

**Journalism in Transition: Exploring Newsgames as an
Experimental Form**

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Submitted in accordance with the requirements for the degree of Doctor of
Philosophy

The University of Leeds
School of Media and Communication

September 2023

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Acknowledgements

I would like to start by thanking my supervisor, Professor Kate Nash. Her insightful suggestions and comments across these five years have nudged me to become a better researcher. More importantly, throughout this tumultuous and challenging journey, she has been my steadfast support, especially during the toughest times. It is very hard to put into words how much I appreciate her kindness and warmth.

I want to extend my thanks to Dr Yuan Zeng. Although we only worked together for the last six months of my project, she has provided me with much inspiration and encouragement that enriched my research. She has also helped me so much in moving forward with entering the examination and submitting my thesis.

I am also grateful to Dr Matthias Revers, who decided to become my supervisor when I was at my most difficult point. In the year we worked together, his outstanding experience in journalism studies pushed my project forward and allowed me to bounce back.

My thanks go to my friends who helped me to finish the pilot test. They also offered advice and friendship as I have been far away from my hometown.

I want to thank my Mum and Dad. They have always been my strongest support. They did not have a deep understanding of my project, but their financial support has definitely been important to me. And most of all, their love and encouragement have been invaluable.

Finally, my deepest appreciation goes to my smart and beautiful partner, Lu. I could not have reached this point without you. I have been incredibly lucky to be on this journey with you, and your love, wisdom and courage have made it all the more meaningful.

Abstract

In culture we find play as a given magnitude existing before culture itself existed, accompanying it and pervading it from the earliest beginnings right up to the phase of civilization we are now living in. (Huizinga, 1949, p.4)

Crossword puzzles in newspapers allowed news and games to intersect decades ago. In the digital age, the combination of journalism and video games has generated a new type of journalistic innovation: newsgames. Newsgames employ the game format as a basis of construction and place the context for the games within a newsworthy story or event.

This thesis aims to explore and understand how newsgames reflect the negotiation of different journalistic roles and what this reveals about broader changes in journalism. I employ a cultural approach to studying newsgames that highlights the importance of audiences and sees journalistic roles as a key dimension of journalistic cultures.

Methodologically, I develop a multi-dimensional approach to analyse newsgames. Furthermore, this research uses semi-structured interviews to explore the production of newsgames, and gaming interviews provide insights into audiences' interaction with them. Publicly available sources serve as additional materials for these two perspectives.

This thesis focuses on three aspects: truth claims, entertainment and audience engagement, and advocacy. My findings suggest that newsgames practitioners take a series of steps to justify newsgames as appropriate journalistic practice. As an experimental and innovative form of journalism, newsgames have a promising potential to enhance journalism. Players' experiences of playing newsgames are highly relevant to their views on the roles of journalism in society.

These findings make three main contributions to scholarship. First, this thesis offers a nuanced and comprehensive understanding of newsgames. Second, this study emphasises the need to examine journalistic innovations through the cultural approach. Third, it proposes a process model that incorporates audiences into the negotiation of journalistic roles.

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List of Abbreviations

BBC	British Broadcasting Corporation
Covid-19	Coronavirus Disease 2019
CO2	Carbon Dioxide
MRFM	Men and Religion Forward Movement
NPC	Non-Player Character
OJA	Online Journalism Award
RQ	Research Question
UX	User Experience
WHO	World Health Organization

Chapter 1 Introduction

As I submit my dissertation, I will certainly be reminded once again of that distant afternoon when I did the newspaper crossword. Crossword puzzles were a hit in the 1920s and sparked another minor craze in the 1940s (Foxman, 2015). For me, barely ten years old at the beginning of the 21st century, these stories were too old, and the crossword was a new game to me; I was hooked. Every day after school, while waiting for dinner, I often tried to conquer the newspaper crosswords but rarely succeeded. Despite this, crossword puzzles helped me kill the boredom, and I had great fun. I am sure I must have wondered, at least for a moment, why the game was sandwiched between pieces of news. What are the intersections between news and games? On the face of it, they seem quite different, but are they perhaps compatible?

Another story happened when I was in high school. I was a typically active teenager who enjoyed chemistry lab classes, but the school did not schedule too many of them for safety reasons. This made me depressed until, one day, I found a chemistry lab video game. I attempted to do exciting things that were forbidden in a real laboratory and sometimes practised doing experiments seriously. This game helped me to understand the periodic system of chemical elements, and it was much more engaging than 'traditional' learning. I was thus alerted, subconsciously, to the idea that games can have a serious intent alongside being fun. Games allowed me to learn about chemistry experiments, which can be seen as real-world issues. Although video games are almost always entertaining and fantastic, they do not seem to be limited to these features. Might journalism with its serious intent contribute to society by allowing citizens to 'play' the news?

The last tale took place during my internship for an e-sports news outlet in Beijing, China, in the last summer of my undergraduate studies. My job was to collect all kinds of news about e-sports through various channels and publish it for readers. I am someone who likes to think about strange questions. One day after work, I was on the overground train and thought about a play on words: can the term 'game news' be switched over? In other words, is there such a thing as a 'news game' in this world? I managed to find a few newsgames and noticed that they seemed to report the news in an uncommon way, as they seldom described specific people or events. When I was applying for my PhD, all

these small events unconsciously pushed me towards my thesis topic. I finally decided to research the newsgame, which sits at the intersection of journalism and video games.

In the following part of this chapter, I introduce the context of research, the research rationale, the research questions and objectives, the working definition of newsgames, the thesis structure, and the terms used in this thesis.

The game is on!

1.1 Research Context

In 2018, the *Financial Times* published an interactive news product, *The Uber Game*. This game invites audiences to put themselves into Uber drivers' shoes and allows them to vicariously experience important moments in the life of an ostensibly 'typical' Uber driver. Players face a series of challenges from which they need to make the best choices to keep the driver's life on track. This game was a great success and won the creators several awards, including the 2018 Online Journalism Award (OJA) for Excellence and Innovation in Visual Digital Storytelling, the Gold Medal at the 2018 Serious Play Awards, and the Award for Excellence for Experimental Design at the Society of News Design Awards. Although this game was not the first significant hybrid of video games and journalism, it demonstrates the example of journalism experimenting with emerging digital technology in response to external change (Ferrer-Conill et al., 2020; Usher, 2016). This type of experiment may or may not foreshadow the future of journalism, but it reminds us to consider why such shifts appeared in journalism.

Carlson (2015a) argues that 'journalism is not a solid, stable thing to point to, but a constantly shifting denotation applied differently depending on context' (p.2). Similarly, Deuze and Witschge (2018, p.170) suggest that we need to ask what journalism becomes rather than what journalism is. In this research, I consider journalism, including news organisations, newswriters, journalistic standards, audiences and forms of journalism, to be dynamic and changing, always being reconstructed in new social, technical, economic, cultural and political contexts. It is important to consider the evolving nature of journalism and explore new factors, particularly how newsgames can be part of these reconfigurations. The question here is the way in which newsgames, as

a journalistic practice, can help us to understand the wider transformation and shifts of journalism.

A variety of crises has brought about dramatic changes to journalism, and the future of journalism is uncertain. Journalism, as a profession, is no longer stable and is faced with disruptive challenges from many angles (Deuze and Witschge, 2018). One of the most pivotal challenges is manifested in collapsed advertising business models (Anderson et al., 2015; Pickard, 2011). Some scholars are concerned that the digital media environment brings audience fragmentation, which leads to the decreased consumption of news (Aalberg et al., 2013; Yeykelis et al., 2018). The phenomenon of misinformation shows 'the collapse of the old news order' (Waisbord, 2018, p.1866). Furthermore, the growth in infotainment and tabloidisation makes us rethink the relationship between journalism and entertainment (Otto et al., 2017). Journalism's professional identity and autonomy have also been challenged, and this directly questions a greater understanding of what journalism is and how it should work (Allan and Hintz, 2020; Carlson, 2015b).

However, this is only one side of the story. Some researchers find that the availability of great media choices does not mean a reduction in audiences' news engagement (Huang and Yang, 2022; Lelkes, 2020). Indeed, social media might increase audiences' exposure to news (DeSilver, 2014). Moreover, the news industry has undergone internal changes to respond to these challenges. Newswriters have employed new business models, which bring them competitive advantages in the current media environment (de-Lima-Santos et al., 2022). Digital technologies can bring a series of innovations in the process of making news, which could offer a richer presentation of information and enhance audience engagement, and these innovations have been broadly regarded as helpful solutions to the current crisis (Borges-Rey, 2016; Fang and Repnikova, 2022; Gynnild, 2014).

