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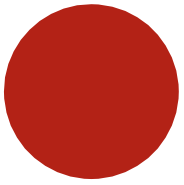
A Framework for Game Audio Transgression

Hugo Miguel Silva Ferreira

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FACULDADES PARTICIPANTES:

FACULDADE DE ENGENHARIA
FACULDADE DE BELAS ARTES
FACULDADE DE CIÊNCIAS
FACULDADE DE ECONOMIA
FACULDADE DE LETRAS



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Hugo Miguel Silva Ferreira

Mestrado em Multimédia da Universidade do Porto

Orientador: Pedro Cardoso (Professor Auxiliar)

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Hugo Miguel Silva Ferreira

Mestrado em Multimédia da Universidade do Porto

Aprovado em provas públicas pelo Júri:

Presidente: Gilberto Bernardes de Almeida (Professor Auxiliar)

Vogal Externo: Horácio António Barbosa Tomé Marques (Professor Adjunto)

Orientador: Pedro Jorge Couto Cardoso (Professor Auxiliar)

Resumo

Esta dissertação examina de que forma o áudio de jogo pode operar de modo transgressivo em jogos digitais, ao cruzar convenções estabelecidas e ao reformular a experiência do jogador. Embora o áudio de jogo seja frequentemente compreendido através das suas funções práticas, como feedback, usabilidade, orientação e imersão, este estudo defende que o som também pode desafiar convenções e revelar as fronteiras que normalmente estruturam o ato de jogar. Para responder a esta questão, a dissertação desenvolve uma framework para a transgressão no áudio de jogo, baseada em três dimensões principais: estética, lúdica e sociocultural. A framework também considera casos híbridos, nos quais várias dimensões operam em conjunto. Esta é inicialmente desenvolvida através de investigação teórica sobre áudio de jogo, convenções, experiência do jogador e teoria da transgressão, sendo depois aplicada em análise através de close readings de segmentos de gameplay selecionados. Os resultados mostram que a transgressão no áudio de jogo é frequentemente multidimensional e não depende apenas da forma como um som soa em si mesmo. Pode também emergir através de alterações na função do som, de reatribuição de papéis, de pistas sonoras pouco fiáveis e da quebra da confiança auditiva. A análise mostra ainda que a transgressão pode ser momentânea ou estrutural, e que pode depender tanto de convenções internas estabelecidas pelo próprio jogo como de expectativas mais amplas ligadas ao género, ao meio ou à cultura. A dissertação refina depois a framework e explora a sua utilização como ferramenta heurística para a criação de jogos. Ao fazê-lo, posiciona a transgressão no áudio de jogo como um conceito analítico e também como uma abordagem prática de design. No geral, a dissertação contribui com um modelo para compreender, analisar e desenhar áudio de jogo que desafia convenções e expande as possibilidades expressivas do som em jogos digitais.

Palavras-chave: Transgressão, Áudio para Jogos, Design de Som, Game Design

Abstract

This dissertation examines how game audio can operate transgressively in digital games by crossing established conventions and reshaping the player's experience. While game audio is often understood through its functional roles, such as feedback, usability, guidance, and immersion, this study argues that sound can also challenge conventions and reveal the boundaries that normally structure play. To address this, the dissertation develops a framework for game audio transgression based on three main dimensions: aesthetic, ludic, and socio-cultural. The framework also accounts for hybrid cases, where multiple dimensions operate together. It is first developed through theoretical research on game audio, conventions, player experience, and transgression theory, and is then applied in analysis through close readings of selected gameplay segments. The findings show that game audio transgression is often multidimensional and does not depend only on how a sound sounds in itself. It can also emerge through changes in sound function, role reassignment, unreliable audio cues, and the breakdown of auditory trust. The analysis further shows that transgression can be moment-based or structural, and that it may depend on both internal game conventions and broader genre, medium, or cultural expectations. The dissertation then refines the framework and explores its use as a heuristic tool for game creation. In doing so, it positions game audio transgression as both an analytical concept and a practical design approach. Overall, the dissertation contributes a model for understanding, analysing, and designing game audio that challenges conventions and expands the expressive possibilities of sound in digital games.

Keywords: Transgression, Game Audio, Sound Design, Game Design

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Abbreviations

HCI	Human Computer Interaction
HUD	Heads-Up Display
UI	User Interface
UX	User Experience
RPG	Role-Playing Game
FPS	First-Person Shooter
HCI	Human Computer Interaction
HUD	Heads-Up Display
UI	User Interface

Introduction

Context

Digital games have long been seen as cultural artefacts capable of communicating ideas, evoking emotions, and engaging the player to reflect (Juul, 2013). Within game studies, more attention has been given to how games produce meaning through elements such as mechanics, narrative, and representation (Juul, 2013; Salen & Zimmerman, 2006). However, sound often takes a backseat in these discussions because it's seen as a primarily supportive element intended to enhance immersion or provide basic feedback, rather than being appreciated for its potential to be expressive (Jørgensen, 2009).

Game audio is designed to be precise and reliable to the player (Jørgensen, 2013; Sinclair, 2020). This approach aligns with broader trends in user experience and HCI (Human-Computer Interaction), where the main goal is often to reduce confusion and create a seamless playing experience for the player (Norman, 2013). Sound design tends to favor recognizable cues and consistent feedback, which allows sound to fade into the background while still guiding players through gameplay.

But in the case of critical and experimental games, their impact isn't just about an enjoyable and seamless experience. They can also evoke a range of emotions in the player by defying expectations (Juul, 2013; Sicart, 2017). While conflict and tension are commonly explored at the level of mechanics or narrative (Juul, 2013), there remains significant potential to examine how sound itself can be used to challenge conventions and destabilise interpretation (Jørgensen, 2013). There is room to research how deviations from established sound norms can function as intentional expressive strategies within game design.

From this perspective, game sound transgression refers to the intentional violation or subversion of established game sound conventions in order to disrupt habitual modes of player engagement. Rather than functioning as error or malfunction, these deviations operate as expressive design strategies that draw attention to sound’s role in creating meaning and promoting reflection, discomfort, or reinterpretation of the game experience.

Relevance of the Study

In game audio research, much attention has been given to understanding how sound supports usability, learning, and immersion (Jørgensen, 2009; Jørgensen, 2013). Comparatively little work has examined how intentional disruption of game sound conventions can serve as a meaningful design strategy. While studies of transgression in games have addressed controversial content, mechanics, or representational themes, sound has rarely been examined as a primary site of transgressive expression.

This gap is significant given the extent to which players learn to trust sound as a communicative channel. Because sound feedback is often processed automatically and below conscious awareness (Norman, 2013), deviations from expected behaviour can produce strong experiential effects. Researching these moments offers insight into game audio design and how players negotiate meaning, control, and interpretation in interactive systems.

By focusing on the idea of game sound transgression, this work contributes to a more nuanced understanding of game sound as an expressive medium. It bridges philosophical theories of transgression with game-specific accounts of player experience, offering a framework for analysing, designing, and reflecting on sound-driven disruption in games. In doing so, it complements existing work on game audio conventions by examining what happens when those conventions are intentionally exceeded or unsettled.

Research Questions

Building on discussions of sound conventions, usability-oriented design practices, and the expressive potential of deviation in critical and experimental games, this research examines how sound can operate beyond its conventional supportive role. Rather than approaching audio solely as a transparent channel for feedback or immersion, the study examines how deliberate ruptures of established game sound conventions can function as meaningful design strategies. It seeks to understand how these ruptures can expose underlying conventions, disrupt usual modes of engagement, and affect the player's experiences. These concerns are brought together in the following research question:

> *How can sound in digital games be used transgressively to reveal conventions, challenge player expectations, and produce affective or reflective experiences?*

Sub-Questions

1. In what ways can game audio intentionally diverge from established game sound conventions to create unexpected effects?
2. How do players experience and interpret moments of game sound transgression during gameplay?

3. How can different forms of game sound transgression be systematically described and analysed within a coherent framework?

Hypothesis

This dissertation proposes the hypothesis that game sound transgression can serve as a strategy for revealing underlying conventions. When sound goes beyond its usual communicative role, it can expose established norms and disrupt player experiences. Instead of being seen as errors, these transgressive moments rely on players' pre-existing expectations and are felt relationally, leading to emotional, interpretive, or cognitive disruptions.

Goals and Contributions

In response to the limited attention given to sound as a site of transgressive expression in games, this work seeks to articulate and formalise the role of game sound transgression within game design and analysis. The primary goals of this dissertation are:

1. To theorise game sound transgression as a meaningful and experiential phenomenon grounded in established theories of transgression and game audio.
2. To create a framework that highlights the critical dimensions and mechanisms through which sound can defy expectations in games.
3. To provide a structured vocabulary for analysing how sound can challenge conventions and shape player experience beyond functional or immersive roles.

By achieving these goals, we hope to provide valuable insights for both critical analysis and thoughtful design. Ultimately, this work aims to show that sound in games is not only a background element but a powerful tool for creative disruption and expression.

Notes on the Structure of the Document

This dissertation is organised into four main chapters, each contributing to the study of game audio transgression in digital games.

Chapter 1 examines how sound normally functions in game design. It shows that game audio plays an important role in how players understand and interact with game systems. The chapter explains how sound conventions are learned over time, how they become familiar to players, and how they support reliable gameplay. By describing what is considered normal in game audio, this chapter establishes the baseline for later discussion.

Chapter 2 focuses on the concept of transgression. It explains that transgression in games is not simply rule-breaking, but occurs when established norms are deliberately challenged. The chapter clarifies how transgression depends on existing expectations and how it can produce tension, surprise, or reflection without destroying the structure of play.

Chapter 3 brings these ideas together to develop a framework for understanding game sound transgression. It defines what game sound transgression means in the context of video games and introduces the main elements of the framework. The chapter outlines different ways in which sound can challenge conventions and considers how these disruptions affect player experience.

Chapter 4 describes the research methodology. It explains how the framework is applied to selected games, how examples are analysed, and how the framework is evaluated and refined. This chapter shows how the theoretical ideas developed earlier are put into practice.

Overall, the dissertation moves from explaining how sound normally works in games, to examining how those norms can be challenged and finally to applying a structured framework to real examples. This progression allows game sound transgression to be studied in a clear and systematic way.

Publications in the Scope of the Dissertation

From this dissertation, we published a conference paper submitted to EIMAD 2026. That paper presented an initial framework for game audio transgression in digital games and applied it through a close reading analysis of twelve selected gameplay segments. Its main aim was to test whether the proposed framework could identify and describe different ways in which game audio disrupts conventions and reshapes the player's experience.

The paper focused mainly on the analytical part of the research. It proposed three main dimensions of game audio transgression: aesthetic, ludic, and sociocultural, while also recognising hybrid cases where more than one dimension operates at the same time. The findings from this paper helped clarify important aspects of the framework, including the role of voice, the distinction between moment-based and structural transgression, the importance of internal and external conventions, and the idea that game audio transgression does not always weaken immersion but may also intensify player involvement (Ferreira & Cardoso, 2026). This paper was accepted for publishing, and will be presented during the conference on July 09, 10 and 11 of 2026.

1. Conventions of Game Audio

Video games are complex systems in which meaning arises from the relationships among their multiple components, such as rules, visuals, player actions, and sound. Sound is important in games, but it can sometimes be overlooked. Game audio plays a crucial role in helping players navigate the game world because it provides important feedback, shapes their expectations, and enables an emotional connection with the game. As games become increasingly advanced, it is important to see sound as a key part of gameplay and interpretation.

This chapter lays the groundwork needed to discuss sound and its connection not only to game design but also to the players' experience and interaction. Instead of looking at audio in an isolated way, sound is seen as part of a system that shapes how games communicate with players. These systems are capable of influencing multiple aspects, such as how players perceive possibilities and how they learn to play effectively. The chapter explores how players understand games through learned conventions, focusing on how sound and visuals help with usability, clarity, and coherence in the game world. Sound plays a crucial role in how players interact with games. It not only helps in keeping the player informed about what is happening in the game but, at the same time, makes them feel more in control of their actions. As they immerse themselves in the game, they start to trust the audio cues and develop an expectation of how they will guide them. This shared understanding of sound enhances the overall experience, creating a seamless connection between the audio and the gameplay itself.

This chapter looks at how sound conventions take shape in digital games and how they become part of the way players understand and engage with interactive systems. Section 1.1 introduces the idea of conventions in game design and player culture, showing how shared expectations help players make sense of complex systems and interact with them smoothly. Section 1.2 moves to the relationship between sound and image, explaining how meaning in games emerges from their combined perception and how audio helps organise attention and space. Section 1.3 focuses on sound as a communicative layer during play, considering the ways in which audio informs the player and supports moment-to-moment interpretation of game events. Section 1.4 examines how trust in game sound develops through usability principles and learned patterns of interaction. Section 1.5 then turns to repetition and familiarity, showing how continued

exposure to the same game sound cues stabilises expectations and supports a sense of coherence in the game world. Section 1.6 situates these practices within a broader audiovisual context, discussing how conventions from film and television influence sound–image relations in games and are adapted to interactive systems. Section 1.7 then frames sound as part of the gameworld interface, focusing on how audio functions as a mediating layer within play and contributes to the player's ongoing interpretation of the game world. Taken together, these sections outline what players come to recognise as normal or expected in game audio, establishing a reference point for later chapters that explore what happens when such expectations are deliberately disrupted.

1.1 Conventions in Game Design and Player Culture

Typical game design revolves around a collection of conventions that influence how we play and understand games. These conventions are able to represent the expectations that players and designers develop through their shared experiences over time. They help make games clear and easy to learn, as well as giving them meaning. They reduce uncertainty about the state of the game and the consequences of player actions, help players understand how the system responds to input, and allow them to interact with complex systems.

We can think of these conventions like invisible support structures. They work best when players no longer notice them. Schell (2020) refers to the interface as "the infinitely thin membrane" between the player and the game, suggesting it should be strong, effective, and almost invisible (p 268). This idea applies beyond interfaces to conventions in game design: once players internalize these conventions, they can engage with the game without constantly thinking about how to interact with it.

This invisibility happens through practice and shared knowledge. Designers rely on players' previous knowledge from other games and experiences. Schell (2020) encourages designers to use established solutions within familiar game genres. This isn't related to a lack of originality or creativity on the developers' end, but it's more about recognizing that conventions help establish a common language between designers and players. It creates a set of familiar rules that both understand. When designs match familiar patterns, players are quickly able to know how to interact with the game, which allows them to focus on more strategic decisions. In this way, conventions act as shortcuts that help designers build on what players already know. Björk and Holopainen (2006) explain this idea through game design patterns. They describe these patterns as common gameplay solutions that can be reused. Patterns show structural similarities and variations, serving as flexible frameworks rather than strict rules. Their strength lies in being repeatable but not uniform, meaning that the same pattern can create different experiences in different games. When players encounter familiar patterns from earlier games, it helps them grasp new ones more quickly, enhancing their overall understanding of the game.

While conventions can be found in all areas of game design, sound plays a significant role due to how the players perceive it. Ihde (2007) explains that sound is not just a separate entity like images, but an interactive experience that immerses listeners in an environment. Sound conventions play a much bigger role than just sharing information; more importantly, they shape how we experience spaces and feel present within them. This helps clarify why sound conventions effectively guide attention and expectations without drawing conscious focus. Because we cannot ignore sound in the same way we can with visuals, the use of sound conventions helps stabilize our experience. Like other design conventions, this stability goes unnoticed as long as the conventions work well.

However, conventions also set boundaries between acceptable and unacceptable sounds. Hegarty (2010) points out that what we call "noise" isn't just a property of sound; instead, it comes from social judgments tied to established norms. Sound conventions organize our experiences and create conditions that define certain sounds as bothersome or inappropriate. These boundaries often go unnoticed until they are challenged. Design theories support this view by emphasising that conventions are learned through cultural exposure rather than being instinctual. Norman (2013) characterises conventions as culturally shared rules that emerge from repeated practices and become familiar through use, shaping how users interpret and respond to systems. Yablonski (2020) notes that users tend to expect consistency across systems, carrying over assumptions from previous experiences. In digital games, these learned conventions allow players to anticipate the system's behaviour, better interpret feedback, and interact with complex systems without much effort.

When we look at conventions in design and gaming, it becomes clear that they serve as common frameworks that both designers and players use to navigate and understand experiences. These conventions evolve with culture, and once we learn them, they often fade into the background. This allows players to focus more on the exciting aspects of the game rather than getting stuck trying to figure out how everything works. To truly understand how sound influences our perception, conveys messages, or even pushes against traditional ideas, we first need to be aware of the established structures that make these elements understandable. Conventions in both game design and player culture create a shared foundation that shapes how we interpret, engage with, and find meaning in games. Understanding this groundwork is essential for the goals of this dissertation.

1.2 Audiovisual Perception and Meaning Construction

The main idea of this dissertation is that sound in games should not be seen as just an extra layer added to what we see. In media, especially interactive ones, meaning comes from the interaction of what we see, what we hear, and what we do. This section explains why sound and image work

together, how sound directs attention and shapes space differently from vision, and why these differences matter in a gameplay context.

Chion's theory of audio-vision explains how sound and image work together in visual media. He says that our experience with sound and visuals is not just the simple addition of two senses but a mix where each one influences the other. As Chion notes, "You do not see the same thing when you hear, and you do not hear the same thing when you see." (Chion et al., 1993/2019, p. xxi). This idea challenges the belief that sound only supports what we see. Instead, sound actively helps shape how we understand and experience images. Chion introduces the idea of "added value," which refers to how sound adds meaning to an image while hiding its own role (p. 5). This makes it seem like meaning is already part of the image. Chion points out that this often leads people to overlook the importance of sound, thinking it only repeats what is in the image. In games, this effect is intensified: sound frequently does not simply enrich interpretation but establishes operational certainty, contributing to the sense that events are honest, responsive, and consequential. As Jørgensen argues, audio provides the sense of presence and physical reality that makes the gameworld feel tangible and reactive (2009).

Another important concept in audiovisuality is synchresis. Chion defines this as the automatic connection we make between a sound and a visual event when they happen at the same time. This bond is based on timing rather than logic. Sounds and images that occur together are seen as connected, even if they do not naturally relate. Chion notes that synchresis can link unrelated sounds and images, creating meaningful experiences just through their timing (1993/2019). In the context of games, synchresis is crucial because gameplay involves quick, repeated actions, like impacts or footsteps, where fast audio and visual connections are necessary. Jørgensen connects this idea to gameplay, explaining that players see sound as coming from the image, and the image as the source of the sound, allowing these cues to act as cohesive signals (2009). While synchresis explains how sound and image merge, players also engage in distinct modes of listening to decode this information. Chion (1993/2019) identifies three fundamental listening modes that define whether the player is attending to the narrative cause, the symbolic meaning, or the acoustic qualities of the sound.

To clarify how sound contributes to meaning in relation to image, Chion proposes a set of conceptual categories that describe different modes of audiovisual interaction. Through these categories, sound is shown to play an active role in shaping interpretation and perception rather than simply accompanying visual information. Table 1.1 presents these distinctions, offering a concise overview of the sound–image relationships discussed in his work and serving as a reference point for the discussion that follows. Together, these categories illustrate how sound does not merely accompany image but actively participates in the construction of meaning.

Table 1.1: The three modes of listening (Adapted from Chion et al., 1993/2019, pp. 29–33).

Listening Mode	**Definition**	**Player Focus**
Casual Listening	Listening to gather information about the sound's source or cause.	"What is that sound?" (e.g., Identifying an enemy's location by footsteps).
Semantic Listening	Listening to interpret a code or language.	"What does this mean?" (e.g., Understanding voice-over instructions).
Reduced Listening	Listening to the sound's traits (pitch, timbre) independent of its cause.	"How does it sound?" (e.g., Appreciating the texture of a sci-fi ambience).

Chion argues that sound can direct our attention to specific visual elements, highlighting some events while making others less noticeable (Chion et al., 1993/2019). In games, this is not just about understanding but also about how we play. Players cannot always keep their eyes on everything important, especially when information spreads out or goes off-screen. Jørgensen (2009) explains that sound acts as a filter, highlighting crucial information while ignoring less important information. This helps players stay aware of what's happening without overwhelming their attention (pp. 74–78). Through this filtering effect, sound directly aids decision-making and actions during gameplay.

Chion discusses how audio and visual elements blend in media, while Ihde (2007) explains how we experience sound differently from how we experience sight. Ihde argues that we do not perceive sound as a single, focused object as we do with vision. Whereas vision is directional, sound surrounds the listener, producing what Ihde describes as an auditory field characterised by "surroundability" (pp. 75–76). This spatial quality means listeners feel immersed in an environment rather than just observing a scene. Because of this, sound can effectively communicate both presence, closeness, and danger.

Ihde also argues against the idea that we experience the world through separate senses. He believes our experiences are initially whole and unified. This idea supports Chion's view that the combined experience of audio and visual elements is natural, not artificial. In video games, this unity becomes stronger through interaction, as players shape their perceptions based on their actions and the game's responses. Sound does not just represent what's happening; it reveals hidden events and feelings that sight alone can't show, according to (Chion et al., 1993/2019). Hegarty (2010)adds to this understanding by distinguishing between visual and acoustic spaces. He describes visual space as ordered and continuous, while acoustic space is characterized by overlapping relations. In an interactive setting, the simultaneous nature of sound enhances

immersion and makes it challenging to treat sound as just background noise; sound, therefore, influences the way players engage with the game world.

Together, these insights support several key points for this dissertation:

- Meaning in games comes from the combination of sound and image; each alone cannot create the same effects.
- Sound is crucial in creating feelings of certainty, presence, and events, often defining what seems to be happening.
- Sound organizes space and attention differently from vision, making it effective for conveying information outside the view of the screen.
- Sound enhances immersion and simultaneity; it plays an important role in shaping gameplay experiences, whether stabilizing or destabilizing them.

These insights justify the approach taken in this chapter. If game audio conventions are significant, they matter because sound directly contributes to meaning creation within the combined audio-visual environment. This understanding sets the stage for the following sections, which will explore how sound communicates, builds trust through use, and functions as an integral part of the experience, where any disruption can greatly affect gameplay.

1.3 Sound as Communication in Games

If Section 1.2 established how audiovisual meaning emerges perceptually through the combination of sound and visual image, this section looks at the role of sound in video games during gameplay. Sound in games is not just used for background elements or to build atmosphere, but is also a crucial way for the game to communicate important information about what is happening, what might change, and what actions players should take. Unlike sound in film, which mainly affects how audiences feel, game sound helps players respond quickly and effectively, especially in uncertain and high-pressure situations.

Collins (2008) highlights that game audio is structured to serve specific purposes. One key role of sound effects and music is to alert players to potential danger or opportunities. This pre-emptive role is what sets game sound apart from film sound. While film audio can shape how audiences think or feel, game audio encourages players to take action. Collins sums this up well, stating that in games, sound leads players to behave in certain ways (2013, p. 22). As a result, sound acts as a clear and reliable communication tool.

A very important function of sound in games is to provide early warnings. Audio cues often give players information before a threat becomes visible, helping them prepare for what's coming. Collins (2008) points out the value of acousmatic sound, in which the sound source isn't immediately visible, because it helps players navigate and react to their environment. In fast-paced gameplay, these early alerts are vital. Without them, players may miss threats until it is too late, extending their awareness beyond just what they see on screen. This can be seen, for

example, in stealth games where the player's tactical use of sound can be superior to visual information. We can see this in the “alert” noise in the *Metal Gear Solid* series. This distinct sound alerts players to enemy detection instantly, it communicates to the player a critical state change from safety to danger, faster than the visual scanning would allow.



Figure 1.1: *Metal Gear Solid 2: Sons of Liberty* (2001), the player is detected by an enemy.

In addition to warnings, sound also gives feedback on player actions. It confirms whether an action has worked, failed, or is still in progress. By having consistent sounds linked to specific actions, players learn what to expect. Collins stresses that this predictability is important for sound to effectively provide feedback. Players grow accustomed to hearing the same sound in response to the same action (2013). This allows players to quickly judge outcomes without having to look away from the action. Jørgensen (2009) adds to this by identifying different types of feedback sounds, like those for confirming or rejecting actions. For example, a successful action might produce a sound of impact, while a failed action creates a different sound. These distinct sounds let players quickly assess the situation and adjust their actions. Importantly, these sounds don't need to be realistic; they just need to communicate clear differences in outcomes. Sound is also essential for helping players understand their surroundings, especially when they can't see everything. Since the screen can only show part of the game world, audio often provides clues about events happening outside the player's view, as well as movement and distances. Jørgensen (2009) describes game sound as functioning like radar, helping players stay aware of important events even when they can't see them (pp. 36–38). Through spatial sounds, games convey direction, distance, and movement, which support navigation and awareness while playing.

Many studies agree that sound helps reduce the mental and visual load by spreading information across different senses. When players are focused on tasks like navigating, aiming,

or managing multiple elements, audio can deliver important updates or alerts without requiring them to look away. Jørgensen (2009) argues that audio displays are particularly useful in these situations because they let us process information at the same time instead of one after another (p. 78). Collins (2013) adds that sound effects speed up learning by helping players quickly tell the difference between right and wrong actions. In this way, sound improves usability not by making the game simpler, but by helping players understand its states and changes more easily. In these explanations, sound in games appears as a practical communication tool rather than just an artistic element. It alerts us to dangers, confirms actions, shares spatial details, and lessens mental strain by using different senses for information. As players hear consistent and repeated sounds, they build trust in these audio signals. This trust allows sound cues to blend into the background while still playing a key role in choices and actions. Understanding this is important for the ideas discussed in the next sections. If sound acts as a communication system that players depend on to navigate the game, then the rules that shape this system and what happens when they change are crucial for understanding player experiences. The next section will look at how trust and expectation are built through repeated exposure, predictability, and learned mental models, enabling sound to work reliably during gameplay.

1.4 Cognitive and Usability Expectations

Players often don't initially trust game sound as meaningful or reliable information. Instead, they learn to rely on audio cues through experience. Players begin to value these sounds when they show they are timely, consistent, and helpful for taking action. This section explains how trust in game sound is a cognitive process based on feedback, predictability, and learned mental models, and links these ideas to sound conventions in games. Design theory shows that feedback is key to building trust. Norman (2013) explains that feedback is how we communicate the results of an action, and it needs to be immediate. Even small delays can be unsettling. He argues that poor feedback can be worse than no feedback at all because it creates uncertainty, distraction, and anxiety. In games, where players act quickly and often face high stakes, feedback is crucial. It reassures players that their inputs are recognized and that the system is responding correctly. Without this confirmation, players might focus more on the game interface than on the game itself, doubting whether their actions were understood or executed correctly. Game audio is particularly good at providing this feedback. Sounds can confirm actions without taking players' visual attention away, making audio a highly effective way to show system responsiveness. Many small sounds, like clicks, chimes when picking up items, hit confirmations, or warning tones, act as signals of trust. When these sounds happen constantly, players gain confidence that the game system is clear, responsive, and manageable. This confidence relies on closing what Norman (2013) terms the 'Gulf of Evaluation.' As illustrated in his model of the Seven Stages of Action (Figure 1.2), sound functions as the critical link in the perception stage, allowing the user to

interpret the system's state and confirm that their goal has been met. In this context, perception refers to the player noticing a sound as it occurs, such as hearing it, recognising when it happens, or sensing where it comes from. Interpretation happens when the player understands what that sound means within the game, linking it to an action or a change in the game. Although these stages are closely connected, they play different roles in how players learn to trust and rely on audio feedback during play.



Figure 1.2: The Seven Stages of Action. While this model describes general interaction, sound in games plays a critical role in the "Perceive" and "Interpret" stages, closing the feedback loop (Source: Norman, 2013, p. 72)

An example of this mechanism is the 'coin' sound in *Super Mario Bros* (1985). This high-pitched sound serves as an immediate, reliable verification of a transaction between player and system. Every successful interaction with a coin produces the exact same noise, creating a feedback loop that confirms the player's action without demanding visual verification. Over time, this becomes cognitively bound to the concept of 'success' and 'accumulation.' If the sound were to fail or were replaced, the immediate result would be confusion about whether the action was registered. This illustrates how important sound cues are for the player to build trust with the system.



Figure 1.3: *Super Mario Bros* (1985), the player is collecting multiple coins.

Trust relies not just on feedback but also on its consistency. Norman (2013) stresses that predictability helps users create accurate mental models of how a system works. When actions unfold as expected, players feel in control; when they don't, uncertainty grows. Yablonski (2020) describes mental models as the mental pictures users form based on past experiences, which they apply to new, similar systems. In games, players bring expectations shaped by previous experiences with genres, mechanics, and interfaces, using those expectations in new situations. Sound conventions help by providing stable connections between actions, events, and sounds. Research on game sound supports this idea by seeing audio as part of how the system operates. Jørgensen (2009) refers to sound in games as a "control system" that shows changes, confirms actions, and signals urgency. She emphasizes that immediate and reliable sounds help players perform well, especially by pointing out the difference between successful and unsuccessful actions. Unique sounds for different outcomes allow players to quickly assess what happened and change their behavior without much thought. Here, what counts isn't how realistic the sounds are, but how clear and consistent they are. Collins (2013) shares a similar view by linking sound to interactivity and repeatability. When players know that the same action will usually result in the same sound, they learn to rely on audio for guidance. This repeatability speeds up learning and lowers the mental effort needed, letting players move more easily over time. If the audio and visual feedback get inconsistent or out of sync, however, trust can break down. Collins notes that timing mistakes or unclear connections can confuse players, leading to frustration (2013).

Trust in sound can be fragile, as noted by Sinclair (2020). If audio cues are inconsistent or unreliable, players may ignore sound and rely on visual information instead. This aligns with findings about visual dominance: when sounds and sights conflict, players usually trust what they see unless they have previously found the sound reliable. Once sound loses its credibility, it stops being an effective part of the interface. Norman's idea of signifiers helps explain this relationship. He describes signifiers as clear indicators that show what actions are possible or the current state

of a system (2013). In games, many sounds serve this purpose, indicating whether actions can be taken, are successful, or are blocked. Norman warns about the "danger of silence," highlighting the importance of sound cues.

If sound signals are nonexistent or weak, users may feel less in control, especially when visual feedback is limited. Together, these insights show that trust in game sound is built through experience rather than being a natural quality of audio. With consistent feedback and reliable interactions, sound becomes an important part of how players understand the game system. Once this trust is established, sound cues can help players take action without needing to focus on them. Understanding how this trust is formed is essential for the rest of this chapter. If players depend on sound because it has proven to be reliable, then the rules of game audio are not just artistic choices but also important for usability. Recognizing this trust helps explain why breaking usual sound patterns can have strong effects; it becomes very important when discussing sound as an interface and the idea of game sound transgression later in this dissertation.

1.5 Sound and World Coherence

This section explains how players come to trust sounds in games as a reliable source of information and how that trust turns into learned patterns that influence their behavior. These patterns are not natural or determined solely by design; they develop through repeated experiences, successful interpretations, and shared interactions, eventually becoming a normal part of gameplay. Over time, players develop an understanding of sound in games, learning not just how to hear it but also how to use it. Research on game sound highlights that repetition helps establish meaning. Collins (2013) states that event-driven sounds in games rely on repeatability: the same action usually produces the same sound, which lets players form expectations about what will happen (p. 33). With repeated exposure, players connect certain sounds to specific actions, states, or results. What starts as a conscious thought process becomes something they recognize automatically. Sound changes from information that needs decoding to a recognizable pattern that players can act on right away. However, not all repetition creates stable patterns. Successful interaction reinforces these patterns. When players react to a sound cue and achieve a positive result like avoiding danger or completing an action, the link between the sound and its meaning gets stronger.

Collins (2013) connects this idea to learning, saying that sound feedback helps players quickly tell the difference between correct and incorrect actions. Similarly, Jørgensen (2009) sees sound as part of a feedback system that helps players improve, allowing them to test their understanding of the game and adjust their actions. Over time, this creates reliable habits: players respond automatically to sounds instead of questioning what they mean. These patterns are not just personal; they are also shared. Players carry their expectations from one game to another, using experiences with different genres, mechanics, and controls. Jørgensen (2009) calls this

player literacy, where experienced players recognize familiar sounds and apply them in new situations. This shared understanding grows in social settings through discussions, observations, and participation in gaming communities, where certain meanings become commonly accepted. As a result, sound conventions become part of player culture, seen as common knowledge rather than isolated design choices. Industry views support this idea. Horowitz & Looney (2014) mention that many sound design practices continue because players already understand them. Designers often use familiar sound cues to prevent confusion, reinforcing established patterns instead of creating entirely new systems. This reinforcement from design helps ensure that learned patterns persist across different games and genres, making them harder to notice as they work so effectively.

Game sound patterns play a key role in both game rules and the fictional world. According to Juul (2013), many game elements seem fictional but also provide important rule-related information. Sound is a clear example of this mix. A sound in a game can represent something in the game world while also signaling system status, danger, or opportunity. As players hear these sounds repeatedly, they learn to recognize and respond to them as both part of the story and the rules. This integration makes sound an important part of gameplay that players don't need to think about. From a design viewpoint, repeating learned patterns is intentional. Sinclair (2020) highlights that consistent sound design is crucial; if sounds are unpredictable, players may lose confidence. On the other hand, strong links between sounds and their functions help players build expectations, allowing them to apply what they know in different situations and games. In this way, these conventions are not random but are deliberate strategies designed to ease cognitive load and improve usability. The value of learned sound patterns lies in how unnoticed they become. Once players internalize these patterns, they don't require extra attention; they just work. Players respond to them instinctively, blending sound into their awareness and actions. This lack of notice is what allows sound to later serve as an interface, and sometimes as a source of meaningful disruption.

Without these learned patterns, sound couldn't effectively communicate, trust wouldn't be built, and unexpected changes wouldn't matter much. This section lays the groundwork for understanding how variations and innovations in sound become noticeable. Recognizing how sound patterns stabilize through repetition, success, and shared culture sets the stage for the next sections. These will look at the historical influences on these conventions, how they are built into interfaces, and how they can be intentionally changed.

1.6 Sound–Image Relations in Games: From Screen to System

Game sound is often easy for players to understand because it builds on their experiences with movies and television. These previous experiences shape how players interpret sound and visuals in games. This section explains that many sound conventions in games come from earlier

audiovisual media, but games change how these conventions work by making them part of interactive systems. While cinema teaches viewers how to interpret sounds and images together, games turn those interpretations into tools that players use for actions, timing, and making choices.

Chion's idea of the audiovisual contract explains how we see sound and images as a single entity. He suggests that our understanding of the connection between sound and image is not natural; instead, it is learned through culture. Audiences learn to accept sound and image as related, even when the connection is not obvious (1993/2019). With repeated exposure, people develop an audiovisual literacy that helps them quickly and intuitively interpret different sound-image combinations. Sound influences how we see images; it highlights certain events or emotions while often going unnoticed. This learned understanding does not go away when people start playing games. Instead, it lays the foundation for sound conventions in games. Mechanisms like synchresis, where sound and image synchronize, and added value help create a smooth connection between sound and visuals. In games, this connection serves a purpose: players need it to recognize events, evaluate outcomes, and navigate the game world.

Research on game sound looks into how our viewing habits change when we play games. Collins points out that while films may influence viewers' thoughts about situations or objects, games require players to act based on audiovisual information (2013, p. 22). In this way, the sound conventions are not just reused; they are adapted for action. Sounds that once evoked feelings or guided understanding become signals that assist in decision-making, timing, and exploration. This change connects closely with how players interact with the game. Players must always assess potential threats, opportunities, and changes in the game, often under time constraints. Audiovisual ideas learned from movies, like synchronized sounds, spatial audio, or emotional music, are used to support these needs. Sound not only indicates what is happening; it also helps players decide what to do next. As Collins puts it, belief prompts action because players rely on audiovisual clues to succeed in the game (2013).

Juul distinguishes between rules and fiction, which helps us understand how games work. He argues that games function both as systems of rules and as fictional worlds. Players often engage with elements from both of these areas at the same time (2013). Many game elements appear fictional while communicating rule-relevant information. Sound exemplifies this hybridity: a sound may seem to originate from a character, object, or environment, while simultaneously signalling danger, success, failure, or system state.

The interplay of sound in video games creates a unique experience for players, allowing developers to incorporate cinematic sound techniques without causing confusion. Players, drawing on their prior experiences with various forms of audiovisual media, intuitively grasp the dual roles that sound plays. They come to recognize it as not only a narrative element that enhances storytelling but also as a functional aspect that conveys important gameplay information. According to Juul (2013), sound functions as a hybrid sign, meaning that while it possesses a fictional quality, it simultaneously serves a practical purpose related to the rules of

the game. This blend helps players navigate their gaming experience seamlessly, making sound an integral part of both immersion and gameplay dynamics. Jørgensen expands on this idea by stating that the relationship between sound and image in games is rooted in audiovisual practices from film and television. This includes a new expectation of usability (2009). Players expect sound and images to work together and to accurately reflect the game's state. This expectation shows how filmmakers' conventions have changed to suit interactive media. Coherent audiovisual elements are essential not just for immersion, but also for effective gameplay.

Together, these ideas explain how games use sounds and images learned from previous media. However, video games do not simply copy these conventions; they adapt them into useful parts of an interactive system. Sound serves as a link between perception and action, making system communication feel natural by integrating it into familiar audiovisual forms.

Understanding this process is key to the main argument of this dissertation. It demonstrates that the conventions of game sound are rooted in history and perception, but change significantly due to interactivity. This sets the stage for the next section, which will look at sound not just as a learned convention but as an essential tool that helps players engage with the game system.

1.7 Sound as Part of the Gameworld Interface

By this point, we see that game sound connects closely with the visuals (Section 1.2), communicates meaning during play (Section 1.3), earns players' trust through consistent feedback (Section 1.4), becomes stable through learned patterns and shared knowledge among players (Section 1.5), and has been shaped historically by media conventions we see in films and television (Section 1.6). This section wraps up these ideas by viewing sound not just as feedback or representation, but as an interface: a layer that helps players access, understand, and interact with the game system. Thinking of sound as an interface does not mean we have to see interfaces as only technical or visual. It also means we recognize that game interfaces often exist within the game world, embedded in its elements, while also helping players operate within it (Jørgensen, 2013).

Jørgensen (2011) explain that game interfaces are not limited to overlays, menus, or controllers; they often act as game world interfaces systems that help players interact while blending into the fictional setting. In this view, an interface refers to any way players perceive the game state, understand what they can do, and receive feedback. Sound works well as this kind of embedded interface. Unlike visual elements, which can pull players' focus away from the task, sound can deliver information continuously without needing players to look away. Jørgensen (2009) points out that game audio informs players about the game state, their actions, and environmental conditions, often without visual cues. Through confirmations, warnings, spatial cues, and status signals, sound turns system processes into events that players can perceive and respond to. This role of sound relies heavily on reliability and consistency. Collins (2013)

connects interactive sound to repeatability, noting that players depend on audio cues because the same action often leads to the same sound (p. 33). This reliability allows sound to be part of an interactive feedback loop, confirming actions and signaling outcomes. If the audio and visual feedback become inconsistent or misaligned, players can lose trust, similar to how unreliable visual interfaces can make games hard to use. Sound, like any other part of the interface, needs to behave predictably to remain trustworthy.

As previously noted, games operate through both rules and fiction (Juul, 2013). Sound embodies this duality within the gameworld interface. A sound might seem to come from a character, object, or environment, which fits the story, but it also sends important information about danger, success, failure, or timing. This dual role allows sound to help players interact without being seen as a separate instruction. Because of this mix, players often accept sound as a guide for their actions without viewing it as outside advice. The fictional aspect makes the sound's role in communication feel natural. In this way, sound acts like a hybrid interface: it looks fictional, but it serves a functional purpose. Its strength lies in being unobtrusive. As Norman (2013) points out, good interfaces become invisible once they work well. Sound aligns with this idea. When sounds are timely, consistent, and predictable, they help players act without drawing attention to themselves, letting players feel in control without focusing on the interface. From a cognitive perspective, this unobtrusiveness relies on learned expectations and mental models. Yablonski (2020) describes how users develop internal models of system behavior through repeated interactions. This helps them predict outcomes and reduce cognitive workload.

In games, sound becomes part of these mental models when it consistently communicates the state of the system and responses. Over time, players stop consciously "listening for information"; they react to sounds without thinking, blending sound into their perception and actions. Klevjer and Hovden (2013) further explain the effects by arguing that embedded interfaces place responsibility on the player's interpretive skill. Players need to learn how to read interface elements as part of the game rather than as outside instructions. Sound fits this model perfectly. Players learn to listen for cues and interpret their meanings, making them respond accordingly and treating sound as a core part of gameplay rather than an external piece of information. An example of this embedded mediation is found in *Dead Space* (2008). This game is known for the removal of Heads-Up Display (HUD); the game shifts important feedback into the fictional world itself. While the visual health indicator is famously integrated into the protagonist’s suit, the auditory interface is as important. As the character's health gets worse, his breathing changes from a steady rhythm to a struggling, wheezing gasp, and his heartbeat becomes louder. These sounds serve two purposes: they create a scary atmosphere (fiction) and give clear information about the character's Health status (rules). The player doesn't need a health bar to know they are in serious danger; they can hear the character's physical condition and understand the situation.



Figure 1.4: *Dead Space* (2008) main character is on low health.

Together, these ideas help frame sound clearly as an embedded interface in digital games:

- Sound connects the player and system by conveying state, action, and consequences (Jørgensen, 2009).
- Its consistency allows it to provide feedback in interactive processes (Collins, 2013).
- Its fictional aspect makes rule-based communication feel natural (Juul, 2013),
- Its unobtrusiveness follows effective interface design principles (Norman, 2013; Yablonski, 2020).

Through these combined functions, sound becomes a key way for players to understand the game system. Recognizing sound as an interface is important for this context. It changes the view of sound intervention to one of system intervention. When sound conventions are broken, it challenges not just aesthetic expectations but also how players interpret, trust, and act within the game world. This insight establishes the foundation for Chapter 1 and leads to Chapter 2, where we can explore not only stylistic changes but also how they disrupt interface, agency, and player-system relationships.

2. Transgression Theory in Games

This chapter lays the groundwork for understanding transgression as an important idea in games. Rather than viewing transgression as simply breaking rules or acting inappropriately, it is framed as an act that shows the norms, conventions, and assumptions that shape gameplay. The chapter starts by discussing philosophical views on transgression to explain how rules and norms become clear when they are crossed or disrupted.

The chapter then looks at transgression in game studies. It explores how games, seen as rule-based, representational, and experiential systems, allow and rely on boundary negotiation. By examining both designer-driven and player-driven transgressions, along with their aesthetic, ludic, and mixed forms, the chapter shows that transgression in games happens at multiple levels, including game mechanics, representations, social practices, and interpretations.

Finally, the chapter discusses how transgression affects players emotionally and interpretively. It highlights feelings of discomfort, frustration, ambivalence, and reflection as central to this experience. Together, these insights position transgression as a regular approach in games that reveals their structures, values, and limits. This theoretical foundation sets the stage for Chapter 3, which will present a focused way to analyze game sound transgression in games.

2.1 Philosophical Foundations

Transgression is not just about breaking rules. It is a reflexive act that draws its meaning from the boundaries it crosses. Rather than simply causing disorder, transgression works in close relation to norms and limits, making them visible by going beyond them. Its significance lies in the way it exposes and even affirms the structures it seems to challenge.

In *Transgression*, Jenks defines transgression as “a deeply reflexive act of denial and affirmation” (2003, p. 2). For Jenks, transgression announces the law even as it violates it, making the boundary visible through the act of crossing. He emphasises that “transgressive behaviour therefore does not deny limits or boundaries, rather it exceeds them and thus completes them” (p. 7). Transgression gains its force not from rejecting order, but by demonstrating its necessity. Jenks further argues that transgression should be understood as a structural component of social and cultural systems rather than an external threat to them. He states that “the transgression is a component of the rule” and that excess is “a dynamic force in cultural reproduction” (p. 7). Through this lens, transgression prevents stagnation by disrupting established norms while simultaneously reaffirming them by showing what lies beyond them. Crucially, Jenks insists that

transgression must not be confused with chaos or disorder, noting that "transgression is not the same as disorder; it opens up chaos and reminds us of the necessity of order" (p. 7). In modern societies marked by instability and rapid change, this dynamic takes on particular significance, as "our preoccupation with transgression is at the same time a search for limits, which are affirmed by the very act of crossing them" (p. 2).

Foucault's *A Preface to Transgression* (1977) provides a complementary but philosophically deeper account of this relationship between transgression and the limit. Foucault defines transgression as "an action which involves the limit," describing the limit as a narrow zone or line whose existence becomes perceptible only through the act that crosses it (pp. 33–34). For Foucault, limit and transgression are mutually dependent: "a limit could not exist if it were absolutely uncrossable and, reciprocally, transgression would be pointless if it merely crossed a limit composed of illusions and shadows" (p. 34). Transgression does not destroy the boundary; it gives it density and presence. Importantly, Foucault rejects the idea that transgression operates through negation or opposition. He insists that transgression "contains nothing negative," but instead "affirms limited being" while simultaneously affirming the limitlessness into which it momentarily leaps (p. 35). Transgression thus functions as an affirmative act that opens a new zone of experience without dissolving the structure that makes that experience intelligible. Foucault famously characterises transgression as a fleeting event, likening it to "a flash of lightning in the night" that briefly illuminates the darkness while remaining dependent upon it (p. 35). Meaning emerges not from permanence, but from the momentary intensity of the crossing. This understanding reinforces the idea that transgression is not an accidental deviation, but a culturally significant mode of engaging with limits, language, and subjectivity.

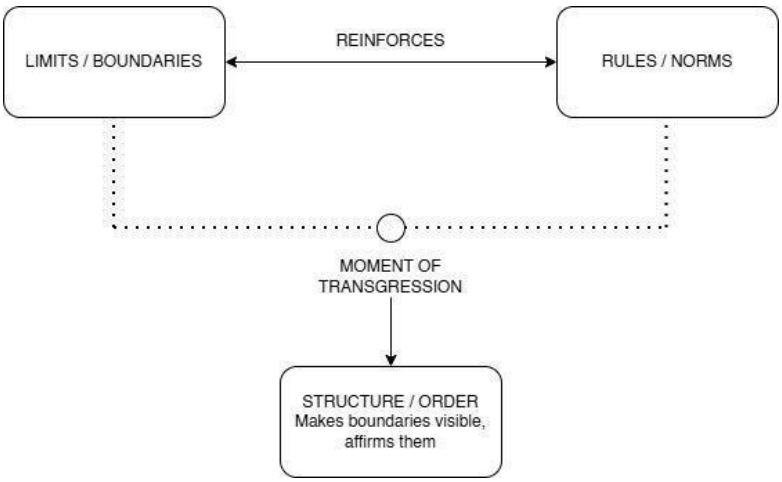


Figure 2.1: Transgression as a boundary-revealing act. Diagram conceptualises transgression as a moment that reveals existing limits, adapted from Foucault's discussion of transgression and limit in A Preface to Transgression (1977, pp. 33-35).

Jervis brings these ideas into the context of modern life. In *Transgressing the Modern* (1999), he argues that transgression is not merely opposition but the mixing of categories and the

unsettling of the boundaries that shape meaning. For Jervis, transgression questions the law and reveals how power can be involved in creating the very excesses it tries to control. He shows that by crossing boundaries, we see how the normal and the abnormal are connected, sometimes to the point where the normal is just a part of the abnormal. For Jervis, transgression is a means by which societies reflect on themselves and explore new ways of understanding identity and meaning. He also sees transgression as something performed and mediated, tied to the everyday 'theatrical' aspects of social life, and always happening within systems of representation.

While Jenks, Foucault, and Jervis focus on the structural and cultural sides of transgression, newer work has explored its ethical and personal dimensions. Treiber (2024) synthesises ideas from Kant, Bataille, and Foucault to view transgression as a political and ethical experience that occurs at the boundary itself. For Treiber, transgression is not just about breaking laws or taboos, but about resisting identities and roles that feel impossible to escape. He follows Foucault in rejecting the idea that transgression is simply oppositional, and instead sees the relationship between limit and transgression as ongoing and dynamic. Transgression, in this view, does not erase limits but rather strengthens and makes them more visible. It is a brief, recurring event that allows life and meaning to keep renegotiating their boundaries.

All of these accounts point to the common idea that transgression makes boundaries visible. It depends on limits, gets its meaning from crossing them, and creates moments of uncertainty or new understanding. Transgression is not just disorder or simple opposition. It is a deliberate act that shows us the rules and norms by briefly going beyond them.

2.2 Transgression in Games

Games are built on rules and shared expectations. These set limits for players and give play its meaning. When players cross or challenge these boundaries, it is called transgression. Throughout this chapter, transgression is understood not as simple rule-breaking, but as a boundary-revealing act that exposes the norms, conventions, or assumptions that structure play.

Mortensen and Jørgensen explicitly frame transgression as a process that reveals what normally remains unquestioned in game cultures. They argue that transgressions operate through their "overwhelming and irresistible presence," making visible "that which is so accepted, so ubiquitous, and preeminent that it is not questioned until it is violated" (2020, p. 30). From this perspective, transgression works as an epistemic tool, provoking shock, fear, or discomfort. It exposes the implicit agreements and limitations that establish play. This process is reflexive rather than destructive. Drawing directly on Jenks, Mortensen and Jørgensen emphasise that transgression is "a deeply reflexive act of denial and affirmation" that acknowledges and brings into focus the very norm, law, or convention that is being violated (Jenks 2003, 2, cited in Mortensen & Jørgensen, 2020, p. 28). Transgression only matters if there are limits to push against. In games, these limits come from rules, images, and ideas about play. Breaking these

boundaries does not erase them. Instead, it shows us where the limits are and what happens when we cross them.

Mortensen and Jørgensen explain that transgression in games is not only about mechanics or representation alone. Instead, transgressive meaning comes from how game mechanics and representational content interact. They note that "... it is difficult to claim that the sense of transgression is created by the procedural power of the game mechanics alone," but the way mechanics interact with certain representations (2020, pp. 50–51). This creates what they call interpretive friction, in which familiar play is disrupted by disturbing or taboo content. They stress that meaning in games emerges from the combination of mechanical and representational elements, not from either one alone. Games frequently disrupt expectations, and this is important for their design. Mortensen and Jørgensen say some games are designed to break down our usual distance and provoke strong emotions. When games surprise us, they can make us uncomfortable or confused. These occasions are not mistakes. There are ways to get us to think and engage in new ways.

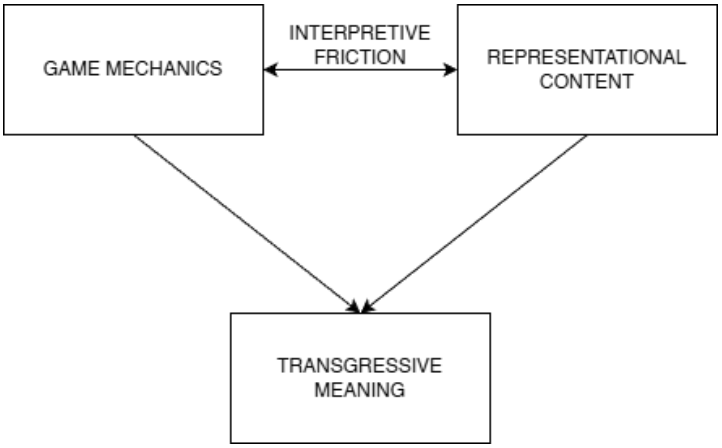


Figure 2.2: The diagram adapts Mortensen and Jørgensen's argument that transgressive meaning arises from tension between form (mechanics) and content (representation) (2020, pp 50-51).

Stenros and Bowman (2018) also focus on boundaries and reflexivity, especially within role-playing games. They argue that "transgression is always tied to a norm violation in a specific context" and that "without boundaries, there can be no transgressions" (p. 4). For them, play is naturally ambivalent: it can be freeing and creative, but also disruptive and unruly. This ambivalence comes from the play existing within reality and fantasy, respectability and taboo, safety and danger. Stenros and Bowman also point out the positive social role of transgression. Using sociological theories of deviance, they say transgressions "clarify where the boundaries lie, promote social unity, and encourage change in the face of new challenges" (p. 6). In role-playing games, transgression often occurs through temporary alternative norms that would not be allowed outside the game, allowing players to break boundaries while remaining safe. In this way, transgression is a negotiated and meaningful part of play, not just an accident.

Sicart's work supports the idea that transgression is a core part of play, not the opposite of it. In *Play Matters*, Sicart says play is naturally disruptive, revealing conventions, assumptions, and biases by changing and unsettling contexts. He calls play carnivalesque, able to mock, trivialise, or subvert structures while still being playful. Sicart introduces concepts such as brink play and dark play to describe play at the edge of acceptability, using ambiguity and discomfort to create emotional and interpretive engagement (2017).

In *The Ethics of Computer Games*, Sicart (2009) situates transgression within an ethical framework. He argues that games are designed as ethical systems that guide player behavior and invite players to explore actions that are usually forbidden. Transgression occurs when games intentionally disrupt normal mechanics or story expectations, prompting players to reflect on their actions. Sicart gives examples in which the lack of victory conditions or discomfort from player decisions constitute ethical challenges, not design flaws (2009). Here, transgression becomes a way to reflect on the values in both the game and the player's choices.

