# Designing Anthrogames: Theory, Methods, and AI Integration in Cultural Gaming

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## ABSTRACT

This study explores 'anthrogames', purpose-built games that merge anthropological knowledge with interactive design. Analyzing three pioneering examples, it traces anthropology's evolving engagement with games: from virtual ethnographies and studies of game production to creating purpose-built games. The authors present a novel theoretical framework distinguishing anthrogames from educational games and traditional ethnographic media. Drawing on computer science, anthropology, and game studies, the study identifies design patterns and methodologies that translate ethnographic insights into engaging, scholarly sound gameplay. It highlights the potential of anthrogames to redefine cultural representation through emerging technologies like Large Language Models and collaborative design. Positioned at the intersection of ethnography, technology, and participatory design, anthrogames challenge anthropologists and designers to develop innovative frameworks for evaluating and creating cultural representation in interactive media. This research underscores their transformative potential in computational anthropology and interactive ethnography, bridging scholarship and player engagement.

## Keywords

Anthrogames, Ethnography, Gamification, Cultural Representation, Interactive design, Large Language Models, Participatory Design.

## I INTRODUCTION

The intersection of anthropology and interactive digital media represents a rapidly evolving frontier in both cultural representation and knowledge production. While

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anthropologists have historically embraced various media forms—from photography to film—for documenting and analyzing cultural phenomena, their engagement with video games has been relatively limited, despite gaming's emergence as one of the most significant forms of cultural expression and social interaction in the 21st century (Muriel & Crawford 2018). However, recent years have witnessed a transformative shift: While some anthropologists have begun exploring video games as tools for ethnographic representation (Boellstorff 2016; Pink et al. 2016), the full potential of games for methodological innovation in anthropology remains largely unexplored.

This study examines the emergence of 'anthrogames'—purpose-built games that serve as vehicles for anthropological knowledge and cultural representation—within the broader context of computational anthropology (Peponakis et al. 2024). Through detailed analysis of pioneering examples and emerging technological capabilities, the authors argue that anthrogames represent a crucial methodological innovation in how anthropological knowledge can be both produced and disseminated. This research makes three primary contributions to the field: First, the authors present the first comprehensive theoretical framework for understanding anthrogames as distinct from both educational games and traditional ethnographic representations. Drawing on both anthropological theory and game studies, the authors demonstrate how these hybrid forms navigate the complex space between cultural authenticity and player engagement.

Second, through detailed case studies of three significant anthrogames— *Never Alone (Kisima Ingitchuna) (*E-Line Media, 2014*), The Long Day of Young Peng* (Pia 2018*),* and *Malinowski in the Age of AI* (Hoffmann et al. 2024)— the authors identify key design patterns and methodological approaches that effectively translate ethnographic knowledge into interactive experiences. This analysis reveals how different development approaches address the fundamental challenge of maintaining anthropological rigor while creating engaging player experiences.

Third, drawing on both technological innovations and participatory design methodologies, the authors explore how collaborative frameworks and emerging technologies, particularly Large Language Models, could significantly transform anthrogame development. This forward-looking analysis extends current research to map potential future directions in anthropological gaming, emphasizing the importance of community participation and cultural authority in game design.

As computational anthropology continues to evolve (Peponakis et al. 2024), particularly with the emergence of new AI capabilities and collaborative methodologies, understanding these developments becomes crucial for imagining future directions in the field. The analysis suggests that anthrogames stand at a critical juncture between traditional ethnographic methods, and technological as well as participatory design innovation, challenging designers, anthropologists and computer scientists to develop new frameworks for evaluating and creating cultural representation in interactive media. This intersection raises fundamental questions about authenticity, agency, and the role of play in cultural understanding—questions that become increasingly important as digital spaces become primary sites of cultural production and social interaction.

By examining the historical development of anthropological engagement with games, analyzing current approaches to anthrogame development, and projecting future

technological and methodological possibilities, this study provides a comprehensive framework for understanding how interactive media can serve both as tools for ethnographic research and as platforms for cultural representation. The findings have significant implications for anthropological methodology, game design, and the broader field of digital humanities, suggesting new directions for how cultural knowledge can be created, shared, and experienced in interactive environments.

## II. METHODOLOGY

This literature review synthesizes scholarly research on anthropological approaches to video games from 2000 to 2024, employing a critical review methodology to examine the evolution and intersection of anthropology and game studies. Rather than attempting a comprehensive systematic review, this study adopts a selective approach to identify and analyze key theoretical developments and significant case studies in the field.