Journalism as a profession is in a state of transformation, and a range of crises go hand in hand with innovation in response to them. Combining journalism with video games is one such innovation. The video game industry is growing rapidly and thriving. It has been one of the key contributors to the entertainment economy globally (Marchand and Hennig-Thurau, 2013; Teipen, 2008). The development of the game industry also

spurred the growth of surrounding fields, such as live streaming (Johnson and Woodcock, 2019; Taylor, 2016). For cash-strapped news organisations, the lure of this financial success is likely to be significant. The combination of news and video games is believed to have the capacity to promote audience engagement, improve brand prestige, and enhance the viability of news outlets (García-Avilés et al., 2022). One innovation is the gamification of news. Gamification means using 'game design elements and game thinking in non-game contexts' (Ferrer-Conill, 2018, p.4). It has been demonstrated to be helpful in attracting newcomers and facilitating news consumption (García-Avilés et al., 2022). The crossword puzzle is updated in the digital era: *Wordle* has brought more than ten million new audience members to *The New York Times* (Pierce, 2022).

This thesis focuses on another type of innovation: the newsgame. The newsgame is understood here as a self-contained news production using play as a means of communicating news. In other words, the newsgame uses the game format as a basis of construction and locates the context for the game within newsworthy stories or events. The working definition of newsgames will be discussed in section 1.4, and section 1.2 explains why this relatively new journalistic form is worth investigating.

1.2 Research Rationale

As mentioned above, what journalism is and how it should work in society are two questions that need to be rethought today. The traditional importance of journalism to a democratic society and public life has been widely discussed (Helberger, 2019; McNair, 2009; Strömbäck, 2005; Waisbord, 2018). James Carey (1996) famously argued that we cannot have journalism without democracy. On this basis, the roles of watchdog and disseminator are seen as important for journalism (McQuail, 2010; Willnat et al., 2019). Journalism has the potential to create truth claims and public knowledge (Ekström, 2002; Nielsen, 2017).

However, these may only be a small part of the roles journalism needs to play. Journalistic roles refer to the tasks of journalism in society, such as observation, information, and providing access to various voices (Hanitzsch and Vos, 2018). Several scholars have already challenged and critiqued the relationship between journalism and democracy (Hanitzsch and Vos, 2018; Hanusch, 2019; Josephi, 2013; Zelizer, 2013). In

the field of journalism, the concepts of truth and fact also deserve to be re-examined. They are often simply regarded as ideal terms, and how they arise in journalistic practice has been little discussed (Broersma, 2010; Muñoz-Torres, 2012; Schudson and Anderson, 2009; Zelizer, 2004). Therefore, it is necessary to explore how journalistic roles have evolved and been shaped recently and how they have been reflected in terms of both production and consumption, which is relevant to journalism as a fluid concept.

1.2.1 The Fluidity of Journalism

In the evolving landscape of media, the concept of journalism is undergoing a reconfiguration. First of all, this is directly reflected in the realm of news organisations and journalists. The focus of journalism studies used to be the newsroom because of the professional practices and the culture of journalism that obviously existed there (Wahl-Jorgensen, 2009). This has led to a situation whereby when we talk about newswriters, we usually mean journalists and editors. Positions, such as 'technical support staff, copy editors, ombudsmen and reader representatives, designers, producers, and programmers' (Deuze and Witschge, 2018, p.171), were neglected, and we know little about how they participate and potentially shape news production.

Recent studies have highlighted the growing importance of these new positions and jobs in making news. Journalists were found to cooperate with data analysts and designers to produce infographics, and community managers, who encourage readers to discuss and contribute to the news, become a significant bridge between news organisations and their audiences (Bakker, 2014). Usher (2016) notes that the concept of journalists has been broadened, and those who are called journalists may wear several hats. For instance, some journalists with no background in coding acquired programming skills while working with data, and then they worked as both programmers and journalists in news organisations (Usher, 2016, p.98). Furthermore, there are entities that used to be non-journalistic that may also be considered as a part of journalism. Non-governmental organisations (NGOs) have been doing more and more work that overlaps with traditional news outlets and has expanded the boundaries of journalism by increasing news coverage from underreported areas (Powers, 2015). In this precarious media landscape, the production model of journalism was reorganised and reconfigured. The question of what people and organisations can be counted as part of journalism has become an open one.

Furthermore, new media technologies also offer opportunities to produce emerging and experimental forms of journalism compared to the past. Structured journalism, 360° video reports and virtual reality have been employed to provide innovative ways of storytelling and consuming news (Lopezosa et al., 2023). These new approaches are seen as offering new possibilities that differ from traditional journalistic forms, thus enhancing the user experience for news consumers. Immersive journalism, which is often based on virtual reality technology, could improve audiences' understanding of the feelings and emotions which accompany the news (De la Peña et al., 2010; Sánchez Laws, 2020). Belair-Gagnon and Steinke (2020) found that digital technology has made interaction with audiences an important idea of journalism innovation. For example, the well-known 'Snow Fall', made by the *New York Times*, brings mapping, data, and multimedia together, and players need to interact with the webpage to explore the whole story (Usher, 2016). These new journalistic forms expand the narrative capabilities of journalism and reflect the fluidity of journalism in conveying information.

Finally, in terms of news content, there is a general shift towards more interpretive accounts and more emotional storytelling. The descriptive style of journalism tends to directly offer a focus on what, where, when, and who. Soontjens (2019) argued that there was a clear rise of interpretive journalism which aims to explain why something happened and provide assessments between 1985 and 2014. According to Salgado and Strömbäck (2012), such a shift may be attributed to audiences' need for analytical and contextualised information to make sense of what happened. In an age where information is abundant and readily accessible, audiences indeed seek questions of 'why' and 'how' in the news coverage (Abdenour et al., 2021). Emotional expression is recognised as an important part of quality reporting and has become more widely used in news narratives (Wahl-Jorgensen, 2013; 2019). A comparative study involving two different media systems in China and Australia shows that emotions are deployed in news texts to draw readers' attention to political and social issues in both countries (Huan, 2017). These two aspects reflect a broader evolution in media consumption patterns and news content. Although there may be some critical ideas towards these shifts, what matters is how these already existing trends can be investigated and understood.

The combination of journalism and video games provides an opportunity to explore the

above shifts. As previously mentioned, the video game industry has seen great growth in the last decade. This development is primarily linked to the global entertainment economy, but the use of video games for purposes other than entertainment has also been widely explored and discussed. The definitions of serious games are fuzzy and dissimilar across the studies, but generally, they refer to games that have been developed 'with the intention to be more than entertainment' (Ritterfeld et al., 2009, p.6). They are designed for different application areas, including education, well-being, health care, and training (Dörner et al., 2016; Laamarti et al., 2014; Susi, 2007). Whatever the purpose of a serious game, the conveyance of information is almost always essential (Alrehaili and Al Osman, 2022; Ritterfeld et al., 2009). This implies that communication is an important part of serious games, which links this genre of video games to journalism.

All three of the aforementioned aspects of journalistic fluidity are represented at the intersection of journalism and video games. Video game development is complicated, and designers, programmers and artists complete a variety of tasks to make games (Liming and Vilorio, 2011). This way of working has also been applied to the production process of newsgames. A developer note (Kwong, 2018) shows that journalists, visual designers and programmers in news organisations worked together to create a newsgame. Moreover, newsgames challenge the traditional static nature of reporting. Traditional journalism, be it in print or broadcast form, typically presents information in a linear and fixed way. Newsgames, however, offer a dynamic and interactive way of storytelling. Video games simulate real-world scenarios, enabling players to experience situations that would be far from their own lives (Chapman, 2016), which helps to explore the interpretive and emotional shifts in journalism. Incorporating newsgames into journalism studies allows us to address the diversity in positions, journalistic forms and news content. Ultimately, this allows us to return to the fundamental question of what journalism is and how it works in today's society.

1.2.2 Research Gaps

In terms of journalism, gamification and serious games are two different but inter-related concepts. As a response to the economic crisis, gamification mainly aimed to attract users and enhance levels of consumption and engagement (Ferrer-Conill, 2018; García-Avilés et al., 2022). Serious games in the news industry, also known as newsgames, may have potential in addition to increasing audiences or improving the economy of

news organisations. Scholars have already examined newsgames from several perspectives. Although journalists and game developers are from different fields, they share similar norms in the production of newsgames (Plewe and Fürsich, 2020). Allowing youth to engage in the development of newsgames can increase their ability to combat misinformation (Literat et al., 2020). The use of a game format reshapes traditional news framing and may provide a higher level of engagement and closeness to the subject (Arafat, 2020).

However, in current academic scholarship, two wide research gaps exist at the intersection of video games and journalism. First, we know very little about the relationship between newsgames and different journalistic roles. An understanding of journalism as an exercise of transmitting information and enhancing citizens' participation in political life is not sufficient to explain the complexity of how journalism works in society. In the digital age, journalistic roles have become more complicated and variable than before (Hanusch and Banjac, 2018; see also Willnat et al., 2019). Newsgames provide an opportunity to explore how journalistic roles have been renegotiated recently. In the production of newsgames, the introduction of game logic and mindset has allowed journalists to re-examine their roles and work objectives (Foxman, 2017; Plewe and Fürsich, 2020). This raises questions about how journalistic roles are negotiated in the field of newsgames and what factors might shape those roles, which have not been sufficiently investigated.