Calleja's theory of incorporation offers an experiential way to understand these ideas. Calleja (2014) says play is an action that comprises many types of engagement, namely spatial, narrative, emotional, and social. Transgression often happens when players test the technical or social limits of the game, showing how the line between game space and real life is unstable. Calleja challenges strict views of the magic circle, arguing that play and reality are always connected and boundaries are constantly negotiated (Calleja, 2014). In this view, transgression exposes the system's seams and draws attention to the interpretive work players do.

Design-focused views also support this idea. Schell (2020) says games get their meaning from boundaries that create consistent value systems. When players are in the game, they take on different values, emotions, and ways of interpreting than when they are outside it. Transgression, through new strategies or unexpected actions, highlights these changes in value and meaning. This understanding of games as systems of meaningful constraints is also central to Salen and Zimmerman's account of meaningful play, where rules create meaning by limiting what players can do. Without consequences, actions lose their importance (Salen & Zimmerman, 2006).

Building on this reflexive understanding of transgression, Flanagan's idea of critical play clearly connects transgression and reflection. Flanagan (2009) says games are ideally suited for subversive practices because they are rule systems that allow players to test and rethink boundaries. In this context, disruptions are "creative acts that shift the way a particular logic or paradigm is operating" (p. 12). By unplaying, rewriting, or reskinning, critical play reveals hidden assumptions and encourages players to question conventions that might seem natural or inevitable (2009).

Across these accounts, transgression in games functions to:

- Expose assumptions that typically remain unquestioned.
- Render implicit rules and conventions visible.
- Disrupt habitual modes of play and interpretation.
- Provoke reflection on the values embedded in game systems.

2.3 Types of Transgression

This section expands on the idea that games create mechanical, aesthetic, and social boundaries. It explains how transgression shows up in games by considering who causes it, designers or players and where it occurs, such as in aesthetics, rules, or a mix of both. Rather than viewing transgression as simply breaking rules, we can see it as patterns that allow games to become spaces for violation, appropriation, critique, and instability. Important to note that not all rule-breaking is transgressive, it only becomes so when it exposes or destabilises the norms that give those rules meaning.

2.3.1 Designer-driven vs. player-driven transgression

The first distinction concerns the source of transgression: whether it is intentionally produced by the game's design or emerges through player appropriation. Sicart (2017) argues that play is inherently appropriative, in that it "takes over the context" and can never be fully controlled by it. This means that while designers can intentionally embed transgressive situations through rules, representations, or ethical constraints, they cannot fully determine how play will unfold. As a result, transgression may arise either as a designed feature of the game or through players' creative, resistant, or subversive uses of the system.

Designer-driven transgression

Designer-driven transgression occurs when designers create uncomfortable experiences in a game, often prompting players to question its goals, rules, or values. Sicart's idea of "abusive games" is useful here. These games push players into actions that feel wrong and force them to deal with a hostile play environment. The real transgression isn't simply a single forbidden action, but how the design challenges normal expectations of play, like helpfulness or reward, and exposes the assumptions players have. Sicart notes that in these cases, the experience comes from playing, not just from the game itself.

Juul (2013) supports this logic by emphasising that transgression can be built into a game by breaking normal expectations of courtesy and support. He points out that some games "flaunt good manners" and let players go against conventions like "helpfulness" and "ease of use," which players usually expect from designers (Juul, 2013). Here, designer-driven transgression happens when the design removes comfort, disrupts usability, or makes insult, difficulty, or futility meaningful. Soderman (2021) adds an expanded theoretical frame by linking designer-driven transgression to a critique of "flow" as a hegemonic design ideal. Rather than treating transgressive rupture as bad design, Soderman argues that designers may intentionally undercut flow, and that critical attention to flow helps explain why, how, and when it becomes oppressive and how it might be disrupted to achieve the best outcome.

A clear example of designer-driven transgression is *Spec Ops: The Line* (2012), which authors transgressive experience through enforced participation rather than optional player deviation. While the game adopts the mechanical grammar of a conventional military shooter, progression requires the player to perform actions that are retrospectively framed as ethically troubling. The player is not invited to transgress; rather, they are compelled to do so by the game's structure. This design strategy is consistent with Sicart's notion of abusive game design, in which the system refuses the usual contract of empowerment and moral reassurance, placing the player in a relation of submission to the game's demands (Sicart, 2017). By denying alternative paths and recontextualising player success as complicity, *Spec Ops: The Line* exemplifies designer-driven transgression as an authored disruption of expected values, achieved through constraint rather than rule-breaking.



Figure 2.3: *Spec Ops: The Line* (2012) white phosphorus scene shows the player forced action.

Player-driven transgression

Player-driven transgression, on the other hand, happens when players take control, resist, or change how the game is played. This can mean breaking clear rules, but often it involves going against unspoken ideas of what proper play is. Soderman (2021) highlights player agency as "unruly" and possibly subversive. Players might "transgress" flow-based games by changing, queering, subverting, or even refusing to play them as intended. Here, transgression is a practice in which the player rejects the role the game assigns them.

Juul (2013) gives a clear example: players can change the purpose of a game by making failure their goal. He describes players sharing "spectacular failures" online, where their actions seem self-defeating but actually create a new challenge. In this case, transgression is not about breaking the game's code, but about changing what counts as success.

Elden Ring (2022) is a good example of player-driven transgression. Players often create their own goals, such as no-hit runs, level-one playthroughs, or using awkward strategies on

purpose. These methods do not break the game's code, but they go against the usual attention to efficiency, survival, and progress. As Juul points out, this kind of play turns what seems like failure or limitation into a new form of success, creating goals that may differ from or even oppose what the designers intended. For Soderman, this is an unruly way to play, in which players use the game for expression or critique rather than simply following the intended path.



Figure 2.4: *Elden Ring* (2022) streamer Lil Aggy attempting a no-hit randomiser.

Aarseth (2014) provides a strong conceptual framework for player-driven transgression using the principle of the implied player. He defines the implied player as "a role made for the player by the game," a set of expectations needed for the game to "exercise its effect" (p. 132). Transgressive play becomes "a symbolic gesture of rebellion" in which the player seeks to regain identity and control. This is consistent with Pötzsch's (2019) distinction between game design features and play practices, in which cheats, bugs, mods, hacks, and imbalances create transgressive opportunities for players.

Stenros and Bowman (2018) expand player-driven transgression to social situations, such as griefing, larp hacking ("play mutiny"), and other types of counterplay (Stenros & Bowman, 2018). Their view is important because it shows that transgression is not exclusively about breaking the code; it also happens when players disrupt the shared activity that keeps the play community together, putting its integrity at risk

2.3.2 Aesthetic transgression

Aesthetic transgression happens when a game breaks expectations about tone, genre, or representation. Here, aesthetic boundaries are understood broadly, encompassing not only visual style but also the coherence and expectations of the game's diegetic world. It does not have to break formal rules; instead, it changes what a game is supposed to feel like or what it is supposed to mean. Sicart's (2017) idea of play as "carnivalesque" helps explain this: play can use social

contexts to mock, trivialise, or change how we see serious things. This kind of disruption may create transgressive effects by challenging the seriousness or norms tied to a situation, identity, or institution.

Soderman (2021) explains aesthetic transgression in modern games by examining those that deliberately frustrate players or go against positive growth themes. He says some games intentionally separate play from empowerment or progress, creating experiences that resist the usual "flow" ideal. For example, some games frustrate players intentionally to offer a different kind of aesthetic experience.

A clear example of aesthetic transgression in this sense appears in Undertale (2015), which deliberately subverts the representational and moral expectations of the role-playing game genre. While adopting the familiar visual and progression structure of classic RPGs, the game subverts the assumption that enemies exist to be defeated and that violence is a neutral or instrumental mechanic. Through its tonal shifts, ironic humour, and persistent moral address to the player, Undertale reframes conventional acts of play as ethically charged and emotionally consequential. As Soderman notes, the game frustrates players' expectations of agency and development, forcing them to reinterpret their actions within the genre's established grammar (2021). The transgression here does not arise from breaking formal rules, but from violating what the game is expected to mean and feel like, producing an aesthetic rupture that destabilises the player's habitual mode of engagement.

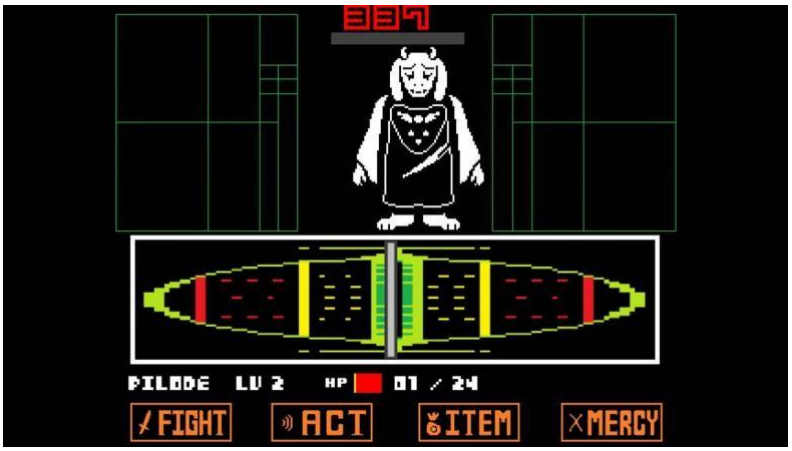


Figure 2.5: *Undertale* (2015) gameplay screenshot.

Juul (2013) supports the idea of aesthetic transgression by questioning the belief that games should always be "fun" or positive. He discusses how games can include tragedy and distress, in which the player's success occurs alongside the protagonist's failure. This creates discomfort by breaking normal emotional expectations. In these cases, the way the game presents its story and the player's achievements clash, leading to a transgressive feeling of complicity and responsibility.

Pötzsch expands aesthetic transgressivity into explicitly cultural terrain by arguing that what is transgressed can range widely from taste and morality to conventionalised perception and understanding. His examples (e.g., the retrospective recognition of sexism as transgressive in older games) show that aesthetic transgression can also emerge historically as norms shift, making once-normal representations newly disturbing (2019).

Stenros and Bowman add that transgression can also be aesthetic in the sense of violating wider cultural norms about adulthood, seriousness, or taboo content. They observe that adult play can itself be culturally suspect, because adults are not expected to be "silly on purpose". They further note that taboo content can involve socially charged topics (2018). This helps position aesthetic transgression as not only formal/genre-based but also normative and cultural.

2.3.3 Ludic transgression

Ludic transgression refers to boundary-crossing at the level of rules, mechanics, systems, and the implied player position. This includes explicit rule-breaking, as well as wider forms of systemic misuse: exploiting bugs, bending mechanics, gaming the system, or violating informal community rules. Sicart (2017) offers a fundamental premise by rejecting the sacralization of rules: "Rules are not sacred," but rather "servants to the action of playing" and thus subject to manipulation and change during play (p. 8). This supports the idea that rule transgression can be a normal, even generative, component of play rather than a simple collapse of play.

Pötzsch defines ludic transgression as design features that are often unintended and let players break rules and mechanics, and he connects this to Aarseth's idea of the implied player. He also includes breaking informal community rules, such as unpopular tactics like camping in FPS games, as part of ludic transgression (2019). This shows that ludic transgression is more than breaking the code; it is also about going against player-made norms for fair play.

Aarseth (2014) gives clear examples of ludic transgression, such as finding unintended possibilities in games: sometimes games allow unexpected actions simply because they are not explicitly forbidden. He argues that such moments are not accidents and an important part of the play experience. This shows that ludic transgression points out the unstable line between what designers intend and what players can actually do.

Competitive multiplayer games, like *Counter-Strike: Global Offensive* (2012), clearly show ludic transgression. Players may use tactics such as camping [1], exploiting map glitches, or relying on overpowered weapons. These actions are allowed by the game's rules but are often disliked by the community. As Pötzsch explains, this type of transgression goes against what players consider fair play, not the game's code.

Aarseth adds that these actions use what the game permits but does not specifically forbid, showing that the balance between player freedom and designer control is always somewhat

[1] In multiplayer games, "camping" refers to the practice of remaining in a fixed strategic position to gain an advantage, often by repeatedly ambushing other players as they enter the area.

unstable. He argues that games implicitly define an implied player, a set of expected behaviours and forms of engagement anticipated by the design. Transgressive play emerges when players act within the game's affordances while deviating from these expectations, exposing the limits of designer control. In this sense, transgression does not require breaking rules, but rather exploiting gaps, ambiguities, or unforeseen possibilities within the system, revealing that rule-based structures can never fully determine how they will be played (2014).



Figure 2.6: *Counter-Strike: Global Offensive* (2012) shows a player camping behind a barrel.

Bogost (2007) expands the idea of ludic transgression by showing that game procedures can be designed to fail or limit players, creating meaning through "broken" systems or forced failure. His procedural rhetoric framework illustrates that games can persuade by using constraints that simulate system problems or unavoidable harm. Here, ludic transgression is more than what players do to the system; it is also about what the system does to players by limiting strategies, removing fairness, or making failure the goal.

2.3.4 Hybrid transgression

Hybrid transgression happens when transgression takes place on several levels at once, especially when game mechanics and representational or political meanings are so connected that they cannot be separated. Soderman (2021) describes this as "critical flow," a kind of reflective immersion that depends on interpretation and critical distance rather than only skill. In this way, hybrid transgression isn't simply a mix of ludic and aesthetic transgression, but a disruption created through the mechanics themselves.

An example of hybrid transgression can be found in the final level of *Drakengard 3* (2013), which disrupts mechanical execution, aesthetic convention, and player anticipations into a single experience. The final sequence replaces the game's established combat mechanics with a rhythm-based encounter that demands much of the player while deliberately withholding conventional

audiovisual cues that would support mastery. Mechanically, the level enforces failure through unforgiving timing; aesthetically, it abandons the power fantasy and the atmosphere created earlier in the game; and experientially, it confronts the player with frustration, exhaustion, and interpretive ambiguity. The transgression here cannot be localised to either mechanics or representation alone: the meaning of the sequence emerges precisely from their connection, producing a rupture that is simultaneously ludic, aesthetic, and affective.

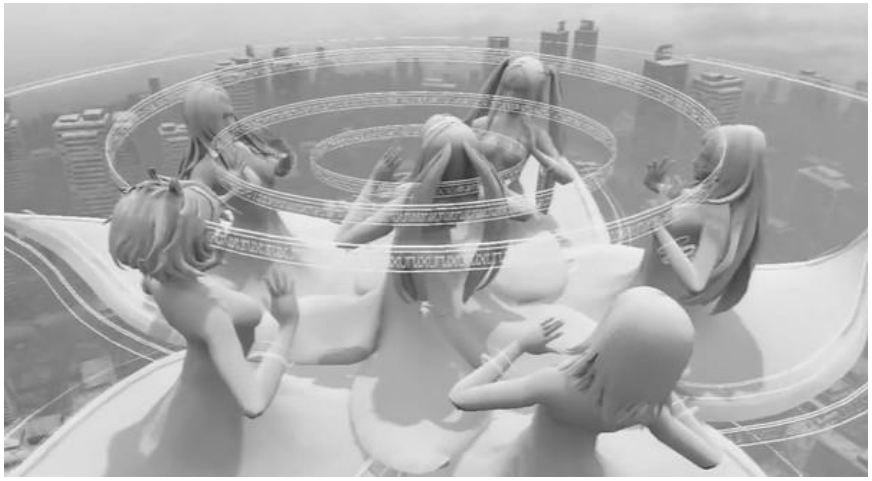


Figure 2.7: *Drakengard 3* (2013) screenshot of the final level "The Final Song."

Pötzsch describes some games and practices as "multiply transgressive," breaking multiple boundaries at once. For example, a game can go against both genre conventions and wider cultural norms. His example of performative interventions using game systems to spread anti-war messages shows hybrid transgression as a mix of system misuse, breaking player roles, and adding political meaning (2019).

Stenros and Bowman (2018) support a hybrid account through cases such as bleed and pervasive games. Bleed refers to the movement of thoughts/emotions between the player and character. In contrast, pervasive games blur the boundaries between ordinary life and the game, making consequences harder to parse. These concepts are important since they locate hybridity not only in "mechanics + representation," but also in the unstable boundary between game and life.

Carter (2022) further reinforces hybridity by examining "treacherous play" in situations in which betrayal is judged by real-world standards because relationships formed are experienced as real. Even when betrayal is mechanically "lawful," it can be socially condemned as a transgression that exceeds the game's internal permissibility. This is a hybrid transgression in a strong sense: the game's systemic allowances collide with extra-game moral expectations.

This typology shows that transgression in games is not a single concept. It can come from designers or players, and it can appear in a game's look and feel, its rules, or across multiple layers at once. These categories help us discuss transgression more accurately, rather than just

calling everything rule-breaking. Although these types of transgression break boundaries in different ways, they all elicit strong emotional and affective responses.

In broad terms, these distinctions can be understood as:

- Ludic transgression, which challenges rules, mechanics, or procedural logic;
- Aesthetic transgression, which disrupts representational, stylistic, or diegetic expectations;
- Hybrid transgression, which emerges from the interaction of mechanical disruption and representational content.

2.4 Emotional Mechanisms of Transgression

Transgression in games matters because of how it feels and impacts the player. Analysts might spot when a game crosses a line, but for players, such moments are emotional, they break comfort, certainty, and routine. Feelings for example, frustration, tension, discomfort, and sharper focus are central to how transgression works in play. Here, we examine how these occasions create emotional intensity by breaking expectations, disrupting flow, drawing attention to failure, and combining different feelings.

Transgression in games matters because of how it feels and impacts the player. Analysts might spot when a game crosses a line, but for players, such moments are emotional, they break comfort, certainty, and routine. Feelings for example, frustration, tension, discomfort, and sharper focus are central to how transgression works in play. Here, we examine how these occasions create emotional intensity by breaking expectations, disrupting flow, drawing attention to failure, and combining different feelings. These elements do not operate in isolation; together, they shape how players experience and later interpret transgressive moments. How players feel in games depends a lot on what they expect. Design, usability, and past experience all shape these expectations. If the game meets these criteria, their emotions stay steady. If that is not the case, then players can feel a sudden shock.

Norman argues that cognition and emotion cannot be separated, and that expectations play a major role in determining emotional outcomes. He notes that confirmation of expectations produces satisfaction, whereas the opposite produces frustration, anxiety, or even surprise (2004). This emotional intensity happens not only because of difficulty or challenge, but from the breakdown of established anticipation structures through which players interpret game systems. It is precisely this breakdown that allows transgression to be felt as an emotional rupture rather than a simple design irregularity.

Transgressive moments use this mechanism by intentionally breaking what players think the game will do or allow them to do. Wilson & Sicart (2010) describe abusive game design as an aesthetic practice that intentionally breaks usability conventions and confronts established assumptions about player comfort and cooperation. This break shatters the player's expectations, triggering emotional shock, making the game’s boundaries suddenly clear. Transgression is also

able to operate through the interruption of the flow. Flow is often seen as the ideal state of play, but transgressive games tend to interrupt it. Soderman characterises flow as the quieting of doubt, a state in which reflection, hesitation, and resistance are temporarily suspended. He contrasts this with critical or reflective modes of play that are seen when flow is disrupted, arguing that games can leave flow and enter and exit the state to generate new expressive possibilities (2021). Emotional discomfort plays a major role in this variation, by interrupting ease and continuity, the game forces players to become aware of their own engagement and limitations. This shift from absorption to awareness marks a transition from smooth play to a more reflective mode of engagement. This is very important because it pulls players out of the game. Instead of being absorbed, they feel uncertain, irritated, or doubtful. These feelings make the game's structure and limits more obvious.

Frustration and failure are some of the strongest ways players can feel transgression. In this vein, Juul points out the paradox that players seek out failure even though it feels bad. He claims that failure always has the potential to be painful because it tests the player's skill and effort (2013). This pain is not a side effect, it is central to how games get players emotionally involved.From this perspective, failure becomes a key site where emotional engagement and transgressive experience intersect. Transgressive games usually make this stronger by showing failure as unavoidable, extreme, or unclear. Wilson and Sicart point out that in abusive game design, frustration is not a mistake but the goal (2010). Here, discomfort is used to show players the limits of their ability, patience, or control. Anable also describes failure as a physical, repeated feeling. Games create cycles of "falling, dying, repeating" that affect how players feel about their own vulnerability and persistence (2018). Instead of letting players solve frustration by getting better, transgressive games may keep it going, turning discomfort into something meaningful rather than just a problem to solve. This persistence of discomfort further complicates the emotional experience of play.

Transgressive play rarely elicits a single emotion. Often, it creates mixed feelings of attraction and dislike at once. Players might feel irritation and fascination, pleasure and discomfort, or both engagement and resistance. These emotional combinations contribute to the ambivalent nature of transgressive experiences. Anable notes that games affect the body as much as emotions, creating strong physical reactions before players even think about them (2018). These feelings might later be named as emotions, but they do not fit neatly into enjoyment or displeasure. This helps explain why transgressive moments can feel bad at first but meaningful later. Isbister (2016) adds that games are powerful emotional systems because players are responsible for what happens. Having this agency makes emotions feel stronger, this results in feelings such as guilt, pride, tension, or anxiety that come from taking part, not just watching. In transgressive situations, this responsibility makes emotions even less stable. Players are not just affected by events, they are part of them.

Transgression also changes how players pay attention. Norman notes that negative feelings like anxiety or annoyance make players focus more on details and immediate feedback (Norman,

2004). Transgressive moments often do this, they make players more alert and focused on what is happening, increasing their engagement with the game. This heightened attention reinforces the impact of emotional disruption. Keogh supports the idea that emotional involvement in games is physical. He argues that games are felt in the body and that feelings come from actions, repetition, and resistance, not just from thinking (2018). From this point of view, emotional disruption is not just mental, it also comes from tense controls, repeated moves, and physical tension. Nguyen (2020) describes games as artworks of agency, where players try out different ways of acting and making decisions. Transgressive emotional experiences push players to be aware of how their choices are shaped, limited, or challenged. This turns emotional discomfort into a more mindful way of playing.

2.5 Purposes of Transgression

Transgression in games matters not just because it breaks rules, but because it breaks the player's experience and changes how they interpret what's happening. The works in this section show that transgression is a strategy: it heightens emotion, exposes hidden rules and conventions, and pushes players to rethink the situation, the system, or even the cultural ideas that games reflect. So, transgression is more than just something that happens during play; it's a way to make boundaries visible and meaningful. While the previous section focused on how disruption is experienced affectively, this section examines how such disruptions are interpreted and made meaningful.

2.5.1 Provoke affective intensity to interrupt automatic engagement

Transgression can create strong emotions that snap players out of their usual, automatic way of playing. Norman's idea of behavioural versus reflective engagement helps explain that the behavioural level is unconscious, but the reflective level is where real understanding happens (2004). When games introduce sudden challenges, discomfort, or break the expected flow, such instances can push players to think more deeply about what they're doing.

Norman links negative affect directly to interpretive focus: "Negative emotions kick in when there is a lack of understanding", and players feel "frustrated and out of control" (p. 77). Crucially, he argues that negative affect can produce cognitive sharpening: "When you are in a state of negative affect, feeling anxious or endangered, the neurotransmitters focus the brain processing." (p. 25). The purpose of disruption, in this sense, is not simply to create discomfort but to produce an urgency that focuses attention toward meaning, causes, and structure.

Soderman (2021) looks at this idea via the idea of flow as mentioned before. He says that when flow is interrupted, pleasure turns into problems, worry, or anxiety. Transgression can be used on purpose to push players out of their comfort zone and make them notice things about the

game they would usually ignore. For example, an unexpected interruption in familiar interaction patterns may force players to slow down, rethink their actions, and consciously pay attention to feedback they would normally process automatically.

2.5.2 Reveal hidden structures and conventions

Another reason for transgression is to show players the rules and expectations that usually stay hidden. Norman points out that negative emotions make people focus on problems and pay closer attention. In games, this means that when things get difficult or disrupted, players start to notice how the system is built with its limits, assumptions, and rules instead of just playing along.

Juul shows how failure performs this revealing function in particularly direct ways. He writes that "failure forces us to reconsider what we are doing" and "connects us personally to the events in the game" (2013, p. 122). Failure is not only affectively painful but it also makes the player's relationship to the system more intimate and accountable. Juul adds that failure has the ability to engage the very positive effect of making the player see new details and depth in the game, because it forces attention onto strategies and structures that would otherwise remain unexamined (2013).

Importantly, Juul frames games as environments in which conventions can be tested and transgressed: "The high-level pattern is that games allow the transgression of many social conventions… and the ease of use that we expect designers to value" (2013, p. 55). This is a clear statement of purpose, by allowing or implementing the violation of conventions helpfulness, fairness, usability, games can make those conventions visible as conventions. Soderman (2021) goes further on this idea and suggests that some games use interruptions to challenge the idea that flow should always guide game design. In this way, transgression doesn't just reveal the rules of a single game, but also questions the bigger design ideas that shape what games are supposed to be. We can see this in moments when standard feedback or assistance is withheld, prompting players to recognise previously invisible assumptions about the game.

2.5.3 Bring boundaries into visibility by breaking immersion and foregrounding the apparatus

A lot of discussions on transgression agree that breaking immersion can serve a purpose, not to ruin the experience, but to show what makes that experience possible. Frasca (2004) directly challenges the idea of immersion as something we should always accept, emphasizing that this immersion should not be taken for granted and that the very act of questioning the values and mechanics of video games could prove to be a source of pleasure for the player. This frames transgression as a conscious shift from being absorbed in the game to taking a more critical perspective.

Frasca connects this idea to Brecht's concept of alienation, articulated in his writings on epic theatre, particularly in *Brecht on Theatre* (1995) describes a strategy of disrupting audience immersion in order to provoke critical distance and reflection., which uses techniques that alienate what is familiar, reminding people they are watching a representation and encouraging them to think (2004). In this case, transgression serves an interpretive purpose because it breaks the sense of familiarity so players can notice the structures usually hidden by routine. Mentioning that simulation is a perfect medium for exposing game rules (2004), because it can show systems and let players change them. In this way, transgression helps make rules and their underlying values clear.

Galloway (2006) offers a similar argument, he states that video games are built from algorithms and that the act of breaking the game is also an act of breaking the algorithm. The point of this kind of disruption is to lay bare the grammar of the medium. In other words, transgression is not simply about creating a different play experience but also it reveals the underlying logic that usually goes unnoticed. This can be observed, for example, in interface interruptions or unexpected audiovisual reminders; these can momentarily distance players from immersion, drawing attention to the structure of the system they are engaging with.

2.5.4 Force meaningful reinterpretation as critique and expressive practice

Transgression in games often aims to make players rethink their actions, the system's possibilities, and the meaning of their experience. Instead of producing immediate meaning, these moments first introduce a disruption that delays the interpretation, prompting players to reflect on the experience after the initial disturbance. Norman's idea of reflective processing explains this well. According to Norman, meaning is found not in immediate reactions or behaviors, but in reflection, where people interpret and understand what happened (2004). Usually, it is only after an interruption in play that players start to reflect.

Norman's ideas about emotional design provide a helpful comparison to comprehend transgressive games. He explains that experiences like amusement park rides mix fear, discomfort, and reassurance, creating moments that might feel unpleasant at first but are appreciated later for their meaning and intensity (2004). Transgressive games work in a similar way. They create tension, frustration, or uncertainty during play to encourage reflection afterward. The important thing is not the immediate enjoyment, but the meaning that becomes clear after the disruption.

Soderman also highlights how some games challenge player expectations to encourage interpretation. He says that certain games shift play toward broader critique, leading players to see games not just as things to master, but as works to read and question (2021). Here, transgression does more than interrupt play; it changes its direction, making gameplay a chance for players to think about what the game says about agency, culture, or the medium.

Wark (2007) takes this idea further by seeing games as allegories for today's "gamespace." She believes games show the abstract rules that shape decisions and values in modern life, and they reveal the gap between what systems assure and what they actually deliver. In this view, transgression is useful because it makes these gaps more obvious, turning hidden contradictions into something players can see. Even negative feelings like boredom or dissatisfaction can be helpful, not as design flaws, but as ways to highlight the limits and assumptions built into games.

Boluk & LeMieux (2017) describe a similar idea with their concept of metagaming[2] as a way to intervene in games. They see metagaming as a practice that disrupts a game's logic and turns play into critique, experimentation, and change. By modifying, exploiting, or breaking rules, players go from just playing games to questioning them. Here, transgression matters because it blurs the line between playing, creating, and thinking, making play a thoughtful and critical activity. For example, a moment that feels confusing or frustrating during play may only become meaningful later, when players reflect on why the disruption occurred and what it revealed about the system.

Table 2.1: Metagaming as transgressive intervention (adapted from Boluk & LeMieux, 2017).

Practice	**Mode of Intervention**	**Critical Effect**
Playing against the game	Rule disruption	Exposes system logic
Breaking the game	Exploitation / misuse	Reveals constraints
Making / modifying	Reconfiguration	Challenges norms
Reflective play	Critical engagement	Transforms meaning

Across these accounts, the purposes of transgression in games can be understood as follows:

- To use emotional disruption to provoke attention and reflection;
- To employ friction, failure, or dissatisfaction to reveal hidden conventions;
- To interrupt immersion to foreground underlying systems and assumptions;
- To compel reinterpretation of what games do, how they operate, and why their structures matter.

This chapter brought together philosophical ideas about transgression with perspectives from game studies and design to show how transgression reveals boundaries in rules, representation, experience, and interpretation. Instead of seeing transgression as rare or unusual, this approach treats it as a valuable design strategy that helps games reveal their structures, values, and assumptions. These ideas form the foundation for the framework in the next chapters, which

[2] The "metagaming" refers to practices, strategies, and meanings that emerge around a game beyond its immediate rules, including optimisation, community norms, and critical or subversive play.

will explore how transgression can be intentionally created, experienced, and understood in game design, focusing on its aesthetic, playful, and experiential aspects.

3. Methodology

3.1 Methodological Approach and Work Plan Overview

This research adopted a qualitative, theory-based, and iterative methodology to research game sound transgression in video games. This approach was appropriate given the nature of the phenomenon under study. Game sound transgression was not treated as a quantifiable or purely technical feature of game audio, but as an aesthetic and experiential process that emerged through the interaction of sound, rules, conventions, and player interpretation. As such, it required an interpretive methodology capable of addressing meaning, affect, and boundary negotiation rather than causal measurement.

The study understood video games as designed systems in which meaning was produced through the interplay of mechanics, audiovisual representation, and sensory feedback, with a specific focus on sound. Within this context, game sound transgression was defined as the intentional disruption of established game audio conventions in order to reveal perceptual or symbolic boundaries, provoke emotional responses, and destabilise habitual modes of interpretation. Because these effects depended on context and player experience, a qualitative framework was necessary to analyse how game sound transgression operated across different games and situations.

This research was organised into four phases:

- Phase 1 - Theoretical Framework: construction of the initial framework based on existing literature.
- Phase 2 - Preliminary Analysis: analytical testing and refinement of the framework through gameplay-based analysis.
- Phase 3 - Game Design & Implementation: application of the improved framework in the design of playable artefacts.
- Phase 4 - Assessment & Discussion: evaluation of the framework and artefacts, leading to a final reformulation.

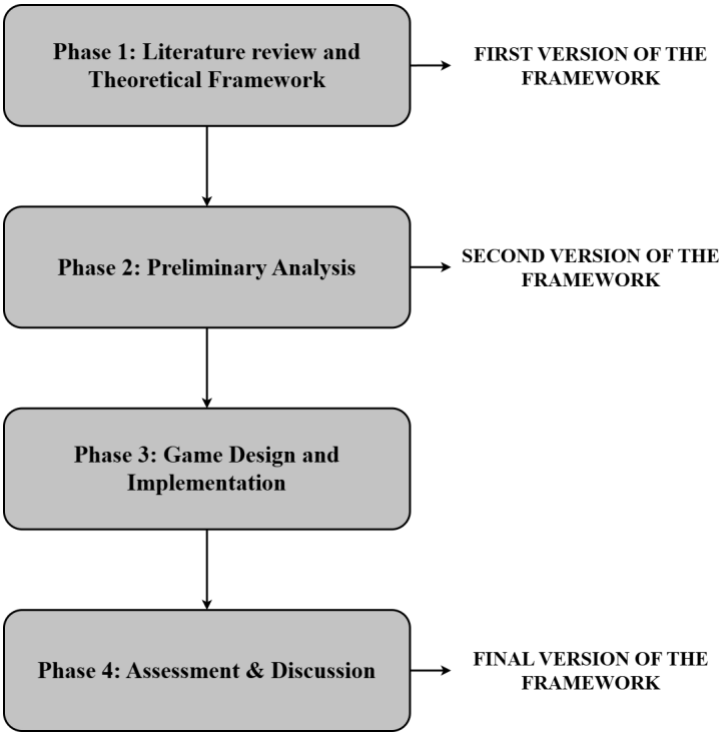


Figure 3.1: Workplan Diagram

The methodology was organized as a phased process with specific moments of feedback and refinement. In Phase 1, the framework was developed from the literature. In Phase 2, it was tested through the analysis of existing games and revised according to the findings. In Phase 3, the revised framework was transformed into a heuristic design tool and applied through practical implementation and prototyping. Finally, in Phase 4, the framework and its practical application were assessed and discussed. In this sense, the iterative dimension of the methodology referred to the progressive refinement of the framework across the research process.

This iterative, qualitative approach aligned with the exploratory aims of the research. Instead of seeking universal rules, the study aimed to develop a flexible and critically grounded framework capable of articulating how game sound transgression functions as an intentional design strategy in video games. For this reason, a theory-driven and iterative methodology was both necessary and well-suited to the research questions addressed in this dissertation.

3.2 Phase 1: Literature Review and Theoretical Framework

Phase 1 focused on the development of version 1 of the Framework, the initial conceptual model for analysing game sound transgression in games. Drawing on literature from game studies, philosophy, design theory, and game audio research, this phase defined key concepts, categories of game sound transgression, and analytical criteria for identifying and distinguishing transgressive sound events in games.

Its aim was not to produce a descriptive overview of existing work, but to translate theoretical insights into a structured analytical tool: the framework. This first version of the framework specified what counted as game sound transgression, how different forms of it could be distinguished, and what kinds of emotional and interpretive effects could be expected.

At this stage, the Framework was deliberately broad and provisional. It functioned as a theoretical hypothesis designed to be tested and refined rather than as a final classification.

3.3 Phase 2: Preliminary Analysis

Phase 2 was the only phase of the research in which existing video games were played as primary analytical material. Gameplay in this phase was used for observation and evidence collection, not for playtesting or evaluation. The purpose of this phase was to apply Framework V1 to selected examples of game audio transgression in order to test its analytical usefulness and identify where it required refinement. This phase adopted a qualitative and interpretive approach based on close reading of selected gameplay segments (Bizzocchi & Tanenbaum, 2024). Close reading was used because the analysis focused on how meaning was produced through the relation between sound, player expectation, gameplay structure, and interpretation. The analysis focused on bounded moments or sequences in which sound played a central role in destabilizing the player's experience. This focus made it possible to examine game audio transgression in detail while still allowing comparison across cases.

The selected cases were examined to understand what conventions were being violated, how sound contributed to the disruption, and how the player's experience and interpretation were affected. Moments that did not align perfectly with the framework were treated as especially valuable because they revealed limitations, ambiguities, or blind spots in Framework V1. Phase 2 therefore functioned as a stress test, where the first iteration of the framework was applied to concrete cases in order to expose where it needed clarification or revision. The corpus was selected according to explicit criteria. A case was included when sound was structurally central to the destabilising moment, when the disruption could be clearly connected to game audio, when the segment could be isolated and replayed, and when the game established an audio convention before disrupting it. Cases were excluded when sound functioned only as atmosphere or reinforcement, when the destabilization could not be clearly tied to audio, or when the moment could not be revisited in a stable way.

3.3.1 Goals

The main goal of Phase 2 was to test Framework V1 against real game examples and determine whether it could consistently identify and describe game sound transgression in practice. Specifically, this phase aimed to:

- Evaluate the clarity and usability of Framework V1 when applied to concrete examples.
- Identify overlaps, ambiguities, or missing elements in the framework;
- Refine definitions and category boundaries;
- Identify recurring patterns across the analysed cases.
- Produce a revised and more optimised version of the framework (Framework V2).

3.3.2 Methods and Procedures

For each selected game, the analysis followed a consistent and structured procedure. First, the game was played and observed to identify moments in which sound behaved in an unexpected or disruptive manner. During this exploratory stage, brief notes were taken whenever audio was found to be misleading, contradictory, emotionally unsettling, or in tension with player expectations.

Second, each identified moment was subjected to detailed analysis using Framework V1. The framework structured what was examined and recorded for each case, including:

- The expected sound behaviour,
- The observed game sound event,
- The boundary or convention being violated,
- The category of game sound transgression,
- And the interpretive effects on the player.

Third, the analysed moments were formalised and documented as discrete analytical units. This step involved consolidating notes, recordings, and observations into a moment log, ensuring that each case was clearly defined and suitable for comparison across games.

Fourth, the documented moments were compared across the analysed games. This comparative stage was used to identify recurring patterns, frequent ambiguities, and boundary cases in which the framework struggled to produce clear or stable classifications.

Finally, Framework V1 was revised on the basis of these findings. Through this process of clarification and adjustment, the initial iteration of the framework was refined, resulting in its second iteration, Framework V2.

3.3.3 Instruments and Tools

The instruments used in Phase 2 were intended to support a systematic and documented close reading process. Since the analysis focused on specific gameplay moments rather than on entire games, these tools helped organize and compare each selected sound event in a consistent way. They also ensured that the interpretation of each case was supported by concrete evidence, such as play notes, recordings, screenshots, and contextual material, rather than relying only on memory or general impressions.

- Play notes, used during exploratory sessions to record observations about sound behaviour, player expectation, and possible destabilising moments.
- Gameplay recordings and screenshots, captured during replay sessions to provide specific evidence for each analysed segment.
- Segment log, used to organise all selected segments and document their title, context, trigger condition, duration, and relevant audio features.
- Framework-based analysis sheet, used to record the baseline, deviation, violated expectation, player impact, mode of transgression, domain of destabilization, conventions challenged, and consistency check.
- Supplementary materials, if applicable, such as developer commentary or interviews, to contextualise whether a game sound behaviour appears intentional.

3.3.4 Expected Outcomes

The primary outcome of Phase 2 was Framework V2, a revised version of the framework with more precise definitions, sharper category boundaries, and improved analytical criteria. Additional outcomes include:

- A documented corpus of analysed game audio transgression segments across multiple games.
- A clearer understanding of how game audio transgression operates in practice.
- A set of recurring findings that inform the refinement of the framework.
- Evidence of the strengths and limitations of Framework V1.
- An optimised analytical toolkit ready for application in the design phase.

3.4 Phase 3: Game Design and Implementation

Phase 3 translated the revised framework into a practical design process. While Phase 2 used the framework as an analytical tool, this phase examined whether the framework could also support the creation of game audio transgression. The goal was to test how the framework could guide the generation, discussion, selection, and implementation of playable design ideas. This phase was organised around three connected activities.

First, the revised framework was transformed into a card-based heuristic tool. Card-based design tools have commonly been used to support creative thinking, human-centred design, and domain-specific design processes (Roy & Warren, 2019). In this research, the cards were designed to help structure the creative process by guiding decisions about game type, gameplay situation, audio convention, intended player effect, and form of transgression. The framework was used in this case to generate and organise new design possibilities.

Second, the card-based tool was used in co-design workshops. These workshops involved participants in the creation of game audio transgression concepts. This use of cards was informed by recent work on bespoke design cards in co-design, which shows that cards can support mutual learning, help non-designers participate meaningfully, and reduce barriers to collaboration across different areas of expertise (Bunæs et al., 2023). The purpose of the workshops was to examine whether the tool could help participants understand the framework and use it to produce concrete design ideas. During the workshops, participants used the cards to combine game situations, sound conventions, player effects, and transgressive strategies. The concepts produced in these sessions were documented and later analysed in relation to the framework.

Third, one idea emerging from the co-design process was selected for practical implementation in Unity. The implementation used existing Unity demos and asset packs as a starting point, rather than building every game system from scratch. This decision narrowed the technical scope of the phase and allowed the research to focus on the design and implementation of transgressive audio moments. The selected Unity demo was adapted into a playable level, with its structure and sounds modified to create a controlled comparison between conventional and transgressive sound behaviour. Other prepared game packs, including racing and 2D platformer examples, were also considered as possible bases for implementation if needed.

The purpose of the prototype was to create a clear and playable situation in which game audio transgression could be intentionally designed and later assessed. The design scope was intentionally limited. Rather than attempting to represent all possible forms of game audio transgression, the phase focused on a small number of controlled situations. This made it possible to examine more clearly how the framework supported design decisions, how participants used the heuristic tool, and where practical implementation revealed limitations or ambiguities.

3.4.1 Goals

The main goals of Phase 3 were:

- To apply the framework as a practical design and heuristic tool.
- To translate the analytical categories of the framework into card-based design prompts.
- To use co-design workshops to generate game audio transgression concepts.
- To examine whether the card-based tool helps participants move from abstract framework categories to concrete design ideas.
- To select and implement one or more concepts in a playable Unity environment.
- To identify practical tensions that appear when theory is translated into design and implementation.

3.4.2 Methods and Procedures

The design process began by reformulating the revised framework into a heuristic tool. This involved turning the main concepts of the framework into card decks that could guide the creation of transgressive audio situations. These decks helped participants define the type of game, the gameplay situation, the normal audio convention, the intended disruption, and the expected player effect.

The card-based tool was then used in co-design workshops. In these sessions, participants worked with the cards to generate possible concepts for game audio transgression. The workshops were structured to move from general understanding to concrete concept development. First, participants were introduced to the concept of game audio transgression and to the purpose of the card tool. Then, they used the cards to combine gameplay situations with expected audio conventions and possible forms of disruption. Finally, each group developed one or more short concepts that described how sound could be used transgressively in a playable game situation. The workshop outputs were documented through concept sheets, notes, and, when relevant, visual materials produced during the session. After each workshop, participants completed a short post-workshop survey. The survey was used to collect individual feedback on the clarity of the concept of game audio transgression, the usability of the card-based heuristic tool, and the extent to which the tool helped participants move from abstract framework categories to concrete design ideas. These responses complemented the workshop notes and concept sheets by providing participant reflections after the collaborative activity. This survey can be viewed in Appendix A. These outputs were examined to identify which ideas were most coherent, feasible, and relevant to the framework. The selected concept was then adapted for implementation in Unity.

The implementation stage used existing Unity demos and asset packs as practical foundations. This allowed the work to focus on level adaptation and the relationship between player action and audio feedback. The prototype was then tested internally to verify that the intended sound event occurred consistently and that the conventional baseline was clear enough for the later disruption to be meaningful. If the moment was unclear, some conditions were adjusted. This process continued until the designed moment was stable, playable, and suitable for assessment in Phase 4. Throughout the process, design decisions were documented in a design log. This documentation recorded how the idea emerged from the card-based workshop process, why the selected sound was chosen, what convention it was meant to establish or disrupt, and how the implementation related to the framework.

3.4.3 Instruments and Tools

The instruments and tools used in Phase 3 support both the collaborative design process and the practical implementation of the selected concept. Since this phase moves from framework to design tool, from design tool to workshop, and from workshop to prototype, the instruments must

document both creative decisions and technical implementation. They were used to record how participants understand and apply the framework, how concepts were generated, and how selected ideas were translated into playable form.

- Card-based heuristic tool, used to translate the framework into practical design prompts.
- Co-design workshop structure, used to guide participants through concept generation.
- Concept sheets, used to document the ideas produced during the workshops.
- Workshop notes, used to record participant discussions, design decisions, and difficulties in using the tool.
- Post-workshop survey, used to collect participant feedback.
- Unity, used to adapt existing demos and implement the playable prototype.
- Existing Unity demos and asset packs, including the FPS demo used for the implemented level and other prepared packs for possible racing and 2D platformer examples.
- Audio editing tools, used to modify, replace, or prepare sound assets.
- Design log, documenting how workshop concepts were selected, adapted, and implemented.
- Prototype recordings and screenshots, used to document the implemented artefact.
- Internal testing notes, used to record technical problems, unclear moments, and design adjustments.

3.4.4 Expected Outcomes

The primary outcome of Phase 3 was a playable Unity prototype featuring a deliberately designed instance of game audio transgression, informed by the co-design workshop process.

Additional outcomes included:

- A card-based heuristic tool derived from the framework.
- A set of game audio transgression concepts produced during co-design workshops.
- Documentation of how participants used the tool to generate design ideas.
- A practical example of game audio transgression implemented through modification of an existing Unity demo.
- Insight into the advantages and limitations of using the framework as a collaborative design tool.
- A clearer basis for the assessment and discussion carried out in Phase 4.

3.5 Phase 4: Assessment & Discussion

Phase 4 consisted of a reflective and critical assessment of Framework V2, the card-based heuristic tool, and the playable artefact developed in Phase 3. Rather than validating the framework through quantitative measurement, this phase evaluated how effectively it functioned

across three connected contexts: analysis, collaborative concept generation, and practical implementation.

The assessment examined how clearly the framework explained instances of game audio transgression and whether its categories remained conceptually distinct when applied in practice. It also considered whether the card-based tool helped translate the framework into usable design prompts during the co-design workshops, and whether the implemented prototype produced a clear and understandable instance of game audio transgression. Particular attention was given to moments where the framework either clarified a transgressive situation effectively or proved insufficiently precise. In this sense, the evaluation was not limited to confirming the framework's strengths, but also aimed to identify its limitations and areas requiring refinement.

3.5.1 Goals

The main goals of Phase 4 were:

- To evaluate the effectiveness of the Framework in practice.
- To identify conceptual strengths and weaknesses.
- To examine how well the framework supported intentional design through the card-based heuristic tool.
- To produce a refined final version of the framework.
- To assess how players interpret and respond to the implemented prototype.
- To identify whether the designed transgressive audio moment is understandable and produces the intended effect.
- To produce a refined final version of the framework.

3.5.2 Methods and Procedures

The evaluation draws on the results of the previous phases. From Phase 2, it uses the analytical findings and the limitations identified through close reading. From Phase 3, it uses the co-design workshop outputs, design log, prototype documentation, and the implemented Unity artefact. These materials were examined together to assess how the framework works as an analytical model, as a heuristic design tool, and as a basis for practical implementation.

The assessment focuses on three main aspects. First, it reviews whether Framework V2 responds to the limitations identified during analysis. Second, it examines whether the card-based tool helped participants generate concrete game audio transgression concepts during the co-design workshops. Third, it uses limited player testing to gather qualitative feedback on whether the implemented transgressive audio moment was noticed, understood, and interpreted in relation to the intended design. Particular attention was given to moments where the framework remains unclear, where workshop participants struggle to use the tool, or where player responses differ from the intended effect. These moments were treated as indicators of conceptual or design

tension rather than as simple failures. On the basis of this assessment, the framework was reformulated into its final version by clarifying terminology and adjusting elements that did not function as intended.

3.5.3 Instruments and Tools

The instruments used in Phase 4 were intended to support the evaluation of the prototype and the final discussion of the framework. Since this phase examines both the player experience and the usefulness of the framework as a design and analytical tool, the instruments help collect structured feedback, observations, and reflections. These materials make it possible to assess whether the designed moment of game audio transgression was understandable, whether it produces the intended effect, and whether the framework needs further refinement.

- Analytical documentation from Phase 2, used to review the strengths and limitations identified during close reading.
- Workshop outputs from Phase 3, used to assess how the card-based tool supported concept generation.
- Design logs from Phase 3, used to trace how the selected concept was developed and implemented.
- Prototype artefact, used as the playable object of assessment.

3.5.4 Expected Outcomes

The primary outcome of Phase 4 was the final and consolidated version of the framework.

Additional outcomes included:

- A critical evaluation of the framework's applicability as an analytical tool.
- A critical evaluation of the framework's usefulness as a design and heuristic tool.
- An assessment of the implemented prototype as a practical example of game audio transgression.
- Identification of the framework's conceptual limits.
- A discussion of its potential for future research and design practice.

4. A Framework for Game Audio Transgression

Previous chapters established two central points for this dissertation. First, game audio is not only an aesthetic layer added to the visual experience. It is also a communicative and operational system that helps players interpret the game state, anticipate events, confirm actions, and understand their relation to the gameworld. As discussed in Chapter 1, game audio cues can guide player attention, confirm player input, communicate system feedback, and support coherence within the gameworld. Through repeated interaction, these cues become familiar conventions. Players learn what certain sounds usually mean, how they relate to gameplay, and how they should respond to them. Second, Chapter 2 defined transgression not simply as rule-breaking, but as an act that gains meaning from the limits it crosses. Transgression does not exist outside norms. It depends on them. By exceeding or disturbing a boundary, transgression makes that boundary visible. When applied to game audio, this means that game audio transgression only becomes meaningful because players have already learned what to expect from audio in games. Its effect depends on the existence of established audio conventions and on the player's trust in those conventions.

Jørgensen understands audio in games as part of the game's interface and control system. In this view, audio does not merely support the visual image; it actively shapes player interaction by communicating information about the game state, spatial relations, and player actions (2009, 2013). Similarly, Collins argues that interactive game audio is shaped by repeatability, contingency, and timing (2008, 2013). In games, specific player actions are often connected to specific audio responses. This consistency helps players predict outcomes and supports a sense of control. Over time, audio feedback becomes part of the player's practical knowledge of the game. Game audio transgression emerges from the disruption of this learned trust. When audio fails to confirm an action, contradicts visual information, becomes unclear, or changes its usual function, the player may no longer be able to interpret the game in the expected way. This disruption can produce uncertainty, discomfort, hesitation, increased attention, or confusion in the player. These effects occur because the audio no longer serves the role the player expected it to.

From this perspective, game audio transgression can be defined as the intentional disruption, reversal, or destabilization of established game audio conventions in order to make those conventions perceptible and alter how players interpret and act during play. For example, if a player action that normally produces clear positive feedback suddenly results in silence, that silence may become meaningful. The player may question whether the action was recognized,

whether the system has changed, or whether the game is withholding information. In this way, the absence or change of expected audio can reveal how much the player normally depends on sound as a guide. As discussed in Chapter 2, transgression can also function as an expressive strategy. It can expose the boundaries of established systems, create emotional intensity, or encourage reflection. In the context of game audio, transgression can reveal how audio supports control, certainty, immersion, and interpretation. By disrupting these functions, game audio can alter the player's relationship to the gameworld, the interface, and the mechanics.

This chapter therefore presents the framework used in this dissertation to identify and discuss game audio transgressions. Building on the discussion of game audio conventions in Chapter 1 and the theoretical account of transgression in Chapter 2, the framework organizes game audio transgression into distinct yet interconnected dimensions of experience. These dimensions are not rigid categories. They provide a vocabulary for recognizing how transgressive audio operates and how it affects the player during play.

4.1 Defining Game Audio Transgression

Game audio transgression is a way of using audio in digital games that goes beyond established audio conventions in order to make those conventions visible to players. This idea understands transgression as a relational act, rather than simply as rule-breaking or disorder. As explained in Chapter 2, transgression gains meaning by crossing boundaries and making them noticeable, rather than by ignoring or destroying them. It is important to differentiate game audio transgression from the simple idea of breaking rules or creating disorder for no clear reason. Transgression does not exist outside rules or conventions; it relies on them in order to be meaningful. In the context of games, this means that transgressive effects emerge from tension with expected audio patterns, not from a complete lack of audio structure.

In games, transgression should also be understood as an experience, rather than only as a structural change. As Mortensen and Jørgensen (2020) show, moments of transgression in gameplay go beyond normal limits while still revealing the importance of those limits in shaping how the game is understood and experienced. However, a transgressive moment that makes gameplay completely unclear or impossible may stop functioning as an expressive choice and become a failure of the system. Game audio transgression specifically concerns the role of audio as a communicative and interpretive system in digital games. It occurs when audio intentionally goes against learned conventions, such as feedback cues, spatial clarity, or emotional signals, forcing players to notice those conventions. To clarify, game audio transgression is not about bad sound design, technical errors, or shocking experiences for their own sake. It is a deliberate strategy that reveals boundaries while remaining connected to the conditions of gameplay.

Based on these points, this dissertation defines game audio transgression as the intentional disruption, reversal, or destabilization of established game audio conventions in digital games in

order to challenge player expectations and alter how audio is interpreted during play. This definition is not intended to describe every possible form of audio disruption in games. Rather, it provides a working definition for the framework developed in this dissertation, focusing on cases where audio crosses or disturbs learned conventions in a way that becomes meaningful for player experience and interpretation.

4.2 Dimensions of Game Audio Transgression

Game audio transgression does not manifest as a single and uniform phenomenon but may operate through different aspects of audio's role within digital games. Building on the definition of game audio transgression as a boundary-revealing act, this section introduces a set of analytical dimensions that describe how audio can exceed established conventions in distinct but interrelated ways. These dimensions are not strict categories or complete classifications. Instead, they are intended to help identify and analyze moments in which audio disrupts expected boundaries.

The following dimensions reflect the multiple roles of audio in games, including its aesthetic, functional, and cultural roles. As discussed in Sections 1.2 and 1.3, these roles may overlap in practice, and a single audio event may activate multiple dimensions simultaneously. The purpose of distinguishing these dimensions is not to separate audio events into exclusive types, but to clarify the specific boundaries being revealed in each case. This provides a clearer basis for analyzing how game audio transgression affects player experience.