The selection of materials focused on influential works from the fields of social anthropology, game studies and computer sciences that specifically address the intersection of games and cultural representation. Publications were identified through a narrative networking approach, starting with seminal works (such as Boellstorff (2008) and Nardi (2010)) and following their theoretical and methodological developments through subsequent literature. This approach allowed for the identification of emerging themes and critical transitions in how anthropologists have engaged with text and video games.

The analytical framework examines three key dimensions of anthropological engagement with games: methodological approaches, cultural translation practices, and technological implementation. This framework was developed through iterative analysis of the selected literature, identifying patterns in how anthropologists have approached games as both research subjects and methodological tools. The study pays particular attention to works that represent significant shifts in theoretical understanding or methodological innovation.

The analysis spans three distinct temporal phases: the early period of virtual ethnography (2000-2008), the emergence of game production studies (2009-2015), and the recent development of anthrogames (2016-2024). This periodization emerged from the analysis rather than being predetermined, reflecting natural breaks in how anthropologists have conceptualized and engaged with text and video games.

## III. ANTHROGAMING: THREE APPROACHES TO DIGITAL GAMES IN ANTHROPOLOGY

The relationship between anthropology and digital games has evolved through three distinct methodological approaches, each representing a different way of engaging with digital games as both cultural artifacts and anthropological tools.

### III.1. Virtual Ethnography

Virtual ethnography emerged as the first systematic attempt by anthropologists to study video games and virtual worlds. Boellstorff's (2008) "Coming of Age in Second Life" marked a watershed moment, demonstrating that virtual worlds could be

legitimate sites for anthropological inquiry. His work established methodological principles for conducting fieldwork in digital spaces, arguing that virtual worlds should be studied ”in their own terms” (Boellstorff 2008,5) rather than as mere reflections of physical reality.

Nardi’s (2010) ‘My Life as a Night Elf Priest’ further developed this approach through her study of *World of Warcraft* (Blizzard Entertainment 2004), examining how players create meaning and social relationships within game worlds. Her work highlighted the importance of understanding gaming practices as culturally significant activities, rather than simply leisure pursuits. In addition, Pearce (2009) contributed to the field through her ethnographic work on player communities in virtual worlds, particularly examining how players develop persistent social identities and cultural practices across different gaming platforms and contexts. Her research focused on the "Uru Diaspora"—a community of players who migrated from the closed game *Uru: Ages Beyond Myst* into other virtual worlds, where they created hybrid cultures that integrated elements from their original gaming environment while adapting to new digital spaces.

The methodological challenges and innovations of virtual ethnography have been substantial. Anthropologists have had to adapt traditional fieldwork methods to digital environments, requiring new approaches to participant observation in virtual spaces. Questions of authenticity and identity in online interactions have become central concerns, pushing researchers to reconsider fundamental concepts of presence and community in digital contexts. This body of work established the foundation for understanding digital spaces as legitimate sites of cultural production and social interaction.

## III.2. Game Production Studies

The second wave of anthropological engagement with games focused on their production contexts. O’Donnell’s (2014) studio ethnography provided crucial insights into the cultural dynamics of game development teams and their creative processes. This work revealed how organizational cultures shape game design decisions and ultimately influence the final products.

Malaby’s (2011) work on game development culture examined how uncertainty and contingency shape creative processes in game studios. His research demonstrated how game developers navigate between artistic vision, technical constraints, and market demands.

Bulut’s (2020) research on precarious labor in the gaming industry expanded this approach by examining power dynamics in game development studios. His work revealed the complex interplay between labor conditions and workplace culture, demonstrating how industry practices directly impact game content and design. These studies collectively highlight the importance of understanding the social and economic contexts in which games are produced.

## III.3. Games as Cultural Artefacts

Digital games have transcended their origins as mere entertainment to become powerful cultural artifacts that both reflect and influence society’s values and norms.

Contemporary anthropologists approach these digital spaces as complex cultural ecosystems, examining how games transmit cultural values, ethical frameworks, and ideological perspectives to global audiences. This scholarly attention has produced significant insights through various studies, from analyses of e-sports communities (Taylor 2012) and machine gambling (Schüll 2012) to investigations of cultural attitudes toward video game violence (Schroeder 2011) and military recruitment through gaming platforms (Allen 2017).