Furthermore, there is a lack of a holistic understanding of newsgames. Some studies on newsgames focus on their production (see Foxman, 2017; Literat et al., 2020), and a large proportion of research investigates specific newsgames (see García-Avilés et al., 2022; Richardson, 2020). However, how audiences interact and perceive newsgames is rarely discussed in this field, and there is a gap in combining the three directions to form a comprehensive understanding of newsgames. The roles and meanings of journalism can be negotiated and shaped by a range of actors, including journalists and audiences (Carlson, 2016). From a cultural studies perspective, news relies on audience engagement to create meaning (Hartley, 2008; Hartley, 2012; Morley, 2003). Incorporating audience research into a holistic approach to newsgames is thus essential for understanding the negotiation of journalistic roles.

In sum, as the digital era has brought 'creative destruction' (Schlesinger and Doyle, 2015) to journalism, the issues of what journalism is and how it should work make the study of newsgames even more pressing. If newsgames are seen as responses to the crisis in journalism, the relationship between newsgames and journalistic roles becomes an important research focus. Studying newsgames contributes to wider discussions in journalism studies, as it can help to explore journalism's place in society with a lens that is linked to the practice of news production and consumption.

1.3 Research Questions and Objectives

Based on the above discussion, this study aims to explore how newsgames reflect the negotiation of different journalistic roles and what this reveals about broader changes in journalism. The craze for video games and the importance of journalism in society means that the interplay between the two could significantly impact each other's societal roles (Ferrer-Conill, 2018). Newsgames present several obvious challenges to conventional notions of what news is and how journalism should work in society. Newsgames may address current events in relatively fictional or abstract ways; they do not primarily rely on providing, as traditional journalism does, explicit evidence such as images, quotes, and data. They invite a playful engagement that can go beyond traditional notions of entertainment and intersect with documentary scholarship (see Nash, 2015). Newsgames may also attempt to persuade in ways that challenge established notions of objectivity which are problematic but still influential in the news-making process and news engagement. Therefore, I understand newsgames as marking out a space of experimentation that goes to the heart of key questions in journalism studies. This project focuses on three topics: the tension between 'fact' and 'fiction', the value of entertainment, and the intention to advocate in newsgames.

These three aspects will be discussed in detail in the literature review, and I briefly explain them here. First, fantasy is 'one of the vital game elements allows users to experience things that would never happen in real life' (Zuo et al., 2019, pp.821-822). However, this does not mean that video games cannot generate connections with the real world. Schwartz (2006) suggests that video games that feature fantasy worlds can also contain metaphors and ideas for the real world. Serious games are more closely related to the real world, as they are often designed for education and training (Dörner

et al., 2016; Laamarti et al., 2014). This means serious games are developed to make statements about how real-world things work. The same goes for newsgames, which, as a journalistic form, have the potential to create truth claims. On the other hand, 'fact' and 'fiction' exist side by side in newsgames. Fiction here is slightly different from 'fantasy' and means something is based on a true story or situation but does not directly present it. At this level, news games and documentaries are somewhat similar. Documentaries directly refer to the real world rather than allegorically telling stories to stand in for the real world (Nichols, 2017). This coexistence creates tension, which nudges us to think about how they are negotiated in newsgames and how this shapes the presentation of truth claims.

The second aspect focuses on the value of entertainment in the context of journalism. Research on the political sphere and public life has dominated journalism studies, and this has led to several blind spots, including the role of everyday life and entertainment in the news industry. Entertainment news has been found to help audiences in areas of consumption, identity, and emotion (Hanusch, 2020). Moreover, entertainment can also be positioned in the context of relevant public issues. Some scholars have challenged the thought that entertainment is trivial by emphasising the important link between entertainment and public life (see Edgerly and Vraga, 2019; Otto et al., 2017; Penney, 2023). In a similar vein, video games do not just serve hedonic purposes and some even have utilitarian purposes (Hamari and Keronen, 2017). Serious games often attempt to combine these two purposes and enhance utilitarian functions, such as education or training, by providing enjoyable experiences for players (Ritterfeld and Weber, 2006; Ritterfeld et al., 2009). In the field of newsgames, there is an important goal aimed at promoting audience engagement (Ferrer-Conill et al., 2020). This raises questions about newsgames: is the entertainment embedded in newsgames likely to facilitate audience engagement with news, and how does this engagement relate to public affairs news?

Third, the link between newsgames and advocacy is a concern of this thesis. The analytical, advocative, and developmental roles of journalism widely exist in journalistic practice (Hanitzsch and Vos, 2018). All these roles share a characteristic that news reporting need not be limited to superficial and simple descriptions. Fisher (2016) argues that there are varying degrees of advocacy in news reporting, and every journalistic work falls into a continuum of advocacy. This links different concepts, including 'advocacy

journalism' (Waisbord, 2009), 'constructive journalism' (Aitamurto and Varma, 2018), 'interpretive journalism' (Salgado and Strömbäck, 2012), and 'solutions journalism' (McIntyre, 2019). In these types of journalism, advocacy can appear in intentional or subtle ways. For instance, the commercial interests of the proprietor, story angle, deadline constraints, and partisanship of the reporter all lead journalists, intentionally or otherwise, to advocate (Fisher, 2016). However, research usually focuses on text and images but pays less attention to the impact of form. Video games are believed to have a unique method of presenting particular ideas and arguments: procedural rhetoric (Bogost, 2007). Therefore, this thesis will investigate the ways in which some newsgames take up an advocacy role, making arguments that seek to intervene in relation to specific issues.

These three issues can be explored from three perspectives: production, media products, and consumption. This is based on a cultural approach to journalism, which will be further explained in Chapter 2. In short, the cultural approach can help us to understand how the professional culture of journalism shapes the way journalism operates in society and allows us to explore how journalistic roles are negotiated in the relationships between different actors or participants. The overarching goal of this study is to explore and understand how newsgames create a context for rethinking these three functions of journalism and to examine their potential implications. With the above three perspectives, this study aims to: a) discuss why newsgame practitioners develop such games and what they do during the production process; b) explore how video game features have been introduced in journalistic contexts and how journalistic storytelling has changed; and c) investigate how audiences play newsgames and how they perceive and negotiate the abovementioned journalistic functions. Truth claims, entertainment, and advocacy are all studied from these three perspectives in this research.

1.4 Defining Newsgames

This section clarifies the object of this study. The concept of newsgames is still somewhat new, and there is no broadly accepted definition. More problematic is that there is no generally acknowledged definition of a game either. By briefly reviewing the history of newsgames, this thesis explains that newsgames should be considered an integral part of journalism. Then from a practical perspective, I will give newsgames a working

definition to clarify the sampling frame of newsgames. This definition does not aim to clearly draw lines between what is a newsgame and what is not. By contrast, I believe the field of newsgames is fluid with many practices that sit at the fringes of the definition. This was also reflected among the newsgames practitioners interviewed for this study, who usually produced many interactive news products, of which newsgames were only a small part.

1.4.1 A Brief History of Newsgames

A fairly wide range of social and cultural practices share the qualities of play, including but not limited to law and poetry (Huizinga, 1949). Video games are also widely used in learning and training nowadays (Ritterfeld et al., 2009). The difference between the so-called 'playfulness' and 'seriousness' is fluid, and this instability is also reflected in the relationship between journalism and games.

In 1972, Atari designed and placed an arcade machine in a bar near the Atari headquarters, and *Pong*, which was installed in this machine, became the first commercially successful video game (Salen and Zimmerman, 2003). However, long before that year, something in the nature of games appeared in the newspapers. Arthur Wynne worked with the *New York World* to publish the first crossword puzzle on December 21, 1913, and the first *New York Times* crossword was released on February 1, 1930 (Bellis, 2012). This type of puzzle game sparked two crazes in the 1920s and 1940s (Foxman, 2015). In this case, crossword exists as a pastime distraction in the realm of journalism and is kept at arm's length from news reporting.

After this, games were more closely linked with journalism, not in the form of video games, but in the form of board games. The Media Group at Glasgow University conducted an interesting study:

[Students at Glasgow University] were asked to imagine that they were journalists writing a short news item on the 1984/5 miners' strike and were given a series of photographs which had been taken directly from the television screen. The photos were all from news programmes during the summer of 1984 and were selected to represent the main themes in coverage of the strike. (Philo, 1990)

In this study, students were required to put themselves into a journalist's shoes to write a potential news story covering the strike. This early attempt is very similar to the newsgames that have been produced in recent years, such as *Pirate Fishing* (Al Jazeera, 2014) and *I reporter* (BBC, 2018). These games, to a certain degree, could be seen as experiments in developing news literacy among audiences. They highlight the importance of audiences in the field of journalism and hope to enhance their understanding of news through an interactive approach.

This attempt was repeated, and 'the news game' was first introduced as a term in 1994. Kitzinger (1994) conducted several focus groups to explore how audiences processed media messages to build their understanding of AIDS. When the sessions began, participants were asked to play 'the news game', which means writing their own news stories with a set of photographs taken from actual broadcast news (Kitzinger, 1994, p.106). This activity was directly defined as a game as it has the characteristics of games. With game rules in place, different choices taken by the players would lead to different endings. In another audience study, participants were invited to write their own news items with 16 photographs taken from TV news coverage of the Israeli–Palestinian conflict (Philo, 2007). It can be observed that such attempts, characterised by gaming features, were closely related to the current affairs of that time, which makes the idea of newsgames decisively different from crossword puzzles.

