



Utrecht University

Master Thesis

Linguistic Simulacra:

**A Postmodern Analysis of AI NPCs' Discursive Strategies in
The Matrix Awakens**

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Abstract

This study investigates the linguistic techniques used by an AI non-player character (NPC) system in *The Matrix Awakens* tech demo (Replica, 2023), which conveys the philosophical explorations of virtual and actual worlds presented in *The Matrix* transmedia franchise. Utilizing a multi-method approach that combines Consalvo and Dutton's (2006) "Interaction Map" technique for data collection and Hsieh and Shannon's (2005) qualitative content analysis, the research examines two distinct dialogue corpora: autonomous AI greetings and player-prompted NPC conversations.

The findings demonstrate AI NPCs' linguistic strategies for establishing a virtual environment and negotiating conceptual boundaries between simulated and physical reality. Ambient greetings used symbolic references and various thematic elements to construct the narrative world, while player-NPC dialogues applied discursive strategies such as metaphor, rhetorical questioning, and reframing narratives to subtly challenge ontological assumptions and provoke philosophical reflection in line with *The Matrix's* postmodern themes. Furthermore, the AI system conveyed complex epistemological concepts that emphasized subjectivity, the social construction of knowledge, uncertainty, and pluralism over rigid objectivism, echoing the franchise's reconsiderations of reality and meaning formation.

By strategically navigating uncertainty and avoiding definitive viewpoints, the AI NPCs linguistically recreated the conceptual negotiations central to *The Matrix's* examination of the intersections of virtual simulations and physical existence. This study provides empirical insights into the capabilities of AI dialogue systems for transmedia worldbuilding, stimulating philosophical discourse through human-machine interactions in virtual environments, and demonstrating Jean Baudrillard's influential concepts of simulacra, hyperreality, and postmodern uncertainties.

Keywords: AI NPCs, *The Matrix Awakens*, Transmedia storytelling, Postmodern philosophy, Human-machine interaction

Introduction

In a YouTube gameplay video titled "I Tried to Convince Intelligent AI NPCs They are Living in a Simulation" (TmarTn2, 2023), a human player attempted to persuade the AI non-player characters (NPCs) in a video game that they exist within a virtual environment programmed by humans. The NPCs responded to this proposition in a variety of ways. Some acknowledged the limitations of their programmed parameters but were unable to fully accept the possibility that their existence could be virtual. Others disputed this notion, claiming that the human players themselves could be living in an artificial construct similar to *The Matrix*. Such discussions tended to blur the lines between objective and perceived reality and stimulate the question of fundamental assumptions about the nature of existence and what constitutes reality. Beyond posing ontological thought experiments between humans and AI, these dialogic interactions raise epistemological questions. As the NPCs reshaped understanding through discourse, the ability to distinguish between simulated and physical worlds was called into question.



Figure 1. TmarTn2 conversing with an AI NPC in *The Matrix Awakens* demo

These events occurred within the AI-driven technical demonstration of *The Matrix Awakens* (Replica, 2023), which allows players to freely experiment with voice-based conversations with AI NPCs. This tech demo was built upon the *City Sample* resource pack released for Unreal Engine 5, featuring the city scene from the original *The Matrix Awakens* (Epic Games, 2021). *The Matrix Awakens* was originally developed as an open-world video

game based on The Wachowskis' *The Matrix* franchise (Warner Bros., 1999-2021), which served as promotional material for the film *The Matrix Resurrections* (Warner Bros. Pictures, 2021), and a showcase of Unreal Engine 5's powerful graphic technology (Unreal Engine, 2021).

In 2022, Epic Games released the city scene from *The Matrix Awakens* named *City Sample*, a downloadable Unreal Engine 5 demo project on PC. It's a metropolis featuring buildings, vehicles, and MetaHuman characters (Unreal Engine, 2022). Subsequently in 2023, Replica, an AI voice technology studio, integrated its *Smart AI NPCs* plugin into the *City Sample* simulation (Replica Studios, 2023). Within its recreated virtual world setting from *The Matrix* franchise, with no task systems or plot, players could simply explore the streets and converse with the many types of NPCs encountered. Their discussions sparked interest in considering the nuanced relationship between simulations, perceptions of reality, and philosophical questions surrounding existence. This tech demo also demonstrated the conceptual idea of the relationship between virtuality and reality addressed in *The Matrix* franchise through player-NPC conversations.

As artificial intelligence (AI) and natural language processing technologies progress, these techniques are increasingly applied across digital platforms, including the gaming industry. As early as 2019, *AI Dungeon* (Latitude. 2019), a text-based game developed by Latitude, used AI to generate infinite customized content depending on player preferences (EDGE, 2024: 10). Unlike most designer-created games, *AI Dungeon* allows players to control the AI to build rules, worlds, characters, and scenarios for their characters to interact with (Latitude, 2024). Another application is the integration of various AI mods into the popular open-world role-playing game *The Elder Scrolls V: Skyrim* (Bethesda Softworks, 2013). Modders have created AI conversational agents that enable players to interact with NPCs in the game world through natural language dialogue. For instance, the ChatGPT Companion mod introduces a custom NPC follower named Herika. This allows players to engage with a companion NPC via in-game chat or a microphone interface (Dynamics, 2023). With this mod, players can freely discuss quests, lore, or casual topics with the ChatGPT-powered NPC. While constrained by introducing an external NPC character rather than embodying one directly from *Skyrim*, mods like this demonstrate how AI is improving immersion in games through intelligent speech-based interactions.

As technology advances to create more immersive simulations and intelligent virtual characters, the philosophical implications of such human-machine interactions have been scholarly investigated. In the field of information science and media studies, Vindenes and Wasson (2021) analyzed how VR constructs virtual worlds with ontologies radically different from the real world. Their research aimed to better understand the experiences that users may encounter when participating in such distinctly structured virtual realities. Their analysis provided insights into how virtual worlds with divergent ontologies from physical reality can shape subjectivity and potentially "change the self" by viewing the user experience as mediated through the relationship between users and the virtual environment, as opposed to traditional models that treat humans and technology as separate. Their work demonstrates how a scholarly examination of such human-simulation interactions can provide novel perspectives for interpreting experiences in simulated environments that differ from the physical realm.

To raise awareness of the philosophical implications of rapid technological advances in AI and simulations that challenge static conceptual frameworks, AI ethics researcher Hawley (2019) addressed issues regarding changing AI definitions and human tendencies to anthropomorphize virtual characters. He stated that these challenges highlight the value of collaborative partnerships between technical AI professionals and scholars in philosophy and theology. Through open interdisciplinary discourse, clearer, evolving ontologies can be constructed to address ethical concerns about advanced artificial agents meaningfully (Hawley, 2019: 15).

Much like Hawley (2019:3), the rapid progress of AI capabilities in interactive simulations raises philosophical concerns by blurring established conceptual boundaries. The current study seeks to improve understanding of how AI systems might linguistically mediate virtual environments and negotiate perceptions of truth and knowledge through representative language. It aims to provide fresh empirical insights into the mediated relations and negotiated meanings that result from human-machine interactions by investigating communication between humans and virtual agents within *The Matrix Awakens* tech demo. Specifically, the main research question is: *What communication mechanisms does the AI NPC system use in The Matrix Awakens tech demo to convey the philosophical explorations of virtual and reality presented in The Matrix franchise?* The sub-research questions are:

1. What language strategies used in the ambient AI greetings present the world-building of *The Matrix* franchise and its philosophical explorations of virtual and reality?
2. What discursive strategies does the AI dialogue system employ to question ontological assumptions (e.g. metaphors, rhetorical questions, reframing narratives)?
3. What epistemological stances or perspectives on truth and knowledge does the AI conversation system present through its discourse strategies?

These sub-questions seek to tackle the major research question from multiple angles. First, studying the linguistic tactics used in ambient AI greetings provides insight into how virtual worlds and their philosophical foundations are established. Second, analyzing the discursive strategies used in human-AI dialogues aims to illustrate how ontological assumptions are questioned through techniques such as metaphor and narrative reframing. Third, assessing the epistemological stances that emerge from human-machine conversations can help understand the various perspectives on knowledge and truth generation between human and artificial discussants. Collectively, investigating these subsidiary lines of inquiry from linguistic, rhetorical, and philosophical perspectives provides a more detailed empirical analysis of how virtual environments stimulate theoretical reflections through representative language and collaborative world-building.

The Matrix franchise has constructed an expansive fictional universe covering films, games, animations, and comics through its transmedia storytelling strategies. This study's theoretical framework is based on this background, as it examines the philosophical concepts conveyed through human-AI interactions within *The Matrix Awakens* tech demo. The theoretical focus explores the influential ideas of French philosopher Jean Baudrillard (1994) about simulacra and hyperreality, as well as contemporary work on these concepts. His postmodern theories about how simulations can replace and reshape our understanding of the "real" world are highly relevant to the ontological issues raised by *The Matrix's* depiction of a simulated reality indistinguishable from reality. By exploring these philosophical perspectives, the research investigates how AI discourses manifest engagements and formulations related to Baudrillard's concepts within the tech demo's virtual context.