The anthropological lens has proven particularly valuable in examining representation within video games, especially regarding marginalized identities (Shaw 2015, Gray 2020). Thereby the emergence of 'indie' game production houses within the last decade has challenged traditional representational politics in game design (Ruberg 2019). However, Srauj (2019) argues that economic precariousness among indie developers may inadvertently perpetuate established patterns of representation. Such critical analyses have proven instrumental in advancing cultural sensitivity in game design and promoting ethical practices within the gaming industry, ultimately influencing how developers approach representation and inclusivity in their creative processes.

A significant recent development in this field has been the emergence of what the authors of this study term 'anthrogames' - specialized games that transcend traditional roles as cultural artifacts to become active instruments in anthropological research and knowledge dissemination. Unlike previous approaches that primarily studied games as objects of cultural analysis, anthrogames represent a methodological innovation where games themselves become tools for ethnographic representation and cultural transmission. This transformation enables the translation of traditional ethnographic data into interactive, playable scenarios, offering new opportunities for potential cultural immersion and understanding. As computational anthropology continues to evolve, particularly with the emergence of new AI capabilities, anthrogames stand at a crucial intersection between traditional ethnographic methods and technological innovation. This intersection raises fundamental questions about how games can effectively serve as vehicles for anthropological knowledge while maintaining both scholarly rigor and cultural authenticity - questions that the authors will explore in detail in the following section.

## IV. DEFINING ANTHROGAMES

Digital games transcend traditional frameworks that view them as mere 'spaces', 'texts' (Juul 2003), or 'actions' (Galloway 2006). Instead, they offer multisensory immersive experiences (Isbister 2016) that create new possibilities for anthropological engagement. This potential gives rise to what the authors of this study have termed as 'anthrogames': digital interactive experiences specifically crafted to convey anthropological knowledge. These games operate through an approach where game mechanics deliberately embody cultural practices while maintaining anthropological rigor. The success of an anthrogame depends on achieving somewhat of a ludic-cultural "resonance" (Rosa 2019), a state where gameplay mechanics and cultural representation work in harmony rather than opposition.

This resonance builds on Juul's (2002) concept of "half-real" game spaces, where formal rules meet fictional worlds. In anthrogames, this intersection becomes more complex as cultural authenticity must be maintained within both the rule systems and

the representational elements. The challenge lies in creating what Juul terms ”emergence” - where simple cultural rules can generate complex, culturally authentic patterns of play.

The distinguishing feature of anthrogames lies in their ”ethnographic thickness” (Geertz 2008), setting them apart from other educational or cultural games. Within the framework of Huizinga’s (1938) ”magic circle” concept, anthrogames create distinct spaces where players engage with cultural knowledge through both narrative and mechanical means. This engagement transcends simple representation to create meaningful interactions with cultural systems and practices.

Anthrogames demonstrate versatility in their applications and target audiences within anthropological practice. They function simultaneously as educational tools for anthropology students and interested learners, and as methodological instruments for field research. Researchers may develop games iteratively through fieldwork, using them to validate cultural representations with informants. In museum settings, these games have the potential to serve as interactive companions to traditional exhibits. While anthrogames share characteristics with activist games (1), or documentary games (Fullerton 2008), their distinction lies in their grounding in ethnographic methodology and their commitment to anthropological knowledge production.

## V. CASE STUDIES OF ANTHROGAMES

This section examines three significant anthrogames that demonstrate different approaches to translating ethnographic knowledge into interactive experiences. Each case study reveals distinct strategies for balancing cultural authenticity with player engagement.

### V.1. Never Alone

Never Alone represents one of the most commercially successful and widely recognized anthrogames to date (2). Developed through a collaboration between E-Line Media and the Cook Inlet Tribal Council, the game translates Iñupiaq oral traditions into an interactive platform. The development process involved extensive consultation with Iñupiaq elders, storytellers, and community members, establishing a new paradigm for indigenous self-representation in video games (Williams 2018).

The game’s cultural representation operates on multiple levels. The core gameplay mechanics draw directly from Iñupiaq cultural concepts, particularly the importance of cooperation and interdependence. Players must switch between controlling an Iñupiaq girl and her arctic fox companion, embodying traditional values of human-animal relationships in Iñupiaq culture. The game also integrates documentary-style ”cultural insights” that unlock during gameplay, providing contextual information about Iñupiaq culture and traditions.