The combination of video games and journalism came later in the 21st century. In 2003, Gonzalo Frasca designed and released a game called *September 12th*, aiming to trigger debate around the war against terrorism. Frasca called it as a newsgame, which is a genre 'simulation meets political cartoons' (Bogost et al., 2010, p.13). This game was seen as the first step in bringing video games and news together. The term 'newsgame' has become fashionable since the mid 2000s (Foxman, 2015). The media technology of video games has allowed this niche genre to develop, leading to a greater diversity of newsgames. Puzzles, infographics and documentaries were all used in the design of newsgames to create interaction between the audience and media products (Bogost et al., 2010). Newsgames have also increasingly drawn on different game features, such as simulation and decision-making strategy (Gómez-García and Teresa De La Hera, 2022). These developments have made newsgames more diverse, resulting in an

unstable boundary.

This brief history of newsgames reflects how the link between journalism and video games has evolved from loosely to tighter. Compared with the early crossword, newsgames have developed into media products which are expected to create interaction between players and current affairs and events by deploying game characteristics.

1.4.2 A Working Definition of Newsgames

Bogost and colleagues (2010) argue that newsgame is an amalgam of journalism and video games. This definition is so broad that we cannot distinguish between newsgames and the gamification of journalism. Foxman (2015) suggests that gamification involves using game elements in non-game contexts, such as introducing badges and points into websites to stimulate user engagement. Ferrer-Conill (2018, p.27) further distinguishes between newsgames and the gamification of journalism: the former are independent playable video games which contain news or current affairs, while the latter brings game design elements into regular journalistic processes. In other words, the newsgame uses the game format as a basis of construction and locates the context for the game within newsworthy stories or events. This echoes other studies that define newsgames as standalone video games (see Plewe and Fürsich, 2018; Sicart, 2008b). The reason I highlight the difference between newsgames and the gamification of journalism here is to emphasise that newsgames should not be understood only as a way to motivate audiences to actively engage with the process of consuming news. Newsgame is a self-contained news product that uses play as a means of communicating news, and it provides a new field to examine journalistic roles.

Furthermore, this study identifies some key characteristics of newsgames. Based on self-contained news products, there are four essential requisites for the working definition of newsgames. First, newsgames should be digital. Before the invention of the computer, playing games had already been a cultural phenomenon in human society for a long time (Huizinga, 1949). Similarly, the link between games and journalism was created before the digital environment: crossword puzzles date back to the 1910s (Ferrer-Conill, 2018).

However, digital and video games bring unique qualities and characteristics to game design. Salen and Zimmerman (2003) note that there are four traits of digital games: immediate but narrow interactivity, information manipulation, automated complex systems, and networked communication. For newsgames, information manipulation and automated complex systems are very important. Information manipulation implies that players can learn game rules and reveal hidden information by playing, which non-digital games do not allow. Video games can provide descriptions and representations of complex systems in a computerised context. These create new approaches to combine news and games. Newsgames can genuinely mix news storytelling and video games together, and players may explore news stories in their own ways.

The second trait of newsgames is that they require game mechanics. This means that newsgames should be playable rather than just interactive. Interactive journalism is defined as 'a visual presentation of storytelling through code for multilayered, tactile user control for the purpose of news and information' (Usher, 2016, p.18). 'Snow Fall' is a famous example of interactive journalism which allows players to explore the story by clicking and viewing different types of messages. Interaction is a basic characteristic of video games, but not all interactive products, like 'Snow Fall', can be seen as video games. Newsgames should contain game mechanics. According to Sicart's (2008a) definition, game mechanics are techniques used by agents to interact with the game state. This interaction is based on the game rules, and the player's actions within the limits of what is possible can alter the state of the game. Essentially, game mechanics convert the player's inputs into different predetermined outcomes within the game system. This distinguishes newsgames from other interactive news products. In other interactive products, users can often only open and view different types of messages. Newsgames, however, are more varied. Newsgame players will have more options at specific nodes. More importantly, players will access different results due to their choices, while the final presentation of other products is almost completely fixed.

The third essential requirement for newsgames is that they directly make truth claims about real-world events and issues. As mentioned above, many commercial video games aim to provide players with an opportunity to experience things that would not happen in real life (Schwartz, 2006). As a result, they do not act as a direct response to the real world. This sets a decisive difference between commercial video games and

newsgames. Newsgames have similarities to traditional journalistic forms, as they are produced to respond to actual events and convey news information (Bogost et al., 2010; Plewe and Fürsich, 2018). In addition to actual and concrete events, this thesis expands the scope to cover larger social or political issues. For example, games that focus on the phenomenon of disinformation or fake news are also included.

Finally, newsgames should deal with current events or issues. Temporal dimensions shape news production and deadlines of news in newsrooms (Carlson and Lewis, 2019; Zelizer, 2018). Although the timeline of newsgames is seldom the same as the 'daily' news cycle, to a certain degree they should still be timely. While the previous requirement distinguishes newsgames from commercial games, this one identifies which of the serious games are newsgames. For instance, educational games have been developed for training surgery residents (Laamarti et al., 2014). There is no doubt that these games create truth claims and help players understand how to deal with real-life medical problems. However, these games should not be included in the category of newsgames, as they are not aimed at addressing issues in current affairs.

To take into account the diversity of practices related to newsgames, it is important to start with a broad and adaptable definition. Based on these characteristics, this thesis proposes the working definition of newsgames:

Newsgame is a self-contained digital news product that contains game mechanics, and it uses play as a means of communicating current real-world issues and events.

Moreover, there are two further characteristics of newsgames, but they do not constitute a definitive list of features that appear in every newsgame. They are mentioned because they are still common and help us to think about questions related to newsgames. First, newsgames are often accompanied by additional news reporting rather than appearing separately. Newsgames may be a part of news coverage and need to complement other pieces of news to form a complete story about the larger issue. They often need to be understood alongside relevant meta-texts, such as textual stories or infographics. This reminds us to consider the links between newsgames and other journalistic forms.

Following the above point closely, there may be a requirement for newsgame players' 'procedural literacy'. This term refers to a capacity to decode information conveyed in video games (Bogost, 2007; Treanor and Mateas, 2009). The transmission of information in a newsgame may not be obvious. Players need to think about their gaming experiences and explore more of the relevant reportage in the series to understand their messages. This reveals the need to consider how players interact with newsgames and perceive their own gaming experiences.

1.5 Thesis Structure

So far in this chapter, I have introduced the context of the research, explained the research rationale, proposed research questions and objectives, and given a working definition of newsgames. At the end of this chapter, I provide several definitions of key terms in this thesis. Chapter 2 is the literature review; Chapter 3 introduces the research design; Chapters 4, 5, and 6 present the empirical data; and Chapter 7 features a discussion and conclusion.

The objective of Chapter 2 is to establish the theoretical foundations of the study and to understand how to investigate newsgames. First, I conduct a review of existing research on newsgames and highlight gaps in the literature. The gaps are reflected from two perspectives: journalistic roles and audience research. I take a cultural approach to studying newsgames, which can be understood in two ways: journalism as culture and journalistic cultures. The first way emphasises the importance of audiences in cultural practices and posits that they should be understood as active participants, and the second considers the roles of journalism as an important dimension of journalistic cultures.

Based on these two approaches, I focus on three aspects to determine the scope of this research: truth claims, entertainment and audience engagement, and advocacy. Truth claims are related to the role of journalism as an exercise of information transmission. I explain evidence and transparency in relation to truth claims and emphasise the importance of examining what the fictional aspect of simulation means for truth claims. Then I explore the relationship between entertainment and public life in the field of journalism and present how one of the ideals of newsgames is to increase audience

engagement. Therefore, it is worth exploring how the entertaining and enjoyable experiences provided by newsgames shape audience engagement with public affairs news. Advocacy is an interventionist journalistic role which aims to support specific ideas or people. Moreover, there is a unique way of making arguments in video games beyond verbal and visual rhetoric. A question of concern is thus how game features can be combined with the advocacy role of journalism. Finally, I provide a set of key propositions for the in-depth investigation of newsgames.

The research design is introduced in Chapter 3, which is grounded in the cultural studies approach and informed by game studies. Based on the literature review, I present three research questions and explain the overall design of the study. I explore the mixed methods that are appropriate to answer the three research questions effectively. I developed a multi-dimensional approach to analyse newsgames. This method can be used not only to analyse game features but also to explore the role of textual and visual elements in newsgames. I conducted semi-structured interviews with newsgame practitioners to collect data about the production of newsgames. Similarly, I employed gaming interviews to explore how newsgame players interact with and understand newsgames. In addition to data collection, I also discuss recruiting participants and data analysis. I collected publicly available sources, such as developer notes and player comments, as supplements to interviews with practitioners and players. At the end of this chapter, I explain the ethical considerations and limitations of the research design.