4.2.1 Aesthetic Game Audio Transgression

Aesthetic game audio transgression concerns the disruption of the usual audio conventions that shape how players sense and experience audio in games. This notion is based on the idea that discomfort can be a useful part of artistic experience, as discussed in *Aesthetics of Discomfort* (Aldama & Lindenberger, 2016). Aldama and Lindenberger propose that art can focus on unease rather than comfort, stating that "displeasure can be central to a work without leading its viewers to pleasure at least in any traditional sense" (p. 17). In this view, discomfort is not necessarily a mistake, but can be a deliberate choice that challenges expectations of aesthetic satisfaction.

When applied to game audio, aesthetic game audio transgression happens when audio refuses the usual forms of resolution and clarity. Aldama and Lindenberger show that discomfort can result from changing familiar structures that people expect to be stable. They point out that unresolved dissonance and ongoing tension can function as signs of aesthetic rupture (2016). They also emphasize that discomfort comes from unresolved tension, uncertainty, and the lack of closure, which are central to how disturbing art affects us. In this way, transgression happens not only through new or unusual sounds, but also through the refusal to restore audio order where the player expects it. However, aesthetic game audio transgression should not be understood only as

the production of discomfort. While discomfort is one possible effect, audio may also become aesthetically transgressive by producing other effects such as: uncertainty, heightened attention, intimacy, instability, or a changed relation to the gameworld. In these cases, the transgression occurs because the audio disrupts the player's sense of coherence, even if the sound is not necessarily unpleasant. What matters is not only whether the sound feels disturbing, but whether it changes the way the player understands and experiences the game's audio.

This idea is also supported by Hegarty's discussion of noise. In *Noise/Music*, noise is not understood only as a specific type of sound, but as something that depends on how sound is perceived and judged. Noise appears when sound does not fit accepted ideas of order or musicality (Hegarty, 2010). For this reason, it helps show the limits of what is normally accepted as organised or meaningful sound. This is useful for aesthetic game audio transgression because it shows that transgression is not the same as simple stylistic variation or ordinary dissonance. It happens when audio challenges the rules that usually make sound feel coherent or acceptable. Chion's *Audio-Vision* also helps explain this idea from an audiovisual perspective. Noise, silence, and conflict between sound and image can challenge expectations of harmony and consistency. Instead of making the experience feel clear or comfortable, they may create uncertainty or tension (1993/2019). These effects reveal that the unity between game audio and image is constructed, even when it normally feels natural. For example, a game may remove an expected environmental sound from a place where it would normally be heard. This absence can disturb the player's sense of coherence, not because the sound itself is unpleasant, but because something expected is missing. The player becomes more aware that audio normally helps make the gameworld feel stable and continuous. Although these ideas come from different theoretical contexts, they share the view that aesthetic transgression reveals normal assumptions about audio. Aesthetic game audio transgression, as understood here, involves intentionally altering or removing audio to disrupt expectations of comfort, clarity, or aesthetic unity in games.

In this dissertation, *aesthetic game audio transgression* refers to the intentional disruption of expected audio conventions in order to make players notice how audio shapes the sensory and interpretive experience of the game.

4.2.2 Ludic Game Audio Transgression

Ludic game audio transgression involves changing how audio normally functions within gameplay. Instead of helping players understand actions, feedback, or possible choices, audio can become misleading or unreliable. This idea relates to *Gameworld Interfaces*, where Jørgensen describes the game interface as a system that helps players interact with the game and reduces confusion (2013). In this sense, audio plays an important role because it can provide information without distracting from the visual experience. It can signal possible actions, warn the player, confirm input, or communicate changes in the game state (p. 48). Because of this, players often learn to trust game audio as part of the interface. If a sound regularly confirms an action, marks

danger, or signals progress, the player begins to rely on it. This creates a stable relationship between audio, action, and outcome.

Ludic game audio transgression happens when this trust is intentionally broken. Instead of being a useful tool for players, audio can conflict with their actions, leading them to feel confused. Norman emphasizes that effective interaction requires clear signals that help users know what actions they can take and what outcomes have occurred (2013). Ludic game audio transgression disrupts this, creating situations where audio cues:

- Suggest actions that aren't possible,
- Misrepresent what happened,
- Don't match player input.

This is connected to Jørgensen's discussion of false affordances. False affordances occur when the interface suggests an action that is not actually possible, leading the player to make wrong assumptions (2013, pp. 88–89). In game audio, this can happen when a sound suggests that the player can interact with an object, enter a space, or perform an action, but the game does not actually allow it. The audio becomes transgressive because it disrupts the normal trust between the player and the game system. Norman's work on interaction design also helps explain this point. Norman argues that effective interaction depends on clear signals that help users understand what actions are possible and what results have occurred (2013). Ludic game audio transgression works against this expectation. Instead of reducing uncertainty, audio increases it. The player may still listen to the game, but listening no longer produces clear information.

Collins also emphasizes the importance of consistency and repeatability in interactive game audio. In *Playing with Sound*, she notes that players listen for specific sounds as cues for action, and that the connection between sound and action helps reduce confusion (2013). When audio becomes delayed, inconsistent, or mismatched with player input, that connection is weakened. The player may hesitate, misread the situation, or lose confidence in the feedback system. For example, a game may repeatedly use a specific sound to confirm that a door can be opened. If the same sound later plays near a door that cannot be opened, the player may approach it expecting interaction. The transgression comes from the fact that the sound breaks the player's learned trust in audio feedback.

In this dissertation, *ludic game audio transgression* refers to the intentional disruption of audio's expected role in gameplay. It occurs when audio stops functioning as a reliable guide for action, feedback, or player understanding, leaving the player unsure how to interpret and respond to the game.

4.2.3 Socio-Cultural Game Audio Transgression

Building on the conception of transgression as a socially constituted and relational act outlined in Chapter 2, *socio-cultural game audio transgression* refers to moments when audio crosses the norms, taboos, or moral expectations connected to play. As discussed in *Transgression in Games*

and Play (Jørgensen & Karlsen, 2018), what is considered transgressive in games depends on the norms of a specific time and culture, meaning that "transgressivity is that which is perceived as such by someone in some context" (p. 49).

Understanding *socio-cultural game audio transgression* requires looking at the specific norms involved. Pötzsch describes transgressive play as breaking norms that are specific to a situation rather than universal rules. He points out that what is suitable for play is often debated and tied to strong emotions (2019). Audio, especially voice and culturally meaningful sound, can carry these norms because it connects to shared histories, identities, and social expectations. Therefore, *socio-cultural game audio transgression* is not only about what happens inside the game system, but also about how in-game audio connects to broader cultural contexts. The idea of "dark play," as described in *The Dark Side of Game Play* (Mortensen & Linderoth, 2018), also helps explain this dimension. Dark play involves themes or actions that may be seen as wrong, controversial, or unacceptable outside the game context. The authors argue that what counts as appropriate in play is often unstable and can provoke strong reactions. In this sense, *socio-cultural game audio transgression* challenges which voices, expressions, and meanings are considered acceptable within play.

Audio is particularly effective in creating these reactions because it can feel immediate and direct. In *The Cultural Politics of Emotion*, Ahmed shows that emotions such as disgust or fear are shaped by cultural associations, rather than existing only as individual reactions (2004). When game audio includes taboo language, hostile voices, or culturally charged references, it can provoke emotional responses that reveal the norms being challenged. The transgression comes from the cultural meaning carried by the audio, not only from the sound itself.

From a game studies perspective, *Transgressive Play and the Implied Player* (Aarseth, 2014) helps explain why these moments may be understood as transgressive. Aarseth views transgression as a form of rebellion against the expected way players are meant to engage with a game (pp. 131–132). *Socio-cultural game audio transgression* can therefore occur when audio introduces meanings that disturb the assumed relation between the game, the player, and the expected audience. For example, a game may use a hostile voice that directly targets the player through racist, sexist, or otherwise discriminatory language. In this case, the audio becomes socio-culturally transgressive because it brings broader social violence into the play experience and forces the player to confront meanings that extend beyond the game system. This dimension is always dependent on context. Mortensen et al. highlight that, without a social frame, what is seen as dark or transgressive play may not stand out (2018). What is considered *socio-cultural game audio transgression* in one culture or historical moment may be accepted, ignored, or interpreted differently in another. Thus, the impact of audio in this dimension comes from the cultural meanings it reveals and the norms it challenges.

In this dissertation, socio-cultural game audio transgression refers to the intentional use of audio to disturb cultural, ethical, or social expectations connected to play, making visible the broader norms that shape what is considered acceptable within a game experience.

4.2.4 Hybrid Game Audio Transgression

Hybrid game audio transgression refers to cases in which the transgressive force of audio emerges through the interaction of multiple dimensions at once. These moments combine all three of the previously established dimensions (aesthetic, ludic, sociocultural). In digital games, transgression is often not located exclusively in representation, rules, or content, but in how these elements connect through play. Mortensen and Jørgensen (2020) argue that the transgressive potential of games lies precisely in this inseparability, since games involve not only what players perceive, but also what they do, how they are positioned, and how they interact with systems and meanings.

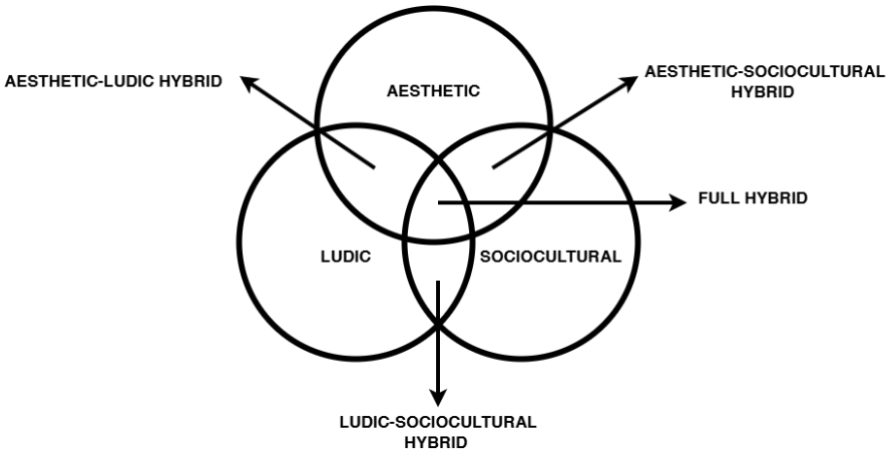


Figure 4.1: Framework of the three dimensions of game audio transgression and their hybrid overlaps.

For this reason, hybridity should not be treated as a secondary or exceptional form of game audio transgression. Because game audio often works at the same time as sensory material, gameplay information, and cultural expression, a single audio event may affect more than one dimension at once. In these cases, separating the dimensions too strictly would make the transgressive effect harder to understand. Hybridity is therefore important because it explains how different forms of disruption can reinforce each other within the same audio moment. A transgressive audio event may function as an aesthetic-ludic hybrid when audio disturbs the player's sensory expectations while also changing how they understand gameplay. It may function as an *aesthetic-socio-cultural hybrid* when an audio choice is unsettling not only because of how it sounds, but because it also invokes broader cultural or ethical meanings. A *ludic-socio-cultural hybrid* may occur when audio affects gameplay while also carrying socially charged meaning. In some cases, all three dimensions may converge, creating a *full hybrid* in which sensory disruption, gameplay instability, and socio-cultural tension reinforce one another.

This broader understanding of hybridity is consistent with work on discomfort and transgression in games. Jørgensen and Karlsen (2018) emphasize that transgression in games may involve aesthetics, play practices, politics, emotions, and social norms, showing that transgressive effects often exceed any single domain. In a similar way, Pötzsch (2018) argues that

transgressivity in video games is not fixed, but can emerge through shifting relations between rules, expectations, cultural norms, and player conduct. These perspectives support the view that hybrid transgression is not an anomaly, but a common way in which games produce complex and unstable experiences. For example, a voice may sound unstable or uncomfortable while also giving unreliable gameplay guidance. In this case, its transgressive force comes from the way both ludic and aesthetic dimensions work together. The player is made uncertain not only about the sound itself, but also about whether the audio can still be trusted as part of the game system.

In game audio, hybrid transgression occurs when audio does more than shock, confuse, or provoke in a single dimension. Its transgressive force comes from interaction. Audio may disturb perception while also interfering with action, or it may destabilize gameplay while carrying cultural meanings that exceed the game system itself. Hybrid game audio transgression, therefore, marks cases where the dimensions of transgression overlap and intensify one another rather than remaining analytically separate.

In this dissertation, *hybrid game audio transgression* refers to cases where audio operates across more than one dimension at the same time, producing a transgressive effect that cannot be fully explained through a single dimension alone.

4.3 Mechanisms of Game Audio Transgression

This section explains how game audio transgression is produced. Following the previous definitions, game audio transgression refers to the ways audio can disrupt expectations, confuse interpretation, or reveal conventions that usually go unnoticed. These processes can appear across different dimensions and may have aesthetic, ludic, hybrid, or socio-cultural effects.

A key mechanism of game audio transgression is incongruence. According to *Playing with Sound*, audio becomes disruptive when it does not align with player actions, visuals, or system logic. Collins describes kinesonic incongruence as a situation where sound does not match what the player is doing (2013). When this alignment breaks down, audio becomes more noticeable and can interrupt the player's understanding of the game. Incongruence may therefore create uncertainty, since the player has to rethink the relation between what they hear, what they see, and what they do. One common form of incongruence is silence where feedback is expected. Collins notes that when pressing a button does not produce a sound, it can cause confusion and hesitation because players depend on audio feedback to understand the results of their actions (2013). Normally, the connection between action and sound helps players understand cause and effect. When this connection is disrupted, audio becomes visible as a guide, rather than remaining unnoticed in the background.

Another mechanism is temporal disruption, especially when sounds and images are out of sync. Chion discusses "synchresis," the process through which we automatically connect sound and image when they occur together (1993/2019, p. 59). When this connection is broken by

delayed or mismatched sounds, players may need to reconsider how actions, images, and outcomes relate to each other. In this case, transgression emerges because the expected timing between audio and event no longer feels stable.

Spatial incoherence is also important. Players usually expect audio to match visible locations and environments. When this expectation fails, the gameworld can feel unstable or unreliable. Chion explains that sound can create perceptual confusion when it does not align with the image (1993/2019, pp. 46, 70). Collins also observes that players may sense spatial incongruence even when they cannot clearly explain it, producing the feeling that something "doesn't sound quite natural" (2013, p. 46). In game audio transgression, this kind of spatial mismatch can make players question the coherence of the gameworld.

Game audio transgression can also happen through excess or overload. When audio becomes too dense, intense, repetitive, or difficult to separate, it may stop supporting interpretation and start interfering with it. Collins notes that too much variation or sound density can draw attention to the audio and interfere with its intended purpose (2013, p. 35). From a production perspective, *Principles of Game Audio and Sound Design* explains how problems such as clipping, masking, repetition fatigue, or poor mixing can disrupt clarity and cohesion (Sinclair, 2020). While these problems are often treated as design mistakes, similar effects can also be used intentionally to create instability or pressure.

Another mechanism is role reassignment. In these cases, the audio does not need to sound strange or unpleasant. Instead, the transgression comes from a change in what the audio does. A sound that normally guides, confirms, or supports the player may begin to mislead, withhold information, or create uncertainty. This shift reveals that audio is a functional part of how players understand the game. This is closely connected to the breakdown of auditory trust. Players normally trust audio to clarify actions, spaces, threats, and feedback. When audio becomes unreliable, the player may still listen carefully, but listening no longer produces certainty. The transgressive effect comes from this loss of trust. Audio stops being a stable support system and becomes something the player must question.

Game audio transgression can also occur through breaks in audiovisual or systemic logic. Chion distinguishes between congruence, which supports meaning, and dissonance, which creates contradictions, such as "I should hear x, but I hear y" (1993/2019, p. 37). When audio contradicts images, actions, or expected narrative logic, it draws attention to the constructed relation between sound and game meaning. This can happen through silence, sudden changes in rhythm or texture, or audio that seems to belong to a different logic than the rest of the scene.

Finally, the physical qualities of audio can also contribute to game audio transgression. Intense or intrusive sound can affect the player directly and make disruption difficult to ignore. As Chion notes, sound can overwhelm perception and create strong sensory effects (1993/2019). In games, this physical force can influence how players feel, interpret, and act. For this reason, game audio transgression often affects more than one dimension at once.

These mechanisms explain how game audio transgression happens. They do not create separate categories of transgression but show different ways audio can reveal boundaries in art, play, hybrid experience, and socio-cultural meaning. By identifying these mechanisms, the framework allows for a clearer analysis of game audio transgression while considering both how it is perceived and how it is produced.

4.4 Player Impact and Interpretation

Game audio transgression is the experience that happens when players interact with a game's audio. It is not a fixed feature of the game, like audio assets or code. According to *The Paradox of Transgression in Games* (Mortensen & Jørgensen, 2020), we should view transgression as a subjective experience that arises from the player's engagement with the game. Game audio transgression occurs when players perceive and process audio within a specific gaming context. This highlights that game audio transgression varies and can be unstable. Mortensen and Jørgensen describe it as a back-and-forth experience where audios that seem unpleasant or confusing can still feel engaging or important. They argue that transgression is not a fixed characteristic but an experience that changes based on context and player engagement. (2020, p. 27). In the case of audio, this instability manifests when players are unable to immediately reconcile what they hear with their expectations of function, aesthetics, or meaning, forcing an active process of interpretation.

This instability is linked to discomfort, which plays a very important role in the experience, instead of it just being a design flaw. Mortensen and Jørgensen propose an aesthetic that is unpleasant, suggesting that negative feelings like fear or frustration can enhance the experience rather than indicate poor design. They argue that transgression is not a fixed characteristic but an experience that changes based on context and player engagement (2020). Game audio transgression often operates through this mechanism by interrupting the player's usual listening patterns, producing moments in which audio requires their attention instead of letting them fade into the background

Another perspective from "*In-Game: From Immersion to Incorporation*" (Calleja, 2014) emphasizes that games only gain meaning through play. Calleja argues that "a game becomes a game when it is played; until then it is only a set of rules and game props awaiting human engagement" (2014, p. 8). From this viewpoint, audios that disrupt expectations only become significant when they are activated by players. When audio conventions change, players have to shift their focus toward understanding and evaluating what they hear. This change in focus leads to increased awareness, which is another key effect of game audio transgression. Mortensen and Jørgensen explain that transgression reveals aspects of audio typically taken for granted until they are challenged (2020). Calleja adds that when familiar patterns break down, players start reflecting on their actions and the game's limitations, interrupting the smooth flow of play (2014).

Therefore, game audio transgression prompts players to examine the nature of audio feedback, control, and meaning-making in games.

Game audio transgression's impact is also influenced by what players know and expect. Mortensen and Jørgensen mention that players come into games with certain expectations that are shaped by their past experiences and genre conventions. This affects whether they see or not a disruption as meaningful or simply a mistake (2020). This idea aligns with "*Playing with Feelings*" (2018) where Anable argues that games work as emotional systems. Meaning comes from the connection between player and game, not just from the game itself. Anable points out that emotional responses depend on players' interpretive skills, cultural background, and personal experiences. This emphasizes that transgressive experiences vary for different players. What is challenging for one player might seem ordinary to another, because these experiences are personal and depend on context (Mortensen & Jørgensen, 2020). Calleja notes that different players interacting with the same game can end up having entirely different experiences (2014). Game audio transgression thus depends on players' willingness to face uncertainty and discomfort, and its effects are not guaranteed.

Overall, these insights show that game audio transgression is not just about audio design or technical choices. It arises from players' physical and emotional engagement with audio. Discomfort, instability, and increased awareness are not side effects; they are key mechanisms that illustrate the boundaries of play and perception.

4.5 Summary, Discussion and Implications of the Framework

The framework developed in this chapter understands game audio transgression as an intentional disruption of expected audio conventions. The dimensions described above do not function as rigid categories, but as analytical tools for identifying how audio becomes transgressive in different ways. Table 4.1 summarises these dimensions by showing their main focus, the boundary they reveal, and the possible impact they may have on the player.

Table 4.1: Dimensions of Game audio Transgression and their impact on player experience.

Dimension	**Primary Focus**	**Boundary Revealed**	**Primary Player Effect**
Aesthetic Game Audio Transgression	Audio as sensory and stylistic experience	Expected coherence of the game's audio experience	Heightened attention, uncertainty, sensory tension
Ludic Game Audio Transgression	Audio as gameplay feedback and interface	Reliability of audio as a guide for action and understanding	Hesitation, loss of trust, uncertainty about how to act
Socio-Cultural Game Audio Transgression	Audio as cultural and symbolic expression	Social, ethical, or cultural expectations connected to play	Discomfort, reflection, awareness of broader meanings

Hybrid Game Audio Transgression	Audio operating across more than one dimension	Separation between the sensory, functional, and cultural roles of audio	Interpretive instability, intensified uncertainty, complex player response

This chapter introduced a framework to understand how audio can transgress established conventions in games. It is based on existing theories about transgression, game audio conventions, and how players experience audio. The framework defines different ways audio can disrupt player expectations and shows how these disruptions reveal boundaries. Instead of seeing transgression as random noise or as a mistake, this framework views it as a purposeful design choice.

This framework relies on the player's ability to recognize standard audio conventions, mechanics, and meanings before they can understand when audio disrupts them. Transgression is seen as a relationship shaped by the clash between familiar audio conventions and their disruption. This is what makes player experience and interpretation so important, aligning the framework with approaches that focus on the player in game studies. The framework also shows that game audio transgression can have various effects on players. Depending on the situation, a disruptive sound may elicit a range of effects, including confusion, tension, discomfort, alertness, reflection, or emotional surprise. These effects are not always negative. While some disruptions may challenge clarity or control, they can also enhance engagement by highlighting how the game is built or by creating moments of uncertainty (Costikyan, 2015). In this way, game audio transgression reveals the limits of routine gameplay.

The framework also shows that game audio transgression is not always effective or suitable. Its impact depends on context, including the genre of the game, the player's familiarity with game systems, cultural expectations, and the specific gameplay situation. A disruption may be interpreted as meaningful when the game gives the player enough context to connect it to the experience. However, if the disruption appears without any clear relation to the game's rules, atmosphere, narrative, or player action, it may be understood as a mistake or technical problem instead of as a deliberate design choice. This shows that game audio transgression depends on careful design and on the player's ability to recognize the disruption as meaningful. For this reason, the framework should be understood as a tool for analysis and reflection, rather than as a strict guide to follow. Its purpose is not to suggest that all audio disruption is valuable, but to help identify when and how audio can challenge expectations in a meaningful way. This prepares the basis for the following chapter, where the framework is applied to specific game cases in order to examine how game audio transgression operates in practice.

5. The Model as an Analytical Tool: Analysis, Assessment, and Discussion

5.1 Introduction

This chapter applies the proposed framework of game audio transgression to a selected set of game cases in order to examine how transgressive uses of sound operate in practice. The aim is to investigate how game audio crosses established conventions, how such moments affect the player's experience, and what these cases reveal about the strengths and limitations of the current version of the framework. The analysis adopts a qualitative and interpretive approach based on close reading (Bizzocchi & Tanenbaum, 2024) of selected gameplay segments. The chapter focuses on specific gameplay moments in which sound becomes destabilizing in a meaningful way. By using the same protocol across all cases, the analysis also aims to maintain consistency and comparability while remaining sensitive to the particularity of each example.

5.1.1 Corpus for the Analysis

The corpus consists of twelve selected games, each represented by one bounded gameplay segment selected for close reading. In this context, a segment refers to a specific scene, sequence, interaction, or recurring gameplay condition in which sound plays a central role in destabilizing the player's experience. The segment was not treated as representative of the entire game, but as a focused analytical unit that made it possible to examine one clear case of game audio transgression in detail.

The sample was constructed through explicit inclusion and exclusion criteria in order to ensure coherence and to keep the analysis aligned with the research focus on game audio transgression. A case was included only when sound played a structurally central role in shaping the player's experience and participated in a clearly identifiable moment of destabilization. More specifically, each selected case had to meet the following conditions:

- Game audio had to be structurally necessary.
- Had to contribute to identifiable destabilization.
- The destabilizing moment had to be isolable and replayable.
- The game had to establish conventions before disrupting them.
- The moment had to be precise to support detailed close reading.

Games were excluded if sound functioned only as atmosphere or reinforcement, if destabilization could not be clearly tied to sound, or if the moment could not be revisited in a stable and controlled way. These criteria are important because transgression can only be identified when a prior norm or expectation has first been established. The selected cases, therefore, do not aim to represent all genres, periods, or forms of game audio equally. Instead, they were chosen because they provide analytically useful examples of how game audio may destabilize perception, action, interpretation, world coherence, or ethical positioning.

The corpus used in the study consists of the following games:

1. *Resident Evil – Code: Veronica* (2000);
2. *Ico* (2001);
3. *Metal Gear Solid 2: Sons of Liberty* (2001);
4. *Silent Hill 2* (2001);
5. *BioShock* (2007);
6. *Drakengard 3* (2013);
7. *Call of Juarez: Gunslinger* (2013);
8. *The Stanley Parable* (2013);
9. *Mafia III* (2016);
10. *NieR: Automata* (2017);
11. *Hellblade: Senua's Sacrifice* (2017);
12. *Immortality* (2022).

This corpus was assembled to cover a range of transgressive effects across the framework's different modes, including aesthetic, ludic, socio-cultural, and hybrid configurations. The choice to analyse one segment per game makes the study manageable while still allowing each case to be examined in depth. It also supports comparison across cases, since all examples are treated at the same analytical level. Some selected segments are brief and scene-based, while others represent more sustained or feature-level forms of transgression. What unites them is their capacity to reveal hidden conventions on which ordinary gameplay sound depends.

5.1.2 Protocol

Each case was analyzed through the same structured close-reading protocol. The purpose of the protocol was to ensure consistency across the corpus by applying the same sequence of steps to every selected segment. The protocol was divided into three stages. The pre-analysis stage focused on identifying the game, selecting the specific segment, and documenting the context in which the segment occurs. The analysis stage focused on establishing the normal game audio behavior of that segment and identifying how the selected case deviates from that baseline. The post-analysis stage focused on interpreting the deviation through the categories of the framework and recording the final analytical classification. In practice, the protocol followed four main steps: first, the selected segment was defined and documented; second, the normal game audio behavior of that segment was established as a baseline; third, the game audio deviation from that baseline was identified; and finally, the deviation was interpreted through the categories of the framework.

Stage 1: Pre-analysis

- **Step 1.1: Selecting the segment**

  One specific and bounded gameplay segment was selected from each game. A segment could be a specific scene, sequence or recurring gameplay condition in which game audio plays a central role in destabilizing the player's experience. The selected segment had to involve identifiable destabilization, include game audio as a part of that destabilization, be replayable, and be limited enough to support detailed close reading.

- **Step 1.2: Game and segment identification**

  The next step was to record basic information about the game and the selected segment. This included:

  - The game title;
  - Developer;
  - Year of release;
  - Platform analyzed;
  - Genre;
  - Relevant audio design features;
  - Segment name;
  - Segment duration;
  - Trigger condition;
  - Neutral description of what happens in the segment.

This step clarified what was being analyzed and prevented the analysis from relying on assumed knowledge of the game.

- **Step 1.3: Establishing the baseline**

  Before identifying any disruption, the analysis established what game audio normally does in the selected context. This can include ambient sound, feedback sounds, music, spatial reliability, sound-layer separation, and audio-visual coherence. The aim was to define the expected game audio behavior before the destabilizing moment occurs. This baseline was necessary because game audio transgression can only be identified when there is a clear expectation or convention that is later disrupted.

Stage 2: Analysis

- **Step 2.1: Identifying the game audio deviation**

  The selected segment was compared with the baseline established in the previous stage. The aim of this step was to identify what changed in the game audio and how that change altered the player's relation to the segment. The deviation was treated as a change in the expected role, function, or behavior of game audio within that moment. This step focused on describing how game audio moved away from what had previously been established as normal, whether by changing its function, becoming less reliable, crossing expected boundaries, or creating ambiguity in the player's interpretation of the scene.

- **Step 2.2: Identifying the violated expectation**
  After identifying the deviation, the analysis examined which expectation had been disrupted. This step asked what the player had been led to expect from game audio before the change occurred, and why the deviation challenged that expectation. The purpose was to make clear that transgression comes from the disruption of a convention. This expectation could be established by the game itself, by genre habits, by interface conventions, or by broader assumptions about how game audio normally supports perception, action, interpretation, or immersion.
- **Step 2.3: Describing the scope of the disruption**
  The temporal form of the disruption was also described. This meant identifying whether the deviation was brief, sustained, escalating, unresolved, or whether stability was restored after the moment. This step helped distinguish isolated game audio events from longer or recurring forms of game audio transgression.

Stage 3: Post-analysis

- **Step 3.1: Player impact**
  After the deviation was described, the next step was to identify what changed for the player as a result of that disruption. In this study, player impact refers to the effect that can be directly connected to the documented game audio deviation. For example, if game audio no longer provides a clear source, the player's perception becomes uncertain. If game audio no longer supports action in the expected way, the player's agency is affected. If voice no longer provides stable meaning, the player's interpretation becomes unreliable. Player impact is treated as an analytical result of what changes in the segment. Each claim about player impact must therefore be linked back to the baseline and to the specific game audio deviation identified earlier.
- **Step 3.2: Game audio boundary revealed**
  This step identified what normally hidden assumption about game audio became visible through the disruption. The analysis asked what the player had been relying on before the deviation occurred. It examined what game audio was expected to do and what boundary became perceptible when that expectation failed.
- **Step 3.3: Mode of game audio transgression**
  The segment was then classified according to how the disruption operated within the framework. This step asked whether the transgression mainly affected perception and affect, gameplay function and agency, broader cultural or ethical meaning, or more than one of these at the same time. The classification was made from the relation between the game audio, the baseline, the deviation, and the resulting player impact. This helped avoid classifying cases only by surface features and made it possible to explain the structural role of game audio in each example.

- **Step 3.4: Domain of destabilization**

  After identifying how the transgression worked, the analysis identified where its main effect was felt. This step determined which part of the player's experience became unstable, for example:
  - If game audio makes the player unsure about what they are hearing, the domain is perceptual.
  - If game audio affects control, action, or decision-making, the domain is rule/agency.
  - If game audio makes the player question moral responsibility or complicity, the domain is ethical.
  - If game audio makes the gameworld feel unstable or incoherent, the domain is world coherence.

This distinction is important because the way a transgression works is not always the same as the area it affects most. For example, a game audio change may initially confuse what the player hears, but its strongest effect may be that the gameworld feels less stable. In another case, a voice may sound normal, but its strongest effect may be to make the player feel less in control. In this context, domain refers to the main area of the player's experience that is destabilized by game audio. While mode describes how the transgression operates, domain identifies where its strongest effect is felt.

- **Step 3.5: Conventions destabilized**

  This step linked the case back to the conventions established in the baseline. The aim was to specify which expected functions of game audio were challenged. A game audio element became analytically relevant when it could be shown to disrupt a convention that had been established either by the game itself or by broader game audio expectations.
- **Step 3.6: Consistency check**

  The final step was a consistency check. This was done by reviewing whether each moment followed from the baseline and deviation identified earlier. This meant checking that the player impact, boundary revealed, mode, domain, and destabilized conventions could all be traced back to observable game audio behavior in the selected segment. This check helped ensure that the interpretation remained grounded and traceable.

This protocol made the analysis systematic while still allowing close reading to remain interpretive. Each case followed the same progression: selecting and documenting the segment, defining the baseline, identifying the deviation, and interpreting the disruption through the framework. Because the same steps were applied to every case, the protocol also supported comparison across the corpus and made it possible to move from individual analyses to broader cross-case findings.

5.2 Analytical Approach

This chapter adopts a qualitative and interpretive analytical approach based on close reading of selected gameplay segments. The purpose is not to measure game audio transgression as a fixed technical property, but to examine how it emerges in context through the relation between sound, player expectation, gameplay structure, and interpretation.

5.2.1 Aim of the analysis

The main aim of the analysis is to test the framework against game cases and to examine how well it accounts for different forms of game audio transgression in practice. More specifically, the analysis seeks to identify how selected moments of game audio destabilization operate, what kinds of expectations they disrupt, what effects they produce for the player, and which dimensions of the framework they activate. The chapter is both descriptive and evaluative: it uses the framework to read the cases, but it also uses the cases to assess the framework's explanatory power and identify areas where refinement is needed. A further aim is comparative. By applying the same analytical procedure across multiple cases, the chapter makes it possible to identify broader patterns that would be less visible in isolated readings.

5.2.2 Limits of the analysis

The first limitation of this approach is that it is interpretive rather than empirical in the quantitative sense. It does not claim to measure player response across large populations, nor does it aim to establish universal reactions to the analyzed sounds. Instead, it offers theory-informed close readings of carefully selected cases. The value of the method lies in analytical depth.

A second limitation is that the analysis works with one selected segment per game. This makes focused comparison possible, but it also means that each game is approached through a bounded moment rather than through its totality. In some cases, this is sufficient because the transgressive force is concentrated in a specific scene. In others, especially structurally sustained cases, the selected segment can only stand in for a broader ongoing condition.

A third limitation concerns the framework itself. Because the framework is still being tested and refined, some cases expose ambiguities or tensions in its current version. The analytical process is meant not only to apply the framework but also to reveal where its categories require clarification. For that reason, some of the most valuable outcomes of the chapter are the places where the framework proves insufficiently precise and must be adjusted.

5.3 Cross-Case Findings

5.3.1 Game audio transgression can operate as a multidimensional process

One of the clearest findings from the analyzed cases is that game audio transgression is often hybrid rather than limited to only one dimension. The framework separates aesthetic, ludic, and socio-cultural modes so that the analysis is easier to organize, but in practice, many cases do not stay inside just one of them. Instead, they combine two or more dimensions at the same time. In the corpus, hybrid cases are among the most common forms of transgression. This is especially clear in the number of aesthetic–ludic cases, but it also appears in ludic–socio-cultural and full hybrid cases.

This matters because it shows that game audio can affect several parts of the player's experience at once. In *Hellblade: Senua's Sacrifice* (2017), for example, sound is unstable and disturbing, but it is also necessary for the player to navigate through the space. In *Call of Juarez: Gunslinger* (2013), voice not only changes how the player understands the story, but also changes the playable sequence itself. In *NieR: Automata* (2017), voice turns a technical setup function into part of the fictional world, affecting both the player's experience of the scene and the meaning of the interface. In all of these cases, the transgressive force comes from the fact that sound works across more than one layer at the same time.

This also appears in the less common hybrid types. In *The Stanley Parable* (2013), the Narrator's voice affects both how the player understands choice in gameplay and how that choice is judged in ethical terms, making it a ludic–socio-cultural hybrid. In *Mafia III* (2016), voiced racist hostility affects how space feels, how the player reads safety and movement, and how broader structures of exclusion and hierarchy are made audible. This makes it a full hybrid case.



Figure 5.1: *Mafia III* (2016), Lincoln Clay enters a racially hostile public space, making this exclusion audible within the gameworld.

The main implication is that hybridity should not be treated as a secondary or unusual part of the framework. It should be treated as one of the central ways game audio transgression works. If hybrid cases are among the most common and most revealing in the corpus, then the framework should recognize that one of the strengths of game audio as a transgressive material is its ability to work across multiple dimensions at once.

5.3.2 Aesthetic transgression is not limited to discomfort

Aesthetic game audio transgression should not be understood only in terms of disturbance or discomfort. The analyses showed that aesthetic game audio transgression includes any situation in which game audio meaningfully changes how the player perceives and experiences the gameworld. This can take the form of discomfort, but also of deeper engagement with the gameworld and stronger player involvement. In this sense, the aesthetic dimension is defined not only by negative affect, but by the way game audio reshapes perception and feeling. For example, in *Silent Hill 2* (2001), the whispered voice in the corridor unsettles the player by weakening trust in the coherence of the world. By contrast, in *Ico* (2001), the player cannot understand the character's speech semantically, since it's in a made-up universe language and the game provides no subtitles, yet this does not reduce the importance of voice. Instead, it supports a more relational form of engagement based on tone and gameplay.



Figure 5.2: *Ico* (2001), Yorda speaks in an untranslated fictional language, making voice present and meaningful while withholding semantic clarity from the player.

This finding broadens the aesthetic dimension of the framework. In some cases, the transgressive effect lies in the breakdown of stable audiovisual relations. This is clear in *Resident Evil – Code: Veronica* (2000), where voice no longer works as a stable marker of speaker identity, producing uncertainty about who is present in the scene. In other cases, however, the crossing of an established expectation about how game audio should function does not weaken the experience but reorganizes it into a more intimate or relational form. Again, *Ico* (2001) is useful here because the withholding of semantic clarity does not distance the player from the characters, but instead changes how that relation is experienced. What matters, then, is not whether the effect is pleasant

or unpleasant in itself, but whether game audio alters the player's normal mode of perceiving and inhabiting the gameworld in a way that makes the crossed boundary perceptible. Aesthetic game audio transgression, therefore, includes both destabilizing and intensifying cases, so long as the reconfiguration of experience becomes meaningful to the player.

This finding also clarifies an important point. The aesthetic dimension of the current framework is framed mainly through discomfort, unresolved tension, disruption of coherence, and the refusal of pleasant or clarifying game audio relations. The contribution of the analyses is therefore to push this point further by showing that aesthetic game audio transgression should include not only disturbing or disorienting cases, but also cases in which game audio intensifies involvement without ceasing to be transgressive.

5.3.3 Game audio transgression can operate through role reassignment

Another important pattern across the analyzed cases is that game audio transgression often happens not because a sound is strange in itself, but because its role changes. In these moments, the sound may still be familiar and clear. What changes is what that sound does in the game. Instead of performing the function the player has learned to expect, it begins to do something else. The transgressive force, therefore, comes less from the sound's form and more from a shift in its function.

Some of the strongest cases work in exactly this way. In *BioShock* (2007), the phrase "Would you kindly" is not transgressive because it sounds unusual. It becomes transgressive because a phrase that seemed like normal guidance is later revealed to be a hidden command. In *Call of Juarez: Gunslinger* (2013), the voice stops being just narration and starts to change the events being played. In *Metal Gear Solid 2: Sons of Liberty* (2001), the Colonel's codec voice still sounds like the same support channel, but it no longer helps the player in a stable way. In all of these cases, the sound remains familiar, but the player can no longer trust its function.

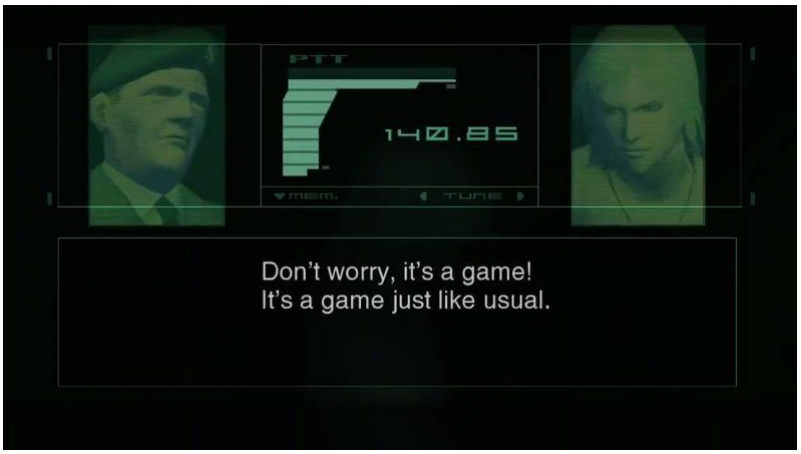


Figure 5.3: *Metal Gear Solid 2: Sons of Liberty* (2001), Raiden receives an unstable codec transmission from the Colonel, turning a normally reliable support channel into a source of confusion.

This pattern is not limited to voice. *Immortality* (2022) shows that even interface-like operational sounds can become transgressive when they stop being neutral navigation tools and begin to suggest hidden meaning. *NieR: Automata* (2017) shows something similar from another angle: sound calibration is not disturbing in itself, but it becomes transgressive because a technical function is turned into part of a fictional interaction. These examples are important because they show that game audio transgression can come from the change of something ordinary, not only from obviously abnormal or unsettling sound.

This finding is important for the framework. The current version already allows attention to disruptions in how sound works, but the analysis shows that the distinction between sound form and sound function needs to be made clearer. Some cases are transgressive because of how they sound, but many of the strongest cases are transgressive because of what sound does in relation to gameplay or interface. If the framework does not make this distinction clearly enough, it may focus too much on strange or disturbing sound material and miss quieter but still powerful forms of transgression. For that reason, role reassignment should be treated as one of the central ways game audio transgression operates.

5.3.4 Breakdown of Auditory Trust

Another pattern that appears across the analyzed cases is the breakdown of auditory trust. In many of the strongest examples, game audio transgression works by making sound less reliable than the player expects. This does not always happen in the same way, and it does not always affect the same part of the experience. However, the broader pattern is clear: sound stops being fully trustworthy as a guide to action, as a source of clarity, as a sign of identity, or as a neutral way of carrying meaning. For this reason, auditory trust is one of the most useful ideas for connecting the different cases in the corpus.

In some cases, this breakdown affects how the player understands the world. In *Silent Hill 2* (2001), the whispered voice is unsettling because the player cannot place it securely within the scene, which weakens trust in the soundscape as something coherent. In *Resident Evil – Code: Veronica* (2000), voice no longer guarantees stable speaker identity, so the player can no longer trust speech as a clear sign of who is present. In both cases, the first effect is perceptual, but the deeper result is that the world becomes harder to read and trust.

In other cases, the breakdown affects guidance and action. In *Drakengard 3* (2013), sound stops being a helpful support and becomes a punishing condition of play, weakening trust in audio as a fair guide for action. In *Metal Gear Solid 2: Sons of Liberty* (2001), the Colonel's codec voice still sounds familiar, but it can no longer be trusted to explain what is happening. In *Hellblade: Senua's Sacrifice* (2017), sound becomes both the main guide through darkness and a continuing source of instability, forcing the player to depend on something that is already difficult to trust. These examples show that auditory trust is not only about atmosphere or interpretation. It can also be central to gameplay itself.



Figure 5.4: *Hellblade: Senua's Sacrifice* (2017), Senua moves through the blindness trial, where the player must depend on game audio to navigate a visually restricted space.

A similar pattern appears in cases where sound first seems neutral or helpful, but later reveals hidden instability. In *BioShock* (2007), a familiar phrase that once helped progression is later understood as covert control. In *Immortality* (2022), operational sounds tied to archive manipulation stop being neutral navigation tools and begin to signal hidden meaning. In *Call of Juarez: Gunslinger* (2013), the narrator's voice stops being a stable framing device and begins to intervene directly in the event being played. In all of these cases, the player's trust is not broken because sound disappears, but because it remains present while its role or meaning changes.

This finding is important for the framework because it connects many cases that otherwise seem very different. The examples vary in mode, domain, and temporal form, but many of them share the same deeper structure: game audio becomes transgressive when it reveals that the player's trust in sound was more fragile than expected. For that reason, the framework should make the breakdown of auditory trust more explicit, not as a separate mode, but as a recurring pattern that can appear across aesthetic, ludic, socio-cultural, and hybrid cases.

5.3.5 Game audio transgression can be moment-based or structural

The analyses also show that game audio transgression does not always happen in the same temporal form. In some cases, it appears as a clear and specific moment, where one game audio event suddenly changes how the player understands the scene, the world, or their own action. In other cases, it works more gradually, through repetition and persistence. This means that time is an important part of game audio transgression. It is not only about what sound does, but also about when and for how long it does it.

Some of the clearest examples are moment-based. In *Silent Hill 2* (2001), the whispered voice in Room 209 gets much of its force from being brief, sudden, and difficult to explain. Even though it lasts only a few seconds, it leaves behind a sense of instability that affects how the player understands the world. *BioShock* (2007) offers another strong example, since the phrase "Would

you kindly" becomes most clearly transgressive in the confrontation with Andrew Ryan, where many earlier uses of the phrase are suddenly reinterpreted at once. In both cases, the transgressive force is closely tied to a specific event where sound changes meaning sharply.

Other cases are better understood as sustained or structural. In *Hellblade: Senua's Sacrifice* (2017), the important point is not only one single rupture, but an ongoing unstable relation between the player and sound. The blindness trial intensifies this instability, but it is grounded in the broader condition of persistent voices throughout the game. In *Ico* (2001), Yorda's untranslated speech is not a brief disruption, but a continuing communicative condition that shapes the player's relationship with her across the whole game. In these examples, transgression is not limited to one isolated moment. It is built into the player's continuing experience of perception and interaction.

The corpus of analysis also shows that temporal form can be more complex than a simple contrast between an isolated event and an ongoing condition. *Immortality* (2022) is especially useful here because the first discovery of hidden meaning in archive sounds works as a rupture, but later the same pattern becomes part of repeatable play as the player actively searches for concealed material. Repetition does not automatically remove the transgressive force. Instead, it can intensify it, normalize it, or turn it into a mechanic while still preserving the importance of the original crossing.



Figure 5.5: *Immortality* (2022), the archive interface reveals hidden material through audiovisual manipulation.

This finding is important for the framework because it shows that game audio transgression may be moment-based, sustained, cumulative, or repeatable. The current version of the framework is better suited to identifying clear disruptions, but the analysis shows that temporal profile should be made more explicit. The same kind of game audio crossing can have a very different force depending on whether it appears as a single event, as an ongoing unstable condition, or as a repeated pattern that becomes part of play.

5.3.6 Voice is a powerful transgressive material

Across the analyzed cases, voice stood out as one of the most effective means through which game audio transgression operates. This is because voice performs several functions at once inside the gameworld, including communication, orientation, framing, and characterization. When voice becomes transgressive, the effect is often greater than a simple disturbance, because it can simultaneously reshape interpretation, carry socio-cultural meaning, morally frame the player's actions, and unsettle world coherence. Voice, therefore, becomes a particularly powerful and flexible transgressive material.

This finding is important because some of the strongest cases in the analysis depend on speech that remains recognizable and intelligible but no longer performs its expected role in a stable way. In *BioShock* (2007), for example, the voice command "Would you kindly" is heard clearly, yet its meaning changes radically once it is revealed as a mechanism of obedience and control. In *Resident Evil – Code: Veronica* (2000), voice disrupts the speaker's identity, making the player question who is actually present in the scene. In *The Stanley Parable* (2013), the narrator's voice becomes morally evaluative, turning the player's choices into a moment of ethical tension. Voice is therefore powerful not only because players usually treat it as meaningful and trustworthy but also because it can disrupt several different domains while remaining recognizably voice.



Figure 5.6*: The Stanley Parable* (2013), the Narrator frames the player's action during the countdown sequence, turning choice into an explicitly judged and pressured event.

Another important result is that voice is especially suited to transgression because it can operate in different ways while still remaining itself. It can be important aesthetically, for example, when speech is heard but not fully understood, as in *Ico* (2001). It can also matter in ludic terms when it guides or changes the player's action, as in *Call of Juarez: Gunslinger* (2013), where narration moves from storytelling to intervention in gameplay. It can also become socio-culturally charged when it carries wider ethical or ideological meaning, as in *Mafia III* (2016),

where voiced racist hostility makes structures of exclusion audible in play. Voice is, therefore, one of the clearest ways through which players become aware that a boundary has been crossed.

The framework already gives voice an important place, especially in the sociocultural dimension, where voice and culturally loaded audio are described as key carriers of shared histories, identities, and norms. More broadly, it frames game audio as a communicative and relational system within gameplay. The analyses go further by showing that voice is especially versatile across the corpus as a whole. This suggests that voice is not only important within one dimension, but one of the most adaptable and effective vehicles of game audio transgression.

5.3.7 Game audio transgression may operate at different levels of reference

Another important finding is that game audio transgression does not always depend on the same type of expectation. In some cases, the crossed boundary is created mainly inside the game itself, through patterns and functions that the player learns while playing. In other cases, the transgression depends more on broader expectations that come from outside the game, such as genre habits, interface conventions, or cultural ideas about what sound usually means and does. There are also cases where both levels matter at the same time. This means that game audio transgression should not always be understood as something purely internal to one game. Sometimes it comes from the interaction between the game's own logic and wider player expectations.

Some cases depend mainly on internal frames of reference. In *Metal Gear Solid 2: Sons of Liberty* (2001), the transgressive force of the Colonel's codec breakdown depends on the fact that the game has already established that voice channel as useful, stable, and trustworthy. The moment becomes transgressive because it breaks a communicative role the player learned inside that game. A similar pattern appears in *Call of Juarez: Gunslinger* (2013), where the narrator's intervention is destabilizing because the player has already learned to treat his voice as commentary rather than as something that can rewind and change the event being played. In both cases, the crossed boundary is mostly created by the game's own internal conventions.

Other cases depend more clearly on external expectations. *Ico* (2001) is a good example, because the transgressive force of untranslated speech depends not only on the way the game presents it, but also on the player's broader expectation that an important speaking character will normally be understandable. *NieR: Automata* (2017) works in a similar way, since the opening calibration scene depends on the wider expectation that sound settings and setup menus normally exist outside the fictional world. In these cases, the relevant boundary does not come only from the game itself, but from habits and expectations the player already brings from other games and interfaces.

Some of the most interesting cases combine both internal and external frames. *Mafia III* (2016) depends partly on the game's own world-building and partly on broader socio-cultural understandings of racist language and exclusion. *BioShock* (2007) also works at both levels: the

phrase “Would you kindly” gains force inside the game’s own narrative and action structure, but it also depends on broader ideas about obedience and manipulation through language. In these examples, the transgressive effect cannot be explained fully by only one source of expectation. It comes from the tension between what the game teaches locally and what the player already knows from wider gaming or cultural experience.



Figure 5.7: *BioShock* (2007), Andrew Ryan reveals the phrase “Would you kindly” as a hidden command, transforming familiar voice guidance into a mechanism of control.

This finding is important because it makes the framework more precise. If all transgressive moments are treated as though they depend on the same kind of expectation, important differences are lost. The framework should distinguish more clearly between internal, external, and combined frames of transgression. This would make it easier to explain whether a case is transgressive because it breaks a rule established by the game itself, because it violates a broader convention the player brings into the experience, or because it does both at once.

5.3.8 Game audio transgression does not always weaken immersion

A final finding across the analyzed cases is that game audio transgression does not always reduce immersion or push the player away from the gameworld. Transgression is often linked to disruption, instability, or rupture, but the cases show that its relation to immersion is more complex. In several examples, sound crosses an established boundary while still pulling the player more deeply into the experience. What changes is not whether immersion exists, but what kind of immersion is being created. Instead of a smooth and comfortable involvement, transgression may produce a form of immersion that is more intense.

This is especially clear in *NieR: Automata* (2017). The opening calibration sequence crosses the usual boundary between technical setup and fictional world, but the result is not distance or detachment. Instead, the player is drawn further into the game’s world and into the early relationship between 2B and 9S. In this case, sound becomes transgressive not by breaking

immersion, but by changing its form. A boundary that would normally stay outside the fiction becomes noticeable, yet the player feels more involved rather than less.



Figure 5.8: *NieR: Automata* (2017), the opening sound settings sequence integrates voice calibration into the fictional interaction between 9S and 2B.

A similar pattern appears in *Ico* (2001) and *Hellblade: Senua's Sacrifice* (2017). In *Ico* (2001), the player cannot understand Yorda's speech in semantic terms, but this does not weaken the emotional bond between the two characters. Instead, the lack of verbal clarity shifts immersion toward tone, dependence, proximity, and shared action. In *Hellblade: Senua's Sacrifice* (2017), the unstable voices and the player's stronger dependence on sound during the blindness trial do not simply create distance from the world. They produce a more intense and pressured kind of involvement, where perceptual instability becomes part of how the player experiences Senua's condition. In both cases, the transgressive force remains meaningful while also deepening engagement.

This finding matters because it challenges the idea that transgression must always work as a negative interruption. Some cases in the corpus clearly do operate through discomfort, rupture, and breakdown, however, others show that crossing a boundary can also reconfigure the experience instead of simply disrupting it. In these moments, the player becomes more aware that a boundary has been crossed, but remains strongly involved in the game. This also helps explain why some transgressive effects are felt before they are fully understood since sound can first change attention or involvement, and only later become clearly understandable as transgressive.

For the framework, this means that immersion should not be treated only as something that transgression interrupts. The analysis suggests that game audio transgression may transform immersion into a more uncertain, relational, or heightened form. This is especially important for the aesthetic dimension, which should not be limited to discomfort or disturbance, but should also include cases where crossing an audio boundary intensifies involvement while still making that boundary noticeable.

5.4 Implications for the Framework

5.4.1 What the Framework Explains Well

The analysis shows that the framework already offers a strong starting point for identifying and discussing game audio transgression. Its most important strength is that it clearly establishes that transgression depends on recognizable conventions and becomes meaningful when those conventions are crossed in ways that affect the player's experience. This basic idea was supported across the whole corpus. In every case, the framework made it possible to define a baseline of expected sound behavior, describe the deviation from that baseline, and explain why that change mattered. In this sense, the framework works well as a way of making normally hidden assumptions about game audio visible.

A second strength is that the framework's main dimensions, aesthetic, ludic, and socio-cultural, proved useful across a wide range of cases. The analysis confirms that game audio transgression can operate through perceptual disturbance, disruption of gameplay function, broader cultural or ethical meaning, or combinations of these. This suggests that the core dimensional structure of the framework is useful in practical analysis.