Williams’ (2018) analysis of Never Alone’s ethnographic significance highlights how the game successfully bridges entertainment and cultural education. The study demonstrates how the game’s reception among both indigenous and non- indigenous players has fostered greater understanding of Iñupiaq culture while maintaining player engagement through compelling gameplay mechanics.

## V.2. The Long Day of Young Peng

Andrea Pia's 'The Long Day of Young Peng' represents a different approach to anthrogaming, focusing on contemporary urban life in China. The game translates Pia's ethnographic research on labor migration from rural areas to Chinese cities into an interactive narrative experience. The development process emerged directly from fieldwork, with the game serving both as a didactical tool for education and a means of representing findings (Pia 2019).

The game's cultural representation focuses on everyday life and social dynamics, presenting players with choices that reflect real-world tensions observed during fieldwork. Unlike *Never Alone*'s more traditional cultural content, *The Long Day of Young Peng* explores contemporary social issues through personal narratives and decision-making scenarios. The game demonstrates how anthrogames can engage with modern social issues while maintaining ethnographic rigor.

Impact analysis shows how the game has been particularly effective in academic contexts, where it has been used to teach about contemporary Chinese society and urban anthropology (Pia 2019). The game's reception underscores the potential for anthrogames to serve as both educational tools and platforms for public anthropology (Pia 2019).

## V.3. Malinowski in the Age of AI

In 2024, Hoffmann and colleagues pioneered a novel approach to digital anthropology by transforming Bronislaw Malinowski's 1922 classic "Argonauts of the Western Pacific" (Malinowski 1922) into interactive gaming experiences. Working with senior social anthropologists, they utilized GPT-3.5 and prompt engineering to develop three distinct game prototypes, demonstrating a new method of translating traditional ethnographic texts into engaging digital experiences (Hoffmann et al. 2024).

Through iterative design thinking processes, the research team created three distinct gameplay scenarios: an interactive dialogue system where players converse with Malinowski followed by knowledge assessment, a Dungeon's & Dragon's-style roleplaying experience where players embody Malinowski himself, and a mentor-based narrative where players guide Malinowski's anthropological journey.

The latter two prototypes particularly demonstrated the potential of Large Language Models (LLMs) in translating complex anthropological concepts into accessible gameplay mechanics. For instance, the Dungeons Dragons adaptation transformed Malinowski's description of the Kula ring into an interactive system, allowing players to directly experience this complex exchange network rather than merely reading about it.

Evaluation sessions with senior anthropologists revealed both promise and challenges in this approach to digital ethnography. While players engaged with anthropological concepts in novel and immersive ways, the project raised important questions about balancing gameplay accessibility with theoretical rigor (Hoffmann et al. 2024). This work represents a significant contribution to what we call 'anthrogaming', offering new perspectives on how classical ethnographic texts can be adapted for interactive digital platforms.

Taking a step back from this case study, and going back to the comperative level of the three use cases it can be said: Each of these case studies reveals different aspects of how anthrogames can serve as tools for cultural representation and anthropological knowledge transmission. While *Never Alone* demonstrates successful collaboration with indigenous communities, The *Long Day of Young Peng* shows how contemporary ethnographic research can be translated into interactive experiences, and *Malinowski in the Age of AI* illustrates the challenges and opportunities in adapting classical anthropological texts. Together, these examples provide insights into the evolving relationship between ethnography and interactive media.

# VI. CRITICAL ANALYSIS

## VI.1. Authenticity in Play

In developing anthropological games striking a balance between authentic cultural representation and compelling gameplay emerges as the foremost challenge. Successful anthrogames must integrate cultural concepts into their core mechanics rather than treating them as superficial narrative elements. For example, *Never Alone* embeds Iñupiaq values of interdependence within its cooperative gameplay systems, while The *Long Day of Young Peng* captures the nuanced dynamics of rural-urban migration in modern China through its decision-making mechanics.

Translating anthropological knowledge into interactive systems requires careful consideration of how gameplay can meaningfully convey cultural practices and beliefs. Developers must consider not only how to represent cultural elements, but how player actions and choices can authentically reflect cultural dynamics while maintaining engagement. This translation process demands a deep understanding of both game design principles and anthropological concepts to create meaningful interactive experiences.