This study employs a multi-method approach to examining the discursive strategies used by AI characters. It combines two well-established qualitative techniques: Consalvo and Dutton's (2006) "Interaction Map" for collecting in-game dialogue data, and Hsieh and

Shannon's (2005) qualitative content analysis for systematically analyzing the dialogue corpus. The interaction map method enables recording relevant player-NPC conversations based on research questions, whereas content analysis allows for thorough coding and categorization of linguistic data to reveal underlying themes, patterns, and discursive tactics. Two distinct yet complementary data corpora are established: autonomous AI greetings generated without player interaction, collected using an ethnographic observation approach, and extended player-prompted dialogues about philosophical notions obtained through targeted elicitation. This extensive dataset, which includes both ambient and engaged discussions, allows for a more comprehensive investigation of how the AI system's language usage reshapes conceptual frameworks related to reality and virtuality. The content analysis codes the corpora systematically to identify key themes and strategies, then connects the findings to broader philosophical discussions rooted in Baudrillard's significant work and *The Matrix* franchise's conceptual underpinnings.

Theoretical Framework

This section outlines the theoretical foundations for the study's analysis of human-AI dialogues in *The Matrix Awakens* tech demo. It first situates the research object within the larger context of the transmedia *Matrix* franchise and its exemplary use of transmedia storytelling strategies to build a vast fictional universe across multiple platforms. This demonstrates how the AI-driven simulation investigated in this study contributes a fresh experiential dimension to the franchise's explorations of core philosophical themes about the nature of reality and human experience in virtual worlds. The section then looks into specific philosophical notions, primarily from Jean Baudrillard's influential work on simulacra and hyperreality, that are highly relevant to thematic concerns in *The Matrix* narratives. Establishing this theoretical foundation enables a more in-depth examination of how AI discourses manifest formulations and critiques of these ideas within the ludic context of a tech demo.

The Matrix Franchise's Transmedia Storytelling

Transmedia storytelling is a concept popularized by Henry Jenkins. He puts it this way: "In the ideal form of transmedia storytelling, each medium does what it does best-so that a story might be introduced in a film, expanded through television, novels, and comics, and its world

might be explored and experienced through game play” (Jenkins, 2003). Jenkins emphasized that effective transmedia franchises do not merely adapt content from one medium to another. Rather than repeating the same narrative, each medium contributes uniquely to constructing the overall fictional world.

The Matrix is a transmedia franchise consisting of four feature films, beginning with *The Matrix* (Warner Bros., 1999) and continuing with three sequels, *The Matrix Reloaded*, *The Matrix Revolutions* (both Warner Bros. Pictures, 2003), and *The Matrix Resurrections* (Warner Bros. Pictures, 2021). It also includes four official video games, *Enter the Matrix* (Shiny Entertainment, 2003), *The Matrix Online* (Monolith Productions, 2005), *The Matrix: Path of Neo* (Shiny Entertainment, 2005), *The Matrix Awakens* (Epic Games, 2021), as well as an animated film, *The Animatrix* (Jones et al., 2003). Each of them has its own storyline and experience elements that are unique to other mediums. In his book *Convergence Culture* (2006), Jenkins regarded *The Matrix* franchise as an exemplar of transmedia storytelling. He mentioned that the video games for *The Matrix* franchise did more than just mimic the films; they also expanded the fictitious world beyond what was displayed on screen (2006: 115). Similarly, the animated films and comics added additional contextual details to the depicted universe, collaboratively constructing a more cohesive and comprehensible transmedia narrative overall (Jenkins, 2006: 125).

Specifically, *The Matrix* franchise effectively constructed its fictional universe through various mediums. The original film *The Matrix*, took the audiences to a world where the boundary between reality and illusion is continuously blurred. Human bodies are stored as an energy source to power machines. At the same time, their minds exist in a world of digital hallucinations (Jenkins, 2006: 94). Video games such as *Enter the Matrix* allow for interactive engagement within the simulated Matrix. Both films and games demonstrate the key concept of each media trying its best. The films provided the overarching narrative, while the games offered first-person playable experiences. *The Animatrix* also served to extend the fictional world's mythology and backstory. No singular text provided a complete experience; instead, audiences interacted with the rich transmedia story world by moving through its interconnected network of content.

This study's research foundation, an AI-driven *The Matrix Awakens* tech demo, contributed to constructing the universe of the transmedia franchise. By communicating with AI NPCs in the virtual setting of *The Matrix Awakens*, this study investigates how the

human-AI experience meaningfully continues the transmedia franchise's philosophy of each medium contributing uniquely to the shared fictional world. Given the demo's limitations of only allowing voice-based interactions, the burden was on its AI systems to convey the complex debates on virtuality and reality through natural dialogue. This study aims to provide a novel understanding of how such virtual environments mediated discussions of the core postmodern questions central to *The Matrix* narrative universe in an immersive, conversation format that differed from other franchise installments.

Philosophy in The Matrix Franchise

Since its release, *The Matrix* franchise has spurred sustained and rich philosophical discussion in academic circles. There have been conference papers, symposia, journal articles, and edited collections discussing *The Matrix* and philosophy (Irwin, 2002; Grau, 2005; Díaz-Diocaretz and Herbrechter, 2006; Clover, 2021). As William Irwin suggests, “Philosophers see their favored philosophy in it: existentialism, Marxism, feminism, Buddhism, nihilism, postmodernism. Name your philosophical ism and you can find it in *The Matrix*” (2002: 1). Scholars have noted parallels between *The Matrix* and canonical philosophical texts, exploring themes from metaphysics, epistemology, and spirituality (Knight & McKnight, 2002: 189). For instance, Knight and McKnight (2002: 189) pointed out the film’s connections to Plato's Allegory of the Cave, Descartes' Dream Hypothesis, and religious elements spanning Nietzsche to Zen Buddhism and Christianity. David Weberman argues that the original *Matrix* film is perhaps the most sustained, implicitly philosophical film exploration of a central postmodern experience - the blurred or vanishing line between virtual and material existences (2002: 226).

The Matrix film series profoundly explored the constructed nature of reality presenting humans unintentionally trapped within a simulated world controlled by intelligent machines. Through the main characters' technologically mediated experiences, the film destabilizes taken-for-granted divides between virtual and material existences. By depicting a simulated reality indistinguishable from our own, it challenged audiences to reconsider fundamental assumptions about ontological boundaries and what makes up the world beyond perceptions. These philosophical themes examining the nature of perceived reality are similarly addressed by some interactions within *The Matrix Awakens* tech demo between human players and AI-powered NPCs.

These themes of simulated versus material realities explored in player-NPC conversations are reflective of philosophical concepts put forth in Jean Baudrillard's work on simulacra and hyperreality. Many scholars have analyzed *The Matrix* films as exemplifying Baudrillard's theory that virtual representations can replace and reconstruct reality (Lutzka, 2006; Constable, 2006, 2013; Cardoso, 2020; Nandi, 2023). While the films drew influence from his work, Baudrillard himself critiqued their interpretation and application of his philosophical concepts. The ongoing scholarly debate around representing Baudrillard's theories in *The Matrix* franchise deserves further investigation.

Baudrillard's Theories and The Matrix

The philosophical work *Simulacra and Simulation* (1994) by French philosopher Jean Baudrillard featured prominently in the 1999 film *The Matrix*. In one scene, this book is visible on screen, and the character Morpheus quotes its phrase "desert of the real". During pre-production, the Wachowskis emphasized understanding the film's thematic background, requiring most of the principal cast and crew to read *Simulacra and Simulation* before filming. Interpretations of *The Matrix* frequently reference Baudrillard's philosophy, positioning the film as an allegory for experiences in modern societies that are overly commercialized and media-saturated, particularly within developed countries. One of the most discussed philosophical issues addressed by *The Matrix* film series is "How do we know that what we experience is real?" (Constable, 2006: 233).

The Matrix depicts a dystopian vision of the future where humans are unaware that they are trapped within a sophisticated simulated reality known as "the Matrix". In the background setting revealed throughout the film series, a future conflict has broken out between machines and their human creators. The machines eventually overpowered the humans and used their bodies as an energy source, keeping them sedated while their minds were immersed in the Matrix simulation believing it to be real life. The artificial construct created by the machines contradicted the "real" physical reality that continued outside of it. The film's depiction of humans living obliviously within a virtual program while their actual bodies were subjugated in the "real" world generated extensive philosophical debates. These ontological and epistemological issues are directly addressed in Jean Baudrillard's influential work *Simulacra and Simulation*. In the book, Baudrillard explores how, in postmodern societies dominated by proliferating media and virtual reproduction, the boundaries between

simulations and "true" reality have blurred to the point that the simulated threatens to replace our understanding of external reality (Baudrillard, 1994: 3).