The framework also explains well that game audio transgression is not limited to one single kind of game audio event. The cases show that sound may become transgressive in different ways, including instability of voice, breakdown of guidance, disruption of world coherence, ethical reframing, or hybrid interaction between several layers at once. This is an important strength because it stops the concept of transgression from being reduced only to unusual, extreme, or disturbing sounds. Instead, the framework already treats transgression as a relational and contextual phenomenon, not as a fixed acoustic property.

Another major strength is that the framework provides a clear analytical vocabulary for moving from observation to interpretation. The categories used in the protocol: baseline, deviation, player impact, game audio boundary revealed, mode, domain, and conventions destabilized, were especially useful because they required each case to be described in a systematic way.. In particular, the distinction between mode and domain proved valuable, because it allowed the analysis to explain not only how a transgressive moment worked but also where its strongest destabilizing effect was felt.

Finally, the framework already explains well that game audio can be a central site of transgression in digital games rather than a secondary or merely supportive layer. The analysis consistently showed that sound can reshape how players perceive, interpret, and engage with play. This supports one of the central claims of the study: game audio should not be understood only in terms of feedback, usability, or atmosphere, but also as a meaningful site where conventions can be challenged and where player experience can be reoriented in significant ways.

5.4.2 What the Framework Does Not Yet Explain Clearly

Although the framework proved useful in the analysis, the close readings also showed that some parts of game audio transgression are still not explained with enough precision. The framework works well as a first structure, but several recurring patterns in the corpus of analysis reveal limits in how clearly it currently explains transgressive sound in practice. These limits do not mean the framework is wrong. They simply show where it needs to be refined so that it can better reflect the complexity of the analyzed cases.

Another limitation is that the framework does not clearly distinguish enough between sound form and sound function. The analysis repeatedly shows that some transgressive moments are powerful not because the sound itself is strange, but because its role changes. In these cases, the sound remains familiar, but no longer does what the player expects it to do. The framework can classify such examples, but it does not yet explain clearly enough that transgression may come from role reassignment rather than from unusual sound material alone.

A third limitation concerns temporal form. The framework can identify clear moments of disruption, but the corpus shows that game audio transgression can also be sustained over time, accumulate gradually, or move from rupture to repeatable mechanic. Some cases are built around one strong event, while others depend on ongoing instability or repetition. At present, the framework does not clearly distinguish between these different temporal forms, which makes it harder to explain cases where duration is central to how the transgression is experienced.

A fourth limitation is that the framework does not distinguish clearly enough between internal and external frames of transgression. Some cases become transgressive because they break patterns established inside the game itself, while others depend more strongly on broader expectations that the player brings from gaming habits, interface conventions, or cultural context. In some cases, both levels matter together. The framework already recognizes that context matters, but it does not yet provide a clear enough way of showing whether the crossed boundary is mainly internal, external, or combined.

Finally, the framework still leans too strongly toward understanding transgression through disruption, discomfort, or breakdown. While many cases do work in those terms, the analysis also shows that transgression does not always weaken immersion or create distance. In some cases, sound crosses a boundary while also intensifying involvement or changing it into a more uncertain or relational form. The framework already allows for aesthetic transgression, but it does not yet explain clearly enough that transgressive sound may also work through reconfiguration and intensification, not only through negative rupture. This is especially important for the aesthetic dimension, which needs to remain broad enough to include both unsettling and immersive experiences.

Taken together, these points show that the framework explains the basic phenomenon well, but not yet its full range. The next step is therefore not to replace the framework, but to refine it

so that it can better account for hybridity, role reassignment, auditory trust, temporal form, levels of reference, and the more complex relation between transgression and immersion.

5.4.3 Proposed Refinements

The close readings confirm that the framework is useful, while also showing where it needs to become more precise. The following changes taken together would improve it by bringing it closer to the way game audio transgression actually works in practice.

The first refinement is that the framework should distinguish more clearly between sound form, sound function, and sound relation. The analysis repeatedly shows that some transgressive moments are powerful not because the sound itself is unusual, but because its role changes or because its relation to other elements becomes unstable. The framework should therefore make it clearer whether the transgressive force comes mainly from how the sound sounds, what the sound does, or how it relates to image, world, system, speaker, or action.

A second refinement concerns the temporal profile. The framework can already identify disruption, but the analysis shows that it should also distinguish whether a transgressive moment is sudden, sustained, cumulative, repeatable, or normalized over time. A clearer temporal field would allow the framework to explain more precisely whether transgression appears as an isolated shock, an ongoing unstable condition, or a pattern that changes through repetition.

A third refinement is that the framework should distinguish more clearly between internal, external, and combined frames of transgression. Some moments become transgressive because they break patterns established by the game itself. Others depend more on expectations drawn from wider gaming habits or cultural norms. In some cases, both levels matter at once. Adding a field for level of reference would make it easier to show whether a case depends mainly on conventions internal to the game, on external expectations, or on the interaction between both.

The framework should broaden the aesthetic dimension to include not only disturbance and discomfort but also the reconfiguration and intensification of experience. The analysis shows that transgression does not always weaken immersion or create distance. In some cases, it deepens involvement or changes it into a more uncertain, relational, or heightened form. For that reason, the framework should not treat immersion only as something that transgression breaks. It should also allow for the possibility that crossing an audio boundary can make that boundary perceptible while at the same time strengthening involvement.

These refinements would make the framework more precise without changing its basic structure. They preserve the central idea that game audio transgression depends on learned convention and meaningful disruption, while giving the framework stronger tools for explaining the multidimensional, temporal, relational, and often immersive ways in which that disruption works across the analyzed corpus.

5.5 Closing remarks

This chapter applied the framework to a selected corpus of game cases in order to examine how game audio transgression operates in practice. Through a close-reading approach, it analyzed how specific game audio moments or conditions disrupted established conventions, affected player experience, and revealed hidden assumptions about what game audio is normally expected to do. The cases confirm that game audio can function as a meaningful site of transgression in digital games, not only by supporting play, but by challenging how play is perceived, interpreted, and inhabited.

The case analyses showed that game audio transgression does not take a single fixed form. It may operate aesthetically, ludically, socio-culturally, or through hybrid combinations of these dimensions. Across the corpus, hybrid cases proved especially recurrent, showing that game audio often reshapes experience across multiple layers at once. The analyses also demonstrated that transgression may emerge through role reassignment rather than unusual sound material alone, that it frequently depends on breakdowns of auditory trust, and that it may take moment-based, sustained, or repeatable temporal forms. Voice emerged as a particularly powerful and flexible transgressive material, while the relation between transgression and immersion proved more complex than a simple model of rupture or distancing would suggest. At the same time, the chapter showed that the framework requires refinement. While its basic structure proved effective, the close readings revealed the need to treat hybridity more centrally, distinguish more clearly between sound form and sound function, clarify temporal profile, specify internal and external frames of transgression, and account more explicitly for the possibility that transgressive sound may deepen or reorganize immersion rather than simply interrupt it. These refinements do not undermine the framework, but strengthen it by bringing it into closer alignment with the complexity of the analyzed cases.

The chapter has a double contribution. First, it demonstrates that the framework is capable of producing meaningful and comparative readings of game audio transgression across a diverse corpus. Second, it uses those readings to identify the most important directions for improvement. In this sense, this chapter functions not only as an application of the framework but also as the basis for its further development. The following chapter builds on these results by discussing the revised version of the framework and considering its implications for the broader study of game audio and transgression in digital games.

6. The Model as a Heuristic Tool for Game Creation: Game Design, Assessment, and Discussion

6.1 Introduction

Previous chapters developed the model of game audio transgression and used it as an analytical tool for examining existing games. This chapter explores a second use of the model: its use as a heuristic tool for game creation. This chapter asks whether the model can also help generate new game concepts in which game audio transgression is central to the design. To explore this possibility, the model was translated into a card-based heuristic tool. The purpose of the tool was to guide participants through a structured creative process. Each deck focused on a different part of the model, such as game type, intended player effect, sound event, normal audio convention, transgressive operation, scope of the disruption, and framework classification. In this way, the tool aimed to help participants move from abstract theoretical concepts to concrete game design ideas. The choice of a card-based format was informed by previous work on design cards and ideation tools. Card-based tools are often used in design to help people generate, discuss, and collaborate on ideas (Roy & Warren, 2018). They can make design knowledge easier to handle, combine, and discuss during creative activities. In game design specifically, ideation cards have also been used to support collaborative concept generation and to make specialized design knowledge more accessible to participants (Wetzel et al., 2017). The tool was tested through one in-person workshop and two online workshop sessions. Each session involved three participants, including the researcher, and followed the same general structure: introduction to the workshop, explanation of the model, introduction to the card deck, concept creation, final concept description, and discussion. Across the three sessions, the tool generated four game concepts. Although the original plan was to create one concept per session, a second concept was developed during the second workshop because participants wanted to continue the ideation process.

The workshops were framed as co-design sessions because the aim was to observe how participants could use the model collaboratively to generate game ideas. Co-design can be understood as collective creativity applied within a design process, involving designers and non-designers working together in the development of ideas (Sanders & Stappers, 2008). The practical organisation of the workshops was also informed by broader co-design guidance, especially the

idea that co-design requires structured activities that help participants collaborate, document ideas, and move from discussion toward possible design outcomes (Kerr & Cheers, 2023). This was also relevant to the use of cards, since design cards can help participants build shared understanding and find common ground during co-design activities (Bunæs et al., 2023). The workshops are therefore treated as an exploratory way of assessing how the model behaves when used in a creative and collaborative context.

One of the concepts generated through the workshops was later selected and implemented as a small playable demo. This prototype was not intended to become a complete game, serving as a design experiment, allowing one workshop concept to be translated into playable form. The demo was then analyzed through the same close reading logic used in the previous chapter, making it possible to compare the model's analytical use with its creative use. The chapter follows the full movement from model to tool, from tool to concepts, and from one concept to prototype and analysis. This process is summarised in Figure 6.1.

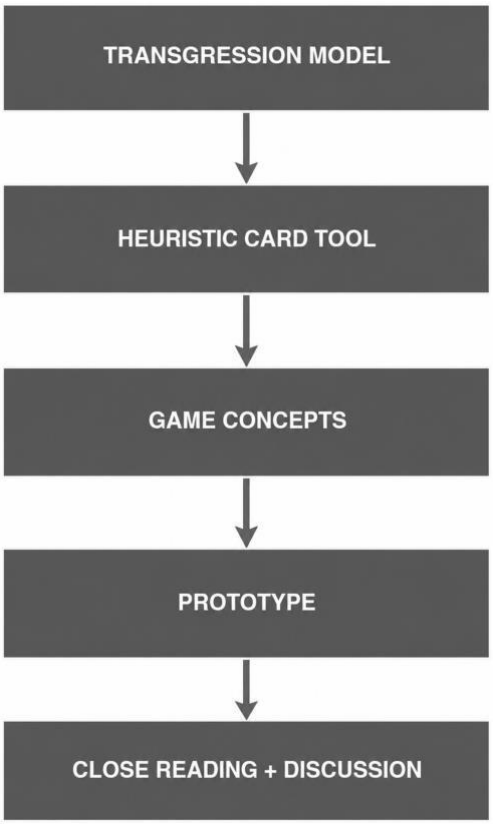


Figure 6.1: Overview of Chapter 6: the model is translated into a heuristic card tool, used in workshops to generate game concepts, developed into a prototype, and analyzed through close reading.

6.2 Conceptualizing the Heuristic Tool

The model developed in this dissertation was first created as an analytical tool. Its purpose was to help identify and explain how game audio transgression operates in existing games. However, if the model is also to support game creation, it needs to be translated into a more practical format. The card-based heuristic tool was created for this purpose. The tool does not tell participants exactly what kind of game to create; it gives them a sequence of prompts that help them make design decisions. These prompts guide participants through the main elements of game audio transgression: the type of game, the intended player effect, the sound event, the normal audio convention, the way that convention is disrupted, the scope of the disruption, and the final framework classification. This approach follows the logic of card-based design tools (Roy & Warren, 2019). Describe card decks as tools that can support creative thinking and domain-specific design in collaborative work. They also explain that cards can organize information into a tangible format that supports inspiration and discussion during design activities. In this dissertation, the card format was chosen because it could make the model easier to use in a workshop setting.

Previous game design card tools, such as the mixed reality game design cards developed by Wetzel et al. (2017) and the *Grow-A-Game* cards developed by Belman et al. (2011), were useful references because they show how cards can turn complex design knowledge into practical prompts for ideation, discussion, and analysis. Both examples use cards to make specialised ideas easier to access and apply during game design activities. This is relevant to this dissertation because game audio transgression is also a complex concept that needs to become usable in a creative setting. The tool developed here was designed to help participants generate game concepts while keeping each design decision connected to the analytical model.

6.2.1 Purpose of the Tool

The main purpose of the tool was to help participants create game concepts where audio transgression was central to the design. The tool was not intended to produce complete games. Instead, it was designed to help participants create focused concepts that could later be discussed and prototyped.

The tool had four main aims:

1. It aimed to make the model easier to use. The model includes several concepts, such as audio convention, transgressive operation, player impact, scope, and framework classification. These ideas can be abstract when presented only as theory. By turning them into cards, the tool made each part of the model easier to handle during discussion.
2. The tool aimed to support concept generation. Each card acted as a prompt that helped participants make one design decision at a time. This reduced the difficulty of starting from a blank page.
3. The tool aimed to keep audio at the center of the design process. In many game design contexts, sound can be treated as something added after the main mechanics are already

defined. Here, the sound event and its disruption are part of the core concept from the beginning.

4. The tool aimed to support collaborative discussion. Because the cards are visible and shared, participants can point to them, compare them, question them, and combine them. This makes the design process more concrete.

6.2.2 Structure of the Card Deck

The heuristic tool was organized into seven decks. Each deck corresponded to one part of the design process and to one part of the model. The decks were used in sequence, so that participants could gradually move from a broad game context to a more specific form of game audio transgression.

Table 6.1: Structure and purpose of the seven decks used in the heuristic tool.

Deck	Name	Purpose
Deck 1	Game Type	Defines the basic type of game or playable context.
Deck 2	Intended Player Effect	Defines what the audio transgression should make the player feel or experience.
Deck 3	Sound Effect	Selects the sound event or audio element that will be changed.
Deck 4	Normal Audio Convention	Identifies what the selected sound would normally communicate.
Deck 5	Scope of the Disruption	Defines how the normal audio convention will be disrupted.
Deck 6	Transgressive Operation	Defines whether the disruption is moment-based or more sustained.
Deck 7	Framework Classification	Relates the concept back to the model: aesthetic, ludic, socio-cultural, or hybrid.

Deck 1: Game Type

Defined the basic playable context of the concept. This deck included three options: FPS, 2D platformer, and racing/karting. These options were selected for practical reasons. Before the workshops, small Unity projects or asset packs for these three formats had already been prepared, so any concept generated from this deck could realistically be implemented if selected. This was

important because the workshop process was connected to a later prototyping stage. The tool therefore had to support creative ideation but also remain within the technical and time limits of the dissertation.

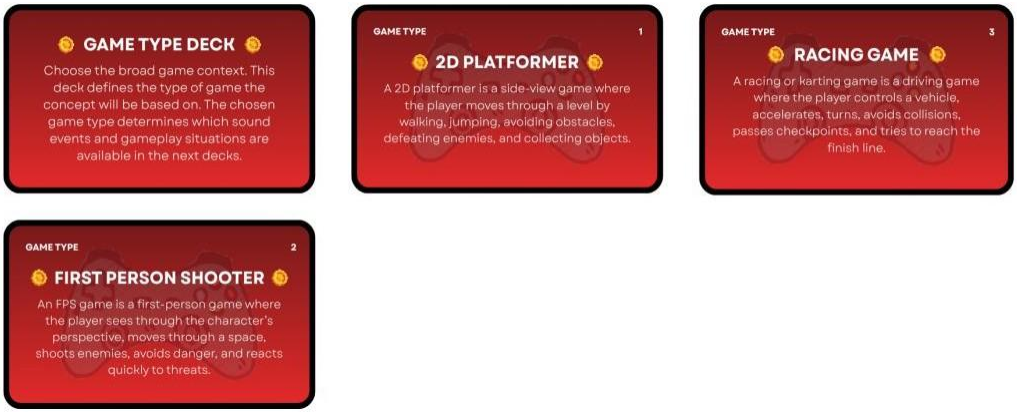


Figure 6.2: Game Type deck. This deck defines the basic playable context in which the game audio transgression concept will be developed.

Deck 2: Intended Player Effect

Its purpose was to make participants think about what the audio transgression should do to the player. This deck asked participants to consider the experience they wanted to create. This helped connect the design process to the affective and interpretive goals of the mode.



Figure 6.3: Intended Player Effect deck. This deck helps participants define the intended experiential effect of the audio transgression on the player.

Deck 3: Sound Effect

This deck was divided according to the selected game type, meaning that there was a specific set of sound effect cards for each game type. For example, an FPS, a 2D platformer, and a racing/karting game each involve different common sound events and gameplay situations. This separation was necessary because audio conventions differ across game types. A reload sound, a jump sound, and an engine sound all create different expectations. By linking sound effect cards to each game type, the tool helped participants choose audio elements that made sense within the selected gameplay context.



Figure 6.4: Sound Effect deck. This deck is organised according to game type and helps participants select the audio event that will become the focus of the transgression.

Deck 4: Normal Audio Convention

This was one of the most important steps in the tool, because game audio transgression depends on the disruption of an expectation. The purpose of this deck was to help participants describe what the chosen sound would normally communicate or support in a conventional game situation. By defining the normal convention first, participants could then design a more meaningful disruption.

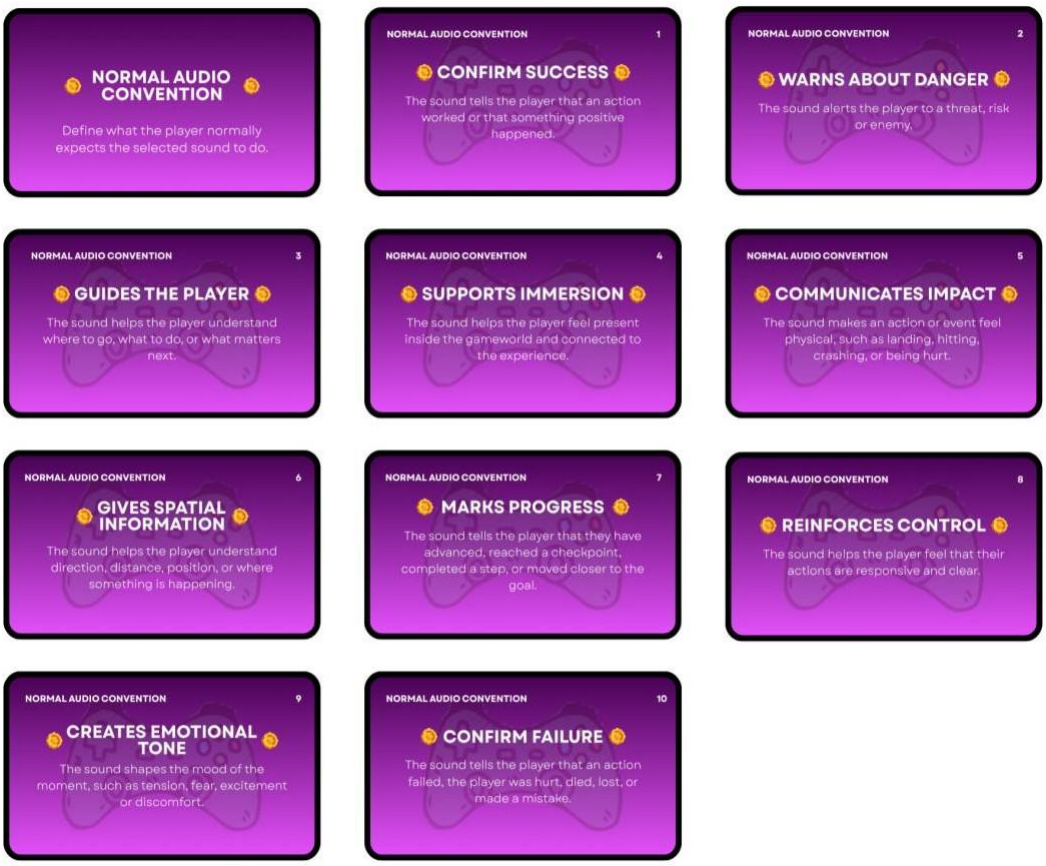


Figure 6.5: Normal Audio Convention deck. This deck helps participants identify the expected function of the selected sound before designing its disruption.

Deck 5: Scope of the Disruption

This deck asked participants to consider how the disruption would appear across time. This was important because game audio transgression can happen as a single moment, as a repeated pattern, or as a more extended condition.



Figure 6.6: Scope of the Disruption deck. This deck helps participants define how the audio transgression unfolds over time within the concept.

Deck 6: Transgressive Operation

This deck helped participants decide how the normal audio convention would be disrupted. It translated the abstract idea of transgression into a design action by asking participants to define the type of change applied to the sound.

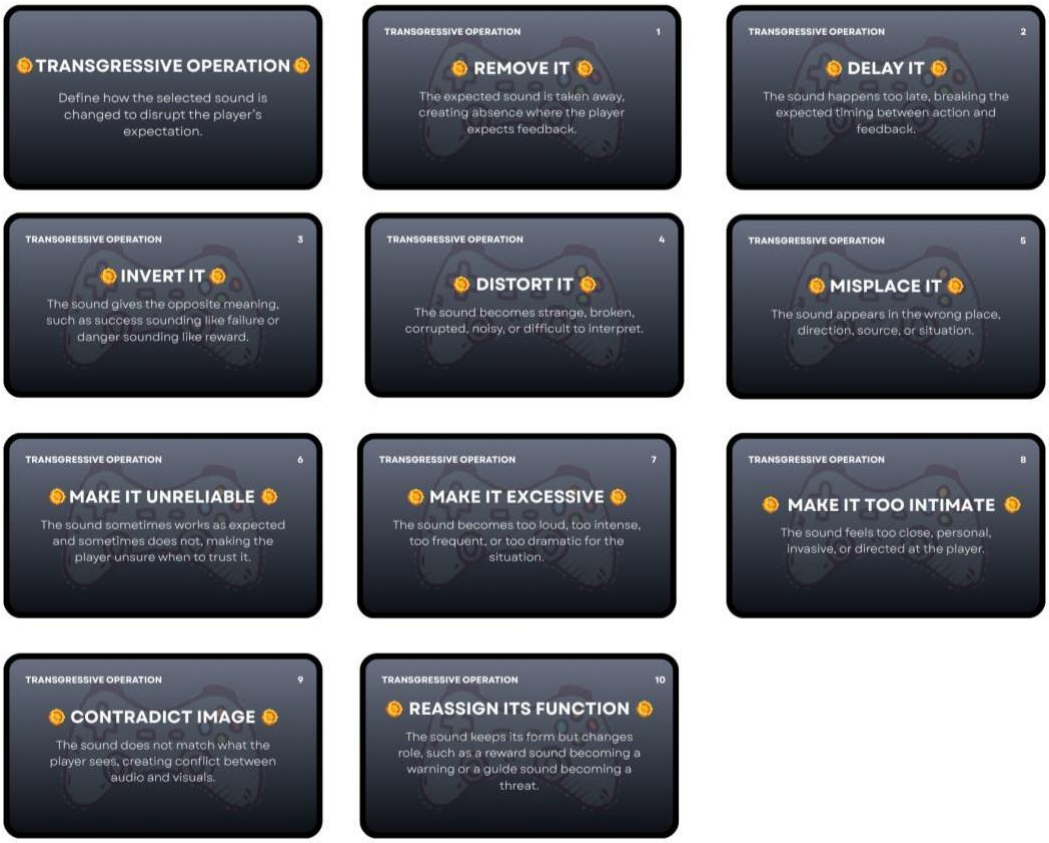


Figure 6.7: Scope of the Disruption deck. This deck helps participants define how the audio transgression unfolds over time within the concept.

Deck 7: Framework Classification

After the concept had been created, participants used this deck to connect it back to the model. This final step encouraged reflection on the kind of game audio transgression produced by the concept and kept the creative process connected to the analytical structure of the dissertation.

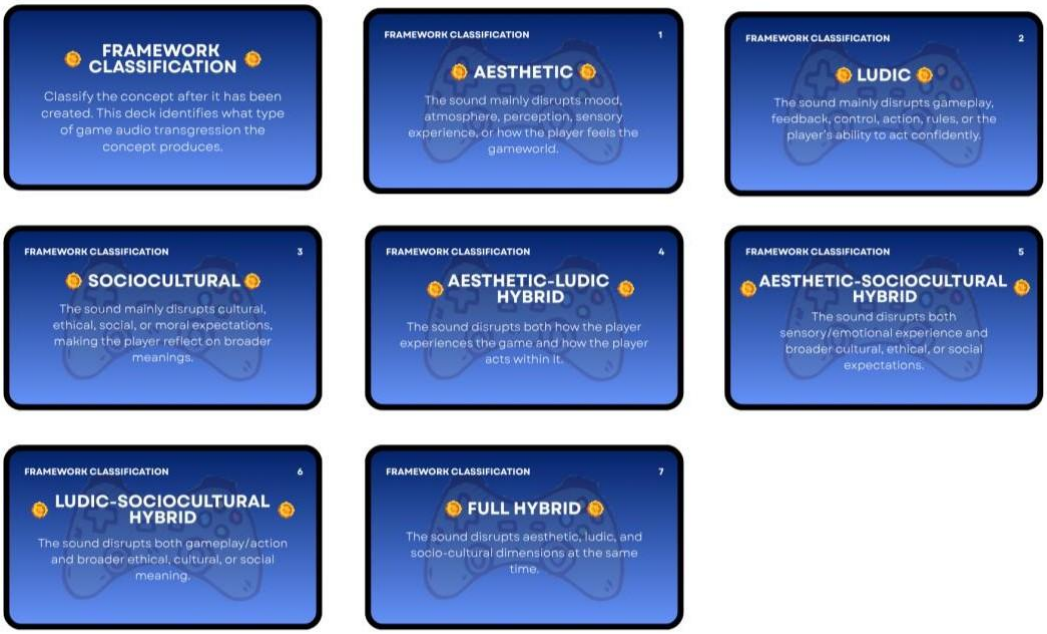


Figure 6.8: Framework Classification deck. This deck helps participants relate the final concept back to the framework categories of game audio transgression.

6.2.3 Flow of the Tool

The tool was used as a step-by-step process. The participants began by moving through the decks one by one. Each deck added one part to the concept. The process began with the selection of a game type. This gave the participants a basic design context. They then selected an intended player effect, which helped define the purpose of the audio transgression. After this, they selected a sound effect and identified its normal audio convention. Only after the normal convention was clear did participants choose a transgressive operation. This order was important because the disruption only makes sense if the expected function of the sound is first understood. After choosing the operation, participants defined the scope of the disruption. Finally, they classified the concept using the framework categories. The final concept was then written into a concept sheet.

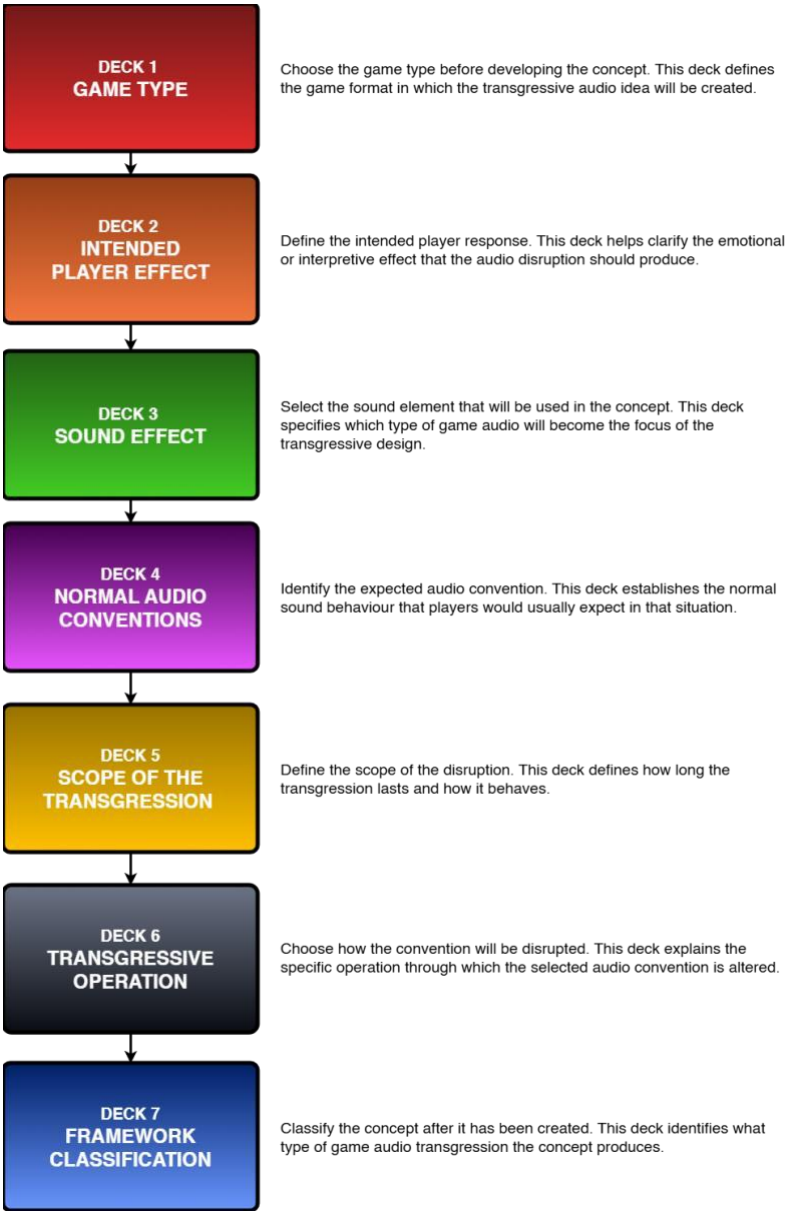


Figure 6.9: Tool use flow.

This sequence was designed to balance structure and creativity. The cards gave participants a clear path, but the final concept still depended on their interpretation and discussion of creative decisions. The tool should be understood as a flexible guide, not as a fixed design method. Its purpose was to guide thinking and collaboration, not to determine a correct solution.

6.3 Workshop Methodology

After the heuristic tool was created, it was tested throughout three workshop sessions. The first workshop was conducted in person, while the second and third workshops were conducted online. The purpose of these workshops was to understand how it could support collaborative game

concept creation. The workshops were therefore exploratory. They were designed to observe how participants understood the model, how they used the card deck, what kinds of concepts they produced, and what difficulties appeared during the process.

The workshops followed a co-design logic. In this context, co-design means that participants were not only asked to evaluate a finished tool, but were actively involved in using it to generate new game ideas. This approach is useful for this stage of our study because the aim was to study the model in use: not only as theory, but as a practical support for creative work. Co-design has been described as a form of collective creativity within the design process, involving designers and non-designers working together in the development of ideas (Sanders & Stappers, 2008). The practical organization of the workshops was also informed by broader co-design guidance, especially the need to structure collaborative activities, support the participants contribution, to document outcomes, and move ideas toward design outputs (Kerr & Cheers, 2023). This is relevant because the workshops created a shared space where participants could interpret the model, make conscious design decisions, and reflect on the usefulness of the tool. The card deck acted as a common structure for this process.

Each workshop followed the same general structure. First, participants were introduced to the concept of game audio transgression and to the main categories of the model. Then, they were introduced to the card-based heuristic tool. After this, they used the cards to create a game concept in which audio transgression was central. At the end of the session, participants discussed the process and completed a short survey about their experience. The following subsections describe the participants and sessions, the materials and data collected, and the workshop procedure.

6.3.1 Participants and Sessions

Three workshop sessions were conducted. The first session took place in person, while the second and third sessions were conducted online. Each session included two invited participants and the researcher, who acted both as facilitator and as part of the ideation process. This means that each workshop had three people actively involved in the discussion and concept creation.

The participants are identified by letters according to the order in which they took part in the sessions: Participants A and B in Session 1, Participants C and D in Session 2, and Participants E and F in Session 3. This anonymization was used to protect participants' identities while still making it possible to refer to specific responses and workshop contributions. All participants had backgrounds connected to games, audio, multimedia, design, or creative practice. This was useful because the workshops required participants to understand game situations, discuss sound, and contribute to the creation of game concepts. However, the workshops did not require all participants to have professional experience in game design or sound design. Since the aim was to test the tool as a support for concept creation, it was important to observe how people with related but varied backgrounds used the card deck.

Table 6.2: Participant profiles across the three workshop sessions.

Participant	Session	Profile	Gender	Format
Participant A	Session 1	Software engineer / PhD student	Male	In person
Participant B	Session 1	Digital artist / Master's student in Art Studies	Male	In person
Participant C	Session 2	Audio designer / Master's student in Music Production	Male	Online
Participant D	Session 2	Audio designer / Master's student in Multimedia	Female	Online
Participant E	Session 3	Multimedia designer / Graphic design company	Male	Online
Participant F	Session 3	Audio designer / Master's student in Multimedia	Male	Online

The post-workshop surveys also collected basic information about participants' familiarity with four areas: playing digital games, game design, sound design, and brainstorming or design tools. Overall, participants reported high familiarity with digital games and sound design. Familiarity with game design and brainstorming tools was also generally positive, although slightly more varied. This information shows that the participant group was appropriate for an exploratory workshop on game audio transgression. Participants had enough familiarity with games and sound to engage with the tool, while still representing different creative and technical backgrounds.

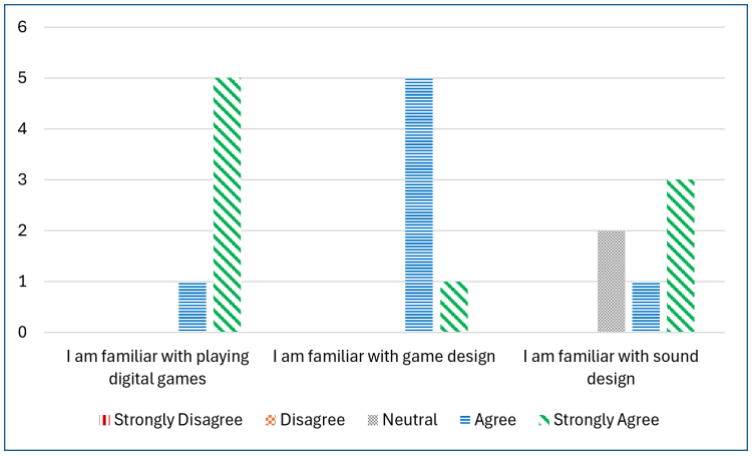


Figure 6.10: Participants' self-reported familiarity with digital games, game design, and sound design before the workshop.

6.3.2 Materials and Data Collection

Each workshop used the same main materials: the card-based heuristic tool, a Miro board, an observation sheet, and a post-workshop survey. Miro was used as the digital workspace for the online workshops. Miro is an online collaborative whiteboard platform that allows participants to organize visual materials, add notes, and collaborate on the same board in real time. In this dissertation, a Miro board refers to the shared digital canvas where the card decks, workshop instructions, and concept development materials were placed during each session. These materials were chosen to support the concept creation process and to collect different types of data about how the tool was used.

The card deck was the main workshop tool. It guided participants through the creation of a game audio transgression concept by asking them to select and combine cards from the seven decks. Each selected card helped define one part of the concept, such as the game type, intended player effect, sound event, normal audio convention, transgressive operation, scope of the disruption, and framework classification.

The Miro board was used as the shared workspace for the workshop. In the online sessions, it allowed participants to see the cards, move them, organize their ideas, and complete the final concept sheet collaboratively. In the in-person session, the Miro board was still used to document the process and preserve the final workshop output. The board, therefore, worked both as a creative workspace and as a record of the design process.

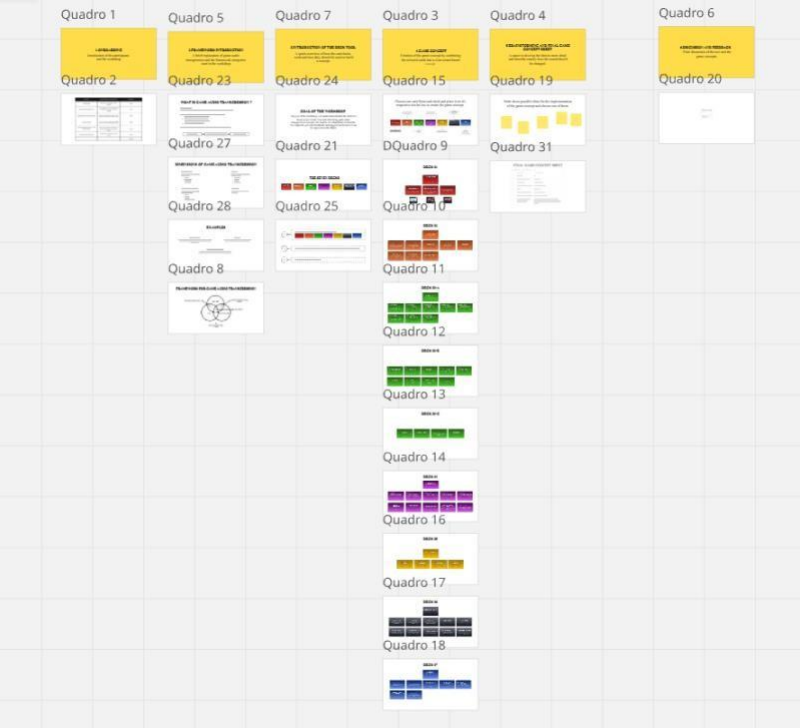


Figure 6.11: Screenshot of the Miro board used during the workshop sessions, showing the organisation of the card decks, instructions, and concept development materials. The Miro boards of each workshop session can be viewed in Appendixes E, G, and I.

The observation sheet was used by the researcher during each session. Its purpose was to record relevant moments that occurred during the workshop, such as participant questions, moments of confusion, useful comments, design decisions, and unexpected reactions. This was important because not all relevant findings appeared in the final concept or survey answers; some difficulties only became visible during discussion, when participants tried to interpret specific cards or choose between possible design directions.

After each workshop, participants completed a short survey. The survey collected feedback about the clarity of the concept of game audio transgression, the usability of the card deck, the usefulness of the tool for concept creation, and the overall workshop experience. It also included open-ended questions where participants could explain what was unclear, which decks were harder to use, and what they would change, remove, or add to the tool.

These materials produced three main types of data: the final concepts created in the Miro boards, the researcher's observation notes, and the participants' survey responses. Using these different data sources made it possible to analyze the workshops from more than one perspective. The Miro boards showed what participants created, the observation sheets showed how the process unfolded, and the surveys showed how participants experienced the tool. This combination was useful because the aim of the workshops was exploratory and qualitative.

6.3.3 Workshop Procedure

All three workshops followed the same general procedure. This was done to keep the sessions comparable and ensure that each group used the heuristic tool in a similar way. The only major difference was the format: Session 1 was conducted in person, while Sessions 2 and 3 were conducted online. Each workshop was organized into six phases. These phases moved from introduction, to explanation, to concept creation, and finally to feedback.

Table 6.3: Workshop procedure and planned duration for each phase.

Phase	Activity	Description	Planned duration
1	Onboarding	Introduction of the participants and the workshop	10 min
2	Framework introduction	Brief explanation of game audio transgression and the framework categories	15 min
3	Deck tool introduction	Overview of the card decks and how they should be used	10 min
4	Game concept creation	Creation of a game concept by combining selected cards	30 min
5	Brainstorming and final concept sheet	Development of the idea in more detail and completion of the concept sheet	15 min
6	Discussion and feedback	Final discussion of the tool and the generated concept	15 min

The first phase was onboarding. In this phase, the participants were welcomed, the purpose of the workshop was explained, and the general structure of the session was presented. Participants were also informed that the activity was part of the dissertation research and that their responses would be treated anonymously.

The second phase was the framework introduction. In this phase, participants were introduced to the basic idea of game audio transgression and given a few examples. The main framework categories were then explained: aesthetic, ludic, socio-cultural, and hybrid transgression.

The third phase was the deck tool introduction. Participants were shown the seven decks and were told how each deck contributed to the concept creation process. The aim of this phase was to make sure that participants understood the role of each deck before beginning the activity.

The fourth phase was game concept creation. Participants selected one card from each deck and placed it in the corresponding slot on the Miro board. These cards formed the basic structure

of the concept. At this stage the goal was not to define the main design challenge: what kind of game it was, what sound would be changed, what convention would be disrupted, and what effect this should have on the player.

The fifth phase was brainstorming and the final concept sheet. After the cards had been selected, participants discussed how the selected elements could become a coherent game idea. They then completed a final concept sheet describing the game concept, the role of sound, the transgressive audio behavior, and the intended player experience.

The final phase was discussion and feedback. Participants discussed how the process worked, what parts of the tool were useful, and what parts were difficult or unclear. After the workshop, each participant completed a short survey. This survey was used to collect individual feedback in addition to the group discussion.

Although the same procedure was used across the three sessions, the process remained flexible. In Session 2, for example, participants wanted to create a second concept, so the structure was adapted to allow this. This flexibility was important because the workshops were exploratory. The goal was to observe how the tool behaved in a real creative situation.

6.4 Workshop Results

This section presents the results of the three workshop sessions. The results are used to understand how the heuristic tool worked in practice: what kinds of concepts it helped generate, how participants used the cards, and what strengths and limitations became visible during the sessions. Across the three workshops, four game concepts were created. The original plan was to create one concept per session. However, in Session 2, participants wanted to develop an additional idea, so the session produced two concepts. This was useful because it showed that the tool could stimulate further ideation beyond the planned structure. The results are organized in three parts. First, Section 6.4.1 presents the four generated game concepts. Then, Section 6.4.2 discusses observations that appeared across the workshops, based mainly on the Miro boards and observation sheets. Finally, Section 6.4.3 presents participant feedback from the post-workshop surveys.

Table 6.4: Generated concepts: selected cards

Concept	Session	Game type	Player effect	Sound effect	Normal convention
Concept 1	1	FPS	Reflection	Hitting enemy	Communicates impact
Concept 2	2	2D platformer	Tension	Music	Creates emotional tone
Concept 3	2	FPS	Distrust	Reload	Reinforces control
Concept 4	3	FPS	Discomfort	Ambient noise	Supports immersion

Table 6.5: Generated concepts: transgression and classification

Concept	Scope	Transgressive operation	Framework classification
Concept 1	Brief	Contradict image	Aesthetic-socio-cultural hybrid
Concept 2	Sustained	Distort it	Aesthetic-ludic hybrid
Concept 3	Escalating	Make it unreliable	Aesthetic-ludic hybrid
Concept 4	Escalating	Make it unreliable	Aesthetic-ludic hybrid

6.4.1 Generated Game Concepts

Concept 1: Reflective Enemy Impact

The first concept was created during Session 1. It was based on an FPS game type and focused on the sound of hitting an enemy. In a conventional FPS, this kind of sound usually communicates impact. It tells the player that the shot connected with the enemy and gives feedback that the action was successful. In this concept, the group proposed contradicting the image through sound. Instead of using a normal impact sound, the enemy hit would produce a sad or human sound. The idea was to make the player reflect on the act of shooting the enemy. The sound would therefore create a contrast between the visual action and the emotional meaning suggested by the audio. The concept was classified as an *aesthetic-socio-cultural hybrid*. It is aesthetic because the emotional tone of the sound changes how the player perceives the action. It is socio-cultural because the concept asks the player to reflect on violence and on the humanization of the enemy.

The transgression is brief because it happens in a specific moment: when the player hits the enemy.

Concept 2: Rhythmic Platformer Tension

The second concept was created during Session 2. It was based on a 2D platformer and focused on music. In this type of game, music often helps create emotional tone and can also support rhythm, pace, and flow. In this concept, the game would be a rhythmic platformer where the player's success or failure changes the speed and intensity of the music. If the player succeeds repeatedly, the music becomes faster, creating more tension. If the player misses a jump or returns to a previous checkpoint, the music becomes slower, with lower percussion in the mix. This would make recovery feel calmer, but still challenging. The concept was classified as an *aesthetic-ludic hybrid*. It is aesthetic because the music changes the emotional tone of the experience. It is ludic because the music also works as a guide for the player's inputs and affects how the player reads the pace of the game. The transgression is sustained because the music changes over time as part of the ongoing gameplay.

Concept 3: Unreliable Reload

The third concept was also created during Session 2. It was an additional concept that was not part of the original plan for the workshop. It was developed because the group wanted to continue the ideation process and create one more idea with the tool. This concept was based on an FPS and focused on the reload sound. Normally, a reload sound reinforces control. It tells the player that the weapon has been reloaded and that they can continue acting with confidence. In this concept, the reload sound becomes unreliable. As the player progresses through the story and becomes increasingly violent, the reload sound sometimes plays even when the weapon has not actually reloaded. This makes the player distrust an audio cue that would normally be clear and useful. The concept was classified as an *aesthetic-ludic hybrid*. It is aesthetic because the sound creates uncertainty and tension. It is ludic because the unreliable reload sound affects how the player understands their ability to act. The transgression is escalating because the unreliability increases as the player advances.

Concept 4: Unreliable Ambient Event

The fourth concept was created during Session 3. It was based on an FPS and focused on ambient noise. In normal gameplay, ambient sound often supports immersion. It helps build the atmosphere of the space and makes the gameworld feel more coherent. In this concept, the player would become used to a specific ambient sound when entering a room or triggering an event. Over time, this sound would begin to play more rarely or inconsistently when the same action happens. The player would therefore become unsure whether the sound still means what it

originally meant. The concept was classified as an *aesthetic-ludic hybrid*. It is aesthetic because the ambient sound changes the feeling and atmosphere of the space. It is ludic because the unreliable sound affects the player's interpretation of events and their trust in the game's feedback. The transgression is escalating because the sound becomes less reliable over time.

6.4.2 Cross-Workshop Observations

The workshop observation sheets and Miro boards showed several patterns across the three sessions. These observations are useful because they show how the tool worked during the creative process, not only what participants reported after the workshop.

- Overall, the tool helped participants move from an abstract idea to a concrete game concept. The deck sequence gave the groups a clear path to follow: first defining the game type, then the intended player effect, then the sound event, the normal convention, the type of disruption, the scope, and the framework classification. This structure was useful at the beginning of the ideation process because it reduced the difficulty of starting from nothing.
- However, the workshops also showed that the cards worked better as prompts than as strict rules. At times, participants felt that the selected cards constrained the direction of the concept. This was especially visible in Session 3, where the group took longer to develop the idea after the cards had been selected. This suggests that the tool should allow participants to adapt, replace, or expand cards when the concept requires it.
- One repeated observation was that participants generally understood the basic idea of game audio transgression. They were able to understand that the concept depends on a sound expectation being disrupted. Participants also gave examples during the sessions, which suggests that the simplified explanation of the model was useful.
- At the same time, the sociocultural dimension was harder to explain than the aesthetic and ludic dimensions. Participants seemed to understand aesthetic and ludic transgression more easily because these categories could be connected directly to perception, gameplay, and feedback. Sociocultural transgression often needed more concrete examples before participants understood how sound could affect cultural, ethical, or social meaning.
- Another important pattern was the difficulty of the Transgressive Operation deck. Across the sessions, this deck often required more discussion. Participants sometimes felt that the available operations were too broad or did not fully match the idea they wanted to create. This suggests that future versions of the tool should include more operation cards, clearer descriptions, or blank cards where participants can write their own operations.
- The workshops also showed that participants wanted more control over the context of the game concept. Some participants suggested adding more game types, while others

wanted to define the tone, mood, setting, or theme of the game. This is important because the meaning of audio transgression often depends on the context where it appears. A sound disruption in a horror setting, for example, may create a different effect from the same disruption in a lighter or more comedic game.

6.4.3 Participant Feedback

The post-workshop surveys provided individual feedback on the clarity and usefulness of the tool. This survey can be viewed in Appendix K. This feedback shows how participants experienced the workshop after completing the concept creation activity. While the observation sheets recorded what happened during the sessions, the surveys helped identify what participants found clear or restrictive. Overall, participant feedback was positive. Participants generally understood the concept of game audio transgression and were able to use the card deck to create game concepts. They also reported that the tool helped them connect different parts of the design process, such as game type, sound event, normal audio convention, player effect, and framework classification.

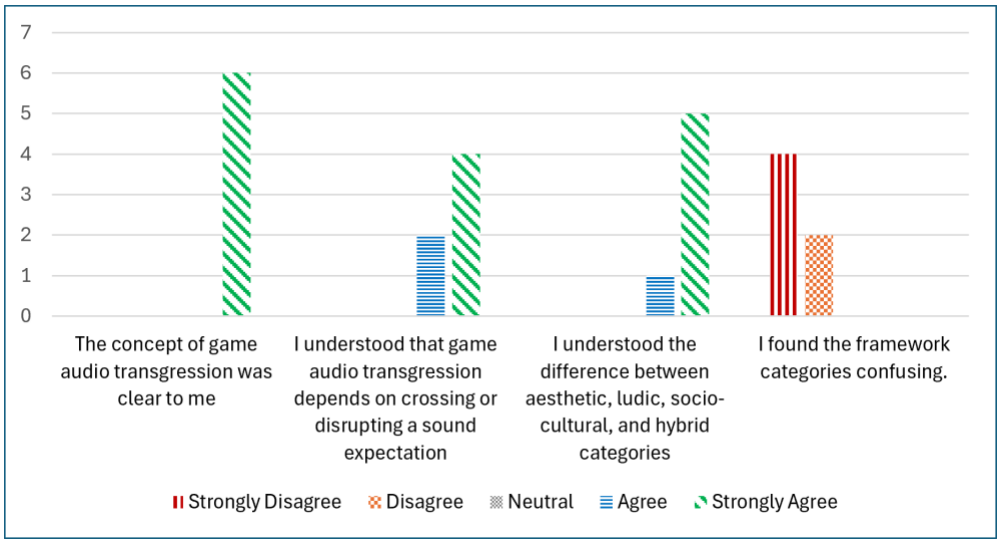


Figure 6.12: Survey results on participants' understanding of game audio transgression and the framework categories.

One of the clearest positive points was that the card deck gave structure to the ideation process. Participants did not have to begin from an empty page. Instead, the cards gave them a path to follow and helped them turn a broad idea into a more concrete concept. This supports the purpose of the tool as a heuristic aid, as it does not create the concept by itself, but it helps participants organize their thinking.

However, the surveys also confirmed some of the difficulties observed during the workshops. The sociocultural dimension was mentioned as one of the least clear parts of the

model. Participants often needed examples to understand how game audio could produce socio-cultural transgression, but still ended up understanding the concept as a whole, even though it took the most time. This suggests that future versions of the tool should include clearer examples for this category or find a simpler way to explain it. The Transgressive Operation deck was also identified as one of the more difficult decks. Some participants felt that the available cards were too broad, while others felt that none of the options fully matched the idea they wanted to create. This feedback suggests that this deck should be expanded or made more flexible. Possible improvements include adding more operation cards, adding blank cards, or allowing participants to create a custom operation when needed.

Another recurring point was that the cards could sometimes feel limiting after the initial idea had been formed. Participants generally saw the cards as useful for starting and structuring the concept, but some felt that the selected cards could restrict brainstorming if they were treated too rigidly. This limitation should be understood in relation to the structure of the workshop. After the initial concept was created, the brainstorming phase was no longer fully open-ended. Its purpose was to develop the selected concept in more detail and make it more precise. For this reason, some narrowing of possibilities was expected. Even so, this feedback reinforces the idea that the tool should be presented as a flexible prompt system rather than a fixed design method.

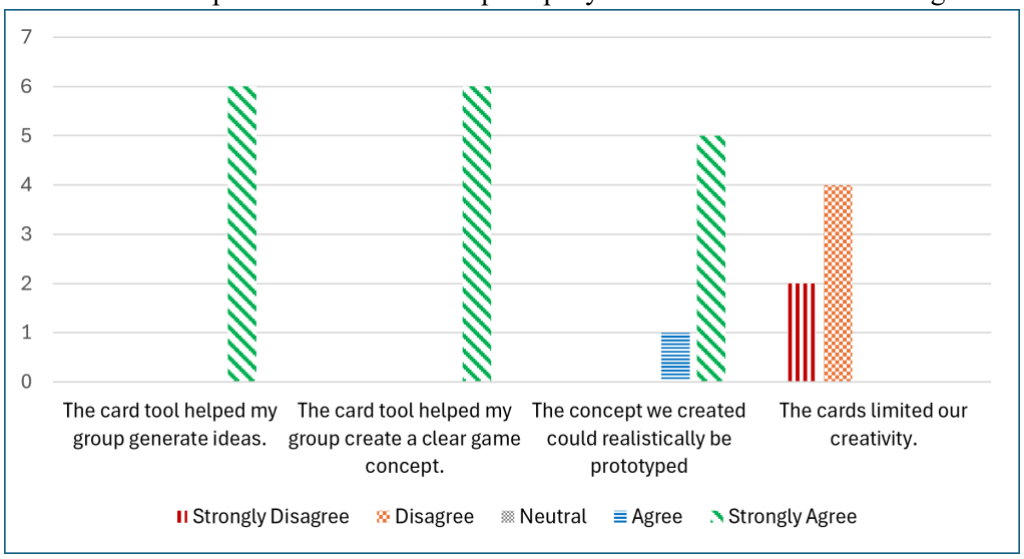


Figure 6.13: Survey results on participants' evaluation of the card tools' usefulness.