Historical authenticity in character representation presents an additional layer of complexity (Chapman 2016; Kapell and Elliott 2013). In interactive environments, this complexity extends beyond factual accuracy to include period-appropriate language, perspectives, and social contexts. As Hoffmann et al. (2024) demonstrate through their prototype, AI-driven historical characters require careful consideration of both individual writing styles and broader historical discourse—in Malinowski's case, early 20th century academic anthropology. This attention to temporal and disciplinary context becomes particularly crucial when developing interactive dialogue systems that must maintain historical authenticity while engaging contemporary users.

## VI.2. Ethnographic Depth

The translation of rich ethnographic knowledge into interactive game formats presents significant methodological challenges. Developers of anthropological games must carefully navigate which cultural elements to prioritize and how to represent complex social dynamics within the constraints of game systems. This process demands rigorous attention to both cultural accuracy and the theoretical frameworks underlying ethnographic understanding.

It is crucial to recognize that ethnographic texts themselves represent an initial translation - the anthropologist's interpretation of lived experiences into written

observations (Clifford and Marcus 1986; Geertz 1973). Asad (1986) reminds us that all ethnographic writing involves complex processes of cultural translation. Converting these texts into interactive experiences thus constitutes a second layer of translation, what Underberg and Zorn (2013) describe as 'digital cultural translation'. To maintain ethnographic depth, games must thoughtfully incorporate original ethnographic details, preserving the nuanced observations that give anthropological works their scholarly value (Pink et al. 2016).

Player agency introduces a third dimension to this complex translation process. While interactive gameplay creates powerful opportunities for experiential learning, it also raises questions about the boundaries of player choice in relation to cultural authenticity. While games theoretically allow unlimited possibilities, ethnographic observations document specific patterns of social interaction within communities. Therefore, developers must thoughtfully constrain player agency to reflect documented social realities while still maintaining engaging gameplay. This balance ensures that player actions align with culturally authentic patterns of behavior while preserving meaningful interactive experiences.

## VI.3. Evoking Curiosity for Cultural Phenomena

Anthropological games that depict cultures authentically have a unique way of sparking players' curiosity, encouraging them to explore and understand unfamiliar ways of life. By introducing players to the traditions, values, and environments of different cultures, these games transform curiosity into a tool for cultural exploration and empathy. Players become motivated to learn more not just to complete tasks, but to genuinely immerse themselves in a world that mirrors real cultural practices, encouraging deeper questions about human experiences across diverse settings.

This curiosity-driven exploration extends beyond surface-level facts, inviting players to interact with cultural artifacts, spiritual practices, and social dynamics that are accurately represented—and this type of curiosity and engagement can even be measured in quantitative terms, such as time spent exploring cultural spaces, interacting with specific objects, or engaging in narrative choices. As players engage with these elements, they may experience "ethno-cultural empathy" (Wang et al. 2003) where they seek to understand the perspectives and values of people from different backgrounds. This immersive, hands-on approach allows players to build a personal connection to the culture and question stereotypes or misconceptions, challenging them to see these communities in their full complexity.

These games also leverage the concept of flow (Csikszent 2013), where players are deeply engaged in a state of focused immersion driven by their curiosity. By presenting authentic cultural challenges and mysteries just difficult enough to stimulate exploration, anthropological games keep players fully absorbed, allowing curiosity to guide them seamlessly through learning and discovery. Players who are drawn in by these authentic portrayals frequently go on to explore books, documentaries, or even travel experiences related to the culture they encountered in-game. This lasting interest can broaden players' worldviews and foster greater empathy and openness toward cultural differences, turning a moment of gameplay into a meaningful, transformative learning experience.

The ability to measure curiosity and engagement in anthropological games significantly enhances their evaluation, providing concrete data on how effectively these games foster cultural understanding and empathy. Traditional evaluation of educational or narrative games often focuses on subjective feedback or narrative depth alone, but with anthrogames, quantitative metrics—such as the amount of time players spend exploring cultural spaces, their interactions with specific artifacts, and choices that reflect engagement with cultural dynamics—offer a more nuanced understanding of their impact. These measurable indicators can reveal which aspects of the game successfully capture players' interest and which cultural elements resonate most strongly, guiding developers in refining content to enhance cultural immersion and player engagement.

Moreover, these metrics can serve as benchmarks for evaluating cultural empathy and knowledge acquisition. By tracking engagement levels, researchers and developers can gain insights into how deeply players connect with the cultural content, how effectively the game encourages players to challenge stereotypes, and whether it sparks lasting curiosity about real world cultures. Surveys or assessments administered alongside play can reveal players' shifts in perspective or knowledge, but direct, in-game metrics provide objective indicators of engagement that may correlate with increased empathy or interest in learning more.