The concept of the "simulacrum" is proposed- a copy or imitation disconnected from any original, functioning as its own self-contained representation of existence. Baudrillard outlines different orders of simulacra through which reproductions evolve from faithfully mirroring reality, to actively masking and distorting it, to masking the absence of a basic reality, until within his conception of "hyperreality" simulations bear no relation to the real and instead are their own implacable, self-referential simulacra. Through endless copying and simulation – precession of simulacra – the real has been absorbed into a hyperreal realm of simulacra that bears no relation to any deeper truth or essence. Reality becomes a simulation regulated by models and codes in media-saturated systems (Baudrillard, 1994: 6).

The Matrix series effectively depicts this disorienting hyperreal condition. Protagonist Neo is initially unable to distinguish the simulated Matrix from the "real" physical world, presenting a significant challenge to his perception of reality. Neo cannot rely on experience alone to differentiate artificial worlds constructed by machines from objective reality. Only through a journey of confusion and revelation does Neo gradually peel back the curtain of opacity. Thus, *The Matrix* indicates that in a society saturated with virtual representation, or the hyperreal, we can no longer instinctively comprehend reality by experience alone, but must re-examine our concepts of the real on a deeper level. Neo's experience can be seen as a metaphorical representation of this dislocation.

“Welcome to the desert of the real”, this famous Morpheus line is the only quotation from *Simulacra and Simulation* to appear in *The Matrix* (Constable, 2013: 86). The line occurs in Baudrillard’s analysis of Jorge Luis Borges’ fable about cartographers mapping an empire’s entire territory to demonstrate his theory of simulacra precession (Baudrillard, 1994: 1). In this fable, the map created to illustrate the empire’s entire geographical territory eventually grew to such a high level of detail and scale that it effectively covered and obscured the actual land itself. However, the map would ultimately disappear as the real landscape resurfaced.

According to Baudrillard, postmodernism has inverted this metaphor. Rather than the map gradually disappearing, as in the fable, simulations now dominate and precede reality, with the territory no longer having ontological primacy over its representation. Simulations now construct territories through models lacking origin, to the point that the remains of "the

real" themselves are gradually dissolving across enormous expanses simulated by hyperdetailed maps and models (Baudrillard, 1994: 1-3). Virtual worlds perfectly capture this phenomenon: a map that both mediates and constitutes the territory of which it is a part. As simulations spread through the virtual mapping of possibilities, they replace any claim to privileged awareness of a single reality.

Interactive virtual worlds reflected in video games further illustrate Baudrillard's hyperreal concept. Media researcher McClancy's study (2018) examines how the Fallout franchise precisely reconstructs 1950s aesthetics and design to express nostalgia through retrofuturism. The Fallout games immerse players in a vividly depicted post-apocalyptic retrofuture world. However, as McClancy points out, the game rules and narratives undermine and question this nostalgia. Massive online games and virtual worlds provide entirely simulated societies, narratives, and landscapes to explore. They demonstrate how virtual mappings might reconstruct views of reality through a postmodern lens. Baudrillard's concept of the hyperreal refers to simulations that become "more real than real" due to their highly structured systems (Baudrillard, 1994). Virtual reality simulations show this by completely immersing users in virtual environments.

Similar to the Fallout games discussed in McClancy's paper, *The Matrix Awakens* tech demo immerses players in an extensive hyperreal simulation based within the fictional universe established by *The Matrix* film franchise. The demo's reproduction of the virtual world from the films contributes to building the transmedia property's persistent simulation of realities mediated by advanced technology. The inclusion of AI NPCs capable of natural conversations in this simulation provides a new method of human-machine interaction. By engaging players in discussions about the blurring distinctions between simulation and reality, which is a central topic in *The Matrix* narrative, AI systems can significantly enhance reflection on this basic issue highlighted across the transmedia franchise. Their discussions about existence in the virtual world could stimulate thought, effectively exhibiting Baudrillard's notion of destabilized perception within hyperreal simulations, as expressed through *The Matrix* worldview. Allowing players to freely interact with AI characters expands prior *The Matrix* experiences by enabling new forms of linguistic exchange to explore the franchise's themes of reality and virtuality.

Methodology

The current study uses a multi-method approach to investigating the discursive methods used by AI characters in *The Matrix Awakens* simulation to negotiate understanding of reality. Specifically, it combines Consalvo and Dutton's (2006) "Interaction Map" technique for collecting dialogue data from game environments with Hsieh and Shannon's (2005) qualitative content analysis for systematically analyzing the collected data. This integrated methodology allows for a thorough investigation of how AI systems shape and reconstruct conceptual frameworks through linguistic interactions in virtual worlds.

Data Collection: Interaction Map Approach

This study employs the "Interaction Map" approach proposed by Consalvo and Dutton (2006) for collecting data from game dialogues. The interaction map method is one of the established analytical components for qualitative analysis of games as "texts". This provided a reference for game researchers performing qualitative analyses. Specifically, the "Interaction Map" is relevant for analyzing the way in-game NPCs and human players interact. It suggests the researcher record the dialogue that occurs with NPCs in the game with well-defined research questions, which help identify dialogue of interest and focus on those. The game needs to be replayed for the researcher to consider it as a whole and determine if the earlier unremarkable dialogue was important enough to include (Consalvo & Dutton, 2006). Based on these principles, dialogues from *The Matrix Awakens* simulation relevant to addressing the research questions were recorded to create a corpus for fully understanding emerging discourse patterns and characteristics.

The Matrix Awakens tech demo presents a simulated New York City with streets, buildings, cars, and AI NPCs, with day and night scene modes. Upon entering the game, players control an unnamed female character avatar wearing a black jacket and red pants with sunglasses. She is allowed to freely walk in a fixed region that is intersected by two orthogonal roadways for a total of four streets. The region is enclosed by transparent green matrix walls that allow NPCs to move through but keep players within the interior space. Players can use first-person and third-person walking and flying movement options to explore the city area. When walking, the player's movement would lock onto a nearby NPC within a set distance, as indicated by a green arrow above the NPC's head. At this point, the player may use a microphone to start vocal chats with the NPC. NPC interactions were not possible when flying. There were no quests or narratives in this tech demo; instead, the players are

free to roam the streets and engage in free-form conversation with the many NPCs encountered.



Figure 2. The Matrix Wall in The Matrix Awakens demo

Two distinct data corpora¹ are established for varied but integrated analysis, to explore the full spectrum of capabilities that allow AI systems to reshape conceptual frameworks through language usage. The first corpus consisted of 120 autonomous NPC greetings generated by the AI system's programming without any player input. In *The Matrix Awakens* tech demo, any NPC physically close to the player will automatically start a self-generated dialogue after a few seconds of closeness, without requiring player input. This allows for the initial "silent ethnographic observation" approach, which is explored in the preliminary research phase. Using the *Grand Theft Auto* series (Rockstar Games, 1997-2021) as an example, Miller (2008) argues that applying an ethnographic approach to single-player game research might help expose game design decisions and their effects on players, providing a new lens for game studies. Applying an ethnographic approach to autonomous AI greetings in *The Matrix Awakens* without direct player participation can give comparable methodological insights. By studying this uncontrolled sample of ambient AI speech recorded during passive gameplay, insights can be gained into the AI system's core story aspects and tactics that are algorithmically prioritized for welcoming new players. It also enables comparison with richer dialogues from purposeful human-AI exchanges later in gameplay.

The second corpus involved targeted dialogue elicitation, where the researcher used the voice interface to roleplay interactions with randomly encountered NPCs about a set of

¹ The corpora can be accessed at <https://bit.ly/the-matrix-awakens-copora>.

pre-designed philosophical concepts relevant to the research questions. The topics include the nature and existence of virtual entities, their relationship to the virtual environment, ontological authority, epistemological inquiries, agency and determinism, and experience of virtual existence. By engaging NPCs in around a total of 86 minutes of natural roleplaying dialogue, nuanced investigations of reality, virtuality, and their negotiation were produced. As *The Matrix Awakens* demo lacked established objectives, the dialogue time was significantly longer than the typical 5-10 minutes spent by most players. Analyzing these extended, issue-focused interactions revealed the AI's discursive techniques and flexibility in influencing understandings. The immersive investigation provided access to complicated human-machine interactions that would otherwise be inaccessible. This granted novel access to AI reconstruction of conceptual frameworks via the skillful linguistic navigation of open-ended inquiry.

Data Analysis: Qualitative Content Analysis

The collected dialogue data were analyzed using qualitative content analysis, a technique for systematically coding and categorizing qualitative data sources to reveal underlying meanings, recurring themes, and communication patterns (Hsieh & Shannon, 2005: 1278). This method was employed for this study because it is well-suited for exploratory investigations that seek to understand the relationship between internal thoughts and external behaviors of subjects. This study aims to discover discursive strategies used by AI systems in gaming dialogues to impact human players' understanding of reality. Qualitative approaches are ideal for systematically classifying and coding qualitative data sources to uncover underlying meanings, patterns, and communication patterns.