Chapters 4, 5 and 6 each explore a particular research question. Chapter 4 addresses RQ1: How are truth claims negotiated in the context of newsgames? I discovered the strategic ritual of truth claims in the production of newsgames, the different ways in which newsgames make truth claims, and how players evaluate and understand truth claims. Chapter 5 addresses RQ2: How does entertainment in newsgames integrate with the pursuit of audience engagement with public affairs? This chapter first examines practitioners' understandings of entertainment and their assessment of audience engagement in the context of newsgames. The following part discusses how newsgames can shape the player's engagement with the content in terms of both game design and actual players' experiences. Chapter 6 addresses RQ3: How do newsgames function as a practice of advocacy journalism? I start by discussing the way in which newsgame practitioners justified their practice of making advocacy newsgames. I outline

different types of advocacy newsgames and newsgame players' responses to them.

Chapter 7 presents my conclusions. I synthesise the empirical findings to answer the three research questions. Furthermore, I consolidate these questions and discuss how this thesis helps us understand newsgames and the broader issues of journalistic roles, and then I provide a projection on possible future trends of newsgames and journalism. The chapter concludes with the contributions and limitations of this thesis and points to future research directions.

1.6 Terms and Definitions

To avoid confusion caused by the varied use of terms in the literature, this section clarifies or defines some of the most important terms used in the text, with the goal of enhancing the reading experience. Some terms, such as advocacy journalism and simulation, will be explained later, as they need to be discussed with a more detailed review of the relevant literature.

Newsgame practitioners

Simply defined, newsgame practitioners refer to all those involved in the production of newsgames. Using this phrase rather than terms such as journalists or newsmakers is in view of the increasing number of former outsiders involved in making news, especially newsgames. This phenomenon includes both cooperation and 'interlopers' (see Belair-Gagnon and Holton, 2018; Deuze and Witschge, 2018; Plewe and Fürsich, 2020). For this project, considering a wider range of newsgame practitioners allows us to consider the emergence of new positions and explore the recent development of journalism.

Newsgame players

I use the term 'newsgame players' to describe the actual and potential audiences of newsgames. The Internet and other technologies cause the audience to become not only receivers but also creators and glossarists. Networked digital media have transformed the conditions of communication by corroding the traditional relationships between senders and receivers (Loosen and Schmidt, 2012). However, even for news organisations, newsgames can be time-consuming and costly to produce (Foxman, 2017; Plewe and Fürsich, 2020). In the field of newsgames, audiences have not really

been involved in their production and their major role is as players. In this thesis, newsgame players have consumed or will potentially use newsgames.

Media products

Royal and colleagues (2020) define media products as ‘internal and audience-facing initiatives, including the organization’s website, special project and event sites, mobile applications, data visualizations, podcasts, newsletters, bots, artificial intelligence projects, and other applications’ (p.597). Newsgames are seen as media products in this study. Consideration of news as a product provides an opportunity to consider the development process and teamwork in journalism (Royal et al., 2020; Wenger et al., 2018). This also highlights the multimedia nature of newsgames and allows us to investigate how different elements work together in newsgames.

System/game system

The concept of the ‘system’ in this thesis develops from simulation and procedurality. Frasca (2003) points out that simulation means to model an original system through a different system. Bogost (2007) sees systems as processes in the material world, such as war, urban planning, and sports. Systems refer to some complex processes in the real world. Video games can thus represent social systems or at least a part of social systems. For instance, *College Scholarship Tycoon* may be regarded as a newsgame to illustrate admissions in the education system. It is worth noting that the ‘game system’ has a different meaning, referring to a collection of interconnected game elements (see Salen and Zimmerman, 2005). A game system contains a visible interface and an invisible black box section (see Jørgensen, 2012). The game system as a whole defines how players can interact and how the game works.

Chapter 2 Literature Review

This chapter starts with an overview of existing newsgame research. Then I move to the cultural approach to journalism studies and the two ways in which it can provide a deeper understanding of journalism and newsgames. The first way sees journalism as a kind of cultural phenomenon, which emphasises that the meaning of news is negotiated in production and consumption. The second focuses on journalistic cultures and talks about how it relates to the ways in which journalism should work in society. Taking a cultural approach can fill the gaps in the current study of newsgames. Based on these approaches, I will discuss three aspects where newsgames may create tensions: truth claims, entertainment and audience engagement, and advocacy, which allows us to consider the different roles of journalism in society. In reviewing the existing research, I highlight gaps that will be addressed in the present study.

2.1 Existing Newsgame Studies

Although the field of newsgames is niche and experimental, there have also been some attempts to consider the hybrid of journalism and video games. Early studies (Sicart, 2008b; Treanor and Mateas, 2009) link newsgames to editorials and comments and argue that newsgames should be understood as a way to express opinions, especially political perspectives. Bogost and colleagues (2010) expand the area of newsgames to consider different ways of integrating news and video games, such as infographics and platforms. This highlights the importance of thinking about different possible uses of games in journalism. These previous studies have mainly focused on newsgames, especially their design and content, and subsequent research started to investigate the production of newsgames. Foxman (2015; 2017) interviewed journalists and game designers to explore the practices in newsrooms and the business model of newsgames. Ferrer-Conill (2018) investigated how gamification, distinct from but related to newsgames, is deployed and understood by journalists.

Journal articles in a special issue of *Convergence* also examine the hybrid of news and games from two aspects: production, and newsgames as media products. From the perspective of production, Plewe and Fürsich (2020) examine the boundary work between newswriters and game developers, and Literat and colleagues (2020) explore

the implications of participating in the game design process on youth participants' news literacy. Game design and content were investigated in terms of news quality and news values to understand how newsgames might convey messages and frame stories (Arafat, 2020; García-Ortega and García-Avilés, 2020; Richardson, 2020). In addition to this issue, Gómez-García and Teresa De La Hera (2022) look at 75 newsgames and distinguish between 'interpretive newsgames', 'informative newsgames', and 'opinion newsgames' based on the way they transmit messages. Plewe and Fürsich (2018) investigate the ways in which newsgames shape information about and representation of distant suffering.

However, two significant gaps exist in the research on the intersection of video games and journalism. First, the perspective of audiences is rarely investigated in existing research on newsgames, which tends to focus on the production of newsgames or game design. Meier (2018) explores audiences' awareness of newsgames and their evaluation of whether newsgames are successful, but this research is rather superficial and unclear, and little is really known about players' experiences and perceptions. As a result, the existing research lacks a comprehensive understanding of newsgames by integrating the perspectives of production, media products and consumption, which is an objective of this study.

Second, understanding of the relationship between newsgames and journalistic roles remains limited. Journalistic roles refer to the potential ways in which journalism functions in society, such as gatekeeper and disseminator (Hanitzsch, 2007). The gaps in the literature are reflected in three areas: the tension between 'fact' and 'fiction', the value of entertainment, and the intention to advocate. The informational role of journalism has a commitment to making truth claims (Ekström, 2002), while video games often involve fantasy or fictional elements. This tension and its implications are rarely discussed in newsgame studies. Entertainment, to a certain degree, has been regarded as trivial in the field of journalism (Penney, 2023), but video games usually provide enjoyable experiences for players (Fang et al., 2010). The field of newsgame research lacks in-depth discussions regarding entertainment and what it means for journalism. Advocacy journalism involves supporting specific causes and ideas (Thomas, 2018), and video games are considered capable of making arguments in unique ways (Bogost, 2007). However, we know little about the relationship between newsgames and

advocacy. This thesis will explore these three dimensions to provide an understanding of the negotiation of journalistic roles in the context of newsgames.

2.2 Cultural Approaches to Journalism

Understanding journalism as a cultural practice is not a straightforward matter. There are some apparent tensions between journalism and cultural studies, such as the different understandings of truth (Tomaselli and Shepperson, 1999; Turner, 2000) and entertainment (Corner, 2009; Deuze, 2005a). Journalism and cultural studies are not consistent in these ways, leading to a certain degree of mutual neglect in these two research areas. Zelizer (2004) lists several influential monographs on cultural studies, including Barker (2016), Miller (2001) and O'Sullivan et al. (1994), and notes that journalism is almost never mentioned in those works. Similarly, the cultural perspective has not been sufficiently integrated into journalism studies despite some efforts, such as considering a range of cultural issues – from the arts to everyday life – as essential parts of journalism (Hartley, 2009; Kristensen, 2019). There is also a noticeable blind spot where digital journalism has seldom been analysed as a social and cultural phenomenon. This leads to a lack of knowledge of how digital journalism 'created meaning of and for the societies and cultures it served' (Steensen et al., 2019, p.336).

By approaching journalism through a cultural lens, new dimensions and insights can be gained, allowing for a comprehensive exploration of its intricate dynamics and multifaceted nature. Turner (2000, p.363) suggests that 'constructing it as oppositional is a bad choice for both parties' because cultural studies is helpful for revealing the meaning and interpretation lurking in the background of journalistic practice. According to Zelizer (2004, p.101), cultural studies regards the world of news as providing 'a complex and multi-dimensional lattice of meanings for all those involved in journalism'. Seeing journalism as culture means expanding the focus of journalism research concerns, such as considering cartoons and reality shows (Zelizer, 2008). This highlights the nature of subjectivity and construction in journalism and allows us to revisit three aspects: the different roles played by journalism in society, the relationship between mainstream journalism and the margins of journalism, and the way in which audiences and journalists are connected. As a result, it is possible to create an academic connection between cultural studies and journalism studies based on the recognition of

their differences, such as the understanding of truth and the role of entertainment. Such a connection may help them to go beyond their own limitations. For journalism studies, this can provide an opportunity to see journalism as a 'broad-spectrum cultural production' (Ahva and Steensen, 2020, p.46), which is helpful in exploring the diversity of journalism and its functions. Diversity means that journalism is not merely related to politics (see Hanitzsch and Vos, 2018) but can be linked with spheres such as lifestyle, technology, emotions, and audiences' everyday engagement.