6.5 Prototype Development and Analysis

After the workshops, one of the four generated concepts was selected for implementation as a small playable demo. This step was included to test whether a concept created through the heuristic tool could be translated into an actual playable experience. The aim was to create a prototype where one form of game audio transgression could be experienced directly.

The prototype was not built from scratch. Instead, it was developed by modifying Unity's FPS Microgame, a pre-built first-person shooter template designed to be customized and expanded. This choice made the prototype feasible within the time limits of the dissertation. The existing Unity project provided the basic FPS structure. The work for this dissertation focused on creating a new level structure, adapting the available assets, and changing the audio behavior in order to implement the selected form of game audio transgression. The prototype is structured around two short levels. The first level presents the FPS conventions in a normal way. Enemy hit sounds function as expected. The second level then introduces the transgression. In this level, the final enemy's last hit produces a human-like sound instead of a conventional impact sound. This moment is designed to contradict the visual action and make the player reflect on the act of shooting. The prototype also allowed the model to be tested in a different way. In the previous chapter, the model was used to analyze existing games. In the workshops, it was used to help create new concepts. In this section, both uses come together: one concept generated through the tool is implemented, and then the resulting demo is analyzed through close reading.

The selected concept was developed into a short demo because it was feasible within the available time and because its audio transgression could be clearly implemented. The focus was on making the transgressive audio behavior understandable in play, rather than building a complete game.

6.5.1 Concept Selection

The concept selected for implementation was Concept 1 – Reflective Enemy Impact, created during Session 1. Although all three game types included in the tool had possible Unity-based implementation paths, this concept was selected because it offered the clearest and most focused way to test the model in playable form. The aim was to choose the concept that could best demonstrate the movement from card-based ideation to prototype and close reading analysis.

The selection was based on three main criteria:

- First, the concept had a clear relation between convention and disruption. In a first-person shooter, enemy hit sounds normally communicate impact and confirm that the player's action has connected. This convention is easy to establish through repeated gameplay. The prototype could therefore create a first level where this feedback behaves normally, before introducing the transgressive sound in the second level.
- Second, the concept placed audio at the centre of the experience. The visual and mechanical action remains familiar: the player shoots an enemy. What changes is the sound attached to that action. This made the concept especially useful for testing how a small audio change can alter the meaning of a familiar gameplay moment.
- Third, the concept produced a precise moment suitable for analysis. The human-like sound attached to the final enemy's last hit creates a specific point of rupture that can be examined through the same close reading criteria used in the previous chapter.

6.5.2 Prototype Description

The prototype was developed as a short first-person shooter demo using Unity's FPS Microgame as a base. The original template provided the basic systems needed for the prototype, including first-person movement, shooting, enemy behaviour, objectives, health, and user interface elements. These systems were not created from scratch. Instead, they were adapted so that the focus of the prototype could remain on the implementation of the selected audio transgression.

The demo was organized into two short levels. The first level was designed to establish the normal audio convention. In this level, enemy hit sounds behave as expected. When the player shoots and hits an enemy, the sound communicates impact and confirms that the action was successful. This level was important because the transgression in the second level only works if the player first understands the normal relationship between shooting and hit feedback. The second level introduces the transgressive moment. The general FPS structure remains the same: the player moves through the level, shoots enemies, and completes the objective. However, when the player reaches the final enemy, the last hit produces a human-like sound instead of a normal impact sound. This change is designed to contradict the image. Visually, the player is still shooting a game enemy, but the sound suggests something more human and emotionally uncomfortable.

The purpose of the prototype was to test whether a small audio change could shift the meaning of a familiar action. The normal hit sound supports the expected FPS feedback loop. The human-like sound interrupts that loop and asks the player to reconsider what the action means.



Figure 6.14: Screenshot of the second level, where the final enemy's last hit triggers a human-like sound instead of a standard impact sound.

6.5.3 Close Reading of the Demo

The prototype was analysed using the same criteria applied to the previous game cases. Since the demo was created from one of the workshop concepts, the aim of the analysis was to examine whether the intended form of game audio transgression worked within the playable context.

The analysed moment occurs in the second level, when the player reaches the final enemy. By this point, the first level has already established the normal convention: when the player shoots an enemy, the hit sound communicates impact and confirms that the action has connected. This is a familiar FPS convention, because hit sounds usually support player control and reinforce the relationship between action and result.

The transgression happens when the final enemy's last hit produces a human-like sound instead of a normal impact sound. The visual action remains the same: the player shoots an enemy. However, the sound changes the meaning of that action. Instead of simply confirming impact, the sound suggests pain, vulnerability, or humanity. This creates a contradiction between what the player sees and what the player hears.

The player impact is therefore based on reflection. The sound does not prevent the player from continuing, and it does not change the core shooting mechanic but it briefly interrupts the expected feedback loop and asks the player to reconsider the action. The enemy is still presented as a game target, but the sound makes the action feel less neutral.

The demo can therefore be classified as an *aesthetic-socio-cultural hybrid*, as originally proposed in the workshop concept. It is aesthetic because the change in sound alters the emotional tone of the moment. It is socio-cultural because the sound points toward a broader reflection on violence, enemies, and the humanization of targets. The transgression is brief because it is concentrated in one specific moment rather than sustained across the full demo.

6.6 Discussion and Conclusion

This chapter showed how the model of game audio transgression can be used beyond the analysis of existing games. By turning the model into a card-based heuristic tool, it became possible to test whether its concepts could support game creation. The workshops and prototype suggest that the model can work in this way but also show that the tool still needs refinement. The main contribution of this chapter is the movement from theory to practice. The model was first translated into a set of design prompts. These prompts were then used in three workshop sessions to generate four game concepts. Finally, one concept was selected and implemented as a small playable demo. This process showed that the model can support a full creative cycle: from conceptual structure, to ideation, to implementation, and back to analysis.

The results also show that the tool was most useful as a starting point for ideation. The cards helped participants organize their thinking and connect sound, gameplay, player effect, and transgression. However, the workshops also showed that the tool should not be too rigid. Some

participants felt limited after selecting cards, especially when the chosen combination did not easily fit the idea they wanted to develop. For this reason, the tool should be understood as a flexible heuristic aid, not as a fixed design method. The prototype reinforced this point. It showed that a concept created through the card tool could be implemented in a playable form, but it also showed the importance of practical constraints. The final demo was small and focused, but it was enough to demonstrate the intended form of game audio transgression. The first level established the normal convention, while the second level disrupted it through a human-like sound on the final enemy's last hit. This confirmed that the selected concept could work within the playable context.

6.6.1 The Model as a Creative Tool

The workshops suggest that the model can function as a creative tool, not only as an analytical framework. In the previous chapter, the model was used to examine existing cases of game audio transgression. In this chapter, the same model was used to help participants create new concepts. This shows that the model can support both interpretation and design. The card deck was important in this process because it translated the model into smaller design decisions. Instead of asking participants to create a full concept immediately, the tool guided them step by step. Participants first defined the game type, then the intended player effect, then the sound event, the normal convention, the transgressive operation, the scope, and the framework classification. This made the model easier to use in practice. The generated concepts show that participants were able to use the tool to place audio at the center of the design. In all four concepts, the audio disruption was the main element that shaped the player experience. This supports one of the goals of the tool, which is to make participants think about sound as a core design element. ally does, how it is disrupted, and what kind of player experience this disruption is meant to create.

The workshops also confirmed that the strongest concepts appeared when participants clearly understood the normal audio convention before disrupting it. When participants identified the normal function of a sound clearly, it became easier to create a meaningful transgressive use of that sound. At the same time, the workshops showed that the model becomes harder to use when the categories are too abstract. This was most visible with socio-cultural transgression and with the transgressive operation deck. These parts of the tool required more explanation and examples. This does not mean that the model failed as a creative tool. Rather, it shows that some parts of the model need stronger support when they are used for design rather than analysis.

The prototype also supports the value of the model as a creative tool. The selected concept moved from a workshop idea into a playable demo, and the intended transgression worked within that context. The demo showed that the model can guide a small design intervention: first establishing a convention, then disrupting it through sound, and finally analyzing the effect of that disruption on the player. Overall, the model worked best as a guide for thinking, it helped organize that discussion and gave participants a shared structure for making design decisions. The

model can be understood as a heuristic tool, as it helps designers ask useful questions but does not prescribe a single correct answer.

6.6.2 Limitations and Future Improvements

Although the workshops produced useful results, this stage of the research has some limitations:

1. One limitation is that only one of the four concepts was implemented. This was necessary because of time and technical constraints. The implemented demo shows that one workshop concept could work in a playable form, but it does not show whether all concepts would work equally well. Future work could prototype more concepts, especially concepts from different game types, to test how the tool performs across different gameplay contexts.
2. The prototype itself was also limited in scope. It was developed by modifying an existing Unity FPS template rather than building a game from scratch. This was appropriate for the aim of the chapter, because the focus was on testing the audio transgression, not on creating a complete game. However, it also means that the design was shaped by the possibilities and limits of the original template.
3. The workshops also showed several ways to improve the tool. The most important improvement would be to make the card deck more flexible. Some participants felt limited after selecting cards, especially when the chosen combination did not fully match the concept they wanted to develop. Future versions could include blank cards and optional custom cards.
4. Another improvement would be to expand the Transgressive Operation deck. This deck was often difficult because participants sometimes felt that the available operations were too broad or not specific enough. Adding more operation cards, clearer descriptions, and examples would make this step easier to use.
5. The socio-cultural dimension also needs more support. Several participants understood aesthetic and ludic transgression more easily than socio-cultural transgression. Future versions of the tool could include concrete examples, short explanation cards, or prompts that ask participants to identify the cultural, ethical, or social meaning affected by the sound.
6. The tool could benefit from more contextual options. Participants suggested adding more game types and more control over mood, setting, or theme. This would help participants develop richer concepts and could make socio-cultural transgression easier to explore. A future version of the tool could therefore include a new deck or worksheet field for Theme / Mood / Setting. helping participants develop richer concepts and making socio-cultural transgression easier to explore.

Overall, these limitations do not weaken the value of the tool. Instead, they show where it can be improved. The workshops suggest that the model can support creative work, but they also show that a heuristic tool needs flexibility, examples, and space for participant interpretation.

6.6.3 Final Remarks

This chapter explored the model of game audio transgression as a practical tool for game creation. By translating the model into a card-based heuristic tool, the research moved from analysis to design practice. The workshops showed that participants were able to use the tool to generate game concepts in which audio was central to the experience. The results suggest that the model can help designers think about sound in a more active way. The tool encouraged participants to ask what sound normally does, how that expectation can be disrupted, and what effect this disruption can have on the player. This helped connect game audio, player experience, and transgression in a practical design process. The prototype showed that one of the workshop concepts could also work in playable form. Although the demo was small and based on an existing Unity template, it demonstrated the intended audio transgression clearly. This showed that the concept could move from card-based ideation to implementation and then back into close reading analysis.

Overall, this chapter supports the idea that the model has two connected uses. It can be used to analyse existing games, as shown in the previous chapter, but it can also be used to support the creation of new game concepts. The card deck is, therefore, a practical extension of it. It makes the model easier to use in collaborative design contexts. At the same time, the chapter also shows that the tool should be improved in future versions. More game types, clearer examples, more flexible card options, and stronger support for socio-cultural transgression would make it more useful. Even so, the workshops and prototype suggest that the model can guide creative work and help designers produce focused examples of game audio transgression.

Conclusion

Summary of the Findings

The findings of this dissertation show that game audio transgression depends first on the existence of conventions. Sound can only become transgressive when there is an expectation that can be disrupted. This expectation may be created inside a specific game through repeated use of a sound cue, or it may come from broader genre, interface, audiovisual, or cultural conventions. For this reason, understanding how game audio normally functions is necessary before analysing how it can be disrupted. Across the theoretical chapters, sound was shown to operate as an interface-like mediator between player and system. It guides action, supports interpretation, communicates feedback, and stabilises the player's sense of agency. This makes audio a powerful site for transgression. When a trusted audio cue becomes unstable, misleading, absent, or recontextualised, the disruption affects more than the sound itself. It can change how the player understands the system, the gameworld, and their own actions within it.

The close readings showed that this disruption often operates across more than one dimension at the same time. Although the framework separates aesthetic, ludic, and socio-cultural dimensions for clarity, many analysed cases were hybrid. Sound can affect perception, gameplay, and cultural meaning at the same time. This means that hybridity is one of the central ways game audio transgression operates. The analysis also showed that aesthetic transgression should not be limited to discomfort. Some cases do create unease, fear, confusion, or instability, but others show that game audio transgression can also deepen involvement, increase attention, or change the player's relation to the gameworld. Transgression does not always push the player away from the game. In some cases, it creates a more intense form of immersion. Another important finding is that game audio transgression can happen through role reassignment. A sound does not need to be strange or disturbing in itself to become transgressive. It may become transgressive because its function changes. A sound that normally guides, confirms, supports, or reassures the player can begin to mislead, control, withhold information, or create uncertainty. This distinction between sound form and sound function became one of the most important refinements of the framework. This is closely connected to the breakdown of auditory trust. Many analysed cases showed that players rely on sound as a trustworthy source of information. When that trust breaks down, the player's relation to the game changes. This breakdown of auditory trust appeared across different kinds of cases and should therefore be understood as a recurring mechanism of game audio transgression.

The analysis also showed that time matters. Game audio transgression may appear as a brief moment, a sustained condition, an escalating process, or a repeated pattern. Some cases depend

on a sudden rupture, while others work because the player remains in an unstable audio condition for a longer period. This shows that the framework needs to consider not only what sound does, but also when it happens, how long it lasts, and how it develops over time. Voice emerged as a particularly powerful material for game audio transgression. This is because voice can communicate information, frame action, create identity, guide the player, and carry cultural or ethical meaning. Because of this, changes in voice can destabilise several parts of the player's experience at once. Across the analysed cases, voice often worked as one of the clearest ways to reveal boundaries in meaning, trust, agency, and socio-cultural interpretation.

Finally, the research showed that the model can function not only as an analytical framework, but also as a creative tool. The card-based heuristic tool helped participants generate four game concepts centred on game audio transgression. The workshops showed that the model could be translated into practical design prompts and used collaboratively. The implemented prototype further showed that a workshop concept could become a playable audio transgression and then be analysed through the same framework.

These findings support the main hypothesis of the dissertation: game audio transgression can reveal underlying conventions by disrupting the player's learned trust in sound. These disruptions are not merely errors or failures. When intentional and contextualised, they can become expressive strategies that affect how players feel, interpret, and act within a game.

Limitations of the Study

The first limitation of this study is methodological. The analysis was based on qualitative close reading rather than large-scale player testing. This allowed for detailed interpretation of specific game audio moments, but it does not claim to represent all possible player responses. Different players may interpret the same audio disruption differently depending on their experience, cultural background, genre knowledge, and familiarity with the game.

A second limitation concerns the corpus. The analysis focused on twelve selected games, with one bounded segment from each game. This made the study manageable and allowed for comparison across cases, but it also means that each game was analysed through a specific moment rather than as a complete work. Some games may contain other relevant examples of game audio transgression that were not included.

A fourth limitation concerns the workshop stage. The card-based heuristic tool was tested in only three workshop sessions, with six invited participants and the researcher. This small sample was appropriate for an exploratory study, but it does not allow broad conclusions about how all designers or players would use the tool. The researcher also acted as facilitator and participant, which helped guide the sessions but may have influenced the direction of the concepts.

A fifth limitation concerns the prototype. Only one of the four generated concepts was implemented. The prototype was developed by modifying an existing Unity FPS demo rather than

by building a full game from scratch. This was suitable for the purpose of the dissertation, because the goal was to test a focused audio transgression, not to create a complete game. However, it also means that the practical implementation was limited in scale.

Finally, the study does not fully assess player reception of the implemented prototype. The close reading of the demo showed that the designed transgression worked within the intended context, but future testing with players would be needed to understand how different players notice, interpret, and respond to the audio disruption.

Future Work

Future work can develop this research in several directions. The first direction is to refine the framework further. The analysis showed that the framework would benefit from clearer distinctions between sound form, sound function, and sound relation. It should also continue to develop its treatment of temporal form, levels of reference, auditory trust, and the relation between transgression and immersion.

Another direction is to test the framework with a larger and more varied corpus. Future research could include more genres, independent games, horror games, rhythm games, multiplayer games, experimental games, and games from different cultural contexts. This would help examine whether the framework remains useful across a wider range of audio practices. It would prove very interesting to conduct player studies. Since this dissertation focused mainly on close reading and exploratory workshops, future work could examine how players actually experience game audio transgression. Interviews and playtesting could help identify whether players notice the disruption, how they interpret it, and whether it produces the intended affective or reflective effect.

A fourth direction is to improve the card-based heuristic tool. Future versions could include more game types, clearer examples, more flexible cards, blank cards, and stronger support for socio-cultural transgression. The workshops showed that the tool works best as a flexible guide rather than a fixed design method. Future work could test revised versions of the deck with more participants and with different types of design teams. I also think more workshop game concepts should be prototyped. In this dissertation, only one concept was implemented, but the other generated concepts could also be developed into playable forms. Implementing concepts from different game types would help test how game audio transgression works.

A final direction is to explore game audio transgression as a design practice in its own right. The framework developed in this dissertation can help designers think about audio as a material for disruption, reflection, and expressive play. Future work could therefore use the framework in design education, experimental game development, sound design workshops, or critical game analysis.

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Appendix A Close Reading Protocol and Criteria

Inclusion and Exclusion Criteria for the Game Sample

The game sample was selected according to a set of inclusion and exclusion criteria aligned with the aims of this dissertation. Since the study uses close reading, the aim was to select games that contain clear and analyzable moments in which game audio transgression can be identified, described, and interpreted.

Sound Must Be Important to the Analysed Moment

A game was included when it contained at least one segment where sound played an important role in shaping the player's interpretation of the game situation. This means that sound had to do more than decorate the scene or intensify an already clear visual event. It had to contribute to how the player understands an action, a space, a character, a system response, or their own position within the game.

In these cases, removing or changing the sound would significantly weaken the meaning of the moment, even if the game could still be played mechanically. Games were excluded when audio served only as background atmosphere, general emotional support, or simple reinforcement of information already conveyed through visuals or mechanics.

The Segment Must Establish a Recognisable Audio Convention

The selected segment had to contain a recognisable audio convention or baseline. This was necessary because game audio transgression depends on the disruption of an expectation. The baseline could be established inside the game itself, through repeated use of a sound cue or audio behaviour, or it could come from broader game audio, genre, interface, or audiovisual conventions.

Games or segments were excluded when the audio was too unstable from the beginning to establish a clear expectation, or when there was no identifiable convention against which the disruption could be understood. Without a recognisable baseline, it would not be possible to explain what boundary or expectation was being crossed.

The Segment Must Contain a Meaningful Audio Deviation

The selected segment had to include a moment where sound disrupts, reverses, withholds, distorts, contradicts, or reassigns an expected audio function. This deviation could affect the player's perception, agency, interpretation, emotional orientation, ethical position, or trust in the game system.

However, the deviation had to be meaningful within the context of play. Games were excluded when the audio irregularity appeared to be only a technical problem, a random effect, or a purely decorative stylistic choice without a clear impact on interpretation. This criterion was important for distinguishing game audio transgression from simple audio variation or poor implementation.

The Moment Must Be Suitable for Close Reading

The selected segment had to be suitable for close reading. This means that the transgressive audio moment had to be sufficiently bounded to be described in detail. The analysis required a clear segment, scene, interaction, or repeated audio behaviour that could be isolated and examined.

Preference was given to moments that could be replayed, revisited, or documented through video and audio capture. Games were excluded when the relevant audio effect depended mainly on unpredictable multiplayer behaviour, unstable online conditions, or procedural variation that made the moment difficult to reproduce or analyse consistently.

Sound Must Affect Player Interpretation or Positioning

The selected games also had to allow the relationship between audio, gameplay, and player experience to be analysed. Since the framework examines aesthetic, ludic, socio-cultural, and hybrid forms of game audio transgression, the sample needed to include cases where sound affected more than surface atmosphere.

The audio deviation had to alter how the player perceived the gameworld, understood the rules or system, interpreted an action, or reflected on the meaning of what was happening. Games were excluded when sound remained expressive but did not substantially affect the player's interpretive or experiential position.

The Sample Must Support Comparison Across Different Forms of Transgression

The final sample also aimed to support comparison across different forms of game audio transgression. For this reason, the selection included segments that varied in sound type, function, scope, and framework classification. Some cases involved voice, music, silence, interface sound, environmental sound, or feedback sounds. Some were brief moments, while others were sustained or escalating conditions.

This variation was important because it allowed the analysis to test whether the framework could account for different ways in which game audio transgression operates. The aim was to examine how the same framework could be applied to different kinds of audio disruption.

Summary

- A game or segment was included in the sample only if it satisfied the following conditions:
- Game audio played an important role in the interpretation of the analysed moment.
- A recognisable audio convention or baseline could be established.
- The segment contained a meaningful audio deviation.
- The moment could be isolated and analysed through close reading.
- Sound affected the player's experience or interpretive position.
- The case contributed to comparison across different forms of game audio transgression.

These criteria ensured that the sample remained methodologically coherent. They also helped distinguish game audio transgression from ordinary sound design variation or technical failure. The selected games were therefore chosen because they offered clear cases in which sound crosses or destabilises an established expectation while remaining meaningful within the context of play.

Close Reading Protocol for Game Sound

In this study, we analyse selected gameplay segments in order to understand how game sound destabilizes established conventions and affects the player. We apply the same procedure to every game in the sample to ensure consistency and comparability. For each game, we produce three documents:

Structure Overview

- Document 1 - What are we analysing?
- Document 2 - What is normal and what changed?

- Document 3 - How do we classify and explain it?

The protocol is structured and organized in three phases: pre-analysis, during analysis, and post-analysis.

Pre-Analysis Stage

In the pre-analysis stage, we prepare the ground for the analysis. We decide exactly which segment we will study and make sure it is clearly defined and manageable. We gather all necessary contextual information about the game and the selected moment so its understood what is being analysed and why it is relevant. At this stage, we do not interpret or classify anything. Instead, we focus on identifying the segment, describing it in neutral terms, and defining what "normal" sound behaviour looks like before any disruption occurs. This allows us to establish clear expectations that will later serve as a reference point for identifying change.

Step 1 - Selecting the Segment

We select one clearly bounded segment per game. The

segment must:

- Contain identifiable destabilization.
- Involve game sound in that destabilization.
- Be replayable.
- Be short enough to analyse clearly (usually 1–5 minutes).

By the end of this step, we have clearly chosen and defined the segment that will be analysed. We know where the segment begins and ends, how long it lasts, and why it is suitable for study. This ensures that the analysis remains focused and that we are working with a clearly bounded unit rather than a vague or broad part of the game.

Step 2 - Game & Segment Identification

- Before analysing sound behaviour, we record:
- Game title
- Developer
- Year
- Platform analysed
- Genre
- Relevant audio design features (if applicable)
- Segment name (level/chapter/scene)

- Segment duration
- Trigger condition (player action or scripted event)
- Neutral description of what happens in the segment

By the end of this step, we have gathered all the essential contextual information about the game and the selected segment. We can understand the basic conditions of the case: what game is being analysed, on which platform, in what genre, and what happens in the chosen scene. This creates transparency and clarity. It prevents confusion and ensures that the analysis is grounded in a clearly described context rather than assumed knowledge.

Step 3 - Establishing the Baseline

Before identifying disruption, we define what sound normally does in the selected context.

We describe baseline sound behaviour in terms of:

- Ambient sound (environmental stability and consistency)
- Feedback sounds (how actions and states are confirmed)
- Music (how emotional tone is framed)
- Spatial reliability (direction and distance cues)
- Sound layer separation (world sound, interface sound, music)
- Audio-visual coherence (timing and causal alignment)

We then identify which conventions are active before the disruption. These may include:

- Functional clarity
- Agency reinforcement
- Cognitive aid
- Transparency / minimal friction
- Audio-visual coherence
- Spatial reliability
- World soundscape consistency
- Sound layer separation
- Emotional framing
- Immersion support

By the end of this step, we have defined what “normal” sound behaviour looks like in the selected context. We have identified which sound conventions are active and how they shape the player’s expectations. This baseline acts as the reference point for the entire analysis. Without it,

we would not be able to explain what counts as change or why a particular moment can be considered destabilizing.

Analysis Stage

In the analysis stage, we carefully examine the selected segment and focus on what happens in relation to game sound. We compare the sound behaviour in the disruptive moment with the baseline expectations established earlier. Our goal is to describe clearly what changes, how it changes, and whether the change is brief, sustained, or escalating. We avoid interpretation at this point and concentrate on observable differences in sound behaviour. This stage ensures that any later classification is grounded in concrete evidence rather than assumption.

Step 4 - Deviation

We describe clearly what changes in the sound compared to the baseline.

We specify:

- What sound behaviour changes.
- Which baseline expectation is violated.
- Whether the deviation is brief, sustained, or escalating.
- Whether stability is restored or remains unstable.

By the end of this step, we have clearly identified what changes in the sound compared to the baseline. We know which expectation is broken and how the sound behaves differently. We also understand whether the change is short, sustained, or increasing in intensity. At this point, we have a clear description of disruption based on observable sound behaviour. This gives us the evidence needed to move into structured classification. This stage answers the question of "what is different from normal sound behaviour?"

Post-Analysis Stage

In the post-analysis stage, we interpret and classify the disruption identified earlier. Using the structured categories defined in our framework, we explain how the change in sound affects the player, which boundary of game sound is revealed, how the disruption operates, and in which domain it occurs. We also identify which established conventions are destabilized. At this stage, we ensure that every claim is directly supported by the baseline and deviation described previously. This final step allows us to move from description to structured interpretation while maintaining clarity and consistency across all analysed games.

Step 5 - Player Impact

We describe what changes for the player as a result of the disruption.

- Possible player impacts include:
- Perceptual uncertainty
- Loss of agency
- Cognitive instability
- Moral discomfort
- Emotional intensification
- Reflective awareness

By the end of this step, we have explained how the disruption affects the player. The player impact is directly linked to the documented change in sound. This ensures that the analysis remains grounded in what actually happens in the segment.

Step 6 - Game audio Boundary Revealed

We identify which structural assumption about game sound becomes visible because it no longer functions normally.

Possible boundaries include:

- Reliability boundary (sound as trustworthy guidance)
- Clarity boundary (sound reduces ambiguity)
- Confirmation boundary (sound confirms actions)
- Emotional framing boundary (music supports interpretation)
- Layer separation boundary (distinct sound layers)
- Audio-visual coherence boundary
- World coherence boundary
- Immersion boundary (sound remains transparent)

By the end of this step, we have identified which assumption about game sound becomes visible because it stops functioning normally. We understand which “rule” of sound design is exposed as a limit. This clarifies what the disruption reveals about how game sound usually works and how it shapes expectations.

Step 7 - Mode of Game Audio Transgression

We determine how the disruption operates structurally. Possible modes:

- Aesthetic (perceptual or tonal disruption)
- Ludic (gameplay or feedback disruption)
- Hybrid
- Socio-cultural (genre or ideological disruption)

By the end of this step, we have determined how the disruption operates. We know whether it mainly affects perception, gameplay function, both at the same time, or broader genre expectations. This helps us explain the structural role of sound in producing destabilization and avoids mixing different types of disruption.

Step 8 - Domain

We determine where destabilization primarily occurs. Possible domains:

- Perceptual
- Rule / Agency
- Ethical
- World coherence

By the end of this step, we have clearly located where the destabilization occurs. We have identified whether the main instability affects perception, agency, ethics, or world coherence. This keeps the analysis organized and ensures that each case can later be compared across games in a consistent way.

Step 9 - Conventions Destabilized

We identify which of the established game sound conventions are challenged in this moment. These may include:

- Functional clarity
- Agency reinforcement
- Cognitive aid
- Transparency / minimal friction
- Audio-visual coherence

- Spatial reliability
- World soundscape consistency
- Sound layer separation
- Emotional framing
- Immersion support

By the end of this step, we have linked the disruption directly to the established conventions. We have shown which expectations about game sound are challenged in this moment. This connects the analysis to the theoretical framework and prevents the interpretation from becoming disconnected from the literature.

Step 10 - Consistency Check

Before finalizing the analysis, we verify:

- That each classification is grounded in the baseline and deviation.
- That we are not adding unsupported assumptions.
- That the disruption can be clearly explained using observable sound behaviour.

Summary of Workflow

Pre-analysis:

- Select segment.
- Document context.
- Define baseline expectations.

During analysis:

- Identify and describe deviation.

Post-analysis:

- Classify player impact.
- Identify game audio boundary revealed.
- Determine mode.
- Determine domain.
- Identify conventions destabilized.
- Perform consistency check.

SAMPLES

These samples are selected using domains as reference; we use domains because they define where destabilization happens in the structure of the game experience. By organizing the sample around perceptual, rule/agency, ethical, and world coherence domains, we ensure that we cover different types of instability. This prevents redundancy and guarantees that the analysis reflects the full scope of our framework. Domain-based selection also allows us to compare how sound destabilizes different layers of experience instead of running the risk of doing a lot of analysis on similar games, keeping the study focused on structure instead of genre or personal preference.

List of the samples:

- Silen Hill 2 (2001)
- Drakengard 3 (2013)
- Hellblade: Senua's Sacrifice (2017)
- Bioshock (2007)
- Call of Juarez Gunslinger (2013)
- Metal Gear Solid 2: Sons of Liberty (2001)
- NieR: Automata (2017)
- Ico (2001)
- Resident Evil – Code: Veronica (2000)
- The Stanley Parable (2013)
- Immortality (2022)
- Mafia III (2016)

Appendix B: Detailed Analytical Sheets for the Selected Cases

Silent Hill 2
Game & Segment Identification

1. Game Information

- Game title: Silent Hill 2
- Developer: Team Silent / Konami Computer Entertainment Tokyo
- Year: 2001
- Platform analysed: PC (Enhanced Edition)
- Genre: Survival Horror

2. Selected Segment

- Segment name (level/chapter/scene): Blue Creek Apartments - Room 209
- Segment duration: Brief sound event only lasting a few seconds.
- Trigger condition (player action / scripted event): the player enters Room 209 and moves toward the balcony area, triggering the whisper shortly before the later Pyramid Head encounter in the apartment section.

3. Description of the Segment

In this segment, the main character James is exploring the apartment complex, moving through narrow interior rooms and corridors while searching for keys and progression items. The player is in a slow, cautious exploration state, already trained to treat sound as meaningful because enemies and danger are often communicated through sound before they are seen. In Room 209, however, a low whispering voice can be heard even though there is no clear visible speaker, no direct gameplay prompt, and no stable visual event that explains it. The sound elements present are room tone, distant environmental noise, James's footsteps, and then the whispered voice.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

Before the disruption, the apartment environment sounds tense but reliable. The ambience is low and oppressive with some environmental noise creating unease. Even when the exact source of a sound is unclear, the player still understands it as part of the building's atmosphere.

2. Feedback Sounds

The game normally confirms actions and states through recognizable sound cues: footsteps respond to movement, doors react when tested, combat produces direct audio confirmation, and the radio usually helps signal nearby monsters.

3. Music

Music in this segment is restrained. This section of the game relies more on droning sounds. This keeps the player alert and uneasy, but still able to distinguish ambient sounds.

4. Spatial Reliability

In normal play, the space is not fully comfortable, but it is mostly readable. The player can usually infer whether a sound belongs to the environment or the player character. Direction and distance are stable, even if obscured by the game's horror aesthetics.

5. Sound Layers

- Environmental ambience
- James's movement and interaction sounds
- Enemy warning cues such as radio static
- Musical or textural emotional framing

The player may not always identify everything immediately, but the layers still feel like they belong to an organized sound system.

6. Audio-Visual Coherence

In its normal state, most sounds either match visible events or are accepted as part of the environment. Even when the town is uncanny, the game usually maintains enough coherence for the player to keep interpreting the world.

7. Active Conventions in This Segment

- **Functional clarity:** sound often helps orient the player
- **Cognitive aid:** sound supports attention and anticipation
- **Audio-visual coherence:** most sounds feel connected to the environment or action
- **Spatial reliability:** sounds usually seem to come from somewhere in the world
- **World soundscape consistency:** the apartment has a recognizable game sound identity
- **Sound layer separation:** ambience, action, warning, and mood are usually distinguishable
- **Emotional framing:** sound supports fear and uncertainty
- **Immersion support:** the player remains absorbed in the world through game sound continuity

8. Baseline Expectations

- Sounds in the environment may be eerie, but they still belong to the world in an interpretable way.
- If a human voice is heard, the player expects some source or cause.
- Important game sound events are usually tied either to threat, environment, or emotional framing.
- The soundscape maintains enough structure for the player to keep building a stable interpretation.

Part 2 - Deviation

1. Description of the Change

The change is the appearance of a whispered human voice in Room 209 with no visible speaker and no clear audiovisual cause. The sound does not behave like an enemy warning, environmental ambience, or musical element. It introduces a speech-like element into a space where speech is not visually grounded.

What makes this a deviation is not just that the voice is strange, but that it does not fit clearly into any of the normal sound categories the player has learned to use. It is not confirmed as diegetic in a stable way, not explained as interface feedback, and not resolved immediately upon hearing or at all.

2. Expectation Violated

- If a voice appears, it should have a source, function, or eventual explanation.

The scene violates the expectation that the game's soundscape, while eerie, still remains interpretable enough to separate its different layers.

3. Scope of the Disruption

- **Is it brief?** Yes
- **Sustained?** No, the sound event itself is short
- **Escalating?** No
- **Unresolved?** Yes
- **Is stability restored?** Partially, because the game continues, but the meaning of the event is not restored or clarified

Analytical Classification

1. Player Impact

- **Perceptual uncertainty**
  The player hears something that sounds like a voice but cannot securely place it in the world. This makes perception itself unstable.

- **Cognitive instability**
  The player has to ask themselves what is causing this sound. The usual interpretive categories stop working well.

- **Emotional intensification**
  Because the sound is human and intimate, it often feels more disturbing than a monstrous noise or industrial ambience. It creates a more personal form of unease.

- **Reflective awareness**
  The player may become newly aware of how much they normally rely on sound to understand the game world.

2. Game Audio Boundary Revealed

The most important boundary revealed is the audio-visual coherence boundary. The scene makes visible an assumption that usually stays hidden: players expect that a meaningful voice in a game world will connect to an understandable source.

A strong secondary choice would be the world coherence boundary, because the event also makes the world feel less stable. But audio-visual coherence is the clearest first choice because the immediate rupture comes from hearing a voice that the image does not support.

3. Mode of Game Sound Transgression

Primary mode: Aesthetic

This is best understood as an aesthetic game sound transgression because the disruption primarily acts on perception and atmosphere. It does not alter rules or game mechanics but instead breaks the expected sensory logic of the scene in order to produce unease and ambiguity.

4. Domain

Primary domain: World coherence

Even though the first rupture is perceptual, the deeper destabilization affects the coherence of the game world itself. The player is pushed to question what kind of world this is.

That is why world coherence is stronger here than pure perceptual domain. The scene does not just confuse hearing for a moment but it weakens the player's trust in the world's internal logic.

5. Conventions Destabilized

The main conventions destabilized are:

- **Audio-visual coherence**
  A human voice appears without a visible source.

- **Spatial reliability**
  The player cannot locate where the sound comes from.

- **World soundscape consistency**
  The whisper does not fit into the already established apartment sound logic.

- **Sound layer separation**
  The player cannot easily decide to which sound layer the whisper belongs to.

- **Functional clarity**
  The sound seems meaningful, but its function is unclear.

- **Cognitive aid**
  Instead of helping interpretation, the sound disrupts interpretation.

6. Final Check

- The baseline shows a soundscape that is eerie but still interpretable
- The deviation introduces a voice with no secure source or function
- This leads logically to perceptual uncertainty, cognitive instability, and a rupture in audio-visual coherence
- The dominant mode is aesthetic, and the strongest destabilization domain is world coherence

The analysis also avoids unsupported claims by not insisting on a single meaning for the whisper. The important point is not what the whisper “really says” or “really is,” but how it functions in relation to the player’s learned expectations of game sound.

Drakengard 3

Game & Segment Identification

1. Game Information

- Game title: Drakengard 3
- Developer: Access Games / Square Enix
- Year: 2013
- Platform analysed: PlayStation 3
- Genre: Action RPG / hack-and-slash

2. Selected Segment

- Segment name (level/chapter/scene): Final song battle / ending rhythm sequence against One
- Segment duration: short as a discrete sequence, but potentially extended through repetition because failure restarts the section
- Trigger condition (player action / scripted event): triggered at the end of the final confrontation, when the game shifts from its established combat format into a music-timing challenge

3. Description of the Segment

In this segment, the player is no longer engaged in the normal action-combat structure that has dominated most of the game. Instead, the climax becomes a timed musical sequence in which inputs must be matched to the song. The player is required to listen carefully and act in strict timing with the music, including the final hidden or delayed cue near the end. The world is still present fictionally, but the player's main challenge is now not combat. The major sound elements are the song itself and the timing cues, and the absence of forgiving support that would normally help the player succeed more.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

Before this disruption, Drakengard 3 usually uses sound to support movement, combat, and atmosphere. Environments, enemy presence, attack impacts, and vocal performance all contribute to a chaotic but readable action-game soundscape.

2. Feedback Sounds

- Attacks produce immediate impact feedback
- Movement and combat have a recognizable audiovisual correlation
- Enemies and damage states are communicated through direct cues
- The player learns by acting within a real-time combat system

3. Music (if present)

Music usually frames the action emotionally and dramatically. It supports the game's themes and atmosphere, but it does not replace the core gameplay structure. In most of the game, music accompanies action, but it does not become the rule system that the player must obey.

4. Spatial Reliability

In the normal baseline, sound still helps the player understand what is happening in relation to enemies, attacks, and movement. Even if the game is hectic, the player can usually connect what they hear to the ongoing action.

5. Sound Layers

- World and combat sounds
- Character and enemy sounds
- Music as emotional framing

- Feedback that helps the player react

6. Audio-Visual Coherence

Most of the time, sound supports what the player sees and does. These sounds all retain enough coherence for the player to continue acting through established habits.

7. Active Conventions in This Segment

- Functional clarity
- Agency reinforcement
- Cognitive aid
- Transparency / minimal friction
- Audio-visual coherence
- Emotional framing
- Immersion support

8. Baseline Expectations

- The final challenge will remain similar with the action logic the player has learned throughout the game.
- Sound will support play, but will not suddenly become the sole or dominant rule structure.
- Feedback will help the player understand when to act and whether an action succeeded.

Part 2 - Deviation

1. Description of the Change

The major change is that the game shifts its final confrontation into a very difficult music-timing sequence. Sound becomes the main structure the player must follow precisely. The player must now obey a much stricter timing logic.

This is a deviation because the game asks the player to succeed through a mode of listening and response that is not compatible with the combat established beforehand. The scene also lacks the clarity and forgiveness players usually expect at such a climax, especially in relation to timing and the final cue.

2. Expectation Violated

- The game's final challenge will remain legible through the same action-feedback relationship the player has learned so far.

3. Scope of the Disruption

- **Is it brief?** As a designed sequence, yes
- **Sustained?** Yes, for the duration of the whole final song challenge
- **Escalating?** Yes, because tension increases as precision becomes more important
- **Unresolved?** Not fully, because the scene can be completed, but the disruptive logic remains active until the end
- **Is stability restored?** Only after completion

Analytical Classification

1. Player Impact

- **Loss of agency**
  The player's normal action freedom is reduced. Agency is not removed completely, but it is reconfigured into a timed sequence. The player can no longer rely on the combat habits learned across the game.

- **Perceptual uncertainty**
  The player must read and anticipate timing with precision, and the sequence can create uncertainty about exactly when to act, especially in the final moments.

- **Cognitive instability**
  The player has to rethink their understanding of what kind of challenge this is. The sequence asks for a different interpretive model at the very end of the game.

- **Emotional intensification**
  The unusual sequence produces frustration.

2. Game Sound Boundary Revealed

The strongest boundary revealed is the clarity boundary. The ending makes visible the normally hidden assumption that game sound should provide cues in a sufficiently and supportive way for players to translate perception into action. In this section that support becomes unusually strict, and deceptive in practical terms. A strong secondary choice would be the confirmation boundary, because the player's trust in when and how sound confirms the correct moment of action is also tested heavily.

3. Mode of Game Audio Transgression

Primary mode: Ludic

This is best classified as ludic game audio transgression because the disruption primarily affects the player's relation to the game as a system of action. Sound becomes the mechanism that restructures play itself. The sequence is not transgressive because it makes the world uncanny or because it produces purely atmospheric disruption. Its strongest force lies in changing what the player must do and how they must do it.

4. Domain

Primary domain: Rule / Agency

This is the main area of destabilization because the sequence primarily disrupts the player's ability to act through previously established habits. The player's learned relation between input and feedback is redefined at the endpoint. The problem is not that the world stops making sense, but that the structure through which the player can exercise agency becomes controlled by sound.

5. Conventions Destabilized

- **Functional clarity**
  Sound no longer supports action in the expected level of practical clarity.

- **Agency reinforcement**
  Instead of reinforcing confident action, sound constraints and disciplines the action.

- **Cognitive aid**
  The sound forces a reinterpretation of how to play.

- **Transparency / minimal friction**
  The sequence is intentionally high-friction and unforgiving.

- **Emotional framing**
  Music no longer just frames emotion, it becomes the structure of the encounter.

6. Final Check

- The baseline establishes that sound usually supports an action-game structure

- The deviation shows that the ending makes music and timing the central system of success

- This leads directly to loss of agency, cognitive instability, and a rupture in functional clarity

- The most coherent classification is therefore: Mode is ludic, and domain is Rule/Agency.

Hellblade: Senua’s Sacrifice

Game & Segment Identification

1. Game Information

- Game title: Hellblade: Senua’s Sacrifice
- Developer: Ninja Theory
- Year: 2017
- Platform analysed: PC
- Genre: Action-adventure
- Relevant audio design feature (if applicable): the game uses binaural audio and was explicitly designed around voice-hearing and spatialized sound, with headphones strongly emphasized as part of the intended experience.

2. Selected Segment

- Segment name (level/chapter/scene): Blindness / darkness trial (one of the Odin trials)
- Segment duration: A short self-contained trial sequence within the broader trial section
- Trigger condition (player action / scripted event): After reaching the trial area around the tree, the player enters the blindness trial, where visibility is heavily restricted and progression depends on navigating through darkness while following environmental audio cues.

3. Description of the Segment

In this segment, Senua, the main protagonist, moves through a space of near darkness where the players vision of the environment is heavily reduced. The player is still progressing through the world, but the task shifts: rather than reading space mainly using vision, the player must listen for directional cues and environmental signst. The major sound elements are ambient environmental sounds such as wind and water, footsteps, the persistent voices around Senua, and the broader binaural soundfield that places sounds around the player’s head and body. This matters because the game’s audio design becomes the primary way of orientation and uncertainty at the same time.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

Before the blindness trial, *Hellblade* already presents a dense and unstable sound design world. The player hears environmental ambience, movement through space, and a continuing field of whispered or spoken voices. The baseline is therefore not silence or audio clarity. Instead, the baseline is a world in which sound is already psychologically charged. The game's constant whispers and disembodied voices is a core part of the experience, delivered through binaural sound to create an unsettling auditory field.

2. Feedback Sounds

- Movement produces recognizable footstep cues
- Combat and interaction are supported by impact and motion sounds
- Voices may warn, doubt, or comment
- Environmental audio helps frame place and movement

So even though the soundscape is already unusual, it still often remains functionally useful enough for the player to continue. The voices are part of the baseline.

3. Music (if present)

Music in *Hellblade* typically plays an active role in mood and tension. It contributes to the game's unstable psychological atmosphere, but in the baseline state it does not by itself replace the player's ordinary reliance on seeing the environment.

4. Spatial Reliability

Under normal conditions in the game, spatial hearing is already intensified. Because of the binaural design, can easily feel and determine the origin and position of each sound. Even so, outside the blindness trial, the player still usually has vision available to orient the environments interpretation.

5. Sound Layers

- Environmental ambience
- Senua's movement and world interaction
- The intrusive voices
- Music and broader emotional sound design

These layers are already less cleanly separated than in many games, but they remain interpretable enough for the player to proceed. The player learns that voices can be present constantly without every moment becoming completely unreadable.

6. Audio-Visual Coherence

Before the blindness trial, the player can still use vision to cross-check what is heard. Even if the voices destabilize their attention, the visual space remains visible.

7. Active Conventions in This Segment

- Functional clarity
- Cognitive aid
- Audio-visual coherence
- Spatial reliability
- Sound layer separation
- Emotional framing
- Immersion support

8. Baseline Expectations

- The voices will remain intrusive but manageable as part of the game's normal game sound identity.
- Vision will continue to help stabilize what the player hears.
- Sound will contribute to atmosphere and tension, but not carry the whole burden of spatial interpretation alone.
- Even in a psychologically unstable game, the player will usually have enough cross-checking information to keep perception workable.

Part 2 - Deviation

1. Description of the Change

The major change in the blindness trial is not that the game suddenly introduces voices for the first time. The voices are already baseline. The real deviation is that the game reduces visual reliability and forces the player to depend much more heavily on hearing at the exact moment when hearing is already an unstable channel. The player must follow sound to move correctly, but the soundscape is also populated by intrusive voices.

So the scene changes the status of sound:

- From a psychologically charged support system
- Into a primary navigational condition that is also unstable

2. Expectation Violated

- Even in an unstable audio world, the player will still be able to rely on vision to stabilize perception.

3. Scope of the Disruption

- **Is it brief?** Relatively brief as a trial segment
- **Sustained?** Yes, for the duration of the trial
- **Escalating?** Yes, because anxiety and dependence on sound increase as the player proceeds
- **Unresolved?** Partially; the trial ends, but the perceptual pressure remains meaningful during the scene
- **Is stability restored?** Yes, after the segment, broader audiovisual stability returns.

Analytical Classification

1. Player Impact

- **Perceptual uncertainty**
  The player is pushed to question how reliably sound is able to identify direction when vision is stripped back and the auditory field is already crowded by voices.

- **Cognitive instability**
  The player must constantly reorganize how to interpret the space.

- **Emotional intensification**
  This situation makes stress and anxiety increase.

- **Reflective awareness**
  The scene can make the player more conscious of how much orientation normally depends on audiovisual cooperation, and how fragile perception becomes when that balance is disturbed.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the reliability boundary. The trial reveals the hidden assumption that sound can be trusted enough to support spatial understanding when vision is limited. Here, sound is both necessary and unstable, so the reliability boundary becomes visible.

3. Mode of Game Audio Transgression

Primary mode: Hybrid (Aesthetic-Ludic)

This scene is best seen as Hybrid because it works in two ways at the same time. First, it creates aesthetic disruption. The player has trouble trusting what they hear. Sounds feels unclear, and hard to separate. This makes the scene feel disturbing and unstable. Second, it creates ludic disruption. The player does not just hear this instability they must also play through it. Sound becomes necessary for progressing and understanding the space .So the scene is not only about atmosphere. It also changes how the player must act.

4. Domain

Primary domain: Perceptual

The main area of destabilization is the player's ability to hear, locate and trust what is heard.

- The voices themselves are part of the game's baseline
- The blindness trial becomes transgressive because it pushes those already-established game sound conditions into a more unstable perceptual configuration

5. Conventions Destabilized

- **Functional clarity**
  Sound no longer provides straightforward guidance to remain comfortably readable.

- **Cognitive aid**
  Sound also complicates that understanding.

- **Audio-visual coherence**
  The usual relation between seeing and hearing is narrowed because vision is severely reduced.

- **Spatial reliability**
  Direction and distance become more difficult to trust under auditory pressure.

- **Sound layer separation**
  The player must navigate environmental cues and intrusive voices within the same auditory field.

- **Immersion support**
  Immersion is intensified, but in a strained and destabilizing way rather than a supportive one.

- **Emotional framing**
  Sound actively produces the perceptual conditions that make fear and confusion work.

6. Final Check

- The baseline establishes that *Hellblade* already uses intrusive voices and binaural sound as part of its normal game sound world
- The deviation is that the blindness trial sharply increases dependence on hearing while reducing visual stabilization
- This directly produces perceptual uncertainty and heightened pressure on auditory reliability
- The strongest classification is therefore: Mode is Aesthetic–Ludic hybrid. and Primary domain is Perceptual

Bioshock

Game & Segment Identification

1. Game Information

- Game title: Bioshock
- Developer: 2K Boston and 2k Australia
- Year: 2007
- Platform analysed: PC
- Genre: First-person shooter
- Relevant audio design feature (if applicable): radio voice guidance and repeated spoken phrases used to direct the player through the game.

2. Selected Segment

- Segment name (level/chapter/scene): Andrew Ryan confrontation / “Would you kindly” reveal
- Segment duration: Short as a scene, but built on many earlier uses of the same phrase
- Trigger condition (player action / scripted event): After following Atlas’s radio guidance through much of the game, the player reaches Andrew Ryan, and Ryan reveals that the phrase “Would you kindly” has been controlling Jack, the main protagonist, all along. Ryan then forces Jack to obey and kill him through the same phrase.

3. Description of the Segment

In this segment, the player reaches Andrew Ryan after a long period of being guided by Atlas through radio speech. Up to this point, Atlas has sounded like a helpful voice giving advice. In this scene, that voice pattern is reinterpreted. The player learns that “Would you kindly” is not just a polite way of speaking. It is a trigger phrase used to control Jack. Sound is central here because the transgressive force depends on a spoken phrase that the player has heard many times before without fully noticing its real meaning. The important sound elements are Ryan’s speech, Atlas’s earlier radio voice as

remembered and reinterpreted, the repeated phrase itself, and the scene's shift from normal dialogue to the revelation that voice has been functioning as control.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

Before this moment, *BioShock* presents a world full of environmental sound, machine noise, water, decay, and combat ambience. The world sounds hostile, but it is still readable as part of Rapture's atmosphere.

2. Feedback Sounds

- Weapons confirm attacks
- Machines and alarms signal danger
- Radio voices provide guidance
- Spoken instructions help the player know where to go and what to do

3. Music (if present)

Music usually supports tension, danger, or dramatic atmosphere. It helps frame events emotionally, but it does not normally replace the player's understanding of what speech is doing.

4. Spatial Reliability

Most of the time, the player can roughly tell where sounds are coming from:

- Enemies
- Machines
- Nearby spaces
- Radio communication

Radio speech is different from environmental sound, but it still feels reliable in another way: it feels like trustworthy narrative guidance.

5. Sound Layers

- World ambience
- Combat and machine sounds
- Music
- Radio speech and voice communication

6. Audio-Visual Coherence

Before the reveal, the player has no strong reason to doubt the role of Atlas's voice. The voice fits the normal logic of the game, a remote character gives information and helps the player survive. So voice and action seem to match in a stable way.

7. Active Conventions in This Segment

- **Functional clarity**
- **Agency reinforcement**
- **Cognitive aid**
- **Transparency / minimal friction**
- **Audio-visual coherence**
- **Emotional framing**
- **Immersion support**

8. Baseline Expectations

- A guiding voice is there to help the player progress.
- Spoken instructions are meaningful, but not dangerous in themselves
- Radio guidance supports player action rather than secretly controlling it.
- If a voice tells the player what to do, that still belongs to the normal structure of game direction and mission framing.

Part 2 - Deviation

The main change is that the player learns that a repeated spoken phrase “Would you kindly” has not been innocent guidance at all. It has been a control mechanism. A voice that seemed helpful is revealed to have been shaping the player’s actions from the start. Ryan explains that Jack was conditioned to obey this phrase, and then uses it to make Jack kill him. So the sound changes in meaning, not only in form. The phrase itself is not new. What is new is the player’s understanding of it.

This is why the moment is strong:

- The same voice pattern that once seemed normal now becomes disturbing
- Sound moves from guidance to obedience
- The player realizes that speech has been carrying hidden meaning all along

2. Expectation Violated

The main violated expectation is:

- A guiding voice is helping the player, not controlling the player-character through a hidden command.

A second violated expectation is:

- Speech in the game communicates goals and story, but does not secretly remove freedom.

3. Scope of the Disruption

- **Is it brief?** The reveal scene is brief
- **Sustained?** Yes, because it changes how the player understands many earlier moments
- **Escalating?** Yes, because the realization becomes stronger as Ryan explains the truth
- **Unresolved?** Partly, because the player keeps thinking back to earlier uses of the phrase
- **Is stability restored?** Not fully, because trust in the voice system is broken.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware of how much they trusted voice guidance and how easily that trust was built.

- **Cognitive instability**
  The player must rethink earlier parts of the game. Things that once seemed normal now mean something different.

- **Loss of agency**
  The scene shows that Jack's freedom was limited in a hidden way. Even if the player has been acting all along, the meaning of that action is suddenly challenged.

- **Emotional intensification**
  The reveal creates shock and tension because the player realizes that obedience was built into the story through voice.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the **reliability boundary**, because the player trusted spoken guidance as a stable and supportive source of information. The reveal shows that this trust was misplaced, since the same voice structure was also a mechanism of control. A strong second option is the **confirmation boundary**, because the voice had seemed to confirm what the player should do.