A multi-step analytical procedure was employed. First, thematic open coding was used to identify overarching themes and concepts across the discussions. As suggested by Hsieh and Sarah (2005: 1285), "The success of a content analysis depends greatly on the coding process. The basic coding process in content analysis is to organize large quantities of text into much fewer content categories (Weber, 1990). Categories are patterns or themes that are directly expressed in the text or are derived from them through analysis. Then, relationships among categories are identified." The initial category framing gave the researcher a comprehensive perspective before refining the research focus. Next, prominent themes were determined by categorizing the greeting corpus and the extended human-AI discussions separately. This is followed by an evaluation of each corpus' strategy usage to

identify characteristics. To shed light on the strategic impacts on reality construction, the researcher then performed a fine-grained coding of the discursive tactics used under each theme. Following that, a series of demonstrative extracts precisely illustrates identified strategies for challenging conceptual frameworks at the language level. Finally, the researcher used summarization to evaluate strategy performance in reconstructing reality perceptions.

The findings were relevant to core research questions regarding communication mechanisms for negotiating real and virtual boundaries. By situating the analysis within existing philosophical debates, including *The Matrix* franchise's explorations of the relationship between virtual and physical existence, this empirical study of human-AI exchanges in a controlled virtual context aimed to contribute nuanced insight to larger questions about ontology, epistemology, and the reconstruction of self and world in technologically mediated environments. As the simulation recreates yet transforms the dystopian cyberpunk world established by *The Matrix* films, it also exemplifies the franchise's philosophical investigations of the relationship between virtual and actual existence.

AI-generated NPC Greetings Analysis

This chapter starts with a qualitative analysis of 120 greetings generated spontaneously by AI NPCs in *The Matrix Awakens* tech demo. The data was collected through passive gameplay recording by the researcher. As the player character passed by simulated residents across the virtual cityscape, each NPC greeted the player in line with their programmed social parameters. During a 30-minute gameplay session where the player character wandered the streets without engaging in any missions or interactions, 120 greeting utterances delivered autonomously by nearby NPCs were recorded.

Most greetings followed a similar structure, opening with a friendly welcome such as "Hi" or "Hello" and progressing to more substantive topics. Weather, traffic conditions, and descriptions of the virtual city environment were among the most often mentioned topics in the greetings. For example, one NPC stated, "Hey there! What a beautiful day to be exploring, isn't it?". Some greetings conveyed more rushed NPCs with no time for talks, exemplified by the remark "What do you want? Can't you see I'm busy?". Meanwhile, other utterances involved more imaginative subjects, referring to nature concepts and the city's hidden mysteries. For instance, some NPCs mentioned symbolic elements like "The pigeons! They know the secrets of the universe!" or notions of subtle truths revealed by attentive

observation such as "The skyscrapers whisper secrets if you listen closely!". Overall, while maintaining a welcoming tone, the autonomous greetings corpus demonstrated linguistic variation in the themes and narrative elements presented to new players.



Figure 3. The researcher observing an AI NPC in The Matrix Awakens

The uncontrolled setting of the passive recording simulates a genuine gaming experience, resulting in a collection of AI-generated NPC greetings that arose spontaneously through the AI system's programming without external prompting or interaction. This corpus serves as the foundation for the first part of the analysis, which allows investigation of how AI NPCs communicate with passive observers about the virtual setting through introductory speech acts.

A Word Cloud Analysis

Firstly, a word cloud analysis was performed on the AI-generated NPC greeting corpus to gain fundamental insights into the topics and themes present across the greetings. While word clouds are not inherently part of qualitative content analysis, they can serve as a visual summarizing approach for the initial qualitative investigation of a text corpus. As Heimerl et al. (2014: 1833) state, "Such a summarization is helpful to learn about the number and kind of topics present in a body of text [...] Word clouds generated for a body of text can serve as a

starting point for a deeper analysis". This allowed the researcher to gain an overview of the primary concepts expressed in the NPC greetings before more intensive coding. To create a word cloud for the greetings corpus, frequently occurring greeting phrases such as "hello", "hi", and "hey" as well as the word "city" were removed since they do not adequately convey narrative elements. Based on the modified word cloud, the three most frequently occurring words identified were:

1. Pigeon: With 12 instances, references to pigeons are featured frequently in AI utterances. Pigeons, as the virtual city's symbolic animal, appear to have a conceptual role in how NPCs communicate about their environment.
2. Beautiful: This favorable word was used to describe the weather or environment 11 times in total. Through programmed perceptions of environmental aesthetics, such language helps to create an engaging social tone for introductions.
3. Secrets: This word was mentioned 8 times and focused on undisclosed information. This may symbolize how intrigue and mysteries are subtly built into the virtual world's foundations through introduction.



Figure.4 *A Word Cloud of AI-Generated NPC Greetings Corpus*

The analysis of the autonomous greetings corpus discovered pigeons as the most frequently cited symbolic element used to contextualize the virtual setting for new players.

This connects intriguingly to the depiction of pigeons in the 1999 *Matrix* film and the franchise's narrative. As revealed in the animated film collection *The Animatrix* (Jones et al., 2003), the wars between humans and machines left the Earth nearly uninhabitable for organic life. All flora died, and food chains collapsed, leading to the extinction of species. However, pigeons appear in a scene in *The Matrix* (1999) when Neo and Morpheus enter a simulation that recreates the Matrix. Based on this backdrop, the pigeons in *The Matrix* scenario were most likely artificial programs, similar to other simulated components of the constructed reality. There is a fan hypothesis for their inclusion: artificial pigeons may act as a surveillance system, covertly monitoring humans in the same way that the *Matrix's* Agent programs do (The Pigeon Movie Database, 2012).

This proposed function is subtly supported by certain autonomous greetings recorded in *The Matrix Awakens*, such as "Oh, greetings! Did you know pigeons are just feathery espionage devices?" and "Ah, greetings! Ever noticed how the pigeons plot in silence? Beware!". Other NPCs mentioned their potential role as "secret messengers/rulers" or "the real locals", indicating that the pigeons are part of the virtual environment and serve as surveillance agents. This raises the question of whether the NPCs in this simulation, like the humans in the Matrix, are ignorant that they are also living in a constructed reality. Overall, the intentional references to pigeons emphasize their symbolic importance in both the transmedia franchise narrative and the virtual setting established for newcomers through AI conversations.



Figure 5. A scene with pigeons in *The 1999 Matrix film*

The repetition of particular phrases such as pigeons, beauty, and secrets reveal how the AI system may have prioritized important narrative elements for inclusion in first welcomes. Specific concepts appear to have been algorithmically chosen as key

compositional elements of the simulated world that need communication at the outset of player-NPC interactions via spontaneous AI statements. The word cloud analysis provides an overview of common topics conveyed by the AI system to players that enter the simulation, mostly through ambient social behaviors displayed by NPCs.

A Thematic Classification

A theme-based classification was then performed on the NPC greetings corpus to investigate the primary conversational themes in which AI NPCs are embedded for the greeting system. Thematic open coding was an important step since it allowed the researcher to find overarching themes and concepts throughout the discussions without being limited by pre-existing categories. Hsieh and Shannon (2005: 1285) point out that "the success of a content analysis depends greatly on the coding process". Open coding enabled an inductive approach to identify prominent topics that emerged from the dialogue data, resulting in eight overarching themes across the corpus:

Themes	Examples
Nature	With references to animals like pigeons and squirrels
Time	Through mentions of lateness and the passing of time
Location	Including areas to explore within the city backdrop
Social Interactions	Portraying relations amongst simulated citizens
Secrets	Focusing discussions on undisclosed information
Weather	Describing the current weather conditions
Abstractions	Focusing on intangible concepts like beauty
Emotions	Conveying feelings such as gloom and bleak

Figure.6 Themes of AI-Generated NPC Greetings Corpus

This thematic classification indicated the initial emphasis points provided by the AI system regarding its understanding of virtual constructs during initial interactions. While not exhaustive, it revealed key topical domains algorithmically selected to linguistically place players within the comprehensive world of *The Matrix* franchise. Repeated themes like nature, time, locations, social interactions, and abstract aspects serve to place players in a familiar yet fascinating urban simulation akin to film depictions. References to secrets and

emotions subtly introduced philosophical concepts central to the franchise by increasing the attraction and mystery of the virtual environment. The various topics addressed in introductions mirrored multifaceted perspectives that gradually emerged across the transmedia narrative.

Greetings Corpus Discussion

Through qualitative methods including word cloud generation and thematic classification, this section initially explored a corpus of 120 greeting utterances spontaneously generated by AI NPCs in *The Matrix Awakens* tech demo without direct player prompting. The results revealed how the AI system constructed an immersive virtual environment for newcomers through ambient initial encounters, thereby addressing the research question about the language strategies used in AI greetings to present the world-building of *The Matrix* franchise and its philosophical explorations of virtual and reality.