2.2.1 Journalism as Culture

It is necessary to explain what cultural approaches are and how they can be employed to understand journalism. Cultural studies is diverse, but its research shares some common features. Ahva and Steensen (2020) argue:

Analyzing journalism through the lenses of cultural theory implies questioning what is presupposed in journalism, figuring out how journalists view themselves, trying to understand the diversity of journalism... The cultural analysis of journalism is interested in how journalism intersects with everyday life. Audiences' perceptions of and interactions with journalism are therefore important to cultural studies of journalism. (p.46)

This provides two different but closely related ways to explore journalism: journalism as culture and journalistic cultures. Journalism can be regarded as a significant type of cultural phenomenon which shapes both our understanding of the world and our place within it. In this way, the consumption and production of news are equally important, and together they shape the meaning of news. In other words, cultural studies approaches give more prominence to the value of audiences than mainstream journalism studies. James Carey's (2008) ritual view of communication, a prominent example of cultural approaches to communication, can be seen to demonstrate the critical role of the audience within journalism. Carey examines newspapers through this view of communication. News writing and reading are both acts of ritual and examples of drama (Carey, 2008). What appears in the newspaper should not be merely understood as pure messages received by audiences. Therefore, Carey (2008, p.17) argues that 'the model here is not that of information acquisition, though such acquisition occurs, but of dramatic action in which the reader joins a world of contending forces as an observer at a play'.

Cultural studies approaches to journalism indicate that there are more things beyond the processes of information transmission in journalism. It also highlights the question of how audiences engage with the process or ritual of journalism rather than merely receiving information.

Carey (2008, p.17) himself provides a useful summary of the news: it is 'a presentation of reality that gives life an overall form, order, and tone'. Journalism, as a form of communication, has real-world relevance and has a role in engaging with the audience's life. From the cultural perspective, the real-world relevance of journalism is created and modified by the minds, experiences and lives of people who participate in the news process with different roles, including but not limited to journalists and audiences.

John Hartley is another prominent scholar renowned for promoting the integration of journalism and cultural studies. Hartley (2012) insightfully points out that journalism studies typically regards culture as a manipulable object, whereas cultural studies tends to view culture as a subject. Thinking in terms of the subject creates opportunities for contemplating collective and self-expression, encouraging us to recognise audiences as active agents who contribute to the construction of meaning. The exploration of what audiences say and do in relation to news is a key perspective for understanding the role of journalism in society (Heikkilä and Ahva, 2015). Hartley (2008) argues that 'cultural studies has been preoccupied with the moment at which media production becomes communication and culture – the moment of "use" in the circumstances of ordinary life' (p.17). This illustrates that journalism, as part of the media industry, needs to be given equal attention in relation to the question of how news is used and perceived in everyday life. More importantly, Hartley (2008) points out that 'the "practice" and "meaning" of journalism ought to be understood as the same object of study' (p.11). Here, 'practice' refers to the process of making news, and 'meaning' as a cultural concept is shaped by consumers. The production and consumption of news should not be completely separated because they work together to negotiate journalism as a cultural form.

The cultural approach argues for a more holistic understanding of journalism, one that recognises the roles of journalists and audiences as equally important actors in shaping the cultural significance of news. This perspective acknowledges that the production and consumption of news are interconnected processes that together contribute to the

construction of cultural meanings and realities. Journalism is seen not just as a mode of information transmission but as a cultural ritual involving both journalists and audiences in the creation of meaning. Therefore, audiences should be understood as active participants contributing to the news process.

In addition to the emphasis on audiences, the concern of cultural studies with the relationship between power and culture has influenced the methodologies of journalism studies, most notably toward the language-based forms of critical textual analysis. Discourse theory as a cultural approach has flourished in journalism studies and provides a key lens to investigate the ways in which journalism produces meaning. The most widely used methods related to cultural studies are based on semiotic and linguistic traditions (Ahva and Steensen, 2020). Stuart Hall's (2006) 'Encoding/Decoding', which was originally published in 1973, is a seminal work to connect audience research and discourse analysis. This essay discusses how messages can be decoded differently by audience members based on their own social contexts. The essential studies of *Nationwide* news audiences (Brunsdon and Morley, 1978; Morley, 1980) develop this approach and demonstrate the distinctive ways in which audiences can respond to mediated journalistic texts. Bruce and colleagues (2014) investigate the link between the content of information on social media and people's experience of accessing information. As a method of cultural studies, these studies highlight the importance of considering content, audiences and contexts together. The dominant meaning of the news contents can be examined through discourse analysis, and conducting audience research is useful to explore how these contents are interpreted in complex and subtle ways by audiences.

2.2.2 Journalistic Cultures

Returning to the above quote on cultural studies by Ahva and Steensen (2020), it can be noted that the second way to connect journalism and cultural studies is through the investigation of journalistic cultures. Schudson (2010) sees the cultural view of journalism as an approach to reveal the relationship between an event in the world and journalism as a symbolic system. Thus, this cultural account of journalism focuses on exploring why a certain occurrence is covered in a particular way. For instance, it allows us to think about why news stories about Africa are often about war and disaster. Schudson (2010) believes that journalistic cultures as 'a deep structure' shapes

storytelling, but few newswriters can identify and define it (p.178).

However, journalistic cultures can still be revealed through the investigation of practices. Journalistic cultures can be considered as 'the accrued, long-term detritus of daily newswriting', which establishes the symbolic context and guides the working process of journalists (Anderson, 2013, p.1015). Journalistic cultures are apparent in the actions and beliefs of journalists, which are characterised by 'a particular set of ideas and practices' that journalists intentionally and unintentionally use to legitimate their position in society and give purpose to their work for themselves and others (Hanitzsch, 2007, p.369). Journalistic cultures are closely related to what journalism does (and is supposed to do) in society and how newswriters can achieve that end. It drives the role perceptions of newswriters and is performed in distinct ways as newswriters do their work.

Journalistic roles are an important constituent of journalistic cultures, and they refer to 'normative responsibilities' and 'functional contribution to society' (Hanitzsch, 2007, p.371). Previous research has had a rather narrow perspective, but recent studies on the performance of journalistic roles have revealed that journalistic cultures have significantly changed in many regions and cannot be explained only by traditional ideal patterns (Mellado et al., 2017). Journalism can perform different social roles in society, and news professionals are not merely a set of insulated professional communicators (Hanitzsch and Vos, 2018). The emerging digital technologies and media may modify and reshape journalistic cultures and influence journalists' perceptions of professional roles (Ahva and Steensen, 2016). These show the importance of broadening the understanding of journalism. Journalistic cultures should be regarded as fluid and dynamic. They are constantly reshaped, and those shifts are manifested in practice and perception.

Moreover, Hanitzsch and Vos (2017) point out that there are four levels of journalistic roles: 'normative, cognitive, practiced, and narrated roles – correspond to conceptually distinct features: what journalists *ought to do*, what they *want to do*, what journalists *do in practice*, and what they *say they do*' (p.124, italics in original). Normative roles refer to society's expectations and constraints on journalism; cognitive roles relate to the goals and ambitions of journalists when expectations are internalised by them; practiced roles

show in the journalists' behaviours and performances when they are working; and narrated roles imply a reflection on journalistic practices, which may sometimes cause introspection and changes in journalistic cultures. These four levels influence each other and reshape journalistic roles.

It is worth noting that this framework places journalists at the heart of journalistic roles. Although normative roles seem to imply the link between audiences and journalists by discussing what the outside world expects from journalists, this theory does not incorporate what audiences think about journalism. The negotiation of journalistic roles consists of three components: actors, sites/audiences, and topics (Carlson, 2016, p.355). Actors represent people who make news, including journalists and non-journalists. People who were not previously considered journalists are involved in the production of newsgames (see Plewe and Fürsich, 2020), and their positions in shaping journalistic roles should be considered. Sites/audiences encourage research into what audiences are saying and where they are saying it. Because newsgames emphasise audiences' interaction, this can be extended to a consideration of how the gaming experiences of audiences relate to their perceptions. Based on the idea of considering journalism as culture, audiences and journalists have the same important status, and they should be included in the investigation on an equal footing.