Ultimately, the ability to measure curiosity-driven engagement in anthrogames allows developers, educators, and researchers to more accurately assess their educational and cultural impact. This approach strengthens the case for anthrogames as tools for cultural education, as they are no longer evaluated solely on entertainment value or narrative complexity but also on their ability to foster meaningful, quantifiable engagement with diverse cultural perspectives. This data-driven understanding helps establish anthrogames as a powerful medium for cross-cultural learning, empathy building, and sustained interest in global perspectives.

## VI.4. Study Limitations

This study's analysis is constrained by two key limitations that must be acknowledged. First, while our three case studies examine diverse cultural representations and development approaches, including the successful co-production model demonstrated by *Never Alone's* collaboration with the Cook Inlet Tribal Council, the broader sample remains limited in geographic and institutional scope. Moreover, two out of the three anthrogames analyzed were developed primarily within Western academic and commercial contexts, which may limit the generalizability of our findings to anthrogame development emerging from other cultural traditions or institutional frameworks.

Second, the rapidly evolving nature of both game development technologies and anthropological methodologies means that our analysis captures only a snapshot of current practices. The field's nascent status also limits the availability of long-term impact studies that could provide deeper insights into how anthrogames affect both players and the communities they represent over extended periods.

These limitations highlight the need for future research that examines anthrogames developed within diverse cultural contexts and includes longitudinal studies of player and community impact. As the field continues to evolve, addressing these constraints

will be crucial for developing more comprehensive frameworks for anthrogame development and evaluation.

## VII. FUTURE DIRECTIONS

Building on these identified limitations and the analysis presented above, several promising directions emerge for advancing anthrogame development and research. These directions encompass both technological innovations and methodological advances that could address current constraints while expanding the field's potential for cultural representation and anthropological knowledge production.

### VII.1. Large Language Models

Procedural Content Generation (PCG) in games ”refers to the creation of game content automatically using algorithms” (Togelius et al. 2011, 1). While PCG has proven challenging since ”the generator has to create the content, satisfy constraints imposed by the artist, and return interesting instances for gamers” (Hendrikx et al. 2013, 1), recent advances in artificial intelligence, particularly Large Language Models (LLMs), offer new possibilities for automated content creation in games. LLMs are increasingly shaping the landscape of digital gaming with their applications extending far beyond basic text generation. As shown by Gallotta and colleagues (2024), LLMs can serve diverse roles both within games themselves and in supporting game experiences through player analysis and content adaptation. This versatility opens particularly interesting possibilities for anthropological games, where cultural representation and player engagement are paramount.

In the context of anthropological games, LLMs offer multiple promising applications. They can function as sophisticated non-player characters (NPCs), generate culturally appropriate background imagery, assist in character design, and provide valuable insights into player behavior and preferences. Their natural language processing capabilities enable more nuanced forms of cultural storytelling, allowing games to dynamically adapt their content based on player interactions and learning patterns. This adaptability helps create more engaging experiences while potentially deepening players’ understanding of different cultural contexts.

However, the integration of LLMs in anthropological games raises significant ethical considerations, particularly regarding cultural representation and data rights. At the core of this issue lies the fundamental right of Indigenous Peoples to maintain control over their cultural information, including data about their communities, traditions, and territories (Kukutai et al., 2016). While LLMs could enhance gameplay by creating more dynamic and responsive experiences, this potential must be carefully weighed against the risk of oversimplifying or misrepresenting complex cultural practices through automated content generation.

Moving forward, developers and researchers must find ways to harness the potential of LLMs while ensuring respect for cultural protocols and maintaining anthropological accuracy. This challenge involves careful consideration of data sovereignty (Hummel et al., 2021) and the establishment of ethical frameworks that recognize Indigenous Peoples’ rights to control how their cultural knowledge is collected, stored, and utilized in digital environments. While LLMs offer promising technological capabilities, their successful implementation in anthrogames ultimately depends on thoughtful

integration with human-centered design approaches. This recognition led the authors to consider more collaborative and community-oriented frameworks for anthrogame development.

