. The player cannot determine what occurs within the scene, and thus

lacks direct agency. However, the player can still determine how to relate to the situation. In this sense, such moments remind the player that freedom does not exist in the absence of constraints but rather acquires meaning within them.

2. PHENOMENOLOGICAL ANALYSIS: THE DEEPENING OF THE EXPERIENCE OF WAITING

In game design, the player's experience is often explained through the concept of flow, which is based on the balance between challenge and skill; however, waiting mechanics interrupt this flow and thereby introduce a different layer of experience (Csikszentmihalyi, 1990). Moments of waiting in video games generate a rupture within the player's consciousness. From a phenomenological perspective, this rupture unfolds through three successive stages: suspension, emptiness, and awakening.

2.1. Suspension and the Expansion of Time

Heidegger identifies "being held in suspense" as one of the fundamental elements of boredom. In games, when the player waits for a door to open or for a progress bar to fill, they remain oriented toward a future event within the game world; yet the present moment does not deliver that anticipated future. Studies demonstrating the elasticity of temporal perception in gameplay indicate that moments of waiting are not experienced by players in the same manner as objective duration; consequently, a delay of only a few seconds within the game may be perceived in the player's subjective experience as significantly longer and more intense (Nuyens et al., 2020). This condition of suspension qualitatively expands the experience of time. Five seconds on the clock may feel considerably longer while waiting. The player becomes confined within the immediacy of the present moment.

Rather than focusing on the game's narrative progression, attention shifts toward the weight of one's own waiting. These moments constitute rare instances in which time itself is perceived almost as a tangible object.

2.2. Emptiness and the Dissolution of Meaning

The second element of boredom identified by Heidegger is "being left empty", a condition in which objects in the world cease to address us and our functional relationship with them collapses. When waiting mechanics temporarily withdraw meaningful action from the game, the game world suddenly appears emptied of purpose.

At this point, the player encounters the raw and seemingly meaningless presence of objects in a manner reminiscent of Sartre's description in Nausea. The character standing on the screen is no longer perceived as a heroic figure but rather as a mere aggregation of pixels. This sense of emptiness can be unsettling, precisely because it compels the individual to generate meaning independently. If the game no longer assigns a task, the player may begin to question their own presence before the screen. Such questioning marks the beginning of an existential awakening.

2.3. From Waiting to Action: Radical Freedom and Responsibility

When the waiting period concludes and control is returned to the player, the subsequent action may no longer appear as a purely automatic response. A player who has reflected upon their own presence during the interval of waiting may possess the potential to perform the next action in a more authentic manner.

For Heidegger, the path beyond profound boredom lies in resoluteness, that is, in the individual's capacity to assume responsibility for their own existential possibilities. Waiting

mechanics in games can, in this sense, compel the player toward such a stance. Rather than merely following the path prescribed by the game, the player acts out of an intention that emerges from the reflective space opened by waiting itself.

3. THE AXIOLOGICAL DIMENSION OF DIGITAL BOREDOM

Within the video game literature, an "enjoyable" experience is not necessarily equivalent to a "meaningful" one. Meaningfulness is often defined less through mechanical pleasure than through the relationships players establish with characters, narrative structures, and their own lived experiences (Rogers et al., 2017). Waiting mechanics also destabilize the value system (axiology) embedded within a game. Whereas conventional games tend to reward speed, efficiency, and achievement, games structured around waiting foreground alternative values such as patience, acceptance, and contemplation.

The legitimization of video games as an art form is often associated with their capacity to reflect the human condition. Waiting mechanics contribute to this capacity by directly confronting players with two fundamental aspects of human existence: the transience of time and the inevitability of waiting. Through such experiences, games can move beyond their status as mere instruments of entertainment and begin to function as philosophical texts in experiential form.

4. CONCLUSION

The present study demonstrates, through theoretical and analytical examination, that waiting mechanics in video games possess the capacity to generate an experience of existential boredom in players. Waiting should therefore not be interpreted

merely as a technical delay or a design flaw; rather, it operates as an active component that shapes the structure of player consciousness. Synthesis and key findings:

1. The Perceived Length of Time
   Waiting mechanics transform time into a qualitative weight consistent with Heidegger's analysis of Langeweile. Players begin to perceive the passage of time not only through measurable duration but also through the experiential intensity of their own existential discomfort.

2. Loss of Agency and Control
   Moments of waiting suspend the player's agency and remind them that the world, or the game environment, does not always conform to their intentions. This condition evokes existential experiences comparable to facticity and thrownness.

3. The Necessity of Meaning-Making
   When the game temporarily withdraws action and waiting begins, the player becomes responsible for generating meaning independently. These dynamic parallels Sartre's notion of creating existence out of nothingness. In this sense, waiting shifts the player from the role of a human-doing toward that of a human-being.

4. Sisyphean Defiance
   Grind mechanics and repetitive gameplay cycles place the player within a structure analogous to Camus's conception of the absurd. Within this cycle, the player may either lose themselves in repetition or, like Sisyphus, embrace the cycle and derive from it a form of quiet satisfaction.

Games can be understood not merely as systems designed to produce pleasure, but also as meaningful media experiences through which players may engage with themes such as selfhood,

loss, responsibility, and mortality (Oliver et al., 2016). Through waiting mechanics, video games have the potential to transform the player from a passive consumer into an active subject who reflects upon their own temporality. Future directions in game design may increasingly employ discomfort, boredom, and temporal tension not as design failures but as deliberate artistic strategies. In this context, the influence of broader intellectual movements such as Slow Media and Slow Philosophy may become visible within digital games, reframing waiting not as a loss of time but as an existential gain.

In conclusion, waiting mechanics in video games can produce an experience of existential boredom that enables players to develop deeper insights into their own existence. In this sense, games may function as digital laboratories of philosophy, offering a controlled environment in which individuals can confront their own nothingness and the inexorable flow of time. The moment of waiting is therefore not the point at which the game stops, but the moment at which it truly begins.

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