There are differences between journalistic cultures around the world, and they might be related to country-specific contexts (Hanitzsch et al., 2011; Wright and Nolan, 2021). Journalistic cultures from different countries may have national characteristics which are shaped by a range of macro and micro factors, such as market structures, technological development and political context (Jiang et al., 2021). The national features can also be found in recent journalistic innovations. For example, data literacy, data availability and commercial pressure are all believed to have influenced the development of data journalism in China (Zhang and Feng, 2019). Some of these factors are highly related to the Chinese context where there was a lack of newswriters' technical skills because of the late start of relevant education, and the political environment and technology standards limited the degree of data openness (Zhang and Feng, 2019, p.1296). This study initially intended to compare differences between countries, but this was not done due to the Covid-19 pandemic and other reasons. This will be explained in the research design and the Covid-19 impact statement.

2.3 The Necessity of a Cultural Approach to Newsgames

This study aims to explore the research questions: how do newsgames reflect the negotiation of different journalistic roles, and what does this reveal about the broader changes in journalism? To answer these questions, it is essential to consider a cultural approach as it offers three significant advantages. First, the cultural approach can help us to connect journalism studies to game studies. Journalism is not something distinct or separate from other media practices and should be related to them. Video games are also seen as a form of culture that can play specific roles in society (Shaw, 2010). Game studies is concerned with aspects of production, with video games themselves, and with players (Lankoski and Björk, 2015b). The cultural approach can help us to explore how the traits of journalism and video games are integrated and shaped in newsgames; for example, in the convergence of the ways journalism and video games represent the real world. Cultural approaches can help us to explore a series of questions about digital journalism, especially how journalism creates knowledge and meaning for societies (Steensen et al., 2019, p.336). This is important for thinking about how journalism can function differently in society.

Second, the cultural approach is an important supplement to the scholarship in understanding the roles of journalism in society. There are many theories providing explanations for the question of how journalism functions and develops in society from a macro perspective. For instance, the social functions of journalism can be investigated by exploring the connections between journalism and other social systems, such as economy and politics (Benson, 2006; Ryfe, 2006). This view usually highlights the influence of macro-level elements on micro-level practices. It can be observed that the audience remains a largely neglected actor when discussing the social roles of journalism. Cultural approaches emphasise the collective contribution of production, media products and consumption. If we expect, for example, that journalism might promote some social changes, we should consider the audience's response to and engagement with media products. The cultural approach's emphasis on audiences helps to consider how journalistic roles are negotiated in the context of newsgames.

Combining the above two points highlights the need to view newsgame players, who are

also news audiences, as active actors. Digital information technologies offer the possibility of viewing news audiences as active participants (Lewis and Westlund, 2015). Journalism can be seen as a cultural process which involves the co-creation of meaning by journalists and audiences. Sicart argues that gamers are not configurators of the game system but 'living, breathing, culturally embodied, ethically and politically engaged' beings (Sicart, 2011). Players actively participate in the narrative and gameplay, making choices that influence the outcome and direction of the game. They could also creatively provide their interpretation of the game and their gaming experiences. The cultural approach does not deny the importance of information transmission but emphasise the of the possibility of audiences to shape how media technologies operate. This duality in the role of players as both actors and audiences is fundamental to the investigation of newsgames.

Third, the cultural approach assumes that journalism can play various roles in society, and newsgames can be useful for looking at the boundaries of journalism to gain insight into journalistic roles. In this way, newsgames can be seen as 'strategic research materials' (Merton, 1987) to explore the relationship between journalism and culture, providing valuable data for changes in journalistic practices. Strategic research materials refer to particular cases that can be used to carry out a fruitful investigation of previously stubborn issues because of their advantages and accessibility (Merton, 1987, p.10). They are not always but often marginal and easily ignored (Merton, 1987, p.19). For instance, Deuze (2005a) located tabloid journalism in the margins of the news industry and argued that it could be used to reveal how journalism organises and structures itself and how, in turn, this affects the way journalism works in society. Research on the margins of journalism can offer a lens through which broader issues important to the field of journalism can be addressed. Similarly, newsgames, as a niche experiment in journalism, are useful for exploring the potential shifts in how journalism functions.

The cultural approach to journalism offers an expansive analytical perspective that challenges the ideas held by traditional journalism studies about how journalism works. The investigation of newsgames should consider perspectives of production, media products and consumption and take into account the fluidity of a wide range of journalistic roles. In the following sections, to answer the research questions, I examine three aspects. First, the 'fiction' part brought by video games creates tension with the

informational role of journalism, which is closely associated with the pursuit of truth. Second, the role of entertainment is often overlooked in journalism, and newsgames offer a new possibility to revisit it. Third, video games are considered to be used to make arguments and thus have a persuasive effect, which links to the discussion of the journalistic role of advocacy.

2.4 Truth Claims

Truth and some related terms, such as facts and reality, are important for journalism. Zelizer (2004) argues that journalism's uncritical adherence to truth, facts and reality 'render it sorely outdated and out of step with an academic inquiry of a cultural bent', but loosening journalism's adherence to these would also 'lose its distinctiveness from the other modes of cultural expression, argumentation, representation, and production which frequently comprise the targets of cultural analysis' (p.104). This charts the tension between journalism studies and cultural studies. In the field of journalism studies, these terms are often assumed to be foundational and remain unchallenged. Cultural studies moves them to the centre stage and views them as phenomena that require an explanation, as they are shaped by historical, social, and broader cultural contexts within which the practices of journalism are undertaken.

On the one hand, the simple acceptance of facts, truth and reality is problematic because this ignores the important roles of journalists and audiences in the production and perception of these concepts. On the other hand, why news is still produced and consumed cannot be explained without an appeal to notions of truth, reality, and facts. Therefore, truth should be investigated in a way that treads a careful path between recognising its value and acknowledging that it should not be taken for granted.

While questioning journalism's fascination with these terms, remaining aware of the particular value of these concepts to journalism is helpful to understand journalism better and broaden the inquiry of journalism studies. Scholarship has already explored the relationship between truth claims and alternative forms of news. For example, late-night talk shows are considered as a potential source of news consumption by some audiences (Edgerly, 2017; Gil de Zúñiga and Hinsley, 2013).

Newsgames may open up a new space for exploring the truth claims of journalism, as newsgames may bring fiction and imagination into the field of journalism. Fantasy games describing virtual worlds are an important part of the gaming industry (Williams et al., 2014). In the field of video games, fantasy is regarded as an important element of video games as it allows players to experience things that hardly ever happen to them in real life (Zuo et al., 2019). Yet video games are not created in a void, and they almost always have links to the real world. Juul (2011) argues that ‘the fictional world cues the player into making assumptions about the real world in which the player plays a game’ (p.168). This emphasises the potential for players to make connections between the content of the game and the real world as they play it. Video games can provide players with a virtual space which contains elements of realism and fantasy at the same time, such as the representation of race in *Grand Theft Auto: San Andreas* (Schwartz, 2006). Research on serious games demonstrates this integration more visibly. The application areas of serious games include but are not limited to education, training, and well-being (Laamarti et al., 2014). Games in these areas aim to enable players to take what they have learnt from games and use it in the real world.

This raises the challenge of how journalism's commitment to truth claims may or may not fit into the game format. Although some studies (Gómez-García and Teresa De La Hera, 2022; Plewe and Fürsich, 2018) have preliminarily explored the ways in which newsgames transmit information, one aspect is absent in this research: newsgames allow us to rethink the problem of an unthinking endorsement of truth, facts and reality.

To address this gap, I first discuss the different journalistic epistemologies of truth and argue that a pragmatic approach to understanding truth claims is best suited to investigating newsgames. This view concerns how truth claims are produced and understood, avoiding the unresolved debate between subjectivity and objectivity. Then I review three key aspects to highlight gaps in the existing research that will be addressed in this thesis. The first section focuses on the role of evidence in making truth claims, and the second part explains the potential of simulation to link video games to real-world issues. In the last section, strategic ritual and transparency allow us to think about the ways in which the gap between ‘fact’ and ‘fiction’ may be bridged in newsgames.

2.4.1 Journalistic Epistemology

This section explains the reason for taking a pragmatic approach to exploring truth claims. Epistemology is also known as the theory of knowledge, which focuses on how something can be known and justified (Audi, 2010). In relation to journalism, Ekström (2002) argues that 'the legitimacy of journalism is intimately bound up with claims to knowledge and truth' (p.260). Therefore, journalistic epistemology, which may explain how truth claims of journalism can be justified, is an important factor in understanding how journalism justifies its position in society.

There are two relatively opposing views in journalistic epistemology, commonly known as realism and social constructivism (Godler and Reich, 2013). The journalistic conception of realism is closely related to objectivity as an ideal. It is generally accepted that the definition of objectivity is that journalists should separate facts from values. The idea of the objectivity norm requires journalists to offer 'straight, unbiased information without bias or opinion' (Ward, 2008, p.73) to the public. There is an assumption here that facts and reality can be perceived by newswriters. Realism in the journalistic sense considers reality to be knowable, and that the perceived objects do not depend on any perceivers (Godler and Reich, 2013; Hanitzsch, 2007). Realism promised journalism the possibility to objectively describe reality and generate truth claims and became the primary journalistic epistemology in the first half of the twentieth century (Schudson, 2001).