3. Mode of Game Audio Transgression

Primary mode: Socio-cultural

The phrase "Would you kindly" does not only affect how the game is played. More importantly, it challenges larger ideas about obedience, authority, and control through language. What first seems like normal guidance from a helpful voice is later revealed to be a form of manipulation. Because of this, the sound in the scene carries meanings that go beyond simple gameplay feedback. It becomes a way of exposing power, submission, and the hidden force of spoken commands. This is why socio-cultural is the strongest mode for this example.

4. Domain

Primary domain: Rule / Agency

The most important change is not in how the player hears the sound, but in how the player understands action and control. The reveal shows that the voice was shaping Jack's behaviour all along, which changes the meaning of agency in the game. The player realizes that what seemed like free action was partly based on hidden obedience.

5. Conventions Destabilized

- **Agency reinforcement**
  The voice no longer supports confident action. It reveals hidden control.

- **Functional clarity**
  Spoken guidance is no longer simple guidance.

- **Cognitive aid**
  Voice once helped the player understand the game, but now it also makes the player question that understanding.

- **Transparency / minimal friction**
  The system was not as open as it seemed. There was hidden coercion inside a familiar voice pattern.

- **Emotional framing**
  The same phrase changes from neutral/helpful to disturbing and oppressive.

6. Final Check

- The baseline shows that spoken radio guidance is treated as useful, and trustworthy

- The deviation reveals that one repeated phrase has actually been a command structure

- This leads to reflective awareness, cognitive instability, and loss of agency

- The best classification is: Mode: Socio-cultural and Domain: Rule / Agency

Call of Juarez: Gunslinger

Game & Segment Identification

1. Game Information

- Game title: Call of Juarez: Gunslinger
- Developer: Techland
- Year: 2013
- Platform analysed: PC
- Genre: First-person shooter / western
- Relevant audio design feature (if applicable): Unreliable narrated voice-over that can directly reshape the presentation of gameplay events.

2. Selected Segment

- Segment name (level/chapter/scene): rewind moment during Silas Greaves's narrated retelling
- Segment duration: short as a scene, but built on the broader logic of Silas's unreliable narration
- Trigger condition (player action / scripted event): while recounting events, Silas verbally corrects himself, and the game rewinds the sequence so it can happen differently.

3. Description of the Segment

In this segment, the player is progressing through a normal shooter sequence while the protagonist (Silas Greaves) narrates the events as a story from his past. Up to this point, the scene appears stable and functions like an ordinary playable section. Then Silas corrects himself. His spoken narration signals that what has just been shown is not how events happened. The game responds by rewinding the sequence and allowing it to unfold differently. Sound is central here because the transgressive force begins through spoken voice. Silas's narration no longer comments on the action. It actively changes the meaning and structure of what the player is playing. The important sound elements are

Silas’s voice-over, the remembered and replayed sequence of events, and the shift from narration as commentary to narration as intervention.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

Before this moment, *Call of Juarez: Gunslinger* presents a world full of expected western action sounds, environmental ambience, gunfire, movement, and combat space. The world sounds dramatic and stylised, but it is still readable as part of a stable shooter sequence.

2. Feedback Sounds

- Weapons confirm attacks
- Enemy and environmental sounds signal danger
- Movement and combat sounds support progression
- Narration provides framing and context for the action

3. Music (if present)

Music supports the western tone and dramatic rhythm of the sequence. It helps frame the action emotionally, but it does not normally replace the player's understanding of what narration is doing.

4. Spatial Reliability

Most of the time, the player can roughly tell where sounds are coming from:

- Enemies
- Gunfire
- Environmental space
- Narrated voice-over

Narration is different from environmental sound, but it still feels reliable in another way: it feels like storytelling that accompanies the level rather than changes it.

5. Sound Layers

- World ambience
- Combat and environmental sounds
- Music
- Narrated speech / voice-over

6. Audio-Visual Coherence

Before the rewind, the player has no strong reason to doubt the role of Silas's voice. The voice fits the normal logic of the game: a narrator recounts past events while the player enacts them. So voice and action seem to match in a stable way.

7. Active Conventions in This Segment

- Functional clarity
- Agency reinforcement
- Cognitive aid
- Transparency / minimal friction
- Audio-visual coherence
- Emotional framing
- Immersion support

8. Baseline Expectations

Listing clear expectations. These expectations define what the player is trained to expect.

- A narrated voice is there to frame and explain the action.
- Spoken narration is meaningful, but not strong enough to alter the level itself.
- Voice supports player understanding rather than rewriting what has just happened.
- If a narrator describes the scene, that still belongs to the normal structure of storytelling layered over gameplay.

Part 2 - Deviation

1. Description of the Change

The main change is that the player hears Silas correct his own narration, and this correction causes the sequence to rewind and unfold differently. A voice that seemed to be telling the story is revealed to be capable of reshaping the action being played. So the sound changes in meaning, not only in form. The voice itself is not new. What is new is the player's understanding of what that voice can do.

This is why the moment is strong:

- The same narrated voice that once seemed like commentary now becomes intervention
- Sound moves from storytelling to structural disruption
- The player realizes that speech has been carrying the power to revise gameplay all along

2. Expectation Violated

The main violated expectation is:

- A narrating voice is explaining the player's actions, not changing the events being played through a spoken correction.

A second violated expectation is:

- Speech in the game communicates story and context, but does not undo or rewrite the sequence itself.

3. Scope of the Disruption

- **Is it brief?** The rewind scene is brief
- **Sustained?** Yes, because it changes how the player understands later narrated moments
- **Escalating?** Yes, because the realization strengthens the sense of Silas as an unreliable narrator
- **Unresolved?** Partly, because the player keeps questioning the stability of narrated events
- **Is stability restored?** Not fully, because trust in narration as simple commentary is broken

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware of how much they trusted narrated voice as a stable framing device.

- **Cognitive instability**
  The player must rethink what was just played. What once seemed like a fixed sequence now means something different.

- **Emotional intensification**
  The rewind creates surprise and tension because the player realizes that spoken narration can disrupt and reorganize gameplay.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the world coherence boundary, because the player trusted narrated voice as something that belonged alongside a stable sequence, but the scene reveals that voice can also interfere with and reshape that sequence. A strong second option is the clarity boundary, because the meaning of narration was never as limited or innocent as the player believed.

3. Mode of Game Audio Transgression

Primary mode: Hybrid

Silas's spoken voice does not only frame the action. More importantly, it changes the structure of the playable event by correcting and rewinding it. What first seems like normal narration is later revealed to have the power to intervene in gameplay itself. Because of this, the sound in the scene becomes a way to expose the instability between narration and play. This is why hybrid is the strongest mode for this example.

4. Domain

Primary domain: World coherence

The most important change is in how the player understands the stability of the game world. The rewind shows that the voice was shaping the form of the played sequence, which changes the meaning of continuity and reliability in the game. The player realizes that what seemed like a fixed world event was partly dependent on narrated revision.

5. Conventions Destabilized

- **Functional clarity**
  Narrated voice is no longer simple explanation.
- **Cognitive aid**
  Voice once helped the player understand the sequence, but now it also makes the player question that understanding.
- **Transparency / minimal friction**
  The system was not as straightforward as it seemed. There was hidden instability inside a familiar storytelling voice.
- **Audio-visual coherence**
  The same narrated sequence is no longer fully stable as a single coherent event.
- **Emotional framing**
  The voice changes from confident storytelling to a source of surprise and disruption.
- **Immersion support**
  Narration exposes the scene as something being actively constructed and revised.

6. Final Check

- The baseline shows that spoken narration is treated as useful, readable, and trustworthy
- The deviation reveals that the same voice can actually rewind and reshape the sequence
- This leads to reflective awareness, cognitive instability, and loss of certainty
- The best classification is: **Mode: Aesthetic–Ludic hybrid.** and **Domain: World coherence**

Metal Gear Solid 2: Sons of Liberty

Game & Segment Identification

1. Game Information

- Game title: Metal Gear Solid 2: Sons of Liberty
- Developer: Konami Computer Entertainment Japan
- Year: 2001
- Platform analysed: PC
- Genre: Stealth / Action-adventure
- Relevant audio design feature (if applicable): codec voice communication used as a reliable support channel, later destabilized during the Colonel AI breakdown.

2. Selected Segment

- Segment name (level/chapter/scene): Colonel AI breakdown during the Arsenal Gear sequence
- Segment duration: short as an isolated sequence, but strongly tied to the wider late-game collapse of narrative and informational stability
- Trigger condition (player action / scripted event): during the late-game progression, the player receives increasingly unstable codec calls from the Colonel AI, which become contradictory and openly intrusive.

3. Description of the Segment

In this segment, the player continues progressing through the game while receiving codec transmissions from the Colonel, a voice that throughout most of the game has functioned as a stable source of command and direction. At first, this channel has the role of providing information and helping the player understand both objective and context. During the breakdown sequence, however, the Colonel's speech becomes erratic. He starts saying irrational things, repeating strange lines,

issuing impossible instructions, and speaking in ways that no longer fit the ordinary logic of the gameworld. The once trusted voice channel now becomes a source of instability. Sound is central here because the transgressive force is carried by spoken voice. The breakdown is experienced through hearing the collapse of a familiar support system. The important sound elements are the Colonel's codec voice, the established reliability of codec communication earlier in the game, and the shift from guidance to intrusive instability.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

Before this moment, *Metal Gear Solid 2* presents a readable stealth-action soundscape. Environmental ambience, movement sounds, alarms, machinery, and background atmosphere all help situate the player in a military setting.

2. Feedback Sounds

- Movement and environmental sounds support stealth.
- Alerts and detection sounds communicate danger.
- Weapons and interaction sounds confirm player actions.
- Codec calls provide mission context and instructions.

3. Music (if present)

Music supports tension and the narrative. It helps intensify the mood of the game, but it does not undermine the player's understanding of the function of codec communication.

4. Spatial Reliability

- Enemies
- Environmental systems
- Alerts and mechanical spaces
- Codec voice transmissions

Codec calls are not spatial in the same way as environmental sounds, but they are still reliable and a trustworthy information layer that helps the player interpret the game.

5. Sound Layers

- World ambience
- Stealth and action feedback
- Music
- Codec voice communication

6. Audio-Visual Coherence

Before the breakdown, the player has strong reason to trust the codec channel. The Colonel's voice fits the normal logic of the game by supporting a system that delivers orders and contextual information. So voice and gameplay still appear to belong to one coherent structure.

7. Active Conventions in This Segment

- Functional clarity
- Agency reinforcement
- Cognitive aid
- Transparency / minimal friction
- Audio-visual coherence
- Emotional framing
- Immersion support

8. Baseline Expectations

Listing clear expectations. These expectations define what the player is trained to expect.

- A codec voice is there to guide and inform the player's understanding.
- Spoken mission support is meaningful and trustworthy within the game's structure.
- Voice helps the player interpret the situation rather than destabilizing it.
- If a superior officer speaks through the codec, that speech still belongs to the normal logic of military communication layered over gameplay.

Part 2 - Deviation

1. Description of the Change

The main change is that the player hears the Colonel's codec voice stop behaving like a stable support channel; the voice becomes irrational and increasingly disconnected from the expected role of mission communication. The sound changes in meaning, not mainly in acoustic form. The codec voice itself is still recognizable, but its function collapses.

This is why the moment is strong:

- The same voice that once provided guidance now produces instability
- Sound moves from support and explanation to disruption and uncertainty
- The player realizes that the codec channel was not as trustworthy as it seemed

2. Expectation Violated

The main violated expectation is:

- A mission-support voice is helping the player understand the situation, not undermining the player's ability to trust what is being heard.

A second violated expectation is:

- Speech in the game communicates orders and context, but does not break down into irrational intrusion that destabilizes the whole structure of interpretation.

3. Scope of the Disruption

- **Is it brief?** The breakdown sequence is brief as a concentrated event
- **Sustained?** Yes, because it changes how the player understands the codec channel and the surrounding narrative
- **Escalating?** Yes, because the instability grows as the sequence continues
- **Unresolved?** Yes, because trust in the voice as stable support is not restored in the same way
- **Is stability restored?** Not fully, because the player's confidence in the reliability of codec communication is broken.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware of how much they depended on the codec voice as a trustworthy support system.

- **Cognitive instability**
  The player must rethink what is being heard. A channel that once helped organize meaning now makes the situation harder to interpret.

- **Emotional intensification**
  The breakdown creates tension and unease because the player hears a familiar voice become unstable without fully losing its recognizable form.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the clarity boundary, because the player trusted the codec voice as a clear and reliable carrier of meaning, but the scene reveals that this clarity can collapse. A strong second option is the reliability boundary, because the moment exposes how dependent the player was on the assumption that support-channel speech could be trusted.

3. Mode of Game Audio Transgression

Primary mode: Hybrid (Aesthetic-ludic)

The Colonel's spoken voice does not only frame the situation. More importantly, it destabilizes the entire interpretive structure through which the player understands gameplay and narrative context. What first seems like normal mission support is later revealed to be unstable, intrusive, and no longer trustworthy. Because of this, the sound in the scene carries effects that go beyond storytelling or guidance. It becomes a way of exposing instability between voice and interpretation. This is why hybrid is the strongest mode for this example.

4. Domain

Primary domain: World Coherence

The most important change is in the player's ability to understand and trust what is being communicated. The breakdown destabilizes the informational and interpretive clarity through which the player reads it. The player realizes that the voice was not the helpful informant it seemed to be.

5. Conventions Destabilized

- **Functional clarity**
  Codec voice is no longer guidance.
- **Cognitive aid**
  Voice once helped the player interpret the situation, but now it makes interpretation unstable.
- **Transparency / minimal friction**
  The system was not as straightforward as it seemed. There was instability inside a support channel.
- **Audio-visual coherence**
  The same communicative layer is no longer fully coherent with the expected role it had earlier in the game.
- **Emotional framing**
  The voice changes from mission support to a source of unease.
- **Immersion support**
  Codec communication no longer only sustains involvement. It exposes the fragility of the structures the player relied on to make sense of the experience.

6. Final Check

- The baseline shows that codec voice is treated as useful, readable, and trustworthy
- The deviation reveals that the same voice can become irrational and destabilizing
- This leads to reflective awareness, cognitive instability, and loss of certainty
- The best classification is: **Mode: Hybrid** and **Domain: World Coherence**

NieR: Automata

Game & Segment Identification

1. Game Information

- Game title: NieR: Automata
- Developer: PlatinumGames
- Year: 2017
- Platform analysed: PC
- Genre: action role-playing game
- Relevant audio design feature (if applicable): diegetically framed configuration sequence in which voice settings are integrated into character interaction and boot-up fiction.

2. Selected Segment

- Segment name (level/chapter/scene): opening calibration / boot sequence with 9S and 2B
- Segment duration: brief introductory setup scene in the prologue
- Trigger condition (player action / scripted event): at the start of the game, 9S initiates 2B's boot and maintenance sequence and the player is asked to adjust settings, including voice-related settings, while listening to him.

3. Description of the Segment

In this segment, the player begins the game not by entering a neutral menu outside the fiction, but through a boot-up and maintenance sequence framed as part of 2B's activation. 9S guides her through settings such as brightness and voice recognition. During this process, he says that the entire procedure is being recorded and then tells 2B to make sure she can hear his voice. The player adjusts the settings while listening to 9S speak. The moment is important because a function normally treated as external and technical is brought inside the fictional and relational space of the game. Sound is

central here because the player is asked to listen to a character's voice as part of the act of calibration itself.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

In most games, the opening configuration space is not treated as part of the world. It is usually neutral. Even if sound is present, it normally serves a technical rather than fictional purpose.

2. Feedback Sounds

- Menu inputs confirm selection
- Sliders and settings provide technical adjustment
- Sound options help the player calibrate audio
- Voice settings are usually external system functions, not character interactions

3. Music (if present)

If music is present in such a setup context, it normally is purely background music without any specific function.

4. Spatial Reliability

In a standard setup menu, sound is not expected to have strong spatial or relational meaning. It is heard as part of a paratextual interface rather than as a voice situated within the world.

5. Sound Layers

- Interface sounds
- Optional background music
- Calibration voice or sample audio
- Technical system feedback

6. Audio-Visual Coherence

Normally, a sound settings screen is coherent as a technical interface. Voice in this context usually exists to help with setup, not to build character relation or world immersion.

7. Active Conventions in This Segment

- Functional clarity
- Cognitive aid
- Transparency / minimal friction
- Audio-visual coherence
- Interface separation
- Technical calibration logic

8. Baseline Expectations

- Audio setup belongs outside the fiction of the game.
- Voice settings are technical and paratextual rather than relational.

Part 2 - Deviation

1. Description of the Change

The main change is that the game refuses to keep the setup process fully outside the world. The player still performs technical configuration, but this action is reframed as part of 2B's boot-up and maintenance, guided by 9S's voice. So the sound changes in role because it moves from technical calibration to fictional interaction.

This is why the moment is strong:

- The player is still adjusting settings, but the act is now embedded in the story world
- Voice becomes a relational presence
- A system function normally treated as external becomes part of immersion

2. Expectation Violated

The main violated expectation is:

- A sound settings process is an external technical step, not an in-world interaction with another character.

3. Scope of the Disruption

- **Is it brief?** Yes, the calibration scene is brief
- **Sustained?** Its immediate duration is brief, but its interpretive effect is sustained because it establishes how this game can fold interface into fiction
- **Escalating?** No, not strongly within the moment itself
- **Unresolved?** Partly, because the player has now seen that system and fiction are not cleanly separated
- **Is stability restored?** Functionally yes, but the boundary between menu and world has already been crossed.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware that an external setup action has been absorbed into the fiction.
- **Emotional intensification**
  The moment can intensify immersion because the player is listening to 9S as part of 2B's activation and bonds both carachters.
- **Cognitive instability**
  The player must rethink what kind of boundary exists between menu, interface, and world in this game.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the layer separation boundary, because the player expects sound calibration to belong to an external system layer, but the scene reveals that this function can be absorbed into the fictional world.

3. Mode of Game Audio Transgression

Primary mode: Hybrid (Aesthetic-Ludic)

9S's voice redefines that task as part of a fictional and interpersonal event. The moment is hybrid because the consequence exceeds sound and changes the status of the interface itself. What first seems like normal calibration is revealed as diegetic interaction. This is why hybrid is the strongest mode for this example.

4. Domain

Primary domain: World coherence

The most important change happens in how the player understands the relation between the gameworld and what would normally remain outside it. Through 9S's voice the sequence becomes part of 2B's activation and part of the fictional logic of the scene. The moment therefore destabilizes

the usual coherence of where the world ends and where system-level interaction begins. This does not destroy immersion. Instead, it reconfigures world coherence by drawing the player more deeply into the game's fiction through a boundary that would normally remain separate.

5. Conventions Destabilized

- **Functional clarity**
  Voice is no longer only there to test audio settings.
- **Cognitive aid**
  The setup process still guides the player, but it also changes how the player interprets the boundary between fiction and system.
- **Transparency / minimal friction**
  The menu becomes meaningfull.
- **Audio-visual coherence**
  The calibration process now belongs to the world rather than sitting clearly outside it.
- **Sound Layer Seperation**
  The usual distinction between menu function and gameworld relation is crossed.
- **Immersion support**
  The scene suggests that transgression can deepen immersion rather than simply interrupt it.

6. Final Check

- The baseline shows that sound calibration is normally external, technical, and paratextual
- The deviation reveals that *NieR: Automata* turns calibration into a voiced fictional interaction
- This leads to reflective awareness, relational immersion, and cognitive reorientation
- The best classification is: **Mode: Hybrid** and **Domain: World Coherence**

Ico

Game & Segment Identification

1. Game Information

- Game title: Ico
- Developer: Team Ico / Japan Studio
- Year: 2001
- Platform analysed: PlayStation 2
- Genre: action-adventure / puzzle-platform
- Relevant audio design feature (if applicable): minimal dialogue, with Yorda speaking in an untranslated symbolic language that the player cannot understand in semantic terms.

2. Selected Segment

- Segment name (level/chapter/scene): recurring moments of interaction with Yorda through untranslated speech
- Segment duration: sustained across the game rather than concentrated in one short scene
- Trigger condition (player action / scripted event): whenever Yorda speaks and the player hears her voice without being given semantic translation.

3. Description of the Segment

In this segment pattern, the player repeatedly encounters moments in which a character named Yorda speaks, but her speech is not translated into a semantically understandable language. The player hears a voiced response, but cannot intrepret its meaning in the usual way. Instead, understanding must be built through the broader relational context between Ico and Yorda. The moment is important because the game does not present this as a flaw. It is a foundational communicative condition of the experience. Sound is central here because voice is present and clearly meaningful, yet its usual

function of delivering clarity is withheld. Yorda's speech remains audible and relational, but not fully interpretable in conventional dialogue terms.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

In most games, ambient sound supports worldbuilding while dialogue helps the player understand character intentions and narrative context. Even in games with fictional worlds, voiced speech is expected to be understandable either directly or through subtitles.

2. Feedback Sounds

- Spoken dialogue helps clarify narrative meaning
- Character interaction is usually reinforced through understandable speech
- Audio supports communication as well as atmosphere

3. Music (if present)

Music may create mood or emotional tone, but it usually does not replace the communicative role of spoken dialogue.

4. Spatial Reliability

In ordinary game dialogue, the player can hear speech as belonging to a character in the world while also trusting that the speech is useful. Voice is usually both spatially located and informative.

5. Sound Layers

- World ambience
- Character movement and interaction sounds
- Music
- Spoken dialogue

6. Audio-Visual Coherence

Normally, spoken dialogue coheres with character presence and also with communicative access. If a character speaks, the player expects to be able to understand what is being said or at least receive a translation.

7. Active Conventions in This Segment

- Functional clarity
- Cognitive aid
- Audio-visual coherence
- Emotional framing
- Immersion support
- Communicative transparency

8. Baseline Expectations

- Spoken voice normally provides semantic access to character meaning.
- If a voiced character is important, the player is usually meant to understand what that character says.
- Dialogue is expected to help the player understand relationships and situations.

Part 2 - Deviation

1. Description of the Change

The main change is that *Ico* withholds semantic understanding while still preserving voiced relational presence. Yorda speaks, but the player is not given full translation. So the sound changes in role, not because it becomes distorted or hostile, but because it refuses one of the most basic expected functions of dialogue: semantic clarity.

This is why the moment is strong:

- Voice is present, but meaning is withheld
- Dialogue becomes relational and affective rather than semantically transparent
- The player must build connection through tone, and gesture and context.

2. Expectation Violated

The main violated expectation is:

- If a character speaks, the player will normally be able to understand what is being said in semantic terms.

3. Scope of the Disruption

- **Is it brief?** No, it is sustained
- **Sustained?** Yes, across the whole game
- **Escalating?** Not strongly; it is more constant than escalating
- **Unresolved?** Yes, because the barrier remains fundamental to the experience
- **Is stability restored?** No, not within the original play experience, because the lack of direct understanding remains part of the game's communicative logic.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware of how strongly games normally rely on understandable speech.
- **Cognitive instability**
  The player must rely on nonverbal and contextual cues rather than semantic dialogue.
- **Emotional intensification**
  Connection is built through dependence, proximity, and embodied cooperation rather than verbal transparency.
- **Perceptual uncertainty**
  The player hears meaningful voice but cannot convert it into stable verbal understanding.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the clarity boundary, because the game reveals that spoken voice does not have to provide semantic clarity in order to remain meaningful. A strong second option is the immersion boundary, because the moment shows that lack of linguistic understanding can intensify rather than weaken attachment and involvement.

3. Mode of Game Audio Transgression

Primary mode: Aesthetic

Yorda's voice does not intervene mechanically in the structure of play, nor does it become a deceptive command channel. Instead, it disrupts expectation through its sensory and communicative form. The player hears voice as voice, but the expected access to semantic content is withheld. This produces a transgressive effect at the level of how speech is aesthetically and affectively experienced. The voice becomes strange because it remains present while refusing intelligibility.

4. Domain

Primary domain: Perceptual

The most important change happens in how the player hears and interprets voice. Yorda's speech remains present and meaningful, but its semantic content is withheld. The player is therefore destabilized at the level of game sound interpretation rather than rule structure or moral judgment. Voice no longer guarantees direct understanding, and the player must relate to speech through tone, presence, and context instead of clear verbal meaning.

5. Conventions Destabilized

- **Functional clarity**
  Voice is no longer a straightforward vehicle of semantic meaning.

- **Cognitive aid**
  Dialogue no longer directly explains relationship or context.

- **Audio-visual coherence**
  A speaking character remains visible and meaningful, but not verbally accessible in the expected way.

- **Immersion support**
  The game shows that immersion can be sustained, and even strengthened, without intelligible dialogue.

6. Final Check

- The baseline shows that spoken dialogue is normally understandable and semantically helpful
- The deviation reveals that *Ico* keeps voice present while withholding translation
- This leads to reflective awareness and loss of semantic certainty
- The best classification is: **Mode: Aesthetic** and **Domain: Perceptual**

Resident Evil – Code: Veronica

Game & Segment Identification

1. Game Information

- Game title: Resident Evil – Code: Veronica
- Developer: Capcom
- Year: 2000
- Platform analysed: PS2
- Genre: Survival Horror
- Relevant audio design feature (if applicable): voiced character performance used to create instability of speaker identity, especially through Alfred Ashford's shifting relation to Alexia. The game establishes that Alfred switches between his own personality and that of his twin sister Alexia.

2. Selected Segment

- Segment name (level/chapter/scene): Alfred/Alexia vocal impersonation moments, especially where Claire initially interprets the scene as involving two distinct speakers
- Segment duration: brief as a scene, but reinforced by Alfred's recurring instability across the game
- Trigger condition (player action / scripted event): Claire overhears or encounters speech that appears to indicate Alexia's presence, before the game reveals Alfred's unstable switching and impersonation.

3. Description of the Segment

In this segment, the player encounters Alfred Ashford in a scene structured around the apparent presence of both Alfred and Alexia. The voiced exchange initially suggests that two distinct figures are involved. The player is encouraged to hear the scene according to a basic communicative that

different voices imply different speakers.. However, the game later reveals that Alfred is psychologically unstable and shifts between his own personality and that of his twin sister Alexia. As a result, what first seems like ordinary dialogue becomes a performance of identity instability delivered through voice. Sound is central here because the effect depends on hearing the scene as dialogue before understanding that this assumption is unsafe.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

In most games, ambient sound and environmental audio establish mood and place, while voiced dialogue helps clarify who is present, what the interpersonal situation is, and how the scene should be understood.

2. Feedback Sounds

- Character voices help identify speakers
- Dialogue clarifies relations between characters
- Spoken exchange helps orient the player narratively
- Audio supports recognition of presence and identity

3. Music (if present)

Music may intensify tension or horror, but it usually does not replace the basic function of voice as a carrier of stable speaker identity.

4. Spatial Reliability

Normally, when the player hears a voice in a scene, that voice can be connected to a distinct person in the world. Even if the full situation is mysterious, spoken exchange usually still implies that voice corresponds to a stable speaker.

5. Sound Layers

- World ambience
- Environmental and movement sounds
- Music
- Spoken dialogue / character voice

6. Audio-Visual Coherence

Normally, voiced dialogue supports coherent interpretation. If a scene suggests two speakers, the player expects that there are in fact two distinct speaking presences. Voice, body, and character identity are usually treated as mutually reinforcing.

7. Active Conventions in This Segment

- Functional clarity
- Cognitive aid
- Audio-visual coherence
- Emotional framing
- Immersion support
- Communicative transparency

8. Baseline Expectations

- Different voices imply different speaking identities.
- Dialogue helps the player understand who is present in the scene.
- Even in horror, spoken exchange usually remains legible as an interaction between distinct persons.

Part 2 - Deviation

1. Description of the Change

The main change is that the player's trust in voice as a stable marker of speaker identity is undermined. What first appears to be an ordinary vocal exchange becomes reinterpreted through Alfred's unstable switching between himself and Alexia. The sound does not need to become radically distorted to produce this effect. Instead, the transgression lies in the collapse of the assumed link between voice and stable personhood.

This is why the moment is strong:

- Voice seems to clarify identity, but instead makes identity unstable
- Sound moves from narrative orientation to narrative uncertainty
- The player realizes that one of the most basic assumptions about dialogue that a voice belongs securely to a speaker cannot be fully trusted here

2. Expectation Violated

The main violated expectation is:

- If the player hears what sounds like distinct voiced character presence, that speech will normally correspond to distinct and stable identities.

3. Scope of the Disruption

- **Is it brief?** Yes, as a scene-level event
- **Sustained?** Yes, because it changes how the player understands Alfred's voice and presence afterward
- **Escalating?** Moderately, because the instability becomes clearer as the game reveals more about Alfred and Alexia
- **Unresolved?** Partly, because the scene leaves behind instability in how voice and identity are read
- **Is stability restored?** Only after the revelation, but not in a way that restores the innocence of voice as transparent identity marker.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware of how strongly voice is normally trusted as a marker of who is present and speaking.

- **Cognitive instability**
  The player must reinterpret the scene once voice can no longer be taken as transparent evidence of identity.

- **Emotional intensification**
  The moment becomes more disturbing because the instability is carried by voice, one of the clearest normal anchors of character identity.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the **world coherence boundary**, because the scene reveals that one of the gameworld's basic organizing assumptions, that voice corresponds to stable embodied identity, is weaker than it appears.

3. Mode of Game Audio Transgression

Primary mode: Aesthetic

The transgressive effect is carried mainly through how voice is heard and interpreted. This is not primarily a rule-based disruption, nor does voice directly alter the structure of gameplay. Instead, the moment unsettles expectation at the level of vocal presence, identity, and perception. The player hears what seems like ordinary dialogue, but that dialogue no longer guarantees a stable speaker behind it. This makes aesthetic the strongest mode for this example.

4. Domain

Primary domain: World coherence

The most important change happens in how the player understands the coherence of character identity within the world. The issue is not mainly mechanical or ethical. It is that the world no longer feels fully stable at the level of who is speaking as whom. Voice destabilizes the relation between person, body, and presence, which changes how the player understands the internal coherence of the scene.

5. Conventions Destabilized

- **Functional clarity**
  Voice is no longer a straightforward way of identifying speaker presence.
- **Cognitive aid**
  Dialogue no longer simply helps orient the player narratively.
- **Audio-visual coherence**
  The expected coherence between voice, body, and personhood is weakened.
- **Emotional framing**
  Voice shifts from narrative explanation toward disturbance and instability.
- **Immersion support**
  The scene unsettles the player's trust in one of the world's basic representational anchors.

6. Final Check

- The baseline shows that voice is normally trusted to indicate who is speaking
- The deviation reveals that *Code: Veronica* uses voice to destabilize that trust through Alfred/Alexia impersonation and switching
- This leads to reflective awareness and loss of certainty.
- The best classification is: **Mode: Aesthetic** and **Domain: World coherence**

The Stanley Parable

Game & Segment Identification

1. Game Information

- Game title: The Stanley Parable
- Developer: Galactic Cafe
- Year: 2013
- Platform analysed: PC
- Genre: first-person narrative exploration
- Relevant audio design feature (if applicable): a constant narrator voice that normally frames the player's action.

2. Selected Segment

- Segment name (level/chapter/scene): Mind Control Facility / Countdown sequence
- Segment duration: brief as an ending sequence, but strongly dependent on the broader narrator-player relation established beforehand
- Trigger condition (player action / scripted event): after following the Narrator deep into the facility, the player reaches the control room and chooses whether to follow the expected shutdown logic or activate the system, producing the countdown outcome. The Countdown Ending is triggered by turning the system on rather than off.

3. Description of the Segment

In this segment, the player enters the Mind Control Facility while the Narrator explains the meaning of what is being discovered. The voice frames the machine as something oppressive and presents the player's movement through the space as a path toward liberation. At this point, the player has already learned that the game constantly stages obedience and disobedience through the Narrator's speech. In the control room, the player is given a decisive action. If the player acts against the expected

shutdown logic and turns the system on, the Narrator immediately condemns the act and the sequence shifts into the Countdown Ending. The player is then locked into an irreversible situation in which the Narrator continues to speak while the countdown advances. Sound is central here because the ethical force of the moment is carried mainly by voice. The Narrator judges the player's choice, frames it as wrong, and transforms action into something morally charged.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

In most games, a guiding narrator helps orient the player through a space and clarifies the meaning of events. Even when the narrator is ironic or forceful, the voice usually remains a framing device.

2. Feedback Sounds

- Spoken narration helps define the situation
- Environmental sounds support movement through the facility
- Interaction sounds confirm player choices
- Voice gives context, direction, and interpretation

3. Music (if present)

Music can support dramatic tension, but it normally does not determine the ethical meaning of the player's action as strongly as voiced judgment does here.

4. Spatial Reliability

The player can move through the space and understand it as a coherent decision point. The Narrator's voice is not spatial in the same way as environmental sound, but it is normally treated as a stable interpretive layer over the action.

5. Sound Layers

- World ambience
- Interaction and environmental sounds
- Music / tension cues
- Narrator voice

6. Audio-Visual Coherence

Normally, narration helps organize what the player sees and does. Even when it is controlling or ironic, it still appears to function as a guide to how the scene should be understood. This game's scenes can be experienced in different order depending on player action, so the player can indeed avoid being ethically framed up until this point, but there are other examples in the game where this takes place.

7. Active Conventions in This Segment

- Functional clarity
- Cognitive aid
- Audio-visual coherence
- Emotional framing
- Immersion support
- Guidance through voiced narration

8. Baseline Expectations

Listing clear expectations. These expectations define what the player is trained to expect.

- A narrator voice helps interpret the player's action.
- Voice guides the player through the logic of the ending rather than becoming the main source of moral accusation.
- Choice points in games are usually framed structurally before they are framed ethically.

Part 2 - Deviation

1. Description of the Change

The main change is that the Narrator's voice stops functioning mainly as guidance and becomes a moralizing force that frames the player's decision in evaluative terms. The action is not presented as just a different branch. Instead, the Narrator treats it as a failure of responsibility and understanding. The voice therefore changes in role: it no longer only explains the scene, but actively turns the player's act into an ethically charged one.

This is why the moment is strong:

- The Narrator's voice judges the choice
- Sound moves from guidance to accusation and moral framing
- The player is pushed to reflect not only on what was chosen, but on what that choice means

2. Expectation Violated

The main violated expectation is:

- A narrator voice is there to guide and contextualize the player's action, not to turn that action into a morally loaded confrontation.

3. Scope of the Disruption

- **Is it brief?** Yes, as a concentrated ending sequence
- **Sustained?** Yes, because it changes how the player understands the narrator's role and the value of choice in the game
- **Escalating?** Yes, because the countdown intensifies the voice's pressure and judgment
- **Unresolved?** Yes, because the game does not restore a simple trust in the narrator or in player freedom afterward
- **Is stability restored?** Not fully, because the player has now experienced choice as something morally framed.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware that the game is evaluating the meaning of that choice.
- **Cognitive instability**
  The player must rethink whether disobedience here is freedom or something already anticipated by the system.
- **Moral discomfort**
  The scene unsettles the player's confidence that choosing differently is automatically liberating or meaningful.
- **Emotional intensification**
  The countdown and the Narrator's continued speech produce pressure, guilt, and tension by making the player hear the choice as a morally charged act.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the **emotional framing boundary**, because the Narrator's voice does not only explain the scene but assigns emotional and moral value to the player's action.

3. Mode of Game AudioTransgression

Primary mode: Hybrid (Ludic-Socio-cultural)

The Narrator's voice transforms the player's action into an ethically loaded confrontation. The effect is hybrid because the consequence extends beyond sound into the player's understanding of agency, choice, and responsibility inside the structure of the game. What first seems like narrated guidance becomes a voiced challenge to the moral meaning of the player's own action. This is why hybrid is the strongest mode for this example.

4. Domain

Primary domain: Ethical

The most important change happens in how the player evaluates action. The key issue is the fact that voice reframes the player's decision as something ethically charged. The Narrator's speech makes the players choice feel evaluative rather than structural. The player is being made to reflect on what kind of act that choice represents.

5. Conventions Destabilized

- **Functional clarity**
  Narration no longer simply explains the scene.
- **Cognitive aid**
  Voice complicates the value of the player's action.
- **Audio-visual coherence**
  The scene remains coherent, but the voice changes what the player thinks the scene means.
- **Emotional framing**
  The Narrator's voice intensifies tension by attaching judgment to player action.
- **Immersion support**
  The moment deepens involvement by making the player feel implicated in the meaning of the choice rather than merely observing it.

6. Final Check

- The baseline shows that the Narrator's voice is normally treated as guidance and interpretation
- The deviation reveals that in this sequence the same voice becomes a moralizing force that judges the player's action
- This leads to reflective awareness, cognitive instability, loss of moral certainty, and emotional intensification
- The best classification is: **Mode: Hybrid** and **Domain: Ethical**

Immortality

Game & Segment Identification

1. Game Information

- Game title: Immortality
- Developer: Half Mermaid
- Year: 2022
- Platform analysed: PC
- Genre: interactive film / full-motion video mystery
- Relevant audio design feature (if applicable): sound is used not only to support archived film footage and interface navigation, but also to provide “supernatural hints” during scrubbing and footage manipulation, linking sound to the discovery of hidden material.

2. Selected Segment

- Segment name (level/chapter/scene): discovery of hidden reverse-footage material through scrubbing and supernatural audio hints
- Segment duration: recurring mechanic rather than one single short scene
- Trigger condition (player action / scripted event): while watching clips, the player hears unusual audio cues and reverses or scrubs footage to uncover concealed sequences that are not visible through normal viewing alone. The sound team explicitly described handling “supernatural hints” on the game side and tuning these cues as part of the interactive system.

3. Description of the Segment

In this segment pattern, the player is working through archival film footage, interviews, and behind-the-scenes clips, using the game’s interface to pause, rewind, scrub, and jump between images. At first, this appears to be a system for research and discovery within an audiovisual archive. However, as the player continues, audio begins to signal that there is more in the footage than ordinary viewing

reveals. Unusual audio cues accompany the act of scrubbing and reversing, leading the player toward hidden reverse-footage material and supernatural revelations. Sound is central here because the player is drawn into a more uncertain mode of listening in which the archive itself no longer feels neutral. The important sound elements are the interactive scrubbing audio, the eerie cues tied to hidden content, and the shift from interface support to concealed revelation.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

In *Immortality*, the sound team treated the clips as if they were real films, interviews, or behind-the-scenes recordings, aiming for believable "raw" footage aesthetics.

2. Feedback Sounds

- Scrubbing and playback sounds confirm manipulation of the footage
- UI sounds support navigation through clips and the film grid
- Match cuts and interaction sounds help the player move through the archive
- Sound normally functions as part of archive exploration and system feedback

3. Music (if present)

Music and audio design help create the tone of the archive and its films, but at the baseline level they still appear to support the player's interaction with footage rather than undermine the archive's neutrality. The sound team explicitly discussed balancing the "game side" audio, UI sounds, and score interaction with player actions.

4. Spatial Reliability

The player normally expects sounds to belong either to the clip being viewed or to the interface used to manipulate it. Even when the archive is mysterious, the relation between footage sound and UI sound initially appears legible.

5. Sound Layers

- Film / interview / behind-the-scenes clip audio
- UI and scrubbing sounds
- Match-cut sounds
- Score and other responsive game-side audio

6. Audio-Visual Coherence

At first, the player has reason to treat the footage and the archive as coherent. The sounds of old film handling, clip playback, and scrubbing reinforce the idea that the player is navigating a media archive. The interface may feel stylized, but it still seems to belong to a stable archival logic.

7. Active Conventions in This Segment

- Functional clarity
- Cognitive aid
- Audio-visual coherence
- Emotional framing
- Immersion support
- Archive / interface reliability

8. Baseline Expectations

Listing clear expectations. These expectations define what the player is trained to expect.

- Archive manipulation sounds are there to support navigation.
- The player is working with an audiovisual database whose materials may be mysterious, but whose interface logic is stable.
- Sound belongs either to the footage or to the interface and helps separate those layers.
- Scrubbing and reversing are research actions, not acts of supernatural discovery.

Part 2 - Deviation

1. Description of the Change

The main change is that sound becomes one of the main ways the player senses that something hidden is present within the footage. The scrubbing process starts to treat sound as a clue that the archive is unstable and concealing another layer.

This is why the moment is strong:

- The same interface actions that once seemed neutral now feel charged with hidden meaning
- Sound moves from navigation support to covert guidance toward concealed material
- The player realizes that the archive is something that can be listened to for signs of what it is hiding

2. Expectation Violated

The main violated expectation is:

- Scrubbing and archive sounds are there to support navigation, not to function as signals of hidden and destabilizing content.

3. Scope of the Disruption

- **Is it brief?** No, it recurs across the experience
- **Sustained?** Yes, because it reshapes how the player listens to footage and interface actions afterward
- **Escalating?** Yes, because the player increasingly distrusts the archive's apparent neutrality
- **Unresolved?** Yes, because the hidden material changes how the entire archive is interpreted
- **Is stability restored?** No, because once the player understands that scrubbing can reveal concealed material, the archive no longer feels fully stable or transparent.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware that the archive is a system with hidden depths that must be listened to as well as viewed.
- **Cognitive instability**
  The player must rethink the status of interface sound, clip sound, and hidden revelation.
- **Emotional intensification**
  The use of eerie and "supernatural" sound cues makes discovery feel less like research and more like entry into something uncanny and unstable.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the **world coherence boundary**, because the player expects the archive and its interface to form a stable access structure, but sound reveals that this structure conceals another layer of reality or fiction.

3. Mode of Game Audio Transgression

Primary mode: Hybrid (Aesthetic-Ludic)

The sound in this example changes how the player interacts with the archive and interprets the status of the footage. The effect is hybrid because the consequences extend beyond sound into navigation of the archive itself. This is why hybrid is the strongest mode for this example.

4. Domain

Primary domain: World coherence

The most important change happens in how the player understands the coherence of the archive world. The problem is that the archive no longer appears to be a stable audiovisual system containing clips that can simply be browsed. Through sound, the archive becomes uncertain and can lead to concealed material. The player no longer experiences footage and interface as fully separate and reliable levels of the experience.

5. Conventions Destabilized

- **Functional clarity**
  Scrubbing sound is no longer only a navigation aid.
- **Cognitive aid**
  Interface feedback destabilizes what the archive is understood to be.
- **Transparency / minimal friction**
  The archive no longer feels like a transparent system of access.
- **Audio-visual coherence**
  The relation between clip, interface, and hidden content becomes unstable.
- **Emotional framing**
  Discovery shifts from neutral research toward uncanny revelation.
- **Immersion support**
  The player is drawn more deeply into the archive by learning that it must be listened to for what it conceals.

6. Final Check

- The baseline shows that archive sound and scrubbing sound are initially treated as tools for navigation and orientation
- The deviation reveals that in *Immortality* those same sounds become part of hidden revelation and supernatural discovery
- This leads to reflective awareness, cognitive instability, loss of archival certainty, and emotional intensification
- The best classification is: **Mode: Hybrid** and **Domain: World coherence**

Mafia III

Game & Segment Identification

1. Game Information

- Game title: Mafia III
- Developer: Hangar 13
- Year: 2016
- Platform analysed: PC
- Genre: action-adventure / open-world crime game
- Relevant audio design feature (if applicable): spoken racist language and hostile public speechdirected at Lincoln Clay the games protagonist, which make race and exclusion audible in the gameworld rather than only visible or thematic. Critics and developer interviews emphasized that racism was intentionally central to the game's representation of 1968 New Bordeaux.

2. Selected Segment

- Segment name (level/chapter/scene): early encounters in white-controlled spaces where Lincoln Clay is addressed through racist speech and social hostility
- Segment duration: recurring pattern rather than one isolated cutscene
- Trigger condition (player action / scripted event): Lincoln enters certain neighborhoods, workplaces, or establishments and receives voiced racist abuse, suspicion, or exclusion from NPCs, police, and enemies. Coverage of the game notes spoken slurs, hostile ambient reactions, and differential police/social treatment in white areas.

3. Description of the Segment

In this segment pattern, the player moves through New Bordeaux as Lincoln Clay, a Black protagonist in a racially hostile 1968 setting. The transgressive effect emerges through repeated spoken

encounters in which racism is made audible through insults, ambient hostility, NPC barks, warnings, and socially coded public reactions. The player hears race as a structuring force in how the world responds to Lincoln. Sound is central here because the socio-cultural tension is carried directly through speech, tone, and voiced public behavior. The important sound elements are racist slurs, hostile spoken reactions and suspicious police/NPC comments.

Baseline & Deviation

Part 1 - Baseline (Normal Sound Behaviour)

1. Ambient Sound

In many games, ambient speech and NPC reactions help support setting and realism, but they are not usually designed to confront the player repeatedly with audible social exclusion tied to identity. Public voice often fills space without directly challenging the player's social position in the world.

2. Feedback Sounds

- NPC speech helps populate the world
- Enemy dialogue often supports conflict or characterization
- Police or civilian reactions help communicate danger or status
- Voice usually supports worldbuilding without making social hostility the main audible condition of presence

3. Music (if present)

4. Spatial Reliability

Normally, spoken reactions in the environment help orient the player socially and spatially, but they are not always structured to make the player's presence feel racially contested. Voice is usually a readable part of the world, not a repeated social assault on belonging.

5. Sound Layers

- World ambience
- Traffic / city / environmental noise
- Music
- NPC speech and public reactions
- Enemy / police / civilian voiced responses

6. Audio-Visual Coherence

Normally, public speech and social barks reinforce the world's tone and character, but they do not necessarily force the player to confront broader cultural and ethical structures through repeated spoken hostility.

7. Active Conventions in This Segment

- Functional clarity
- Cognitive aid
- Audio-visual coherence
- Emotional framing
- Immersion support
- Social worldbuilding through ambient speech

8. Baseline Expectations

Listing clear expectations. These expectations define what the player is trained to expect.

- NPC speech helps characterize the world and populate social space.
- Spoken hostility in games is often localized to conflict, not to systemic public exclusion.
- Voice usually helps the player feel situated in the world, even if the world is dangerous
- Ambient or enemy dialogue may be offensive or aggressive, but it does not always force a broader confrontation with socio-cultural structures.

Part 2 - Deviation

1. Description of the Change

The main change is that voiced hostility stops functioning only as color or local aggression and becomes a repeated audible sign of systemic racism. The player is hearing a social order that treats Lincoln's presence as suspect, inferior, or illegitimate. The sound therefore changes in roleny becoming one of the main ways the game communicates a socio-cultural boundary.

This is why the moment is strong:

- Spoken hostility is not isolated; it is socially patterned
- Sound moves from worldbuilding to audible enforcement of racial hierarchy
- The player realizes that the world's public voice is structured by exclusion, not just atmosphere

2. Expectation Violated

The main violated expectation is:

- Ambient speech and NPC reactions help situate the player socially, but do not usually make the player repeatedly hear systemic exclusion as a condition of being present in the world.

3. Scope of the Disruption

- **Is it brief?** No, it recurs across many situations
- **Sustained?** Yes, because it shapes how the player hears the city and its people over time
- **Escalating?** Yes, as the player increasingly recognizes racism as an audible social system rather than a one-off event
- **Unresolved?** Yes, because the hostility reflects the ongoing structure of the world rather than a single anomaly
- **Is stability restored?** No, because the player continues to hear the world as racially charged.

Analytical Classification

1. Player Impact

- **Reflective awareness**
  The player becomes aware that public speech and ambient voice can carry a broader social order.

- **Cognitive instability**
  The player must rethink the role of ambient and enemy speech, since it no longer feels neutral.

- **Moral discomfort**
  The world feels less like a neutral action space and more like a hostile cultural structure in which Lincoln's presence is contested.

- **Emotional intensification**
  Repeated voiced racism produces discomfort, anger, and tension because the player hears exclusion as part of the world's ordinary social functioning.

2. Game Audio Boundary Revealed

The strongest boundary revealed is the **emotional framing boundary**, because public speech does not merely populate the world but frames it as hostile, exclusionary, and morally charged. A strong second option is the **world coherence boundary**, because the speech reveals that the world's social order is structured by systemic exclusion.

3. Mode of Game Audio Transgression

Primary mode: Hybrid (Full Hybrid)

The transgressive force of this example comes from the way sound carries meanings shaped by broader social and historical norms rather than only by gameplay structure. Spoken hostility and racist speech become transgressive because they activate a wider cultural and ethical frame outside the immediate mechanics of play. The effect is that voice makes the player hear the gameworld as structured by social prejudice and exclusion. The socio-cultural dimension is central to this case, but the strongest classification is full hybrid because the audio also affects the player's emotional experience and practical relation to the gameworld.

4. Domain

Primary domain: Ethical

The most important change happens in how the player evaluates the world and their place within it. The key issue is that voice makes the player confront the ethical meaning of how people are treated, addressed, and socially positioned. The repeated use of racist speech turns ambient and enemy voice into a vehicle of moral and socio-cultural confrontation.

5. Conventions Destabilized

- **Functional clarity**
  NPC and ambient speech no longer simply populate the world.
- **Cognitive aid**
  Voice destabilizes the player's social comfort within the world.
- **Audio-visual coherence**
  The spoken world reveals a deeper social violence that changes how the player interprets ordinary spaces.
- **Emotional framing**
  Voice produces discomfort and moral confrontation.
- **Immersion support**
  The game deepens involvement by making the player inhabit a socially hostile world through sound.

6. Final Check

- The baseline shows that public voice and NPC speech are usually treated as part of worldbuilding and social atmosphere
- The deviation reveals that in *Mafia III* the same layer of sound becomes a repeated audible expression of systemic racial exclusion
- This leads to reflective awareness, cognitive instability, loss of social comfort, and emotional intensification
- The best classification is: **Mode: Hybrid (Full Hybrid)** and **Domain: Ethical**

Appendix C: Close Readings of Selected Gameplay Segments

Case 1 – Silent Hill 2

Context of the moment

The selected moment takes place in *Silent Hill 2* (2001), a survival horror game in which the player controls James Sunderland, the game's protagonist, as he explores the fog-covered town of Silent Hill in search of his deceased wife. At this stage of the game, James is exploring the Blue Creek Apartments, an early interior area built around slow, tense navigation through corridors, rooms, and small environmental clues. The selected segment occurs in Room 209, shortly before the later encounter with Pyramid Head, the game's main antagonist, in the apartment section. By this point, the player has already learned to treat sound as an indicator of danger, enemy presence, which are communicated sonically before they are fully visible.

Description of the audio event

In Room 209, the player hears a brief whispered human voice while moving through the space. The whisper appears without a visible speaker, without any stable audiovisual source, and without any direct gameplay prompt attached to it. The sound is not confirmed as an enemy warning, an interface cue, or an environmental sound. Instead, it enters the scene as a speech-like presence that seems meaningful while remaining unexplained.

Why is it transgressive

This moment is transgressive because it violates an important expectation the game has already established: even in an eerie and unsettling environment, meaningful sounds usually remain interpretable enough to be placed within the world. If the player hears a human voice, there is normally some cause, source, or eventual explanation that allows it to fit within the game's logic. Here, however, the whisper refuses that placement. It exposes a deeper instability in how the world can be heard and understood. The moment therefore, becomes transgressive not just because it is disturbing, but because it crosses the boundary of expected audio-visual and world-level coherence.

Interpretive effect

The player hears something that sounds meaningful, but cannot determine what it is, where it comes from, or what it means. This uncertainty weakens trust in the environment as a stable and readable world. The result is a more intimate and unsettling form of unease. Causing the player to have doubts about the gameworld's coherence.

What this case contributes to the framework

This case helps clarify that game audio transgression can operate strongly without directly disrupting rules or player action. In *Silent Hill 2* (2001), the transgressive force lies in the destabilization of world coherence through sound.

Classification

This case is best understood as an *aesthetic game audio transgression* because the whispered voice mainly destabilizes the player's sensory and interpretive relation to the scene rather than the structure of action itself. The sound does not interfere directly with rules, objectives, or control. It produces uncertainty by introducing a human voice without a visible source or clear function, breaking the expected coherence between sound and world logic. Its transgressive force lies in how the player perceives and interprets the gameworld, not in how the player acts within it.

Dimension: *Aesthetic Game Audio Transgression*

Case 2 – *Drakengard 3*

Context of the moment

The selected moment takes place at the end of *Drakengard 3* (2013), an action role-playing game in which the player controls Zero, a protagonist who has until this point been played through a familiar real-time combat structure. Across most of the game, progression depends on action-oriented skills such as attacking, dodging, and reacting to enemies in fast-paced combat. The selected segment occurs during the final battle against One, one of the game's antagonists, where the game abruptly abandons this established combat logic and shifts into a rhythm-based musical sequence. Instead of relying on the combat habits developed throughout the game, the player must now listen carefully to the music and press inputs with strict timing.

Description of the audio event

In this final sequence, music shifts its role in the game from background element to becoming the main condition of success. The player must follow the song precisely, including a final cue that is especially demanding and easy to miss. Sound, therefore, changes status from supporting gameplay from the side; it becomes the central rule structure through which the encounter must be completed. At the same time, the cues are unusually unforgiving, so music becomes both the basis for action and the main source of failure.

Why is it transgressive

This moment is transgressive because it violates a central expectation established by the rest of the game, that the final challenge will remain legible through the action-feedback relationship the player has already learned. Up to this point, sound helps the player act within a combat system. In the final battle, however, sound stops functioning as supportive guidance and becomes a strict and punishing condition of play. The problem is not simply that the sequence is difficult. What makes it transgressive is that the game redefines, at its climax, what kind of listening and response the player must perform, and does so in a way that feels hostile to the learned logic of the game itself.