## VII.2. Towards Collaborative Design Frameworks

While technological solutions offer one path forward for anthrogame development, an equally promising direction lies in developing robust frameworks for collaborative design that center community participation and cultural authority. This approach builds upon established methodologies in participatory design and serious game design (Khaled 2014), while addressing the unique challenges of representing anthropological knowledge in interactive formats. As demonstrated by successful projects like *Never Alone,* meaningful collaboration between game developers and cultural knowledge holders can produce experiences that maintain both cultural authenticity and player engagement (Williams 2018).

The development of effective collaborative frameworks requires positioning community members as primary decision-makers throughout the development process, from early conceptualization through mechanic design, narrative development, and aesthetic choices. Critical to this framework's success is the implementation of iterative cultural validation processes, where prototypes are regularly presented to cultural knowledge holders for evaluation and refinement. This iterative approach (Macklin et al 2016) helps identify areas where gameplay mechanics may inadvertently misrepresent or oversimplify cultural practices, allowing for early correction.

To facilitate this collaborative process, formal systems for documenting and incorporating community feedback must be established. These systems include cultural design pattern libraries that document successful approaches to representing specific types of cultural knowledge, collaborative review protocols that establish clear processes for community validation, and documentation frameworks that preserve the context and reasoning behind design decisions. Additionally, the framework must include provisions for bilateral knowledge exchange, training community members in game design principles while simultaneously educating developers about cultural protocols and understanding.

This collaborative framework offers several advantages over purely technological solutions: it helps ensure cultural authenticity while maintaining engaging gameplay by involving knowledge holders in the fundamental design process; it provides clear protocols for handling sensitive cultural knowledge; and it builds long-term capacity within communities to participate in digital cultural preservation and representation projects. These benefits address key criticisms of traditional game development practices (Zambrano 2023), particularly the tendency to extract cultural knowledge without building lasting community capacity.

While this collaborative approach may be more time-intensive than automated solutions, it offers a more sustainable and ethically sound foundation for the future of anthrogaming. Future research should focus on developing standardized yet adaptable frameworks for collaborative design, establishing robust evaluation metrics that assess both cultural authenticity and player engagement, and creating best practices for managing intellectual property rights and cultural attribution. As

demonstrated by successful projects in the field, meaningful collaboration can produce games that not only represent cultures authentically but also create lasting positive impacts for participating communities.

## VIII. CONCLUSION

This examination of anthrogames reveals a significant transformation in how anthropology engages with interactive digital media. Through analyzing the evolution from virtual ethnography to purpose-built anthropological games, this study demonstrates how games have emerged as powerful tools for both cultural representation and knowledge production. The theoretical framework presented here establishes anthrogames as a distinct category that demands its own methodological and evaluative approaches.

The case studies examined demonstrate both the potential and challenges inherent in translating ethnographic knowledge into interactive experiences. Successful anthrogames achieve a delicate balance between multiple competing demands: maintaining anthropological rigor while creating engaging gameplay, preserving cultural authenticity while ensuring accessibility, and integrating educational content while fostering genuine player engagement. The analysis reveals that this balance is best achieved when cultural concepts are deeply integrated into core gameplay mechanics rather than treated as superficial narrative elements.

As the field moves forward, both technological innovations like Large Language Models and methodological advances in collaborative design present new opportunities for enhancing cultural representation in digital spaces. However, these advances must be approached thoughtfully, with careful consideration of ethical implications, particularly regarding data sovereignty and cultural ownership. The development of anthrogames must prioritize community agency and cultural authenticity while leveraging appropriate tools and methodologies to create more dynamic and responsive experiences.

The future success of anthrogaming will likely depend on several key factors: developing robust frameworks for collaborative design and cultural validation, establishing best practices for partnership between anthropologists, game designers, and source communities, and creating ethical guidelines for the implementation of new technologies. As computational anthropology continues to evolve, anthrogames stand to play an increasingly important role in how cultural knowledge is created, shared, and experienced.

This research suggests that anthrogames ultimately represent more than just a new medium for cultural representation—they offer a fundamentally new approach to anthropological practice, one that combines traditional ethnographic methods with interactive digital experiences. The field's future lies in finding ways to balance technological innovation with meaningful community participation, ensuring that advances in both technology and methodology serve to enhance rather than compromise the core mission of anthropological understanding.

## ENDNOTES

1 See for example Paolo Pedercini's game "Phone Story" available at https://www.phonestory.org, which critiques mobile phone production and consumption.

2 This recognition is evidenced by its inclusion in the permanent collection of the Museum of Modern Art (MoMA) in New York, where it has been exhibited since 2022.

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