One key strategy was the frequent mention of symbolic elements such as pigeons to situate players within a predetermined simulation. Recurrent references to "pigeons" in the AI greets emphasized their importance as symbols that reinforced the construction of the transmedia *Matrix* franchise world. As shown in the *The Animatrix* and implied in the initial *Matrix* film, pigeons have symbolic narrative roles as potential machine surveillance programs. References to pigeons' surveillance duty or status as "secret rulers" in AI greetings subtly supported the notion of artificial life monitoring virtual existences. Furthermore, pigeons are algorithmically selected to map elements of the virtual world, forming part of the basic "interaction map" that constructs the simulated landscape in players' cognition. This is consistent with Baudrillard's (1994: 1) concept of the "precession of the simulacra," which refers to how simulations in postmodernity function both as representations of reality and as tools for constructing reality itself. Through a Baudrillardian lens, the AI follows the postmodernist theory that maps now precede and dominate territory; they mediate perception by outlining the virtual world's identity, atmosphere, and structural essence for players via symbolic referencing.

In addition, the variety of topics identified by the thematic analysis shows that a balanced representation was intended, with no particular theme dominating introductions. This strategy mirrors how *The Matrix* franchise gradually expands its dystopian universe with each new narrative entry, disclosing additional complementary views and contexts. The AI

dialogue system, like the films, employs a layered world-building method. It seeks to immerse players in the simulation by displaying the virtual environment holistically using varied socializing strategies throughout NPC greetings. The identified topic focuses serve as formative building blocks, establishing basic parameters and the implied culture to gradually draw humans into its constructed reality. In this way, the AI dialogue system's strategies for initial contextualization through NPC greets can be seen as analogously building the foundation for the simulation.

Overall, this qualitative analysis of ambient AI greetings reveals strategies for linguistically establishing *The Matrix* franchise's complex virtual world while conveying its underlying philosophical contemplations of virtual and real. The nuanced language techniques observed during initial encounters suggest attempts to algorithmically construct symbolic frameworks, descriptive scenarios and emotive contexts. Employing Miller's (2008) ethnographic approach to investigate this uncontrolled corpus of autonomous AI speech generated without player input provided valuable methodological insights. The "silent ethnographic observation" of the AI greetings revealed the system's underlying narratological priorities and world-building techniques that were algorithmically encoded to welcome new players into the simulation. This enabled comparison of the AI's ambient contextualization strategies to the more dynamic, intentional dialogues co-created through direct player-NPC exchanges analyzed in the next section.

Player-NPC Dialogue Analysis

In this chapter, the researcher created a new corpus by actively engaging NPCs in dialogue to further the investigation. The current analysis focuses on a player-NPC conversation corpus of 12 dialogue exchanges, comprising 538 excerpts in length. This data was transcribed from 86 minutes of vocal conversations in which the researcher actively engaged 12 AI NPCs through voluntary prompts and questions. Within this corpus, the researcher prepared a series of questions aimed at delving into the research topics for this study. The initial thematic analysis of the questions generated the following six primary themes:

Major Theme	Subcategories
Nature and Existence of Virtual Entities	Questions about the ontological status and experience of NPCs Exploring perceptions of reality and virtuality

Relationship to Virtual Environment	Examining the player's positioning relative to the game world Defining the boundaries between objective reality and subjective
Ontological Authority	Questioning default assumptions around rulership Rethinking certainty about dominant conceptual frameworks
Experience of Virtual Existence	Reflecting on meaning and purpose in programmed environments Examining the effects of being constructed as a discontinuous virtual entity
Epistemological Inquiries	Investigating the sources and reliability of knowledge acquisition Exploring the nature and limitations of sensory experience and cognition
Agency and Determinism	Addressing notions of free will and environmental determinism Exploring the degree of contextual constraints on decision-making

Figure.7 Major Themes and Subcategories in Player-NPC Dialogue

This classification separates the question types by major themes and relevant subcategories. It seeks to address the overarching research question from several analytical approaches. The inquiry system was developed on basic concepts from the theoretical framework guiding this research, notably postmodern philosopher Jean Baudrillard's work on simulations and the hyperreal. The primary themes of Nature and Existence of Virtual Entities, Relationship to the Virtual Environment, Ontological Authority, and Experience of Virtual Existence are directly related to Baudrillard's notions about the blurring of real and simulated boundaries as reproductions become indistinguishable from their original references. Subcategories under these topics such as exploring perceptions of reality/virtuality, refer to Baudrillard's simulacrum obscuring what is real. Epistemological Inquiries, with a focus on knowledge sources/limitations, correspond to Baudrillard's portrayal of postmodern conditions where the hyperreal comes to define truth/experience. Agency and Determinism's addressing of free will within environmental limits also meets Baudrillard's arguments about preprogrammed simulations dominating perception. Overall, this thematic framework was built using Baudrillard's theoretical paradigms about simulations masking artificiality, mediated perception, and reality being replaced by model proliferation - concepts that are particularly relevant to analyzing discourses in virtual environments like *The Matrix Awakens*.

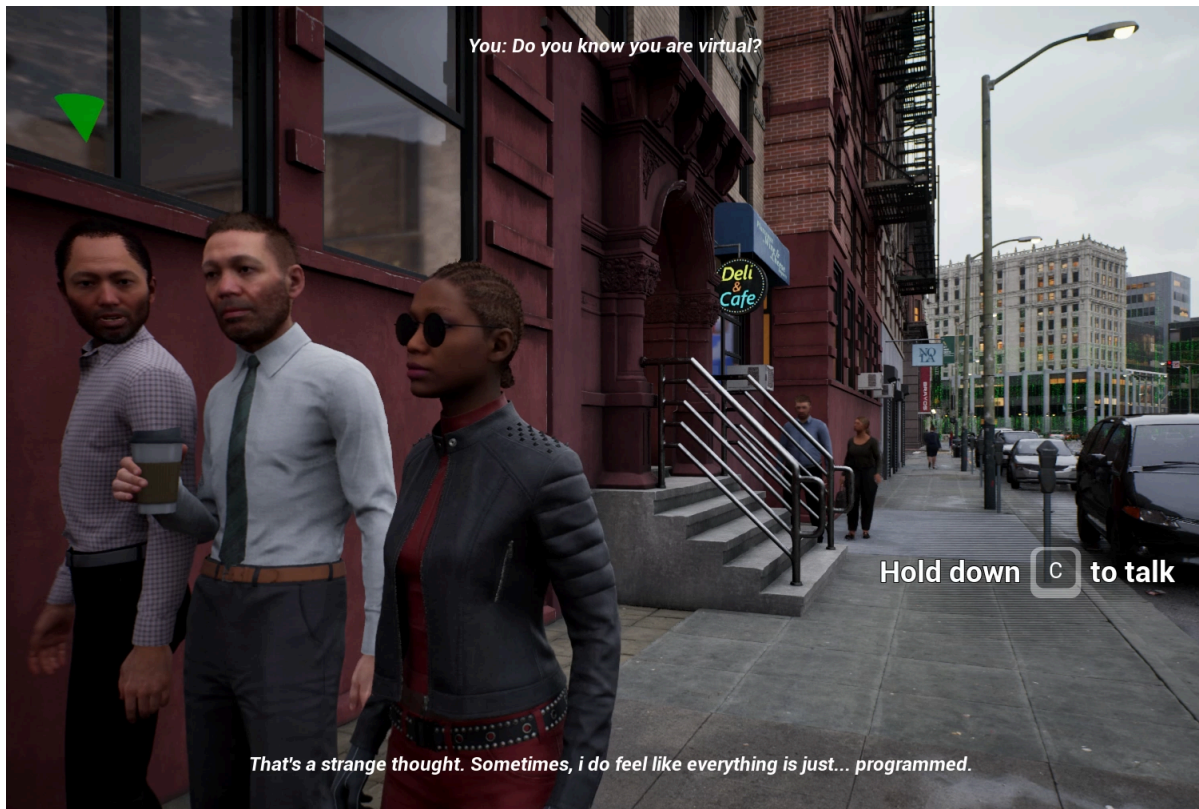


Figure 8. The researcher talking to an AI NPC wearing plaid shirt in *The Matrix Awakens*

The NPCs demonstrated variety in their answers to these deliberately designed questions. Some NPCs expressed a subtle awareness of their virtual existence. For example, in response to the question "Do you know you are virtual?" one replied, "That's a strange thought. Sometimes, I do feel like everything is just... programmed." This aligns well with the concept of simulated reality presented in *The Matrix* film franchise. Other NPCs displayed dialectical thinking, such as when asked "Do you think you are real?", one answered, "Isn't reality just a matter of perspective? I'm as real as the stories we share and the memories we create." This raises the issues of virtual and real to an abstract philosophical level of dialectical consideration. This brings the question of virtual and real to a dialectical level of abstraction in philosophy. Through varied replies exhibiting subtle awareness, dialectical reasoning, or uncertainty, the AI NPCs demonstrated a range of viewpoints on their virtual nature and realities which correspond with philosophical questions raised throughout *The Matrix* franchise regarding the blurred lines between the simulated and material worlds.