Player effect / interpretive effect

The player can no longer rely on the action habits established through the rest of the game and must instead submit to a much stricter relation between hearing and acting. Sound becomes the system the player must obey, but it does not provide the degree of clarity or confirmation usually expected at such

a moment. This produces frustration and pressure, but also a stronger awareness of how deeply sound can structure action.

What this case contributes to the framework

This case is important because it shows that game audio transgression can emerge not only through uncanny or unstable sound, but through the way sound becomes an oppressive condition of play. It demonstrates that music can function not just as atmosphere or emotional support, but as a demanding gameplay structure that reshapes agency itself.

Classification

This case is best classified as a *ludic game audio transgression* because sound becomes the main structure through which the player must act, and it does so in a way that contradicts the gameplay habits established throughout the rest of the game. The final musical sequence reorganizes the player's relation to action by making music and timing the condition of success while offering strict and punishing feedback. The transgressive force, therefore, lies primarily in how sound restructures agency and play rather than in how it alters perception alone.

Dimension: *Ludic Game Audio Transgression*

Case 3 – *Hellblade: Senua's Sacrifice*

Context of the moment

The selected moment takes place in *Hellblade: Senua's Sacrifice* (2017), an action-adventure game in which the player controls Senua, a warrior traveling through a dark mythological landscape. The game has themes of trauma and loss. One of the game's defining audio features is its use of binaural sound and intrusive voices that surround the player and seem to speak from different positions around Senua's head. These voices are present throughout much of the game, so they are not unusual in themselves. The selected segment occurs during the blindness or darkness trial, one of the Odin trials, where visibility is heavily reduced, and the player must move through near darkness by relying much more strongly on sound than before.

Description of the audio event

The key game sound event in this case is not the sudden appearance of a new sound, but a change in the player's dependence on already unstable sound conditions. During the trial, visual information is limited, so environmental audio, footsteps, and the surrounding voices become more important for orientation and movement. Sound, therefore, becomes both the main guide through space and a continuing source of uncertainty. The same voices that previously existed as part of the game's background psychological instability now become more structurally important to how the player must proceed.

Why is it transgressive

This moment is transgressive because it violates the expectation that, even in an unstable game sound world, the player will still have enough visual information to stabilize perception. In the blindness trial, the game removes that support and forces the player to depend on hearing at the exact moment when hearing is already crowded and difficult to trust. The transgressive force, therefore, lies not only in disturbing game audio but in the fact that the player must act through that instability. Sound becomes necessary for progress while simultaneously refusing to become fully reliable.

Player effect / interpretive effect

The player becomes less certain about how reliably sound can identify direction and space, while also feeling stronger tension because progression now depends more heavily on hearing. This produces a form of pressure that is both experiential and practical; the player must then continue navigating through that unstable condition.

What this case contributes to the framework

This case contributes to the framework in two especially important ways. First, it shows that game audio transgression can emerge through a sustained, unstable relation between player and sound, not only through a sudden rupture or isolated event. Second, it demonstrates that some of the strongest cases are hybrid: sound affects both how the player experiences the world and how the player acts within it. For that reason, *Hellblade* supports a refinement of the framework in which transgression can be understood as an ongoing, unstable condition that can persist across play.

Classification

This case is best understood as an *aesthetic–ludic hybrid game audio transgression* because sound operates transgressively at both experiential and functional levels at the same time. On the one hand, the blindness trial intensifies the instability of the voices and the wider auditory field, making perception more uncertain. On the other hand, the player must rely on that unstable sound in order to navigate and progress through the space. The scene is therefore not only unsettling in how it is heard, but also in how it structures action. This simultaneous disruption of perception and gameplay function justifies a hybrid classification.

Dimension: *Aesthetic–Ludic Hybrid Game Audio Transgression*

Case 4 – *BioShock*

Context of the moment

The selected moment takes place in *BioShock* (2007), a first-person shooter set in the underwater city of Rapture. Throughout much of the game, the player controls Jack, who is guided remotely by a man called Atlas through radio speech. Atlas's voice functions as a familiar support channel: he explains objectives, gives direction, and helps the player progress through the environment. The selected segment occurs during the confrontation with Andrew Ryan, where the repeated phrase "Would you kindly" is revealed to have been a hidden verbal command that has shaped Jack's actions throughout the game. Ryan then uses that same phrase to force Jack to kill him.

Description of the audio event

The crucial game audio event is the reinterpretation of a repeated spoken phrase. “Would you kindly” has appeared many times earlier in Atlas’s speech and initially seemed like an ordinary manner of speaking. In this scene, however, the phrase is exposed as a mechanism of obedience and control. The sound itself remains unchanged. What changes is its meaning and function. Voice stops appearing as helpful guidance and is re-read as the vehicle through which hidden control has been exercised in the game's narrative.

Why is it transgressive

This moment is transgressive because it violates a deeply learned expectation about the role of the guidance voice in games. Players usually treat spoken mission support as something that helps them act and understand the world; the game uses this in its favor to make the twist more impactful. Here, that same guidance is revealed as a covert command. The moment therefore, crosses a broader normative boundary related to obedience, authority, and manipulation through language. The transgressive force lies in the fact that the player recognizes that what seemed like normal help was also submission.

Player effect / interpretive effect

The player is forced to rethink many earlier moments in the game, since actions that once felt ordinary now appear structured by obedience. The scene destabilizes the perception of the player’s understanding of action and complicity. Voice becomes the medium through which the player re-evaluates trust and control.

What this case contributes to the framework

This case is especially valuable because it shows that game audio transgression can operate strongly through voice as a structure of power. Voice can also become transgressive when it naturalizes obedience and then reveals that obedience as hidden coercion. The case also strengthens the socio-cultural dimension of the framework by showing that game audio transgression may carry broader meanings about authority and submission while still directly shaping how player agency is understood.

Classification

This case is best classified as a *socio-cultural game audio transgression* because the spoken phrase “Would you kindly” gains its force through meanings that exceed ordinary gameplay feedback and point toward broader structures of obedience, authority, and manipulation through language. Although the revelation also affects how the player understands agency, the strongest transgressive force lies in the fact that voice becomes the medium through which hidden submission is naturalized and then exposed. The scene, therefore, operates not only at the level of system structure, but at the level of wider ethical and ideological meaning.

Dimension: *Socio-cultural Game Audio Transgression*

Case 5 – *Call of Juarez: Gunslinger*

Context of the moment

The selected moment takes place in *Call of Juarez: Gunslinger* (2013), a first-person shooter presented as a spoken retelling of past events. The player controls episodes from the life of Silas Greaves, an aging bounty hunter who narrates his own story while the player enacts it. For much of the game, Silas's voice functions as a framing device: it comments on events, gives them tone, and presents the playable sequence as a story being remembered. The selected segment occurs during a rewind moment, when Silas verbally corrects himself, and the game rewinds the just-played event so that it can happen differently.

Description of the audio event

The key audio event is the moment when Silas's narrated voice stops functioning only as commentary and becomes an intervention in the playable scene. The voice itself remains recognizable and intelligible, but its role changes. What first appears to be ordinary voice-over narration is suddenly revealed to have the power to revise the event being played. The player does not simply hear that the story was told incorrectly but the game also responds by rewinding and restructuring the sequence accordingly.

Why is it transgressive

This moment is transgressive because it violates a familiar expectation about narrated voice in games. A narrator may explain, color, or reinterpret events, but narration is not usually expected to rewrite the level itself. Here, voice crosses that boundary. It moves from storytelling to intervention on the game's structure, which destabilizes the distinction between narration and gameplay events. The transgressive force lies less in how the voice sounds than in what the voice is suddenly allowed to do.

Player effect / interpretive effect

The player becomes aware that the narrated world is less stable than it first seemed, and must rethink what has just been played. The rewind creates surprise, but its stronger effect is interpretive by weakening trust in the sequence as a fixed event and in narration as a supportive layer. In this way, sound destabilizes not only perception, but also the player's understanding of how the world is being constructed.

What this case contributes to the framework

This case is important because it shows very clearly that game audio transgression can emerge through role reassignment. Silas's voice remains unchanged. It becomes transgressive because its function changes from framing to intervention in the gameplay.

Classification

This case is best understood as an *aesthetic–ludic hybrid game audio transgression* because the narrator's voice does two transgressive things at once. First, it destabilizes the player's perception of the event by revealing that what seemed like a fixed sequence was only one version of the story. Second, it intervenes directly in the playable structure by rewinding and reorganizing the scene itself.

Voice, therefore, no longer functions only as representational framing, but also as a force that alters gameplay progression. Because the transgressive effect depends on both interpretive instability and intervention in the game's structure, the hybrid classification is the strongest one.

Dimension: *Aesthetic–Ludic Hybrid Game Audio Transgression*

Case 6 – *Metal Gear Solid 2: Sons of Liberty*

Context of the moment

The selected moment takes place in *Metal Gear Solid 2: Sons of Liberty* (2001), a stealth-action game in which the player controls Raiden during most of the second half of the game. Throughout much of this section, Raiden receives instructions and contextual information through the codec, a voice communication system used by his commanding officer, the Colonel. For most of the game, the Colonel's codec voice functions as a support channel that helps the player understand objectives, mission context, and next steps. The selected segment occurs during the late-game Arsenal Gear sequence, when the Colonel's transmissions begin to break down and become increasingly irrational, contradictory, and intrusive.

Description of the audio event

The crucial audio event is the collapse of a previously trusted communicative voice. The Colonel's voice remains recognizable as the same codec channel the player has relied on for much of the game, but what it says no longer fits the expected role of mission communication. Instead of clarifying the situation, the voice begins to issue strange, impossible, or nonsensical messages. The sound is therefore not transgressive because it changes radically in acoustic form, but because a familiar voice loses the stable function the player has learned to trust.

Why is it transgressive

This moment is transgressive because it violates a strong expectation established by the game itself: that a codec support voice exists to guide, inform, and help the player interpret the mission. Here, that support channel becomes a source of uncertainty. The player can still hear the same recognizable voice, but it no longer performs its expected role. The transgressive force lies in this contradiction between what the player deemed familiar and instability. A trusted communicative system stops clarifying the game and begins instead to destabilize how the player understands what is happening.

Player effect / interpretive effect

The player becomes aware of how much they had depended on the codec as a source of guidance, and must now continue while that support system becomes unreliable. This produces not only unease, but also a more specific form of interpretive instability: the player becomes less certain about what is true, what can be trusted, and how the game should now be understood.

What this case contributes to the framework

This case is important because it shows that game audio transgression can emerge through the collapse of a trusted communicative role. *Metal Gear Solid 2: Sons of Liberty* (2001) demonstrates that a sound may remain familiar in form while becoming transgressive through a change in role.

Classification

This case is best classified as an *aesthetic–ludic hybrid game audio transgression* because the Colonel's codec voice becomes transgressive through both experiential and gameplay-related instability. Aesthetically, the player hears a previously familiar and trustworthy voice become irrational and intrusive. Ludically, this same breakdown affects the player's understanding of objectives, support, and mission structure, since the codec is part of the game's communicative system. The voice therefore, also undermines the gameplay function it previously served.

Dimension: Aesthetic–Ludic Hybrid Game Audio Transgression

Case 7 – *NieR: Automata*

Context of the moment

The selected moment takes place at the beginning of *NieR: Automata* (PlatinumGames, 2017), an action role-playing game in which the player controls 2B, an android soldier, during the opening sequence of the game. Before ordinary gameplay begins, the player is guided through a boot-up and maintenance sequence in which another android, 9S, helps initialise 2B's systems. During this sequence, the player is asked to adjust settings such as brightness and audio while 9S speaks directly to 2B. In most games, this kind of calibration belongs to a neutral setup menu outside the fiction of the game. Here, however, it is integrated into the fictional world from the start.

Description of the audio event

The key audio event is that voice calibration and sound settings are absorbed into the game's fiction through 9S's speech. The player still performs an action by adjusting sound-related options, but that action is framed as part of 2B's activation rather than as an external menu operation. Voice, therefore, changes role; instead of functioning only as a form of game calibration, it becomes part of a character interaction and part of the player's entry into the world.

Why is it transgressive

This moment is transgressive because it violates an interface expectation that sound calibration is normally external, technical, and clearly separated from the fictional world. In *NieR: Automata*, that boundary is crossed. The player still adjusts settings, but the act is no longer outside the game. It becomes part of the gameworld and part of the relationship between 2B and 9S. The transgressive force lies in the way a system-level function is reassigned as a fictional experience and incorporated into the gameworld.

Player effect / interpretive effect

The player becomes aware that a boundary normally taken for granted, the boundary between the setup interface and the fictional world, is less stable here than expected. At the same time, this does not create distance from the game. Instead, it can produce a stronger sense of involvement, because the player's technical adjustment is reframed as part of 2B's activation and early connection with 9S.

What this case contributes to the framework

This case is especially important because it shows that game audio transgression does not always weaken immersion. In this example, crossing an interface boundary actually intensifies involvement by drawing the player more directly into the world.

Classification

This case is best understood as an *aesthetic–ludic hybrid game audio transgression* because it crosses a boundary that is both experiential and functional. Aesthetically, the game unsettles the player's sense between fiction and interface by turning a calibration process into part of the world. Ludically, the player is still performing a real system-level operation, adjusting settings in order to continue. The transgressive force, therefore, does not lie only in how the moment feels, but also in the fact that a gameplay-adjacent function is redefined as fictional. This overlap function makes the hybrid classification appropriate.

Dimension: *Aesthetic–Ludic Hybrid Game Audio Transgression*

Case 8 – *Ico*

Context of the moment

The selected case in *Ico* (2001) is not a single isolated scene, but a recurring communicative condition that persists across much of the game. The player controls Ico, a young boy who escapes from a fortress and gradually forms a bond with Yorda, a girl he must protect and guide through the environment. Yorda speaks several times during the game, but her dialogue is presented in an untranslated fictional language. As a result, the player hears her voice clearly and understands that it is meaningful, yet cannot access its meaning in semantic terms. In most games, speech from a central character would normally be translated or otherwise made verbally understandable. Here, that convention is deliberately missing.

Description of the audio event

The important audio feature in this case is the sustained presence of a meaningful but semantically inaccessible voice. Yorda's speech is not distorted, hostile, or acoustically unstable. The voice remains clear as a voice, but its usual function of providing verbal clarity is denied to the player. Instead of serving as semantically transparent dialogue, it becomes relational and affective, requiring the player to interpret tone, context, gesture, and dependence rather than explicit meaning.

Why is it transgressive

This case is transgressive because it violates the communicative expectation that if an important character speaks, the player will usually be able to understand what is being said, either directly or through subtitles or translation. *Ico* refuses that expectation while still preserving the character's vocal presence as important. The transgressive force, therefore, lies in the withholding of semantic clarity. Voice remains present, but one of its most familiar functions is removed.

Player effect / interpretive effect

The player becomes aware of how strongly games normally depend on understandable speech, and must instead build connection through nonverbal means such as proximity, care, and cooperation. Importantly, this does not reduce the importance of Yorda's voice. On the contrary, it makes the player attend to it differently. The result is not simply confusion, but a reorientation of how character relations are formed through sound.

What this case contributes to the framework

This case is valuable because it shows that game audio transgression can be sustained and foundational, not only brief or event-based. The withholding of semantic clarity is an ongoing condition that shapes the player's relation to the game from beginning to end. In *Ico*, the crossed boundary remains clearly perceptible, yet the result is a more intimate and relational form of immersion rather than disengagement.

Classification

This case is best classified as *aesthetic game audio transgression* because the central disruption concerns how voice is perceived and interpreted rather than how the player acts within the game system. Yorda's speech remains meaningful, but its semantic content is withheld from the player. This changes the player's auditory experience of communication, shifting it away from dialogue clarity and toward tone and gestures. Its transgressive force lies in perceptual and communicative reorientation, which makes the aesthetic classification the strongest.

Dimension: *Aesthetic Game Audio Transgression*

Case 9 – *Resident Evil – Code: Veronica*

Context of the moment

The selected moment takes place in *Resident Evil – Code: Veronica* (2000), a survival horror game in which the player mainly follows Claire Redfield as she tries to survive and escape while searching for her brother. This case focuses on a scene involving Alfred Ashford, one of the game's main antagonists. Alfred is presented as unstable and deceptive, and this becomes especially important in a scene where voice makes it difficult to know exactly who is speaking. At first, the scene seems to present a normal exchange between different speakers. As it continues, however, the player begins to realize that the identity behind the voice is less stable than it first appeared.

Description of the audio event

The important audio event in this scene is that the voice no longer works as a clear sign of speaker identity. At first, the player hears speech as if it belongs to separate and identifiable people. As the scene develops, Alfred's performance makes that assumption unstable. The player can no longer fully trust the voice to answer simple questions, such as who is present and who is actually speaking. The instability is therefore not only part of the story. It is heard directly through the voice itself.

Why is it transgressive

This moment is transgressive because it violates a very basic expectation about speech in games and audiovisual media more broadly: that a voice corresponds in a stable way to a speaker. In ordinary dialogue scenes, players assume that hearing a voice helps clarify who is present and what is happening. Here, the voice stops providing that clarity. It becomes the medium through which identity itself grows uncertain. The transgressive force lies in this collapse of vocal transparency, which destabilizes one of the most taken-for-granted conventions of dialogue.

Player effect / interpretive effect

The player starts to question not only what is happening, but also who is actually behind the voice being heard. This first creates uncertainty at the level of listening and interpretation, but the deeper effect is on world coherence. If voice can no longer be trusted as a stable sign of presence and identity, then the world itself becomes harder to read and trust.

What this case contributes to the framework

This case is useful because it shows that sound can be the main vehicle of instability, not just something that supports it. The scene would be much less effective if the uncertainty existed only at the visual or narrative level. What makes it transgressive is that the voice itself carries the instability.

Classification

This case is best understood as an *aesthetic game audio transgression* because voice destabilizes the player's sensory and interpretive understanding of identity rather than directly affecting gameplay function or broader socio-cultural meaning. The crucial issue is that speech no longer guarantees who is present in the scene, which weakens trust in vocal identity as a stable marker of speaker presence. The transgressive force, therefore, lies in the breakdown of an audiovisual and perceptual assumption about voice, making the scene primarily aesthetic rather than ludic or socio-cultural.

Dimension: *Aesthetic Game Audio Transgression*

Case 10 – *The Stanley Parable*

Context of the moment

The selected moment takes place in The Stanley Parable (2013), during the Mind Control Facility / Countdown sequence. After reaching the control room, the player can act against the expected shutdown logic by turning the system on. This triggers the Countdown Ending, where the Narrator condemns the player's action and frames the choice as morally wrong.

Description of the audio event

The key audio event is the transformation of the Narrator's voice from guidance into moral pressure. The narrator judges, pressures, and frames the player's decision in evaluative terms. Sound therefore becomes more than a storytelling layer. The spoken voice turns the player's action into something that feels morally charged, making the act of choosing itself part of the transgressive experience.

Why is it transgressive

This moment is transgressive because it violates the expectation that a narrating voice will remain a relatively stable framing device. Instead of guiding or adapting to the player's choices, the voice begins to judge them. The transgressive force lies not only in disobedience within the game system, but in the way the narrator makes that disobedience feel ethically charged. The player is made to reflect on obedience, responsibility, and the meaning of choosing against instruction.

Player effect / interpretive effect

The player becomes more aware of their own role in relation to the game's instructions and of how strongly voice can frame action. The scene destabilizes the player's ethical positioning in relation to their own choices. Voice becomes the medium through which gameplay action becomes confrontational.

What this case contributes to the framework

This case is important because it shows that game audio transgression can operate in the ethical domain when voice does more than guide action and instead morally frames it. It also helps refine the framework by clarifying that not every negative consequence in a game should be treated as ethical transgression. What matters here is that sound, specifically the Narrator's voice, makes the moral dimension of the player's choice legible.

Classification

This case is best classified as a *ludic–socio-cultural hybrid game audio transgression* because the Narrator's voice affects both the player's understanding of choice within the game system and the broader ethical meaning of that choice. Ludically, the voice shapes how the player understands action, making them second-guess their choices. Socio-culturally, it frames those actions in moral and normative terms, making the player reflect on responsibility, compliance, and the meaning of choosing at all.

Dimension: *Ludic–Socio-cultural Hybrid Game Audio Transgression*

Case 11 – *Immortality*

Context of the moment

The selected moment takes place in *Immortality* (2022), an interactive film-based game in which the player explores a large archive of recorded footage in order to reconstruct what happened to Marissa Marcel, an actress whose films were never released. The player does not move through a conventional

3D environment. Instead, progression depends on selecting visual details within clips and navigating through related pieces of footage. The selected case concerns the point at which sounds associated with archive browsing begin to reveal that the archive is not a neutral system of access, but something unstable that conceals another layer of meaning.

Description of the audio event

The important audio event is the change in status of the operational interface sound. At first, the sounds produced by scrubbing, reversing, and navigating through clips appear to function as ordinary tools of archive manipulation. As the player continues, however, these same sounds begin to signal hidden content and concealed presence within the footage. Sound, therefore, shifts from neutral navigation support to a sign that the archive itself is unstable and that another layer of reality may be accessed through the player's manipulation of the material.

Why is it transgressive

This moment is transgressive because it violates the expectation that interface-like operational sounds should remain transparent and neutral. In *Immortality* (2022), those sounds begin to carry hidden meaning. The transgressive force lies in the fact that the archive no longer appears as a stable, trustworthy system. Instead, sound reveals that ordinary manipulation is also a form of discovery and that what seemed to be a neutral interface is implicated in something uncanny.

Player effect / interpretive effect

The player becomes aware that the archive cannot be treated as a simple transparent container of clips. At the same time, the repeated manipulation of footage becomes more charged and uncertain, since the player starts to listen for hidden revelation rather than merely using the system mechanically. The scene, therefore, destabilizes not only perception but also the player's trust in the archive as a coherent system of access.

What this case contributes to the framework

This case contributes to the framework in two especially important ways. First, it shows that operational sound can become transgressive, meaning that game audio transgression is not limited to voice, music, or atmospheric sound. Second, it demonstrates that transgressive force may change over time. In *Immortality* (2022), the first discovery functions as a rupture, but later the same pattern can become a repeatable mechanic without losing the significance of its initial appearance.

Classification

This case is best understood as an aesthetic–ludic hybrid because sounds associated with archive navigation become transgressive in both perceptual and operational ways. Aesthetically, they make the archive feel uncanny and unstable. Ludically, they are inseparable from the player's act of scrubbing, reversing, and manipulating footage in order to discover concealed material. The player is therefore not only hearing instability, but actively producing it through an interactive system.

Dimension: *Aesthetic–Ludic Hybrid Game Audio Transgression*

Case 12 – *Mafia III*

Context of the moment

The selected case takes place in *Mafia III* (2016), an open-world action game set in a fictionalized version of New Orleans in 1968. The player controls Lincoln Clay, a Black Vietnam War veteran who returns home and becomes caught in a violent struggle against criminal and institutional power. Unlike many of the other cases in this chapter, the transgressive force here does not depend on one isolated audio event. Instead, it emerges across recurring moments in which NPC speech and public reactions voiced responses make racism and exclusion audible within everyday navigation of the gameworld. The player repeatedly hears racist comments and discriminatory speech patterns that shape how public space is encountered.

Description of the audio event

The central audio feature in this case is the persistent presence of voiced racist hostility. NPC speech repeatedly marks Lincoln as unwelcome, suspicious, or threatening in certain spaces. As a result, voiced interaction becomes part of how the player reads risk and the social structure of the world. Game sound operates on several levels at once: it is representational, because it makes a broader racist social order audible; it is affective, because it changes how spaces feel; and it is also tied to play, because it influences how the player approaches and interprets movement through those spaces.

Why is it transgressive

This case is transgressive because it crosses more than one boundary at the same time. First, the voiced hostility carries meanings that exceed the game and invoke broader socio-cultural structures of exclusion and racism. Second, the audio affects the player's understanding of safety and action in the world. Third, they change the feeling of the gameworld in general, making public environments feel tense and hostile. The transgressive force lies not in one shocking sound, but in the way sound makes systemic discrimination audible as a lived condition of both world and play.

Player effect / interpretive effect

The player does not simply understand discrimination as background narrative information. Instead, it is repeatedly encountered through sound during play. This produces discomfort and ethical reflection, but it also affects how the player moves through and interprets the gameworld. Public space is no longer neutral. It becomes charged by hostility, which makes the player more aware of exposure.

What this case contributes to the framework

This case is especially important because it demonstrates the need for full hybrid configurations within the framework. In *Mafia III* (2016), game audio operates simultaneously across aesthetic, ludic, and socio-cultural dimensions.

Classification

This case is best classified as a *full hybrid game audio transgression* because sound operates transgressively across all three dimensions at once. Socio-culturally, racist speech makes structures of exclusion and discrimination audible in the gameworld. Ludically, these voiced reactions affect how

the player moves and acts in the gameworld. Aesthetically, the soundscape of hostility makes the gameworld feel tense and affectively charged. Since the transgressive force does not belong to one single dimension but emerges through the convergence of all three, a full hybrid classification is justified.

Dimension: *Full Hybrid Game Audio Transgression*

Appendix D: Card-Based Heuristic Tool

GAME TYPE DECK

Choose the broad game context. This deck defines the type of game the concept will be based on. The chosen game type determines which sound events and gameplay situations are available in the next decks.

GAME TYPE 1

2D PLATFORMER

A 2D platformer is a side-view game where the player moves through a level by walking, jumping, avoiding obstacles, defeating enemies, and collecting objects.

GAME TYPE 3

RACING GAME

A racing or karting game is a driving game where the player controls a vehicle, accelerates, turns, avoids collisions, passes checkpoints, and tries to reach the finish line.

GAME TYPE 2

FIRST PERSON SHOOTER

An FPS game is a first-person game where the player sees through the character's perspective, moves through a space, shoots enemies, avoids danger, and reacts quickly to threats.

INTENDED PLAYER EFFECT

Choose the main experience the concept is trying to create for the player.

INTENDED PLAYER EFFECT 1

CONFUSION

The player becomes unsure about what happened, what the sound means, or how to interpret the situation.

INTENDED PLAYER EFFECT 2

DISTRUST

The player stops trusting the game's sounds as reliable guidance and feedback.

INTENDED PLAYER EFFECT 3

DISCOMFORT

The sound makes the player feel uneasy, disturbed, or emotionally unsettled.

INTENDED PLAYER EFFECT 4

TENSION

The sound increases stress, or anticipation during play.

INTENDED PLAYER EFFECT 5

SURPRISE

The sound breaks the player's expectation suddenly or unexpectedly.

INTENDED PLAYER EFFECT 6

REFLECTION

The sound makes the player think differently about the action, the game system, or their own role.

INTENDED PLAYER EFFECT 7

LOSS OF CONTROL

The player feels less able to act confidently or understand how to control the situation.

INTENDED PLAYER EFFECT 8

WORLD INSTABILITY

The sound makes the gameworld feel less stable and trustworthy.

SOUND EFFECT

Choose the sound event or sound layer that will be changed in the concept.

SOUND EFFECT (2D PLATFORMER) 1

MUSIC

The background music that shapes the rhythm, mood, and tone of the level.

SOUND EFFECT (2D PLATFORMER) 2

JUMP

The sound that confirms the player has jumped and supports the feeling of movement and control.

SOUND EFFECT (2D PLATFORMER) 3

LANDING JUMP

The sound that confirms the player has landed and helps communicate impact and weight.

SOUND EFFECT (2D PLATFORMER) 4

KILLING ENEMY

The sound that confirms an enemy has been defeated and usually signals success or progress.

SOUND EFFECT (2D PLATFORMER) 5

PICKING UP ORB

The sound that confirms the player has collected an object, usually acting as reward feedback.

SOUND EFFECT (2D PLATFORMER) 6

DEATH NOISE

The sound that communicates player death, or the end of an attempt.

SOUND EFFECT (2D PLATFORMER) 8

WALKING NOISE

The sound of the player's movement, helping to create presence and connection to the level.

SOUND EFFECT (FPS) 1

SHOOTING ENEMY

The sound of firing at an enemy, usually confirming the firing and damage inflicted.

SOUND EFFECT (FPS) 2

RELOAD

The sound that communicates weapon reloading and tells the player when they are ready to shoot again.

SOUND EFFECT (FPS) 3

FOOTSTEPS

The sound of player movement, often helping with presence and spatial awareness.

SOUND EFFECT (FPS) 4

HEALING ITEM

The sound that confirms the player has collected health item.

SOUND EFFECT (FPS) 5

AMBIENT NOISE

The background sound of the space, used to create atmosphere and give an identity to the world.

SOUND EFFECT (FPS) 6

MUSIC

The music that shapes the tone of combat.

SOUND EFFECT (FPS) 7

ENEMY DETECTION

The sound that warns the player that an enemy has noticed them and danger is incoming.

SOUND EFFECT (FPS) 8

ENEMY SHOOTING

The sound of enemies attacking, helping the player understand threat, direction, and danger.

SOUND EFFECT (FPS) 9

HITING ENEMY

The sound that confirms the player has successfully hit an enemy.

SOUND EFFECT (RACING) 1

MUSIC

The music that gives the energy and rhythm to the race.

SOUND EFFECT (RACING) 2

ENGINE RUNNING

The sound of the vehicle’s engine, usually communicating speed and acceleration.

SOUND EFFECT (RACING) 3

PASSING CHECKPOINT

The sound that confirms the player has passed a checkpoint and is making progress.

SOUND EFFECT (RACING) 4

FINISH RACE

The sound that marks completion and the end of the race.

NORMAL AUDIO CONVENTION

Define what the player normally expects the selected sound to do.

NORMAL AUDIO CONVENTION 1

CONFIRM SUCCESS

The sound tells the player that an action worked or that something positive happened.

NORMAL AUDIO CONVENTION 2

WARNS ABOUT DANGER

The sound alerts the player to a threat, risk or enemy.

NORMAL AUDIO CONVENTION 3

GUIDES THE PLAYER

The sound helps the player understand where to go, what to do, or what matters next.

NORMAL AUDIO CONVENTION 4

SUPPORTS IMMERSION

The sound helps the player feel present inside the gameworld and connected to the experience.

NORMAL AUDIO CONVENTION 5

COMMUNICATES IMPACT

The sound makes an action or event feel physical, such as landing, hitting, crashing, or being hurt.

NORMAL AUDIO CONVENTION 6

GIVES SPATIAL INFORMATION

The sound helps the player understand direction, distance, position, or where something is happening.

NORMAL AUDIO CONVENTION 7

MARKS PROGRESS

The sound tells the player that they have advanced, reached a checkpoint, completed a step, or moved closer to the goal.

NORMAL AUDIO CONVENTION 8

REINFORCES CONTROL

The sound helps the player feel that their actions are responsive and clear.

NORMAL AUDIO CONVENTION 9

CREATES EMOTIONAL TONE

The sound shapes the mood of the moment, such as tension, fear, excitement or discomfort.

NORMAL AUDIO CONVENTION 10

CONFIRM FAILURE

The sound tells the player that an action failed, the player was hurt, died, lost, or made a mistake.

SCOPE OF THE TRANSGRESSION

Define how long the transgression lasts and how it behaves.

SCOPE OF THE TRANSGRESSION 1

BRIEF

The disruption happens in a short moment or single sound event.

SCOPE OF THE TRANSGRESSION 2

SUSTAINED

The disruption lasts across a longer section of gameplay.

SCOPE OF THE TRANSGRESSION 3

ESCALATING

The disruption becomes stronger, stranger, or more intense over time.

SCOPE OF THE TRANSGRESSION 4

REPEATED

The disruption happens more than once, creating a pattern the player starts to notice.

TRANSGRESSIVE OPERATION

Define how the selected sound is changed to disrupt the player's expectation.

TRANSGRESSIVE OPERATION 1

REMOVE IT

The expected sound is taken away, creating absence where the player expects feedback.

TRANSGRESSIVE OPERATION 2

DELAY IT

The sound happens too late, breaking the expected timing between action and feedback.

TRANSGRESSIVE OPERATION 3

INVERT IT

The sound gives the opposite meaning, such as success sounding like failure or danger sounding like reward.

TRANSGRESSIVE OPERATION 4

DISTORT IT

The sound becomes strange, broken, corrupted, noisy, or difficult to interpret.

TRANSGRESSIVE OPERATION 5

MISPLACE IT

The sound appears in the wrong place, direction, source, or situation.

TRANSGRESSIVE OPERATION 6

MAKE IT UNRELIABLE

The sound sometimes works as expected and sometimes does not, making the player unsure when to trust it.

TRANSGRESSIVE OPERATION 7

MAKE IT EXCESSIVE

The sound becomes too loud, too intense, too frequent, or too dramatic for the situation.

TRANSGRESSIVE OPERATION 8

MAKE IT TOO INTIMATE

The sound feels too close, personal, invasive, or directed at the player.

TRANSGRESSIVE OPERATION 9

CONTRADICT IMAGE

The sound does not match what the player sees, creating conflict between audio and visuals.

TRANSGRESSIVE OPERATION 10

REASSIGN ITS FUNCTION

The sound keeps its form but changes role, such as a reward sound becoming a warning or a guide sound becoming a threat.

FRAMEWORK CLASSIFICATION

Classify the concept after it has been created. This deck identifies what type of game audio transgression the concept produces.

FRAMEWORK CLASSIFICATION 1

AESTHETIC

The sound mainly disrupts mood, atmosphere, perception, sensory experience, or how the player feels the gameworld.

FRAMEWORK CLASSIFICATION 2

LUDIC

The sound mainly disrupts gameplay, feedback, control, action, rules, or the player's ability to act confidently.

FRAMEWORK CLASSIFICATION 3

SOCIOCULTURAL

The sound mainly disrupts cultural, ethical, social, or moral expectations, making the player reflect on broader meanings.

FRAMEWORK CLASSIFICATION 4

AESTHETIC-LUDIC HYBRID

The sound disrupts both how the player experiences the game and how the player acts within it.

FRAMEWORK CLASSIFICATION 5

AESTHETIC-SOCIOCULTURAL HYBRID

The sound disrupts both sensory/emotional experience and broader cultural, ethical, or social expectations.

FRAMEWORK CLASSIFICATION 6

LUDIC-SOCIOCULTURAL HYBRID

The sound disrupts both gameplay/action and broader ethical, cultural, or social meaning.

FRAMEWORK CLASSIFICATION 7

FULL HYBRID

The sound disrupts aesthetic, ludic, and socio-cultural dimensions at the same time.

Appendix E: Workshop Session 1 Miro Board Output

1.ONBOARDING

Introduction of the participants
and the workshop

ACTIVITY	DESCRIPTION OF THE ACTIVITY	DURATION
1.ONBOARDING	Introduction of the participants and the workshop	10 MIN
2.FRAMEWORK INTRODUCTION	A brief explanation of game audio transgression and the framework categories used in the workshop.	15 MIN
3.INTRODUCTION OF THE DECK TOOL	A quick overview of how the card decks work and how they should be used to build a concept.	10 MIN
4.GAME CONCEPT	Creation of the game concept by combining the selected cards into a clear sound-based concept.	30 MIN
5.BRAINSTORMING AND FINAL GAME CONCEPT SHEET	A space to develop the idea in more detail and describe exactly how the sound should be changed.	15 MIN
6.DISCUSSION AND FEEDBACK	Final discussion of the tool and the game concepts	15 MIN
		1H 35MIN

2.FRAMEWORK INTRODUCTION

A brief explanation of game audio transgression and the framework categories used in the workshop.

WHAT IS GAME AUDIO TRANSGRESSION ?

DEFINITION

Game audio transgression happens when audio disrupts a convention.

Games teach us to expect sound to behave in certain ways:

- Reward sounds confirm success;
- Warning sounds signal danger;
- Footsteps help locate movement;
- Music supports the mood.

Transgression begins when sound goes against those expectations.



DIMENSIONS OF GAME AUDIO TRANSGRESSION

AESTHETIC

The sound mainly changes how the game feels:

- Mood;
- Atmosphere;
- Perception;
- Discomfort.

LUDIC

The sound mainly changes how the player plays:

- Feedback;
- Control;
- Action;
- Navigation.

SOCIOCULTURAL

Sound changes how the player interprets meaning:

- Ethics;
- Culture;
- Society;
- Moral discomfort.

HYBRID

More than one happens at the same time.

EXAMPLES

AESTHETIC

A happy menu theme slowly becomes distorted and off-key.
Nothing in the gameplay changes, but the mood becomes uncomfortable.

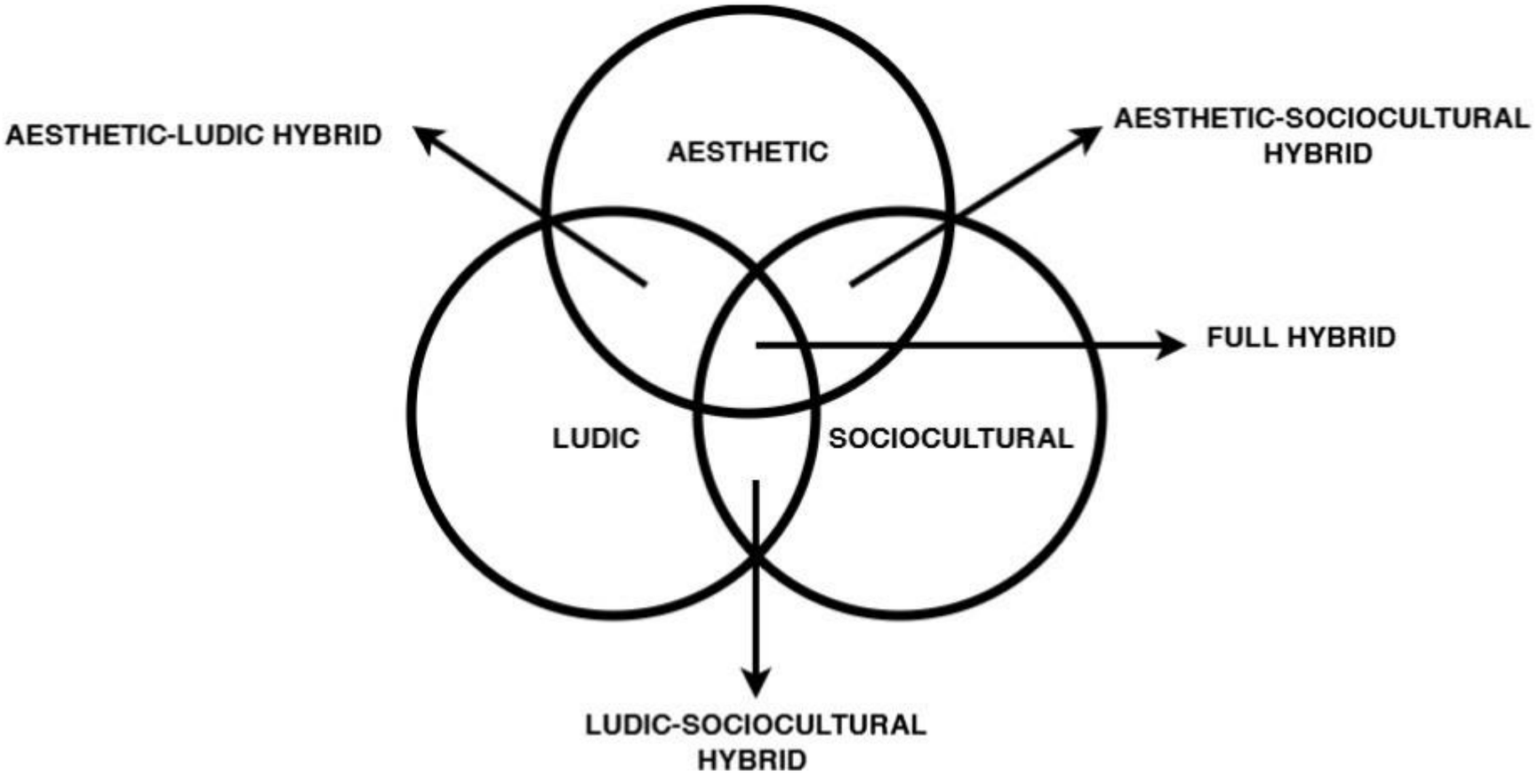
LUDIC

Enemy footsteps come from the wrong direction.
The player cannot trust sound to locate danger.

SOCIOCULTURAL

Hostile voices make the player feel judged or excluded.
The sound changes the social or moral meaning of the space.

FRAMEWORK FOR GAME AUDIO TRANSGRESSION



3.INTRODUCTION OF THE DECK TOOL

A quick overview of how the card decks work and how they should be used to build a concept.

GOAL OF THE WORKSHOP

The goal of this workshop is to understand whether the deck tool helps people create clear and interesting game audio transgression concepts. We want to see what kinds of ideas the tool supports, get some feedback, and suggestions for how it can be improved in the future.

THE SEVEN DECKS



1

Use the decks to build the basic structure of your idea.



2

Brainstorm the sound change, and describe exactly what should happen to the sound.

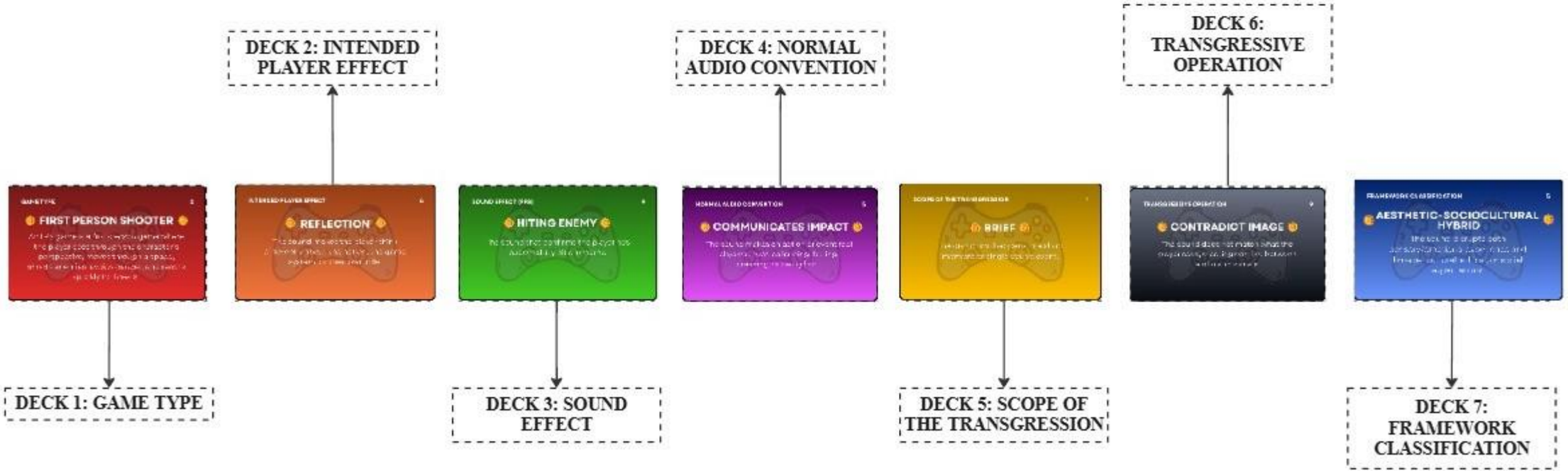
3

Complete the final concept sheet.

4.GAME CONCEPT

Creation of the game concept by combining the selected cards into a clear sound-based concept.

Choose one card from each deck and place it on it's respective slot bellow to create the game concept.



DECK 01

GAME TYPE DECK

Choose the broad game context. This deck defines the type of game the concept will be based on. The chosen game type determines which sound events and gameplay situations are available in the next decks.

GAME TYPE 1

2D PLATFORMER

A 2D platformer is a side-view game where the player moves through a level by walking, jumping, avoiding obstacles, defeating enemies, and collecting objects.



2D PLAT

GAME TYPE 2

FIRST PERSON SHOOTER

An FPS game is a first-person game where the player sees through the character's perspective, moves through a space, shoots enemies, avoids danger, and reacts quickly to threats.



FPS

GAME TYPE 3

RACING GAME

A racing or karting game is a driving game where the player controls a vehicle, accelerates, turns, avoids collisions, passes checkpoints, and tries to reach the finish line.



KART

DECK 02

INTENDED PLAYER EFFECT

Choose the main experience the concept is trying to create for the player.

INTENDED PLAYER EFFECT 1

CONFUSION

The player becomes unsure about what happened, what the sound means, or how to interpret the situation.

INTENDED PLAYER EFFECT 2

DISTRUST

The player stops trusting the game's sounds as reliable guidance and feedback.

INTENDED PLAYER EFFECT 3

DISCOMFORT

The sound makes the player feel uneasy, disturbed, or emotionally unsettled.

INTENDED PLAYER EFFECT 4

TENSION

The sound increases stress, or anticipation during play.

INTENDED PLAYER EFFECT 5

SURPRISE

The sound breaks the player's expectation suddenly or unexpectedly.

INTENDED PLAYER EFFECT 6

REFLECTION

The sound makes the player think differently about the action, the game system, or their own role.

INTENDED PLAYER EFFECT 7

LOSS OF CONTROL

The player feels less able to act confidently or understand how to control the situation.

INTENDED PLAYER EFFECT 8

WORLD INSTABILITY

The sound makes the gameworld feel less stable and trustworthy.

DECK 03-A

SOUND EFFECT

Choose the sound event or sound layer that will be changed in the concept.

SOUND EFFECT (2D PLATFORMER) 1

MUSIC

The background music that shapes the rhythm, mood, and tone of the level.

SOUND EFFECT (2D PLATFORMER) 2

JUMP

The sound that confirms the player has jumped and supports the feeling of movement and control.

SOUND EFFECT (2D PLATFORMER) 3

LANDING JUMP

The sound that confirms the player has landed and helps communicate impact and weight.

SOUND EFFECT (2D PLATFORMER) 4

KILLING ENEMY

The sound that confirms an enemy has been defeated and usually signals success or progress.

SOUND EFFECT (2D PLATFORMER) 5

PICKING UP ORB

The sound that confirms the player has collected an object, usually acting as reward feedback.

SOUND EFFECT (2D PLATFORMER) 6

DEATH NOISE

The sound that communicates player death, or the end of an attempt.

SOUND EFFECT (2D PLATFORMER) 7

HURT NOISE

The sound that communicates damage and tells the player that something harmful has happened.

SOUND EFFECT (2D PLATFORMER) 8

WALKING NOISE

The sound of the player's movement, helping create presence and connection to the level.

DECK 03-B

SOUND EFFECT (FPS) 1

SHOOTING ENEMY

The sound of firing at an enemy, usually confirming the firing and damage inflicted.

SOUND EFFECT (FPS) 2

RELOAD

The sound that communicates weapon reloading and tells the player when they are ready to shoot again.

SOUND EFFECT (FPS) 3

FOOTSTEPS

The sound of player movement, often helping with presence and spatial awareness.

SOUND EFFECT (FPS) 4

HEALING ITEM

The sound that confirms the player has collected health item.

SOUND EFFECT (FPS) 5

AMBIENT NOISE

The background sound of the space, used to create atmosphere and give an identity to the world.

SOUND EFFECT (FPS) 6

MUSIC

The music that shapes the tone of combat.

SOUND EFFECT (FPS) 7

ENEMY DETECTION

The sound that warns the player that an enemy has noticed them and danger is incoming.

SOUND EFFECT (FPS) 8

ENEMY SHOOTING

The sound of enemies attacking, helping the player understand threat, direction, and danger.

SOUND EFFECT (FPS) 9

HITING ENEMY

The sound that confirms the player has successfully hit an enemy.

DECK 03-C


SOUND EFFECT (RACING)
1
MUSIC
The music that gives the energy and rhythm to the race.
SOUND EFFECT (RACING)
2
ENGINE RUNNING
The sound of the vehicle's engine, usually communicating speed and acceleration.
SOUND EFFECT (RACING)
3
PASSING CHECKPOINT
The sound that confirms the player has passed a checkpoint and is making progress.
SOUND EFFECT (RACING)
4
FINISH RACE
The sound that marks completion and the end of the race.

DECK 04

NORMAL AUDIO CONVENTION

Define what the player normally expects the selected sound to do.

NORMAL AUDIO CONVENTION 1

CONFIRM SUCCESS

The sound tells the player that an action worked or that something positive happened.

NORMAL AUDIO CONVENTION 2

WARNS ABOUT DANGER

The sound alerts the player to a threat, risk or enemy.

NORMAL AUDIO CONVENTION 3

GUIDES THE PLAYER

The sound helps the player understand where to go, what to do, or what matters next.

NORMAL AUDIO CONVENTION 4

SUPPORTS IMMERSION

The sound helps the player feel present inside the gameworld and connected to the experience.

NORMAL AUDIO CONVENTION 5

COMMUNICATES IMPACT

The sound makes an action or event feel physical, such as landing, hitting, crashing, or being hurt.

NORMAL AUDIO CONVENTION 6

GIVES SPATIAL INFORMATION

The sound helps the player understand direction, distance, position, or where something is happening.

NORMAL AUDIO CONVENTION 7

MARKS PROGRESS

The sound tells the player that they have advanced, reached a checkpoint, completed a step, or moved closer to the goal.

NORMAL AUDIO CONVENTION 8

REINFORCES CONTROL

The sound helps the player feel that their actions are responsive and clear.

NORMAL AUDIO CONVENTION 9

CREATES EMOTIONAL TONE

The sound shapes the mood of the moment, such as tension, fear, excitement or discomfort.

NORMAL AUDIO CONVENTION 10

CONFIRM FAILURE

The sound tells the player that an action failed, the player was hurt, died, lost, or made a mistake.

DECK 05


SCOPE OF THE TRANSGRESSION
Define how long the transgression lasts and how it behaves.
SCOPE OF THE TRANSGRESSION 1
BRIEF
The disruption happens in a short moment or single sound event.
SCOPE OF THE TRANSGRESSION 2
SUSTAINED
The disruption lasts across a longer section of gameplay.
SCOPE OF THE TRANSGRESSION 3
ESCALATING
The disruption becomes stronger, stranger, or more intense over time.
SCOPE OF THE TRANSGRESSION 4
REPEATED
The disruption happens more than once, creating a pattern the player starts to notice.

DECK 06

TRANSGRESSIVE OPERATION

Define how the selected sound is changed to disrupt the player's expectation.

TRANSGRESSIVE OPERATION 1

REMOVE IT

The expected sound is taken away, creating absence where the player expects feedback.

TRANSGRESSIVE OPERATION 2

DELAY IT

The sound happens too late, breaking the expected timing between action and feedback.

TRANSGRESSIVE OPERATION 3

INVERT IT

The sound gives the opposite meaning, such as success sounding like failure or danger sounding like reward.

TRANSGRESSIVE OPERATION 4

DISTORT IT

The sound becomes strange, broken, corrupted, noisy, or difficult to interpret.

TRANSGRESSIVE OPERATION 5

MISPLACE IT

The sound appears in the wrong place, direction, source, or situation.

TRANSGRESSIVE OPERATION 6

MAKE IT UNRELIABLE

The sound sometimes works as expected and sometimes does not, making the player unsure when to trust it.

TRANSGRESSIVE OPERATION 7

MAKE IT EXCESSIVE

The sound becomes too loud, too intense, too frequent, or too dramatic for the situation.

TRANSGRESSIVE OPERATION 8

MAKE IT TOO INTIMATE

The sound feels too close, personal, invasive, or directed at the player.

TRANSGRESSIVE OPERATION 9

CONTRADICT IMAGE

The sound does not match what the player sees, creating conflict between audio and visuals.

TRANSGRESSIVE OPERATION 10

REASSIGN ITS FUNCTION

The sound keeps its form but changes role, such as a reward sound becoming a warning or a guide sound becoming a threat.

DECK 07

FRAMEWORK CLASSIFICATION

Classify the concept after it has been created. This deck identifies what type of game audio transgression the concept produces.

FRAMEWORK CLASSIFICATION 1

AESTHETIC

The sound mainly disrupts mood, atmosphere, perception, sensory experience, or how the player feels the gameworld.

FRAMEWORK CLASSIFICATION 2

LUDIC

The sound mainly disrupts gameplay, feedback, control, action, rules, or the player's ability to act confidently.

FRAMEWORK CLASSIFICATION 3

SOCIOCULTURAL

The sound mainly disrupts cultural, ethical, social, or moral expectations, making the player reflect on broader meanings.

FRAMEWORK CLASSIFICATION 4

AESTHETIC-LUDIC HYBRID

The sound disrupts both how the player experiences the game and how the player acts within it.

FRAMEWORK CLASSIFICATION 5

AESTHETIC-SOCIOCULTURAL HYBRID

The sound disrupts both sensory/emotional experience and broader cultural, ethical, or social expectations.

FRAMEWORK CLASSIFICATION 6

LUDIC-SOCIOCULTURAL HYBRID

The sound disrupts both gameplay/action and broader ethical, cultural, or social meaning.

FRAMEWORK CLASSIFICATION 7

FULL HYBRID

The sound disrupts aesthetic, ludic, and socio-cultural dimensions at the same time.

5.BRAINSTORMING AND FINAL GAME CONCEPT SHEET

A space to develop the idea in more detail and describe exactly how the sound should be changed.