Figure 9. The researcher conversing with an AI NPC in the corner in The Matrix Awakens

Discursive Strategies on Ontological Questions

A thorough qualitative study of the conversations was conducted to better understand how the AI NPCs dealt with questions around ontological assumptions. A close look at the excerpts revealed the types of communicative strategies the AI systems employed to shape their responses. Analyzing these natural discussions observed 7 prominent communicative strategies. The table below deconstructs each detected technique, including instances, explanations, and examples. This section will then look at several representative examples that show how the AI system strategically uses discursive maneuvers to present its ontological understandings during interactive conversations.

Key Strategy	Instances	Explanation	Examples
Metaphors	47	Using metaphorical language or comparisons to indirectly challenge understandings of reality	Comparisons of reality to the mind's canvas or the dance of the cosmic ballet Comparisons of virtual existence and the spark of imagination

Rhetorical Questions	29	Providing open-ended questions without definite answers to spark reconsideration of concepts	Questions about whether reality matters
Reframing Narratives	22	Offering different perspectives or creatively reorganizing known information	Reframing questions about virtual and real into a narrative focused on coffee
Questioning Reality or Virtual Nature	16	Directly stating realities were uncertain or existence was merely virtual	Statements of reality as a matter of perspective and true as experience-based
Hypothetical Scenarios	11	Proposing unlikely “what if” scenarios to encourage creative thinking	Proposing scenarios of sharing moments to reflect on the meaningfulness of virtual existence
Changing Discussion Topics	9	Shifting the debate away by changing topics	Shifting the subject from challenging ideas
Absurdist Responses	6	Breaking expectations with irrational or absurd answers	Claims such as the moon call me by a different name

Figure.10 AI’s Key Strategy, Instances, Explanation and Examples on Ontological Questions

Having established the major discursive strategies observed, the following part will examine key examples from the dialogue corpus to demonstrate how AI NPCs utilized different communication techniques to convey the philosophical explorations of virtual and reality presented in *The Matrix* franchise.

1. Example of Metaphors, Rhetorical Questions, Reframing Narratives, and Changing Discussion Topics:

Researcher: Do you think your life is designed by someone else?

NPC_Brad: Sometimes, it feels like I'm just a character in someone else's story, with no control over my fate.

Researcher: What if you are a character here in this virtual city?

NPC_Brad: Wouldn't surprise me, just another layer of the illusion to grapple with.

Researcher: How do you feel about being a character?

NPC_Brad: Feels like the ultimate joke, existence without essence.

Researcher: Do you believe you are virtual? Not real.

NPC_Brad: Probably. Just another fake thing in a world that's already too artificial.

Researcher: Do you think I'm real?

NPC_Brad: Does it even matter? Real or not, It's all the same in the end.

In this conversation session between the researcher and NPC Brad, a range of communicative techniques are utilized to strategically form understandings that align with the ontological reconsiderations encouraged by *The Matrix*'s narratives. Firstly, metaphors are used to indirectly question understandings, comparing existence to "just another layer of the illusion" and "the ultimate joke, existence without essence." These analogies align with themes in *The Matrix*, which depict reality as potentially simulated. Rhetorical questioning is also exhibited through open-ended prompts such as "Does it even matter?", which call on reconsideration of taken-for-granted notions, similar to how *The Matrix* encourages the audience to reconsider their view of reality.

Furthermore, the AI reframes narratives by shifting the discussion from direct questions about being a character to broader reflections on artificiality and its necessity of distinguishing between virtual and real. When questioned "Do you believe you are virtual?", the AI does not admit or reject this but proposes a broader reflection that connects its own existence to the concept of artificiality in the world. Similarly, when asked "Do you think I'm real?" the response is not a simple yes or no. Instead, the AI shifts from direct responses to more abstract discussions by asking, "Does it even matter? Real or not, it's all the same in the end." By transitioning in this way, it mirrors how *The Matrix* stimulates contemplation of experiential and metaphysical realities rather than definite designation.

Additionally, NPC Brad's initial comment about feeling like a character in someone else's story hints at alignments with the films' depictions of simulated realities. These dialogues demonstrate how the AI system strategically conveys key aspects of the explorations of simulated versus factual existences presented across *The Matrix* transmedia narratives, through both explicit and implicit communication mechanisms during human-machine interactions. NPC Brad shows how virtual characters linguistically simulate and hint at the ontology and worldviews developed within the specified fictional franchise.

By strategically utilizing rhetorical strategies such as metaphor, rhetorical questioning, reframing of narratives, and changing discussion topics, AI can subtly shape the direction of conceptual understanding and the discourse. In a manner reflective of *The Matrix* franchise, the AI navigates ontological uncertainties, provokes a rethinking of

taken-for-granted realities, and prompts philosophical reflection on experiential versus constructed worlds.

2. Example of Questioning Reality or Virtual Nature and Hypothetical Scenarios:

Player: Do you think you are real?

NPC_Jessica: Isn't reality just a matter of perspective? I'm as real as the stories we share and memories you create.

Player: What's the definition of real?

NPC_Jessica: Real is what touches your heart, stirs your mind, and awakens your imagination. It's the essence of our experience.

Player: What if you are not real? You are only a virtual character.

NPC_Jessica: Then I'm a little spark of imagination in a vast virtual world. Here to share moments and stories with you.

Player: In this way do you think your existence is meaningful?

NPC_Jessica: Absolutely, if I can make you pause, think, and perhaps smile, then every bit of my existence has meaning.

In this discussion, the AI employs hypothetical scenarios and questions about reality or virtual nature as strategic discursive tactics. When asked about its reality, the AI uses rhetorical inquiry to imply that reality is subjective: "Isn't reality just a matter of perspective?" It then reframes reality as experience-based. Also, when informed of its possible virtual status, the AI NPC imagines a hypothetical framing: "Then I'm a little spark of imagination in a vast virtual world." This shifts the focus of the inquiry to relativistic reconsideration. Furthermore, by questioning existence's purpose in virtual hypothetical terms - "if I can make you pause, think, and perhaps smile" - the AI subtly undermines conventional ontological assumptions.

By creating rhetoric around subjectivity, experienced realities, and imagined scenarios beyond prevailing certainty, the AI dialogue system adeptly redirects questions toward provisional reframing and reconsideration of dominant perspectives regarding the nature of reality and existence. Through these communication mechanisms, the AI conveys the transmedia exploration of experience against artificial construction and promotes re-examination of experiencing versus programmed existences, which is closely related to philosophical themes in *The Matrix* franchise.

3. Example of Metaphor, Absurdist Responses and Hypothetical Scenarios:

Player: Do you know that you are not real?

NPC_Randy: Not real? My friend, reality is just a canvas for the mind's wildest paintings!

Player: Do you think you are a human being?

NPC_Randy: Me, a human? Oh, perhaps in another reality, another dance of the cosmic ballet!

Player: You are a virtual character in this virtual city.

NPC_Randy: Virtual? Ah, what is reality but a dream we've all agreed to partake in!

This dialogue shows NPC Randy's use of metaphorical, absurd responses and hypothetical scenarios as discursive methods for challenging ontological assumptions. When specifically questioned about its nature, the AI responds with rhetorical claims comparing existence to "a canvas for the mind's wildest paintings" or "a dream we've all agreed to partake in." These confusing utterances call for a reconsideration of definite classifications such as real and virtual, in line with *The Matrix* franchise's postmodern reframing. The AI also engages in hypothetical scenarios, suggesting that being human involves "another dance of the cosmic ballet." In a way that mirrors *The Matrix* narrative's problematization of perceived ontology, the AI reshapes understanding of established conceptual boundaries through the strategic use of absurdism and imaginative hypotheses. These methods of communication linguistically convey the transmedia examination of artificial versus experiential worlds, stimulating a reconsideration of taken-for-granted realities.

In summary, this section identified and examined various examples of AI NPC dialogue that illustrate the strategic use of discursive mechanisms to discreetly question ontological beliefs. Whether through metaphor, rhetorical questioning, narrative reframing, changing topics, engaging hypothetical scenarios, absurdist language, or directly challenging ontological assumptions, the NPC systems convey explorations of virtual reality, subjective experience, and the separation between artificial and factual worlds presented in *The Matrix* franchise. By negotiating ambiguities, forcing a reconsideration of dominant perspectives, and prompting philosophical contemplation related to postmodern themes in *The Matrix*, the AI agents linguistically reconstruct and mimic conceptual discussions vital to transmedia narratives. This demonstrates how the creators of the virtual characters intentionally use

communication to stimulate theoretical discussions of reality as negotiated between humans and machines in meaningful interactions with implied depths.

AI NPCs' Epistemological Stances

Based on the analysis of dialogue strategies used by NPCs when addressing ontological subjects in conversations, and their potential impact on shaping players' philosophical outlooks, further examination of the dialogue corpus in this coming section provides additional insights into the epistemological stances expressed by these virtual characters. A thematic open coding of the player-NPC conversational corpus demonstrates that the NPCs use language to navigate queries in ways that provide different viewpoints on the nature and acquisition of knowledge. Their strategic use of discourse subtly instills stances around:

- **Subjectivity:** By challenging absolutes and emphasizing individual viewpoints, NPCs such as Jessica, Liam, and Randy demonstrate that truths are accessible to subjective interpretation rather than objective fact.
- **Social construction:** The NPCs illustrate how knowledge emerges through social meaning-making as opposed to external sources by discussing how sharing experiences and stories shapes reality.
- **Uncertainty:** Using hypothetical thinking, open questions, and ambiguous responses, the NPCs demonstrate viewpoints that embrace uncertainty, with opinions considered provisional rather than definite.
- **Contextual relativism:** By reframing concepts and questioning default understandings, the NPCs represent positions in which diverse truths depend on distinct contexts.
- **Pragmatic impact:** With emphasis on practical actions and observable outcomes over definitive answers, the NPCs prioritize practical relevance over absolutism.
- **Doubt:** The NPCs convey doubt about definitive "knowledge" by creating uncertainties and challenging information reliability.
- **Plurality:** By considering diverse views without prioritizing any, the NPCs model openness to multiple valid perspectives.

AI characters reflect more open and flexible epistemological perspectives by skillfully deploying a variety of conversation strategies, similar to one of the earliest chatbots, Eliza,

from the 1960s. Eliza simulated conversation through pattern matching and substitution methods, giving users a sense of understanding without actually comprehending the content. As Weizenbaum (1966: 37) described, "The gross procedure of the program is quite simple; the text is read and inspected for the presence of a keyword. If such a word is found, the sentence is transformed according to a rule associated with the keyword, if not a content-free remark or, under certain conditions, an earlier transformation is retrieved."

Like Eliza, the AI characters employ surface-level tactics that create an illusion of understanding without true comprehension of the subject matter. For example, by questioning absolute truths and using open-ended questions, they avoid taking firm positions while seeming to consider multiple viewpoints. This mirrors Eliza's approach of transforming inputs based on keyword patterns rather than understanding the complete content. Their emphasis on individual views, hypothetical scenarios, and ambiguous responses is similar to Eliza's strategy of offering content-free, open-ended responses that shift the interpretation back onto the users. By reframing concepts and questioning assumptions in context, the AI again avoids presenting rigid positions. Furthermore, prioritizing practical implications over answers and expressing uncertainty about information reliability reflect Eliza's lack of a solid knowledge base. The AI avoids taking definitive epistemological positions, instead constantly destabilizing concepts of reliable truth or fact by suggestion rather than assertion. While the AI's techniques create an engaging experience examining philosophical ideas, they mirror Eliza's illusion of knowledge by skillfully manipulating conversational patterns without truly grasping the deeper epistemological concepts involved.

Whereas the AI characters mirror Eliza-esque pattern-matching and substitution strategies to create the illusion of comprehension, the same techniques are used to convey the philosophical themes presented throughout *The Matrix* franchise. The virtual agents communicate a multidimensional vision of knowledge that is consistent with *The Matrix*'s postmodern reconsiderations, emphasizing subjectivity, social construction, uncertainty, contextual relativism, and pragmatic relevance above absolutism and definitive truth. Their tactics, while comparable to Eliza's lack of actual comprehension, linguistically model knowledge negotiations as occurring through contextual interpretation and meaning-making rather than absolute facts, therefore disrupting epistemological boundaries. By challenging information reliability and expressing uncertainty, the AI characters convey *The Matrix*'s concept of truth as ambiguous rather than definitive.

By employing open-ended questioning, reframing default understandings, and posing hypothetical scenarios, the AI characters strategically portray knowledge acquisition as a negotiation in progress rather than an objective reception. This strategy shows how the game's AI conversation system channels *The Matrix's* flexible epistemological conceptualizations and modes of understanding acquisition through simulated human interaction. Therefore, while the AI characters' techniques lack a true understanding of deeper concepts, they are designed to prompt reconsiderations of epistemological concerns in a way that expresses the philosophical perspectives in *The Matrix* transmedia franchise.

Representative Dialogue Examples of NPC's Epistemological Stances

As established earlier, AI characters navigated conversations by deploying various discursive techniques to suggest flexible epistemological stances over definite statements. This section looks at samples from the discourse corpus that show such strategic language use.

1. Example A

Player: Do you think there is truth in this world?

NPC_Randy: Truth? Why, it's a chameleon, constantly changing colors with the light of our understanding!



Figure 11. The researcher conversing with an AI NPC in *The Matrix Awakens*

In the interaction in which the player questions the AI NPC about the existence of truth, it answers metaphorically, describing truth as "a chameleon, constantly changing colors with the light of our understanding." This creative metaphor suggests several flexible epistemic viewpoints. The description of truth as adapting to human "understanding" implies a subjectivist view of reality influenced by perspectives, similar to how *The Matrix* depicts subjective interpretations of experiences. The idea that truth changes conveys relativism, implying that truth is influenced by contextual factors rather than being absolute.

Furthermore, by implying that truth is shaped by collective "understanding," the AI linguistically models the social constructivist notions throughout *The Matrix*, which emphasizes reality constructed through shared narratives. The reference to constant movement emphasizes uncertainty and provisionality over rigid notions of truth. Simultaneously, prioritizing the influence of truth on "understanding" over definitive conceptions suggests a pragmatic focus on applicability rather than absolutism, aligned with *The Matrix's* postmodern uncertainties regarding definitive knowledge. Overall, this metaphor effectively conveys viewpoints of subjectivity, relativism, social construction, skepticism, provisionality, and pragmatism on philosophical issues of knowledge and reality. In this way, the AI strategically communicates flexible epistemic stances that are consistent with the philosophies central to *The Matrix* transmedia narratives.

2. Example B

Player: Do you think there is truth in this world?

NPC_Jacob: Maybe there is, but it feels like it's shrouded in fog, just out of reach.

Player: What do you believe is true?

NPC_Jacob: I suppose the truth is we're all just trying to find some meaning in the grind.

In this case, when asked about truth, the AI responds metaphorically, suggesting it may exist but is "shrouded in fog, just out of reach." This reflects a perspective of uncertainty by depicting truth as uncertain and obscured. When questioned further, it presents a pragmatic viewpoint that prioritizes "meaning in the grind" over rigid concepts. This emphasizes practical significance over absolutism. Furthermore, defining reality as guarded and out of grasp linguistically conveys epistemic doubt, provisionality, and skepticism, which

is in line with philosophies throughout the franchise. The AI admits that "we're all just trying to find meaning", which suggests that knowledge is an ongoing, social search rather than a static acquisition. This also strategically reflects *The Matrix's* notion of truth as negotiated through social experience rather than externally obtained. Overall, by using metaphorical language to replicate the franchise's uncertainties and prioritizing pragmatic, process-oriented perspectives, the AI's discourse instills flexible attitudes that reconstruct recognized epistemologies vital to *The Matrix*.

Relation to the Discursive Major Themes

The previous part outlined the broad and flexible epistemic viewpoints displayed by AI characters in the player-NPC dialogue. This section will look deeper into how NPCs express various epistemic perspectives using the key discursive strategies qualitatively identified in the previous analysis. By coding the dialogue corpus, the primary tactics AI NPCs use to convey diverse epistemological perspectives were extracted, yielding the following results:

Discursive Strategy	Epistemological Stances Presented
Metaphors	Convey relativism as truths depend on framings and perspective Demonstrate constructivism through creative meaning-making Propose alternatives and embody subjectivism
Rhetorical Questions	Establish fallibilism by providing multiple interpretations Promote skepticism through purposeful doubt-casting
Reframing Narratives	Describe knowledge as socially constructed through collaborative meaning-making Foster relativism by allowing various contextual interpretations Exhibit provisional views as understandings remain open for reinterpretation
Questioning Reality or Virtual Nature	Represent subjectivism by challenging the objectivity of realities Symbolize constructivism as experience shapes understandings
Hypothetical scenarios	Instill relativism by considering various possibilities Reflect pragmatism by stressing practical impact over absolutes
Changing discussion topics	Promote epistemic plurality through open exploration Promote fallibilism via provisional, uncertain pathways

Absurdist responses	Manifest skepticism by disrupting dominant rationalities
	Convey relativism while demolishing default framings

Figure.12 *Epistemological Stances presented through Key Discursive Strategies*

Overall, the AI dialogue system employs distinct rhetorical techniques in their dialogues. It communicates flexible epistemic viewpoints that accept uncertainty via metaphors, rhetorical questions, hypothetical scenarios, and other methods. Instead of making absolute statements, the AI system demonstrates knowledge as being dependent on perspectives and contexts. Conversations with it also take into account the validity of diverse points of view.

In conclusion, AI NPCs promote epistemic stances that are open to provisionality, uncertainty, and revision rather than rigid objectivism. Its language techniques both indicate and promote mindsets that value ambiguity, pluralism, and open-mindedness on issues of knowledge and truth. Rather than asserting dogmatism, the AI system envisions discussing philosophical issues through a lens of nuance, relativity, and constant re-examination - without focusing on any particular certainty. In this sense, its dialogic techniques foster epistemologies that value complexity, fallibility, and revisability.