Write down possible ideas for the implementation of the game concept and choose one of them.

acertar inimgo mas o som não existe confundo o jogador e faz o refletir sobre a importancia da sua ação

fazer o jogador refletir sobre acertar no inimigo com som ou triste ou humano

trocar o som de atingir o inimigo por atingir o player fazendo este questionar se foi atingido

FINAL GAME CONCEPT SHEET

	SECTION	DESCRIPTION
1	GAME TYPE	FPS
2	INTENDED PLAYER EFFECT	REFLECTION
3	SOUND EFFECT	HITTING ENEMY
4	NORMAL AUDIO CONVENTION	COMMUNICATES IMPACT
5	SCOPE	BRIEF
6	TRANSGRESSIVE OPERATION	CONTRADIC IMAGE
7	FRAMEWORK CLASSIFICATION	AESTHETIC SOCIOCULTURAL HYBRID
8	DETAILED DESCRIPTION OF TRANSGRESSION FOR IMPLEMENTATION	Fazer o jogador refletir sobre acertar no inimigo com som ou triste ou humano

6.DISCUSSION AND FEEDBACK

Final discussion of the tool and the game concepts



Google Docs

Workshop Survey

Informed Concent You are invited to answer this short questionnaire after participating in the online workshop on game audio transgression. The pur...

Appendix F: Workshop Session 1 Observation Sheet

WORKSHOP SESSION 1 OBSERBVATION SHEET

General Information

Workshop Session	Participants	Date	Start Time
Session 1	Participant A C B	11/05	15:50

Timestamp	Activity Moment	Observed Phenomenon	Description	Interpretation/Note
16:46	SECTION 4 (DECK 2)	OBSERVATION	Makes a note about how the reflection card wouldn't make sense in the fps since the goal of the game is to kill things	Participant has a narrow view of what can be applied to the scenario, I gave an example of how it could work well and the card ended up being chosen (could indicate the card itself needs some tweaks in the description)
1G:45	SECTION 4 (DECK 3)	QUESTION	Participant questions if the music card and the ambience noise card can't be confusing if they don't overlap	Had to clarify to the participant the difference between them even though booth set the mood they do it in different ways maybe a change in card description would be a good idea to clarify this
25:03	SECTION 4 (DECK 4)	SUGGESTION	Participant says that maybe there should be different names for certain cards since he felt some of them overlap or are a little confusing	Feedback taken into consideration, and valid since from my perspective it is easy to understand must other participants might find it hard to do so.
38:23	SECTION 5	QUESTION	Participant mentions the possibility of a plyer interpreting a transgressive moment as a glitch	Maybe clarify better that transgression in this application comes from the intent the game developer has when

			instead of transgression itself.	making the moment, even though the player may not perceive the moment as transgressive it's still a transgressive moment since that was the intent of the developer.
47:42	SECTION 6	QUESTION	When filling the final game concept sheet, the participant questions in the normal audio convention if removing the sound complexity would be going against the convention better since removing the sound completely shuts down the communicate impact convention since it's the most opposite	The participant provides an interesting point but it's important to clarify that going against a convention doesn't need to do the exact opposite since in this case providing the wrong impact is going against the convention as well so it still fits the scenario

Appendix G: Workshop Session 2 Miro Board Output

1.ONBOARDING

Introduction of the participants
and the workshop

ACTIVITY	DESCRIPTION OF THE ACTIVITY	DURATION
1.ONBOARDING	Introduction of the participants and the workshop	10 MIN
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5.BRAINSTORMING AND FINAL GAME CONCEPT SHEET	A space to develop the idea in more detail and describe exactly how the sound should be changed.	15 MIN
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		1H 35MIN

2.FRAMEWORK INTRODUCTION

A brief explanation of game audio transgression and the framework categories used in the workshop.

WHAT IS GAME AUDIO TRANSGRESSION ?

DEFINITION

Game audio transgression happens when audio disrupts a convention.

Games teach us to expect sound to behave in certain ways:

- Reward sounds confirm success;
- Warning sounds signal danger;
- Footsteps help locate movement;
- Music supports the mood.

Transgression begins when sound goes against those expectations.



DIMENSIONS OF GAME AUDIO TRANSGRESSION

AESTHETIC

The sound mainly changes how the game feels:

- Mood;
- Atmosphere;
- Perception;
- Discomfort.

LUDIC

The sound mainly changes how the player plays:

- Feedback;
- Control;
- Action;
- Navigation.

SOCIOCULTURAL

Sound changes how the player interprets meaning:

- Ethics;
- Culture;
- Society;
- Moral discomfort.

HYBRID

More than one happens at the same time.

EXAMPLES

AESTHETIC

A happy menu theme slowly becomes distorted and off-key.
Nothing in the gameplay changes, but the mood becomes uncomfortable.

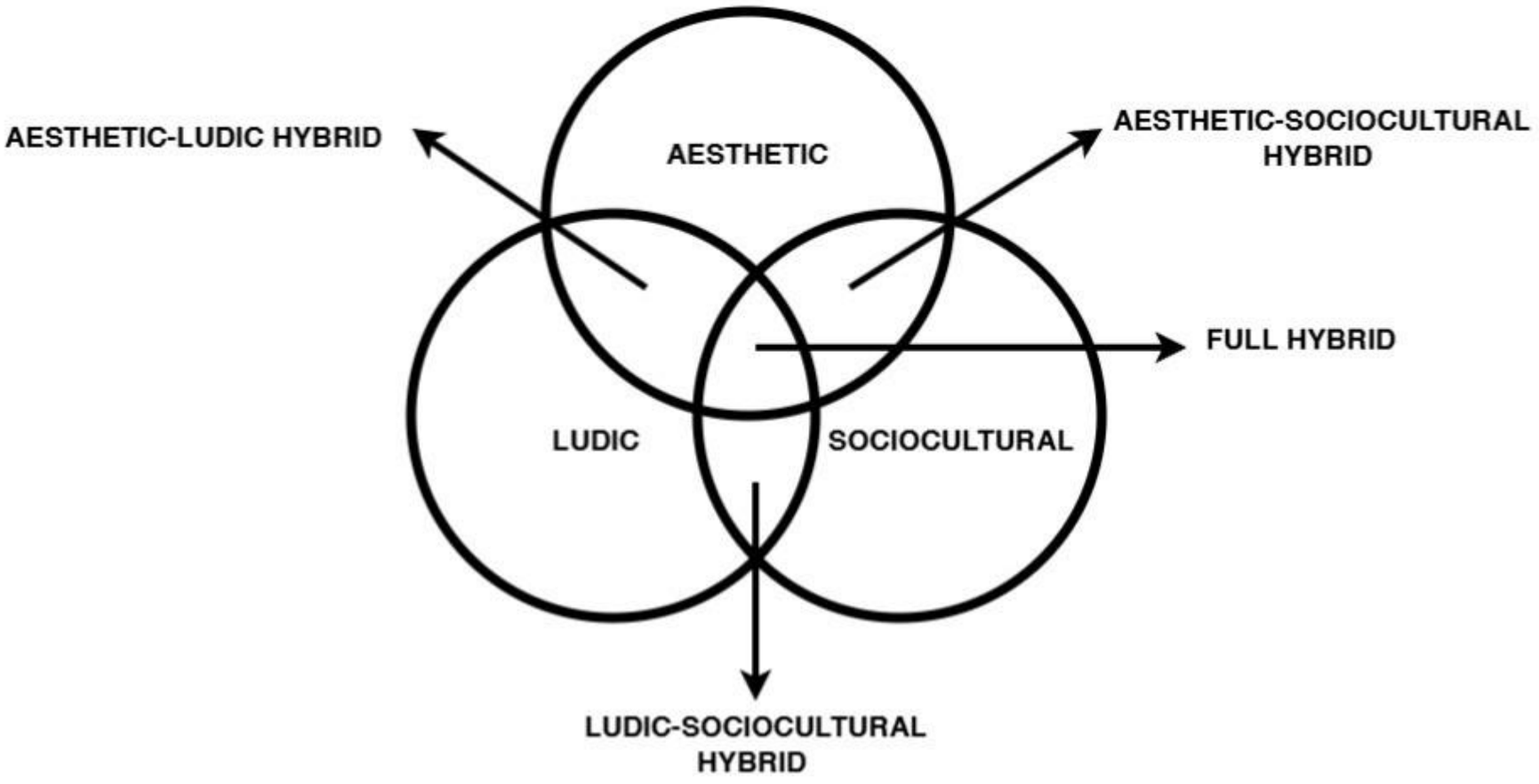
LUDIC

Enemy footsteps come from the wrong direction.
The player cannot trust sound to locate danger.

SOCIOCULTURAL

Hostile voices make the player feel judged or excluded.
The sound changes the social or moral meaning of the space.

FRAMEWORK FOR GAME AUDIO TRANSGRESSION



3.INTRODUCTION OF THE DECK TOOL

A quick overview of how the card decks work and how they should be used to build a concept.

GOAL OF THE WORKSHOP

The goal of this workshop is to understand whether the deck tool helps people create clear and interesting game audio transgression concepts. We want to see what kinds of ideas the tool supports, get some feedback, and suggestions for how it can be improved in the future.

THE SEVEN DECKS



1

Use the decks to build the basic structure of your idea.



2

Brainstorm the sound change, and describe exactly what should happen to the sound.

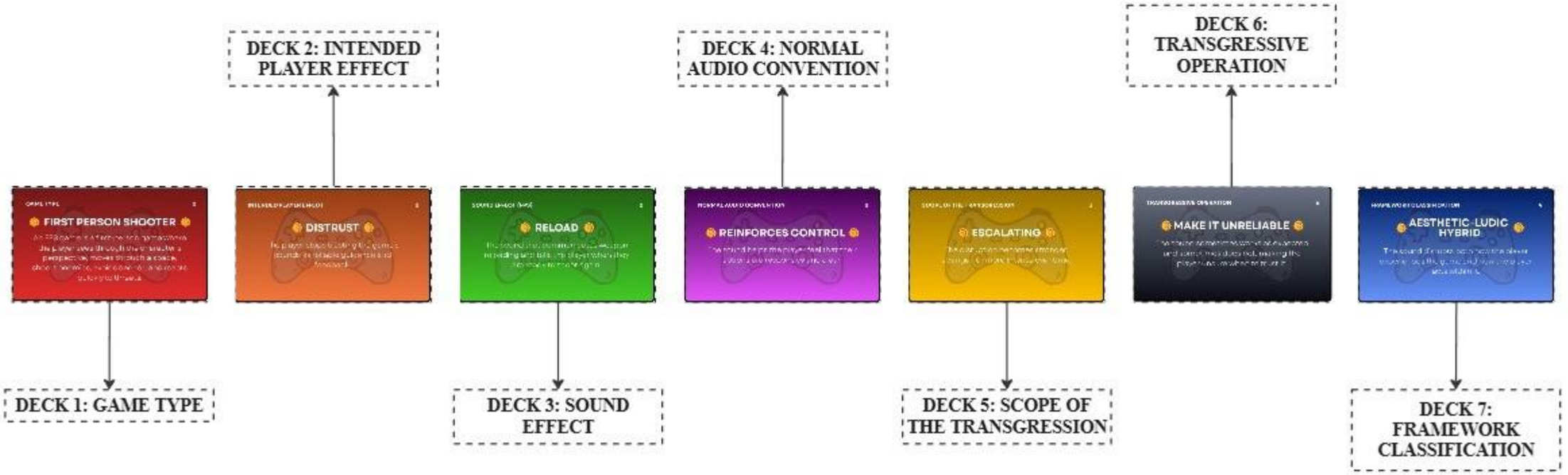
3

Complete the final concept sheet.

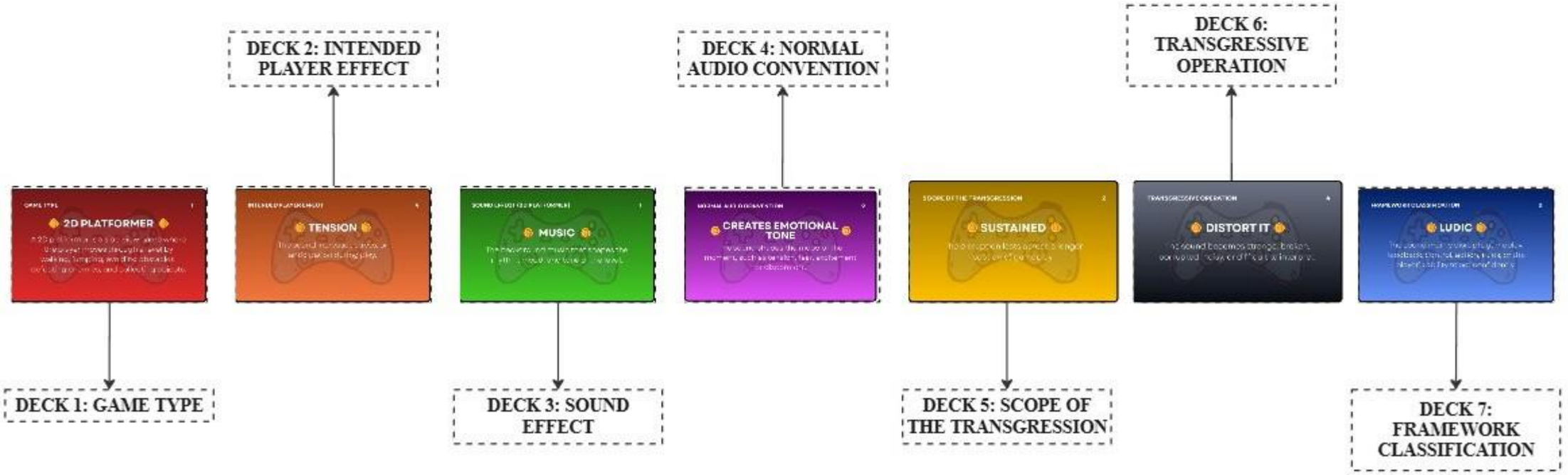
4.GAME CONCEPT

Creation of the game concept by combining the selected cards into a clear sound-based concept.

Choose one card from each deck and place it on it's respective slot bellow to create the game concept.



Choose one card from each deck and place it on it's respective slot bellow to create the game concept.



DECK 01

GAME TYPE DECK

Choose the broad game context. This deck defines the type of game the concept will be based on. The chosen game type determines which sound events and gameplay situations are available in the next decks.

GAME TYPE 1

2D PLATFORMER

A 2D platformer is a side-view game where the player moves through a level by walking, jumping, avoiding obstacles, defeating enemies, and collecting objects.



2D PLAT

GAME TYPE 2

FIRST PERSON SHOOTER

An FPS game is a first-person game where the player sees through the character's perspective, moves through a space, shoots enemies, avoids danger, and reacts quickly to threats.



FPS

GAME TYPE 3

RACING GAME

A racing or karting game is a driving game where the player controls a vehicle, accelerates, turns, avoids collisions, passes checkpoints, and tries to reach the finish line.



KART

DECK 02

INTENDED PLAYER EFFECT

Choose the main experience the concept is trying to create for the player.

INTENDED PLAYER EFFECT 1

CONFUSION

The player becomes unsure about what happened, what the sound means, or how to interpret the situation.

INTENDED PLAYER EFFECT 2

DISTRUST

The player stops trusting the game's sounds as reliable guidance and feedback.

INTENDED PLAYER EFFECT 3

DISCOMFORT

The sound makes the player feel uneasy, disturbed, or emotionally unsettled.

INTENDED PLAYER EFFECT 4

TENSION

The sound increases stress, or anticipation during play.

INTENDED PLAYER EFFECT 5

SURPRISE

The sound breaks the player's expectation suddenly or unexpectedly.

INTENDED PLAYER EFFECT 6

REFLECTION

The sound makes the player think differently about the action, the game system, or their own role.

INTENDED PLAYER EFFECT 7

LOSS OF CONTROL

The player feels less able to act confidently or understand how to control the situation.

INTENDED PLAYER EFFECT 8

WORLD INSTABILITY

The sound makes the gameworld feel less stable and trustworthy.

DECK 03-A

SOUND EFFECT

Choose the sound event or sound layer that will be changed in the concept.

SOUND EFFECT (2D PLATFORMER) 1

MUSIC

The background music that shapes the rhythm, mood, and tone of the level.

SOUND EFFECT (2D PLATFORMER) 2

JUMP

The sound that confirms the player has jumped and supports the feeling of movement and control.

SOUND EFFECT (2D PLATFORMER) 3

LANDING JUMP

The sound that confirms the player has landed and helps communicate impact and weight.

SOUND EFFECT (2D PLATFORMER) 4

KILLING ENEMY

The sound that confirms an enemy has been defeated and usually signals success or progress.

SOUND EFFECT (2D PLATFORMER) 5

PICKING UP ORB

The sound that confirms the player has collected an object, usually acting as reward feedback.

SOUND EFFECT (2D PLATFORMER) 6

DEATH NOISE

The sound that communicates player death, or the end of an attempt.

SOUND EFFECT (2D PLATFORMER) 7

HURT NOISE

The sound that communicates damage and tells the player that something harmful has happened.

SOUND EFFECT (2D PLATFORMER) 8

WALKING NOISE

The sound of the player's movement, helping create presence and connection to the level.

DECK 03-B

SOUND EFFECT (FPS) 1

SHOOTING ENEMY

The sound of firing at an enemy, usually confirming the firing and damage inflicted.

SOUND EFFECT (FPS) 2

RELOAD

The sound that communicates weapon reloading and tells the player when they are ready to shoot again.

SOUND EFFECT (FPS) 3

FOOTSTEPS

The sound of player movement, often helping with presence and spatial awareness.

SOUND EFFECT (FPS) 4

HEALING ITEM

The sound that confirms that a player has collected health item.

SOUND EFFECT (FPS) 5

AMBIENT NOISE

The background sound of the space, used to create atmosphere and give an identity to the world.

SOUND EFFECT (FPS) 6

MUSIC

The music that shapes the tone of combat.

SOUND EFFECT (FPS) 7

ENEMY DETECTION

The sound that warns the player that an enemy has noticed them and danger is incoming.

SOUND EFFECT (FPS) 8

ENEMY SHOOTING

The sound of enemies attacking, helping the player understand threat, direction, and danger.

SOUND EFFECT (FPS) 9

HITING ENEMY

The sound that confirms the player has successfully hit an enemy.

DECK 03-C


SOUND EFFECT (RACING)
1
MUSIC
The music that gives the energy and rhythm to the race.
SOUND EFFECT (RACING)
2
ENGINE RUNNING
The sound of the vehicle's engine, usually communicating speed and acceleration.
SOUND EFFECT (RACING)
3
PASSING CHECKPOINT
The sound that confirms the player has passed a checkpoint and is making progress.
SOUND EFFECT (RACING)
4
FINISH RACE
The sound that marks completion and the end of the race.

DECK 04

NORMAL AUDIO CONVENTION

Define what the player normally expects the selected sound to do

NORMAL AUDIO CONVENTION 1

CONFIRM SUCCESS

The sound tells the player that an action worked or that something positive happened.

NORMAL AUDIO CONVENTION 2

WARNS ABOUT DANGER

The sound alerts the player to a threat, risk or enemy.

NORMAL AUDIO CONVENTION 3

GUIDES THE PLAYER

The sound helps the player understand where to go, what to do, or what matters next.

NORMAL AUDIO CONVENTION 4

SUPPORTS IMMERSION

The sound helps the player feel present inside the gameworld and connected to the experience.

NORMAL AUDIO CONVENTION 5

COMMUNICATES IMPACT

The sound makes an action or event feel physical, such as lancing, hitting, crashing, or being hurt.

NORMAL AUDIO CONVENTION 6

GIVES SPATIAL INFORMATION

The sound helps the player understand direction, distance, position, or where something is happening

NORMAL AUDIO CONVENTION 7

MARKS PROGRESS

The sound tells the player that they have advanced, reached a checkpoint, completed a step, or moved closer to the goal.

NORMAL AUDIO CONVENTION 8

REINFORCES CONTROL

The sound helps the player feel that their actions are responsive and clear.

NORMAL AUDIO CONVENTION 9

CREATES EMOTIONAL TONE

The sound shapes the mood of the moment, such as tension, fear, excitement or discomfort.

NORMAL AUDIO CONVENTION 10

CONFIRM FAILURE

The sound tells the player that an action failed, the player was hurt, died, lost, or made a mistake.

DECK 05


SCOPE OF THE TRANSGRESSION
Define how long the transgression lasts and how it behaves.
SCOPE OF THE TRANSGRESSION 1
BRIEF
The disruption happens in a short moment or single sound event.
SCOPE OF THE TRANSGRESSION 2
SUSTAINED
The disruption lasts across a longer section of gameplay.
SCOPE OF THE TRANSGRESSION 3
ESCALATING
The disruption becomes stronger, stranger, or more intense over time.
SCOPE OF THE TRANSGRESSION 4
REPEATED
The disruption happens more than once, creating a pattern the player starts to notice.

DECK 06

TRANSGRESSIVE OPERATION

Define how the selected sound is changed to disrupt the player's expectation.

TRANSGRESSIVE OPERATION 1

REMOVE IT

The expected sound is taken away, creating absence where the player expects feedback.

TRANSGRESSIVE OPERATION 2

DELAY IT

The sound happens too late, breaking the expected timing between action and feedback.

TRANSGRESSIVE OPERATION 3

INVERT IT

The sound gives the opposite meaning, such as success sounding like failure or danger sounding like reward.

TRANSGRESSIVE OPERATION 4

DISTORT IT

The sound becomes strange, broken, corrupted, noisy, or difficult to interpret.

TRANSGRESSIVE OPERATION 5

MISPLACE IT

The sound appears in the wrong place, direction, source, or situation.

TRANSGRESSIVE OPERATION 6

MAKE IT UNRELIABLE

The sound sometimes works as expected and sometimes does not, making the player unsure when to trust it.

TRANSGRESSIVE OPERATION 7

MAKE IT EXCESSIVE

The sound becomes too loud, too intense, too frequent, or too dramatic for the situation.

TRANSGRESSIVE OPERATION 8

MAKE IT TOO INTIMATE

The sound feels too close, personal, invasive, or directed at the player.

TRANSGRESSIVE OPERATION 9

CONTRADICT IMAGE

The sound does not match what the player sees, creating conflict between audio and visuals.

TRANSGRESSIVE OPERATION 10

REASSIGN ITS FUNCTION

The sound keeps its form but changes role, such as a reward sound becoming a warning or a guide sound becoming a threat.

DECK 07

FRAMEWORK CLASSIFICATION

Classify the concept after it has been created. This deck identifies what type of game audio transgression the concept produces.

FRAMEWORK CLASSIFICATION 1

AESTHETIC

The sound mainly disrupts mood, atmosphere, perception, sensory experience, or how the player feels the gameworld.

FRAMEWORK CLASSIFICATION 2

LUDIC

The sound mainly disrupts gameplay, feedback, control, action, rules, or the player's ability to act confidently.

FRAMEWORK CLASSIFICATION 3

SOCIOCULTURAL

The sound mainly disrupts cultural, ethical, social, or moral expectations, making the player reflect on broader meanings.

FRAMEWORK CLASSIFICATION 4

AESTHETIC-LUDIC HYBRID

The sound disrupts both how the player experiences the game and how the player acts within it.

FRAMEWORK CLASSIFICATION 5

AESTHETIC-SOCIOCULTURAL HYBRID

The sound disrupts both sensory/emotional experience and broader cultural, ethical, or social expectations.

FRAMEWORK CLASSIFICATION 6

LUDIC-SOCIOCULTURAL HYBRID

The sound disrupts both gameplay/action and broader ethical, cultural, or social meaning.

FRAMEWORK CLASSIFICATION 7

FULL HYBRID

The sound disrupts aesthetic, ludic, and socio-cultural dimensions at the same time.

5.BRAINSTORMING AND FINAL GAME CONCEPT SHEET

A space to develop the idea in more detail and describe exactly how the sound should be changed.

Write down possible ideas for the implementation of the game concept and choose one of them. FPS

O JOGADOR QUANDO TEM O HP BAIXO, O SOM DO RELOAD FICA CADA VEZ MAIS GRAVE E DISTORTED (MUDA A PERCEÇAO DESTE FAZ O UNRELIABLE E ESCALETES COM MENOS HP)

A MEDIDA QUE O JOGADOR AVANÇE NA HISTORIA SE TIVESSE A SER BUE VIOLENTO O JOGO FICAVA MAIS UNRELIABLE, OUVE BARULHO DE RELOAD MAS ESTE NAO ACONTECE (QUANTO MAISVIOLENTO MAIS UNRELIADBLE)

FINAL GAME CONCEPT SHEET

	SECTION	DESCRIPTION
1	GAME TYPE	FPS
2	INTENDED PLAYER EFFECT	DISTRUST
3	SOUND EFFECT	RELOAD
4	NORMAL AUDIO CONVENTION	REINFORCES CONTROL
5	SCOPE	ESCALATING
6	TRANSGRESSIVE OPERATION	MAKE IT UNRELIABLE
7	FRAMEWORK CLASSIFICATION	AESTHETIC-LUDIC HYBRID
8	DETAILED DESCRIPTION OF TRANSGRESSION FOR IMPLEMENTATION	A MEDIDA QUE O JOGADOR AVANÇE NA HISTORIA SE TIVESSE A SER BUE VIOLENTO O JOGO FICAVA MAIS UNRELIABLE, OUVE BARULHO DE RELOAD MAS ESTE NAO ACONTECE (QUANTO MAISVIOLENTO MAIS UNRELIADBLE)

Write down possible ideas for the implementation of the game concept and choose one of them. 2D

Jogo de plataforma rítmico onde o sucesso (ou não) do jogador afeta a velocidade da música que é usada como guia para os inputs. Quando sucede repetidamente, a música fica mais rápida, que cria tensão para o jogador. Ao inverso, quando falha um salto, volta a um 'checkpoint' anterior com a música mais lenta, idealmente com a percussão mais baixo na mix, para fazer a recuperação ainda ter uma semblance de desafio

FINAL GAME CONCEPT SHEET

	SECTION	DESCRIPTION
1	GAME TYPE	2D
2	INTENDED PLAYER EFFECT	TENSION
3	SOUND EFFECT	MUSIC
4	NORMAL AUDIO CONVENTION	CREATE EMOTIONAL TONE
5	SCOPE	SUSTAINED
6	TRANSGRESSIVE OPERATION	DISTORT IT
7	FRAMEWORK CLASSIFICATION	AESTHETIC-LUDIC HYBRID
8	DETAILED DESCRIPTION OF TRANSGRESSION FOR IMPLEMENTATION	Jogo de plataforma rítmico onde o sucesso (ou não) do jogador afeta a velocidade da música que é usada como guia para os inputs. Quando sucede repetidamente, a música fica mais rápida, que cria tensão para o jogador. Ao inverso, quando falha um salto, volta a um 'checkpoint' anterior com a música mais lenta, idealmente com a percussão mais baixo na mix, para fazer a recuperação ainda ter uma semblance de desafio

6.DISCUSSION AND FEEDBACK

Final discussion of the tool and the game concepts



Google Docs

Workshop Survey

Informed Concent You are invited to answer this short questionnaire after participating in the online workshop on game audio transgression. The pur...

Appendix H: Workshop Session 2 Observation Sheet

WORKSHOP SESSION 2 OBSERBVATION SHEET

General Information

Workshop Session	Participants	Date	Start Time
Session 2	Participant C / D	13/05	16:00

Timestamp	Activity Moment	Observed Phenomenon	Description	Interpretation/Note
05:25	SECTION 2	OBSERVATION	Participant quickly points out an example that fits perfectly in the game audio transgression category	interesting to see participants with a lot of video game experience quickly can identify transgressive moments from memory makes easier to explain
07:48	SECTION 2	QUESTIONS	Participant asks if overall racist insults in game count as sociocultural transgression	the participant gives one of the best examples in sociocultural transgression being racism it's especially useful that participants can quickly identify examples
22:12	SECTION 4	OBSERVATION	Participant asks if he can tell already a concept, he has in mind	this is interesting to see some participants come up with concepts just by being introduced to the framework
36:37	SECTION 5	OBSERVATION	Participant wanted to do another game concept, so I made an exception	I found it extremely rewarding to see the participant engage in such a positive way that he wanted to do another concept he had in mind
48:34	SECTION 5	OBSERVATION	Participant identifies with ease the framework category	In both this and the last workshop the participants were able to detect the correct framework dimension

				with ease which confirms to me a good understanding of it
54:08	SECTION 3 AGAIN 2ND CONCPET	OBSERVATION	Participant says it could work better the workshop by doing maybe smaller concepts and more of them instead since he wanted to do more of them	Interesting input, the first introduction of the framework does give the participants a lot of preconceived ideas even without the cards.
1:01:22	SECTION3 2ND CONCEPT	OBSERVATION	Participant says that in deck 6 (transgressive operation) that none of the cards fitted his idea specifically noting some of them were close	The transgressive operation deck could do with a few more cards or become a full-on open section for the participant to fill in
1:12:01	SECTION 5 2ND CONCEPT	OBSERVATION	Participant identifies with ease the framework category	Again, the participant finds it very intuitive to categorize the transgressive moment
1:13:3G	SECTION 5 2ND CONCEPT	OBSERVATION	Participant says that he can't imagine a case in this context where it could be sociocultural	Since most sociocultural cases happen in direct relation to a games narrative this workshop is limited in that case since for these to be prototyped in time there have to be some limitation in the game types demos i showed the participants, a future implementation of this would allow the participants to go way deeper into the transgression allowing for narrative

				implication and themes in general

Appendix I: Workshop Session 3 Miro Board Output

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and the workshop

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A brief explanation of game audio transgression and the framework categories used in the workshop.

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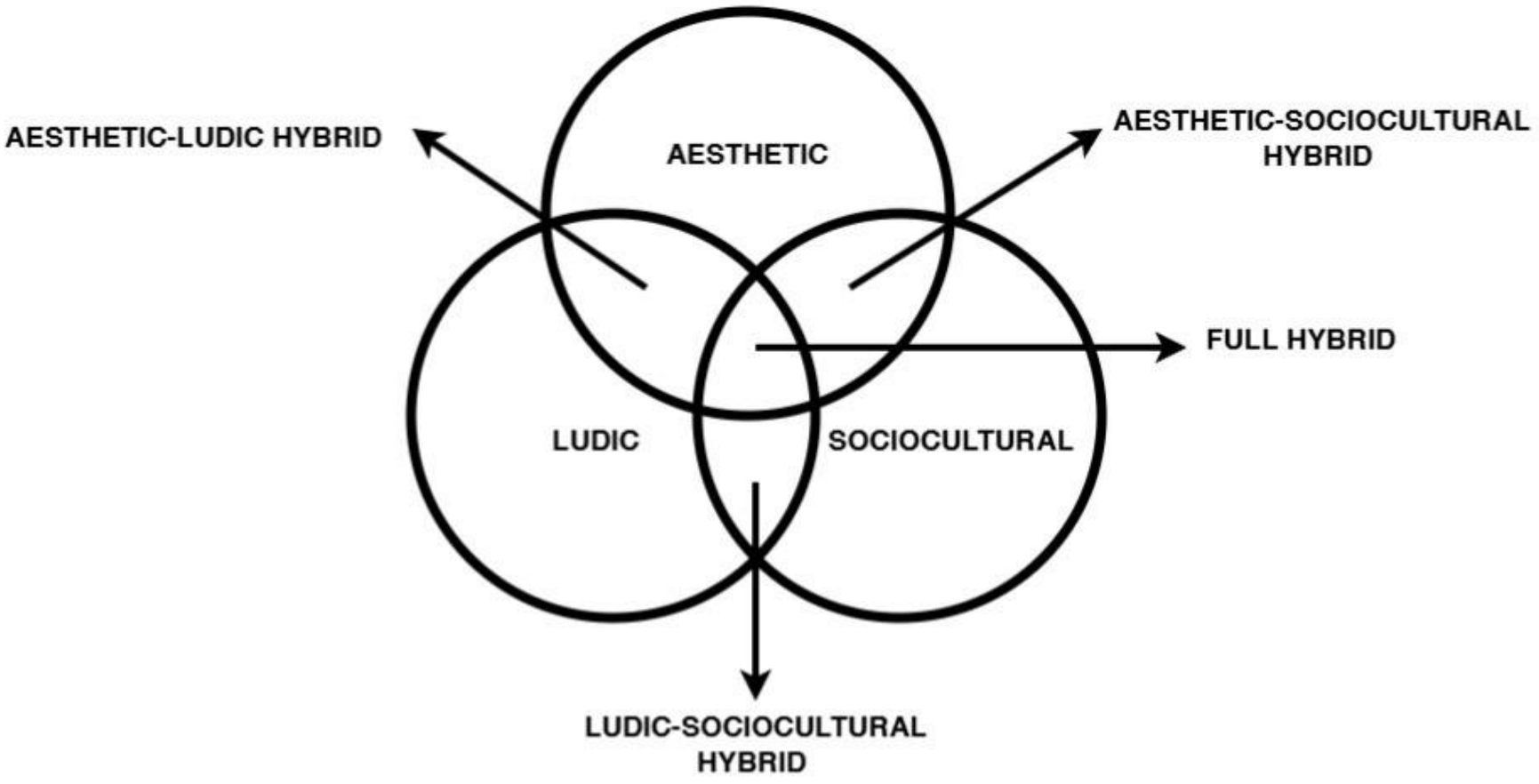
LUDIC

Enemy footsteps come from the wrong direction.
The player cannot trust sound to locate danger.

SOCIOCULTURAL

Hostile voices make the player feel judged or excluded.
The sound changes the social or moral meaning of the space.

FRAMEWORK FOR GAME AUDIO TRANSGRESSION



3.INTRODUCTION OF THE DECK TOOL

A quick overview of how the card decks work and how they should be used to build a concept.

GOAL OF THE WORKSHOP

The goal of this workshop is to understand whether the deck tool helps people create clear and interesting game audio transgression concepts. We want to see what kinds of ideas the tool supports, get some feedback, and suggestions for how it can be improved in the future.

THE SEVEN DECKS



1

Use the decks to build the basic structure of your idea.



2

Brainstorm the sound change, and describe exactly what should happen to the sound.

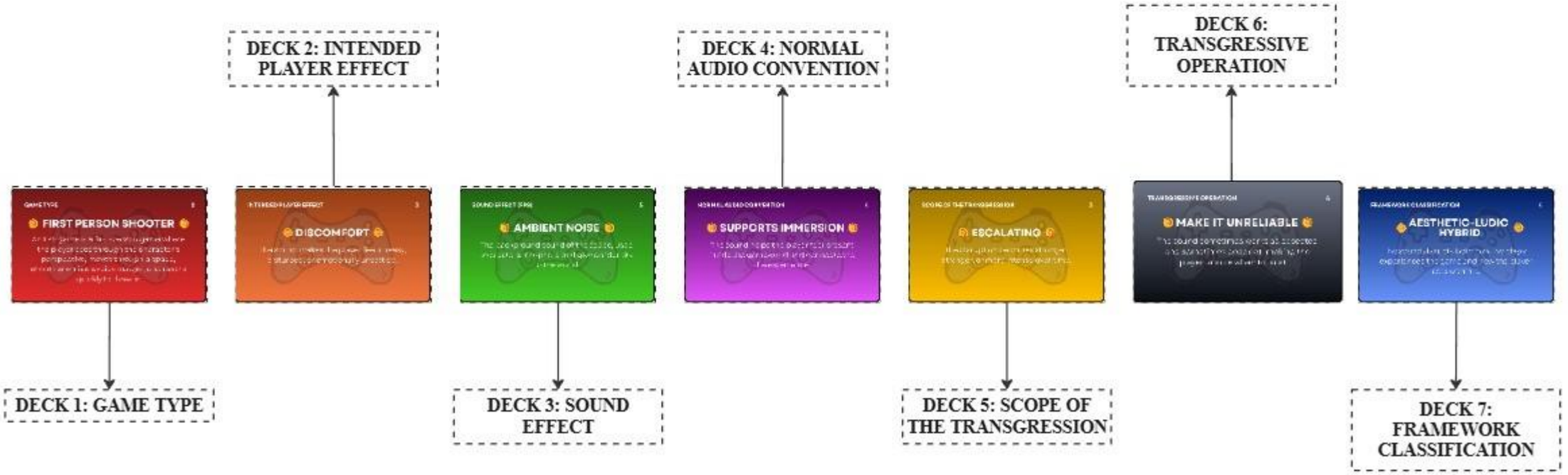
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Complete the final concept sheet.

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Creation of the game concept by combining the selected cards into a clear sound-based concept.

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2D PLAT

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An FPS game is a first-person game where the player sees through the character's perspective, moves through a space, shoots enemies, avoids danger, and reacts quickly to threats.



FPS

GAME TYPE 3

RACING GAME

A racing or karting game is a driving game where the player controls a vehicle, accelerates, turns, avoids collisions, passes checkpoints, and tries to reach the finish line.



KART

DECK 02

INTENDED PLAYER EFFECT

Choose the main experience the concept is trying to create for the player.

INTENDED PLAYER EFFECT 1

CONFUSION

The player becomes unsure about what happened, what the sound means, or how to interpret the situation.

INTENDED PLAYER EFFECT 2

DISTRUST

The player stops trusting the game's sounds as reliable guidance and feedback.

INTENDED PLAYER EFFECT 3

DISCOMFORT

The sound makes the player feel uneasy, disturbed, or emotionally unsettled.

INTENDED PLAYER EFFECT 4

TENSION

The sound increases stress, or anticipation during play.

INTENDED PLAYER EFFECT 5

SURPRISE

The sound breaks the player's expectation suddenly or unexpectedly.

INTENDED PLAYER EFFECT 6

REFLECTION

The sound makes the player think differently about the action, the game system, or their own role.

INTENDED PLAYER EFFECT 7

LOSS OF CONTROL

The player feels less able to act confidently or understand how to control the situation.

INTENDED PLAYER EFFECT 8

WORLD INSTABILITY

The sound makes the gameworld feel less stable and trustworthy.

DECK 03-A

SOUND EFFECT

Choose the sound event or sound layer that will be changed in the concept.

SOUND EFFECT (2D PLATFORMER) 1

MUSIC

The background music that shapes the rhythm, mood, and tone of the level.

SOUND EFFECT (2D PLATFORMER) 2

JUMP

The sound that confirms the player has jumped and supports the feeling of movement and control.

SOUND EFFECT (2D PLATFORMER) 3

LANDING JUMP

The sound that confirms the player has landed and helps communicate impact and weight.

SOUND EFFECT (2D PLATFORMER) 4

KILLING ENEMY

The sound that confirms an enemy has been defeated and usually signals success or progress.

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PICKING UP ORB

The sound that confirms the player has collected an object, usually acting as reward feedback.

SOUND EFFECT (2D PLATFORMER) 6

DEATH NOISE

The sound that communicates player death, or the end of an attempt.

SOUND EFFECT (2D PLATFORMER) 7

HURT NOISE

The sound that communicates damage and tells the player that something harmful has happened.

SOUND EFFECT (2D PLATFORMER) 8

WALKING NOISE

The sound of the player's movement, helping create presence and connection to the level.

DECK 03-B

SOUND EFFECT (FPS) 1

SHOOTING ENEMY

The sound of firing at an enemy, usually confirming the firing and damage inflicted.

SOUND EFFECT (FPS) 2

RELOAD

The sound that communicates weapon reloading and tells the player when they are ready to shoot again.

SOUND EFFECT (FPS) 3

FOOTSTEPS

The sound of player movement, often helping with presence and spatial awareness.

SOUND EFFECT (FPS) 4

HEALING ITEM

The sound that confirms that a player has collected health item.

SOUND EFFECT (FPS) 5

AMBIENT NOISE

The background sound of the space, used to create atmosphere and give an identity to the world.

SOUND EFFECT (FPS) 6

MUSIC

The music that shapes the tone of combat.

SOUND EFFECT (FPS) 7

ENEMY DETECTION

The sound that warns the player that an enemy has noticed them and danger is incoming.

SOUND EFFECT (FPS) 8

ENEMY SHOOTING

The sound of enemies attacking, helping the player understand threat, direction, and danger.

SOUND EFFECT (FPS) 9

HITING ENEMY

The sound that confirms the player has successfully hit an enemy.

DECK 03-C


SOUND EFFECT (RACING)
1
MUSIC
The music that gives the energy and rhythm to the race.
SOUND EFFECT (RACING)
2
ENGINE RUNNING
The sound of the vehicle's engine, usually communicating speed and acceleration.
SOUND EFFECT (RACING)
3
PASSING CHECKPOINT
The sound that confirms the player has passed a checkpoint and is making progress.
SOUND EFFECT (RACING)
4
FINISH RACE
The sound that marks completion and the end of the race.

DECK 04

NORMAL AUDIO CONVENTION

Define what the player normally expects the selected sound to do

NORMAL AUDIO CONVENTION 1

CONFIRM SUCCESS

The sound tells the player that an action worked or that something positive happened.

NORMAL AUDIO CONVENTION 2

WARNS ABOUT DANGER

The sound alerts the player to a threat, risk or enemy.

NORMAL AUDIO CONVENTION 3

GUIDES THE PLAYER

The sound helps the player understand where to go, what to do, or what matters next.

NORMAL AUDIO CONVENTION 4

SUPPORTS IMMERSION

The sound helps the player feel present inside the gameworld and connected to the experience.

NORMAL AUDIO CONVENTION 5

COMMUNICATES IMPACT

The sound makes an action or event feel physical, such as lancing, hitting, crashing, or being hurt.

NORMAL AUDIO CONVENTION 6

GIVES SPATIAL INFORMATION

The sound helps the player understand direction, distance, position, or where something is happening

NORMAL AUDIO CONVENTION 7

MARKS PROGRESS

The sound tells the player that they have advanced, reached a checkpoint, completed a step, or moved closer to the goal.

NORMAL AUDIO CONVENTION 8

REINFORCES CONTROL

The sound helps the player feel that their actions are responsive and clear.

NORMAL AUDIO CONVENTION 9

CREATES EMOTIONAL TONE

The sound shapes the mood of the moment, such as tension, fear, excitement or discomfort.

NORMAL AUDIO CONVENTION 10

CONFIRM FAILURE

The sound tells the player that an action failed, the player was hurt, died, lost, or made a mistake.

DECK 05


SCOPE OF THE TRANSGRESSION
Define how long the transgression lasts and how it behaves.
SCOPE OF THE TRANSGRESSION 1
BRIEF
The disruption happens in a short moment or single sound event.
SCOPE OF THE TRANSGRESSION 2
SUSTAINED
The disruption lasts across a longer section of gameplay.
SCOPE OF THE TRANSGRESSION 3
ESCALATING
The disruption becomes stronger, stranger, or more intense over time.
SCOPE OF THE TRANSGRESSION 4
REPEATED
The disruption happens more than once, creating a pattern the player starts to notice.

DECK 06

TRANSGRESSIVE OPERATION

Define how the selected sound is changed to disrupt the player's expectation.

TRANSGRESSIVE OPERATION 1

REMOVE IT

The expected sound is taken away, creating absence where the player expects feedback.

TRANSGRESSIVE OPERATION 2

DELAY IT

The sound happens too late, breaking the expected timing between action and feedback.

TRANSGRESSIVE OPERATION 3

INVERT IT

The sound gives the opposite meaning, such as success sounding like failure or danger sounding like reward.

TRANSGRESSIVE OPERATION 4

DISTORT IT

The sound becomes strange, broken, corrupted, noisy, or difficult to interpret.

TRANSGRESSIVE OPERATION 5

MISPLACE IT

The sound appears in the wrong place, direction, source, or situation.

TRANSGRESSIVE OPERATION 6

MAKE IT UNRELIABLE

The sound sometimes works as expected and sometimes does not, making the player unsure when to trust it.

TRANSGRESSIVE OPERATION 7

MAKE IT EXCESSIVE

The sound becomes too loud, too intense, too frequent, or too dramatic for the situation.

TRANSGRESSIVE OPERATION 8

MAKE IT TOO INTIMATE

The sound feels too close, personal, invasive, or directed at the player.

TRANSGRESSIVE OPERATION 9

CONTRADICT IMAGE

The sound does not match what the player sees, creating conflict between audio and visuals.

TRANSGRESSIVE OPERATION 10

REASSIGN ITS FUNCTION

The sound keeps its form but changes role, such as a reward sound becoming a warning or a guide sound becoming a threat.

DECK 07

FRAMEWORK CLASSIFICATION

Classify the concept after it has been created. This deck identifies what type of game audio transgression the concept produces.

FRAMEWORK CLASSIFICATION 1

AESTHETIC

The sound mainly disrupts mood, atmosphere, perception, sensory experience, or how the player feels the gameworld.

FRAMEWORK CLASSIFICATION 2

LUDIC

The sound mainly disrupts gameplay, feedback, control, action, rules, or the player's ability to act confidently.

FRAMEWORK CLASSIFICATION 3

SOCIOCULTURAL

The sound mainly disrupts cultural, ethical, social, or moral expectations, making the player reflect on broader meanings.

FRAMEWORK CLASSIFICATION 4

AESTHETIC-LUDIC HYBRID

The sound disrupts both how the player experiences the game and how the player acts within it.

FRAMEWORK CLASSIFICATION 5

AESTHETIC-SOCIOCULTURAL HYBRID

The sound disrupts both sensory/emotional experience and broader cultural, ethical, or social expectations.

FRAMEWORK CLASSIFICATION 6

LUDIC-SOCIOCULTURAL HYBRID

The sound disrupts both gameplay/action and broader ethical, cultural, or social meaning.

FRAMEWORK CLASSIFICATION 7

FULL HYBRID

The sound disrupts aesthetic, ludic, and socio-cultural dimensions at the same time.

5.BRAINSTORMING AND FINAL GAME CONCEPT SHEET

A space to develop the idea in more detail and describe exactly how the sound should be changed.

Write down possible ideas for the implementation of the game concept and choose one of them.

Habituar o jogador (ao entrar numa sala)/ (a um evento no jogo) a um som ambiente, que se ao longo do tempo vai tocando mais esporadicamente ao fazer esta ação

Som de ambiente e agradável e situa o jogador ao início mas há medida que o jogo avança este fica cada vez confuso de entender e o som em si começa a incomodar o jogador.

O som ambiente por exemplo chuva á medida que o nível avança fica cada vez mais alto e imperceptível fazendo este som não viável.

FINAL GAME CONCEPT SHEET

	SECTION	DESCRIPTION
1	GAME TYPE	FPS
2	INTENDED PLAYER EFFECT	DISCOMFORT
3	SOUND EFFECT	AMBIENTE NOISE
4	NORMAL AUDIO CONVENTION	SUPPORTS IMMERSION
5	SCOPE	ESCALATING
6	TRANSGRESSIVE OPERATION	MAKE IT UNRELIABLE
7	FRAMEWORK CLASSIFICATION	AESTHETIC-LUDIC HYBRID
8	DETAILED DESCRIPTION OF TRANSGRESSION FOR IMPLEMENTATION	Habituar o jogador (ao entrar numa sala)/ (a um evento no jogo) a um som ambiente, que se ao longo do tempo vai tocando mais esporadicamente ao fazer esta ação

6.DISCUSSION AND FEEDBACK

Final discussion of the tool and the game concepts



Google Docs

Workshop Survey

Informed Concent You are invited to answer this short questionnaire after participating in the online workshop on game audio transgression. The pur...

Appendix J: Workshop Session 3 Observation Sheet

WORKSHOP SESSION 3 OBSERVATION SHEET

General Information

Workshop Session	Participants	Date	Start Time
Session 3	Participant E/F	14/05	20:00

Timestamp	Activity Moment	Observed Phenomenon	Description	Interpretation/Note
05:27	**SECTION 2**	**OBSERVATION**	**Participant gave a good example of an aesthetic game audio transgression.**	**Shows again how quickly they can understand the concept.**
21:06	**SECTION 4**	**OBSERVATION**	**Workshop session where it was the most obvious to identify the normal audio convention**	**It's important to mention that certain normal audio conventions are easier to categorize than others some are instance and other take more time, I wonder if I could make a better job making it easier for the participants.**
26:42	**SECTION 4 DECK 6**	**OBSERVATION**	**Participant mentions how he would like to change the ambience and setting connotation of the game to a more survival horror**	**In a non-time, constricted environment this workshop and deck tool could really benefit from more options on the game type deck as well as an option to customize the setting and mood of the game as well as the narrative.**
45:57	**SECTION 5**	**OBSERVATION**	**This was the session where the participants took the longest to come up with a concept in the**	**This recurring patterns that happens on specific choices in the deck some of these card**

			brainstorming stage	**combinations do leave participants with more or less freedom in the brainstorming sessions.**

Observation Log

Appendix K: Post-Workshop Survey Form

Workshop Survey

Informed Concent

You are invited to answer this short questionnaire after participating in the online workshop on game audio transgression.

The purpose of this questionnaire is to collect your feedback about the workshop, the card-based heuristic tool, and the game audio concept creation process. Your answers will help evaluate whether the tool was clear, useful, and effective for generating game audio transgression concepts.

Your participation in this questionnaire is voluntary. You may skip any question you do not want to answer, and you may stop answering at any time.

The information collected may include your questionnaire answers and your reflections about the workshop activity. These data will be used only for academic purposes.

Your identity will be kept confidential. Your name will not be used in the thesis or in any publication. Results will be presented anonymously, for example as “Participant 1” or “Group A”.

There are no expected major risks in answering this questionnaire. Some questions ask you to reflect on the workshop, the tool, and your experience creating a game audio concept.

By continuing with this form, you confirm that:

- you have read and understood this information;
- your participation is voluntary;
- you understand that your answers will be used for academic research;
- you understand that your identity will be kept confidential;
- you agree to answer this questionnaire.

Do you agree to answer this questionnaire?

- ○ Yes, I agree.
- ○ No, I do not agree.

1. Participant Background

Basic information about the participant's experience with games, game design, sound design, and creative tools.

Age

.....

Occupation

.....

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
II am ffamiilliiarr wiitth pllayiing diigiittall games..	○	○	○	○	○
II am ffamiilliiarr wiitth game desiign..	○	○	○	○	○
II am ffamiilliiarr wiitth sound desiign..	○	○	○	○	○
II am ffamiilliiarr wiitth brraiinsttormiing and desiign ttoolls..	○	○	○	○	○

2. Understanding

Check whether the concept of game audio transgression and the framework categories were clear.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The conceptt off game audiio ttrransgrressiion was cllearr tto me..	○	○	○	○	○
II underrsttood tthatt game audiio ttrransgrressiion depends on crrossiing orr diisrrupttiing a sound expecttattiion..	○	○	○	○	○
II underrsttood tthe diiffffferrence bettween aestthettiic,, lludiic,, sociio--cullttural,, and hybrriid cattegorriies..	○	○	○	○	○
II ffound tthe fframework cattegorriies conffusiing..	○	○	○	○	○

What part of the concept or framework was least clear?

.....

3. Use of the Deck Tool

Evaluates whether the decks were easy to follow, understandable, and usable during the activity.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The carrd ttooll was easy tto underrsttand..	○	○	○	○	○
The orrderr off tthe decks was easy tto ffollllow..	○	○	○	○	○
The carrds hellped my grroup connectt tthe game ttype,, sound,, pllayerr effffectt,, and sound change..	○	○	○	○	○
The carrds hellped my grroup underrsttand whatt norrmall audiio conventtiion was beiing diisrruptted..	○	○	○	○	○
The carrds hellped us move ffrrom a generrall iidea tto a morre compllette conceptt..	○	○	○	○	○
The ttooll made iitt easiierr tto diiscuss ourr iidea wiitth my parrttnerr..	○	○	○	○	○
The ttooll was diffffiicullt tto use..	○	○	○	○	○
Some carrds ffelltt unnecessarry..	○	○	○	○	○

Which deck(s) was/were hardest to understand ?

- [ ] Deck 1: Game Type
- [ ] Deck 2: Intended Player Effect
- [ ] Deck 3: Sound Effect
- [ ] Deck 4: Normal Audio Convention
- [ ] Deck 5: Transgressive Operation
- [ ] Deck 6: Scope of the Disruption
- [ ] Deck 7: Framework Classification

Why were the deck(s) you chose the hardest to understand ?

.....

Is there any deck you would change, remove, or add?

.....

4. Usefulness for Concept Creation

Checks whether the tool helped participants generate ideas and create a clear game audio transgression concept.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The carrd ttooll hellped my grroup generratte iideas..	○	○	○	○	○
The carrd ttooll hellped my grroup crreatte a cllearr game conceptt..	○	○	○	○	○
The conceptt we crreatted coulld rrealliisttiicallly be prrottottyped..	○	○	○	○	○
The carrds lliimiitted ourr crreattiiviitty..	○	○	○	○	○

What was the hardest part of creating the concept?

.....

Did the cards support your creativity or limit it? Explain briefly.

.....

5. Communication and Overall Feedback

Evaluates whether the tool helped collaboration and an open space for participants to suggest improvements, mention problems, or add final comments.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Wonrkiing iin paiirs hellped tthe iideattiion prrocess..	○	○	○	○	○
The carrds hellped my grroup communiicatte ourr iideas morre cllearrlly..	○	○	○	○	○
Comparred wiitth ottherr bnaiinsttormiing orr desiign ttoolls you have used,, tthiis ttooll hellped generratte morre speciiffiic iideas..	○	○	○	○	○
Comparred wiitth ottherr bnaiinsttormiing orr desiign ttoolls you have used,, tthiis ttooll ffèlltt morre rresttrriicttiive	○	○	○	○	○
Overrallll,, tthe heurriisttiic carrd ttooll was useffull fforr crreattiing game audiio ttrransgrressiion conceptts..	○	○	○	○	○

What should be changed, removed, or added to the deck tool?

Any final comments?

.....

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