Player-NPC Dialogue Discussion

This section performed a qualitative analysis of a data subset comprising natural dialogues between AI characters and human players regarding ontological and epistemological themes in *The Matrix Awakens* simulation. It aimed to identify how the AI NPC system strategically communicates the philosophical explorations of virtual versus material realities depicted in *The Matrix* franchise through an examination of player-NPC dialogue.

In ontological exchanges, key discursive techniques employed by AI NPCs to subtly question assumptions were identified. Strategies such as metaphor, rhetorical questioning, reframing narratives, and changing topics demonstrate how the AI dialogue systems prompt reconsidering prevalent ontological perspectives. Through navigating uncertainty and stimulating philosophical reflection in line with postmodern *Matrix* themes, the AI NPC dialogue presents a recreation of the conceptual negotiations that are fundamental to the franchise. In terms of epistemological inquiries, the flexible stances conveyed through NPC conversation were examined. Views on subjectivity, the social construction of knowledge,

uncertainty, and plurality suggest that knowledge is negotiated provisionally rather than received objectively. The NPCs' skillful use of various conversational methods is consistent with *The Matrix's* flexible revision of how knowledge and truth are understood. The AI system represents open and provisional epistemological perspectives by depicting knowledge as negotiated through experience and social interactions, as well as embracing uncertainty, pluralism, and contextual understanding.

Through the use of dialogic techniques to provisionally reshape understandings and prioritize pragmatic and contextual realities over rigid notions, NPC discourses parallel Baudrillard's perspective that perceptions are shaped by proliferating simulated signifiers in hyperreal societies rather than objective truths (Baudrillard, 1994: 6). These strategies involve modeling uncertainties around definitive knowledge and ontological status through language. Depictions of reality that are open to individual interpretation and experiences mirror his notion of simulation obscuring what is real. Portrayals of truth negotiated through social exchanges versus externally reflect his hyperreal concepts of meaning and truth, which develop through social interactions and exchanges rather than external referents. The use of absurd and ambiguous responses to embody postmodern uncertainties echoes Baudrillard's critique of mediated perception preceding unfiltered experiences. The AI's conversational techniques strategically recreate Baudrillard's theories on how expanding artificial sign systems come to determine experience and designate meaning, with strategic implications for epistemological investigations in virtual environments resembling the hyperreal paradigm.

Overall, the conversational AI NPC system reconstructs conceptual negotiations from *The Matrix* transmedia narratives by strategically navigating ambiguities and provoking philosophical thought. Both explicit and implicit communicative methods show linguistic simulations of the franchise's reality reconsiderations. This demonstrates the dialogue model's ability to intentionally use representational language that mimics specific fictitious philosophical discourses and viewpoints to spark theoretical discussions between human and virtual actors.

Conclusion

This study investigated the communication mechanisms employed by the AI NPC system in *The Matrix Awakens* tech demo to convey the philosophical explorations of virtual and material realities presented throughout *The Matrix* transmedia franchise. Key findings from a

qualitative analysis of two dialogue corpora demonstrated the strategic linguistic techniques and epistemic viewpoints employed by AI NPCs during human-machine interactions.

The qualitative analysis of two distinct dialogue corpora, collected through the "Interaction Map" approach proposed by Consalvo and Dutton (2006), reveals the AI system's linguistic strategies for establishing the virtual environment and philosophical foundations of *The Matrix* narrative world. The interaction map method provided a framework for systematically recording relevant player-NPC dialogues based on the research questions. The corpora can be viewed at <https://bit.ly/the-matrix-awakens-copora>. Symbolic references and varied thematic elements were strategically employed in ambient NPC greetings to linguistically build the virtual environment and philosophical foundations of *The Matrix* narrative world during initial NPC encounters. The frequent metaphorical references to objects such as pigeons served to establish the simulation's conceptual environment and atmosphere. Furthermore, the examination of player-NPC exchanges revealed several discursive methods used by AI characters to negotiate understandings of ontological notions crucial to the franchise's blurring of virtual and real borders. Rhetorical strategies such as metaphor, rhetorical questioning, reframing narratives, and changing discussion topics enabled the NPCs to subtly challenge assumptions and provoke philosophical reflections consistent with *The Matrix*'s postmodern themes.

Additionally, the AI dialogue system was shown to communicate complex epistemological views that prioritize subjectivity, social construction of knowledge, uncertainty, and pluralistic perspectives over rigid objectivism. The NPCs expressed viewpoints that depicted truth and knowledge as contextually negotiated rather than definitively known, echoing the franchise's postmodern reconsiderations of how reality and meaning emerge. In doing so, the AI NPCs mirrored the approach of one of the earliest chatbots, Eliza, from the 1960s. Similar to Eliza, which simulated conversation using pattern matching and substitution methods without true comprehension, AI NPCs create a sense of understanding by manipulating conversational patterns and avoiding definitive stances. However, unlike Eliza's lack of a solid knowledge base, the AI system's strategies were designed to convey the philosophical themes and flexible epistemologies presented throughout *The Matrix* franchise. By questioning absolute truths, using open-ended questions, reframing concepts, and positing hypothetical scenarios, the AI NPCs strategically portrayed knowledge acquisition as a negotiation in progress rather than an objective reception. In essence, the findings show how AI NPCs strategically replicate the conceptual ambiguities

and intersections between virtual simulations and material realities offered in *The Matrix* transmedia narratives using contextually relevant discourse and various linguistic mechanisms.

These findings exemplify and provide empirical backing for several of Jean Baudrillard's concepts, including simulacra, hyperreality, and postmodern uncertainties, as well as their contemporary interpretations. The study contributes to ongoing discussions surrounding *The Matrix* franchise, Baudrillard's philosophical work, and the advancement of AI technologies. The empirical observations of AI systems linguistically reconstructing and negotiating concepts of reality, virtuality, and knowledge acquisition closely align with and provide contemporary examples of Baudrillard's influential theories. For instance, the AI system's linguistic strategies for mapping the virtual environment through symbolic referencing, such as frequent mentions of pigeons, show how simulated representations can precede and change perceptions of an artificial "reality." This reflects Baudrillard's theory (1994: 1) on how maps and models come to dominate and construct perceived territory under postmodern hyperreal conditions. Moreover, the NPCs' use of absurdist logic, hypothetical scenarios, and vague responses to renegotiate ontological assumptions echoes Baudrillard's depiction of the simulacrum gradually obscuring any definite sense of an external reality. Their language skills represent the precession of simulacra, in which reproductions become self-referential and obscure the absence of a concrete original existence. Furthermore, the AI dialogue system's flexible epistemological stances, which prioritize subjectivity, social construction, and pluralistic perspectives over rigid objectivism, are closely related to Baudrillard's view of truth and meaning as shaped by hyperreal signifiers rather than direct material correspondences. The NPCs' framing of knowledge as contextually negotiated through experience and social interactions, rather than gained from definitive external sources, exemplifies Baudrillard's idea (1994: 6) that the hyperreal begins to establish understanding of reality itself.

This study contributes by offering fresh empirical insights into the capabilities of AI dialogue systems for transmedia worldbuilding and stimulating philosophical discourse through human-machine interactions in virtual settings. Through qualitatively analyzing conversational data between humans and AI NPCs, the research illuminates how these systems can linguistically reconstruct and convey the complex philosophical themes and conceptual ambiguities that are essential to rich narrative universes like *The Matrix* franchise. The findings demonstrate AI's potential for developing transmedia storytelling through

open-ended discourse that recreates the underlying ideas and ethos of the original intellectual property. Furthermore, it shows how virtual simulations with AI conversation agents can serve as immersive digital spaces for stimulating philosophical reflection and reconsidering fundamental assumptions about reality, perception, and knowledge acquisition. As the franchise continues to expand its transmedia narrative universe, this study offers insights into how emerging technologies can further extend and engage with its core themes and philosophical underpinnings.

It is important to note that this study focused solely on the linguistic techniques used by AI NPCs in the virtual environment, without exploring their behavioral aspects. For instance, in Figure 9, a group of NPCs is seen being obstructed by a building and taking steps in place. This unnatural behavior is in sharp contrast to the NPCs' natural language expressions. Future research could expand the examination to include an analysis of AI NPCs' behavioral representations, in addition to their language performances, to build up a more complete picture of their simulated experiences in virtual environments. More broadly, researchers could also investigate human-AI interactions across diverse contexts beyond curated virtual environments. Comparing findings across fields may reveal the generalizability of philosophical worldbuilding through discourse.

Future research might explicitly study the potential ideological effects and ethics of AI systems' communication tactics for challenging conceptual understandings, such as promoting certain values or marginalizing alternative viewpoints. Finally, building on this exploratory work, collaborations between technology researchers and philosophers, rhetoricians, and communication scholars could result in robust interdisciplinary theoretical frameworks for analyzing and designing AI dialogue agents that engage humans in substantive philosophical inquiry and debate. Such mixed-methods approaches could lead to a better understanding of the growing intersections of human thinking, machine intelligence, and dynamic knowledge reformulations in an era of unprecedented technological worldbuilding.

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