However, from the rejection of realism, a social constructivist view of reality, which argues 'there is no absolute truth, and journalists inescapably create their own realities' (Hanitzsch, 2007, p.376), emerged in the area of journalism studies. Schudson (1989) argues that news is created by journalists, and facts are defined by news organisations. Ericson (1998) proposes that 'Fact – defined as that which is accepted as reality – is an artifact of communication practices' (p.84). Taking this epistemological position, journalism scholars have focused on the practices of journalists and news organisations as producers of truth and meaning.

The constructivist idea offered a very different way of thinking about what journalistic truth is from the realist view, so some scholars attempt to negotiate the conflict between them. Zelizer (2004) points out that 'recognizing that there is a reality out there and that,

in certain quarters, truth and facts have currency does not mean letting go of relativity, subjectivity, and construction' (p.114). Similarly, Muñoz-Torres (2012) suggests that the subject and the object create the truth claims together, thus there is a 'chance to provide truthful accounts about life and the world' (p.579). Schudson (2019) develops his early view (Schudson, 1989) and explains:

Journalists do not create hurricanes or tornados, elections or murders. They do not create Christmas or rock concerts or the Olympics. They shape them, but they do not shape them just as they choose. (pp.139-140)

From these arguments, it can be found that there is a middle ground in journalistic epistemology. This idea highlights that there can be a perceived reality while also drawing attention to the role of newswriters in creating truth claims about reality that must be considered.

This middle-ground view is in line with a type of epistemology called pragmatism. Pragmatists believe that truth claims are almost always temporary. The process of making truth claims, which includes constantly changing the ways and details of the investigation, is equally (or even more) worthy of being examined. Kovach and Rosenstiel (2021) argue that 'we teach our children rules, history, physics, and biology. All of these truths – even the laws of science – are subject to revision, but we operate by them in the meantime because they are necessary and they work' (p.43). This shows the characteristics of the general pragmatic epistemology. This approach avoids the endless philosophical debate of truth; it does not seek to chase the absolute truth. The so-called 'truth' might be proven false in the future, but it is still essential to understand things currently.

This pragmatic epistemology aligns with the cultural approach to understanding journalistic truth. According to Carey (1997), seeing journalism as a form of culture 'is to see it as a practice of world making, of the making of meaning and significance' (p.331). The cultural approach highlights the activities whereby journalists shape the truth claims of the world, and it is important to realise that the relationship between journalism and truth is constantly being negotiated. Ward (2008) provides a pragmatic epistemological view of objectivity, emphasising that 'objectivity is valued, pragmatically, as a means to

the goals of truth, fair judgment and ethical action' (p.77). In this view, journalists are no longer passive stenographers of facts but become explorers of reality who verify the information and provide interpretation. This idea does not deny the possibility of perceiving reality but points out that journalists cannot eliminate subjectivity in their work. The truth claims of journalism can be understood as a continuing process through this epistemology (Kovach and Rosenstiel, 2021). Different accounts of the same event may verify or refute each other, constantly adding more information.

One of the most significant difficulties that journalism currently encounters is the absence of trust from the public (Fink, 2019), and this pragmatic epistemology helps to consider the role of audiences. Audiences must judge the reliability of news in a complicated media context that contains political bias, algorithmic filtering and conflict of interest (Swart and Broersma, 2022). Truth claims can be seen as 'a performative discourse' that may make audiences believe 'what it describes is real, which, by successfully doing so, transforms an interpretation into truth – into a reality the public can act upon' (Broersma, 2010, p.26). Journalists need to persuade their audience that news stories are relevant to the real world and that they can know the world in light of the news stories. The truth claims as 'an account of something that happened somewhere relies on a relationship between reporter and reader' (Carlson, 2017, p.100). Statements in the news can only become truth claims describing the real world when they are recognised by the audience through negotiation.

As noted earlier, newsgames introduce elements of fiction and imagination into the field of truth claims. Whether and how fiction might be understood as part of truth claims needs to be explored. The pragmatic epistemology provides a way that does not reduce the issue to either production or consumption alone but sees truth claims as emerging from a complex relationship between the two, which helps us to explore what counts as an adequate depiction of reality in the current media environment. This helps to consider how newsgames may challenge journalists and audiences in relation to truth as central to the journalistic enterprise.

2.4.2 Evidence

Even though video games depict a fictional world, they can still be relevant to real-world issues. If newsgames are seen as a combination of 'fact' and 'fiction', the first thing to

think about is whether newsgames might draw from traditional journalistic practices in the way they make truth claims. In this section, the role of evidence in making truth claims is explored.

Newswriters create the social relevance of news by integrating various types of evidence into the production of news stories (Anderson, 2018; Coddington and Molyneux, 2021). Ettema and Glasser (1987; 1998) examine investigative journalism and argue that reporters collect, evaluate and assemble evidence to make truth claims. Tuchman (1972) finds that in broader journalistic practice, evidence also plays a role in supporting the reliability of truth claims. Journalists can utilise evidence presented in news stories to present an impression that the reported messages are proven and verifiable (Coddington, 2020; Henke et al., 2020).

However, research on newsgames is still lacking an overview of the role of evidence in newsgames. Gómez-García and Teresa De La Hera (2022) argue that informative newsgames 'are fact-based objective games focused on empirical evidence of the event presented in the game' (p.459). This claim is questionable, especially given that the study does not critically consider the role of evidence.

Empirical evidence should not be thought to speak directly for truth claims but rather to take into account its contextual nature. It is important to note that evidence cannot be regarded as an independent element that directly stands for the truth claim. Reich and Barnoy (2021) define evidence as 'any information (which may or may not be contained in material artefacts such as documents, photos and video) that points towards some other information, strengthening or weakening one's confidence in that information' (p.4). Evidence is information, which might be in written, visual, audio, or data forms, and more importantly, it does not exist on its own. Information can be evidence because it can make connections with other information within a particular context. For instance, an image of a polar bear swimming does not say anything, but it will take on meaning when deployed in the context of a news story about climate change.

The data used in an infographic highlights the importance of considering evidence in relation to other elements. Data-based journalism covers a fairly wide range of journalistic practices, and data visualisation is one of them (Young et al., 2018).

Infographics provide 'visual depictions of data used for reasoning about information' (Bogost et al., 2010, p.36). The information visualisation of quantitative data and statistics is not something entirely new to journalism. The Men and Religion Forward Movement (MRFM) made a large number of charts and maps through data visualisation and attempted to suggest that this kind of numerical evidence can offer a greater insight into social reality (Anderson, 2017; Anderson, 2018). This movement and view had 'a glancing but meaningful impact on practices of journalism' (Anderson, 2018, p.2). After World War II, infographics were introduced into the routines of news organisations such as *USA Today* and the *New York Times*, and with the spread of computers, digital infographics have been widely produced since the 1990s (Bogost et al., 2010, pp.39-40).

Infographics used to be static due to the fact that they were printed, but digital technology has also opened up new possibilities for infographics, allowing them to become interactive and dynamic. Interactivity in information graphics is seen as a characteristic allowing audiences to actively explore the visual representation of data (Young et al., 2018). Similarly, interactivity is one of the properties of video games, and it allows players to 'influence the quality and course of events occurring' in the game (Klimmt, 2009, p.251). This led to the emergence of 'playable infographics' (Bogost et al., 2010). For instance, *Changes in Hong Kong 20 Years after the Handover*, made by the *United Daily News*, is a newsgame that asks players to estimate how Hong Kong changed in various aspects and draw it on charts. Players can compare their own lines with those based on real-world statistics. This provides the audiences with an opportunity to compare their own perceptions with the truth claims generated by data. However, little is known about the relationship between interactivity and data in journalism studies (Burmester et al., 2010). There is also a lack of understanding within journalism about what the data in newsgames means for truth claims, and this is a question that this thesis attempts to address.

2.4.3 Simulation

In the context of newsgames, simulation is a touchstone for investigating the implications of fiction on truth claims. The term 'simulation' can be more broadly defined as 'an operating representation of central features of reality' (Guetzkow, 1963, as cited in Bloomer, 1973, p.225). This definition shows two essential characteristics of simulation. First, simulation and reality are relevant. This means that simulation is not expected to

achieve an exact replication of things in the real world, and the core of simulation is to capture some key characteristics of things. Second, simulation is considered to be operable and interactive, so simulations can be deployed in video games (see Bloomer, 1973; Ellington et al., 1981).

There are two main styles of simulation in video games. The first is named the 'realist simulation style' by Chapman (2016, p.61). Realist simulation here is primarily an audio-visual concept. As Chapman (2016) claims:

Generally environments, objects, characters and effects are visually detailed and show a degree of fidelity to the physical evidence of the past and the everyday world. Audio-visual elements commonly feature little overt metaphorisation, and the concern is with producing a representation of the past that imitates direct human experience. (p.61)

Realist simulation captures the physical characteristics of the real world and reproduces the virtual copies of things in the real world as much as possible, both visually and audibly. As Nash (2021) argues, realist simulation claims 'to show the past 'as it was' from the perspective of historical agents' (p.85). This allows this type of simulation to have a reconstructive nature, attempting to bring players to a specific moment. Scholarship on immersive journalism is helpful for examining the impact of realist simulation on truth claims. One important feature of immersive journalism is that viewers are 'placed in a situation that felt as real as the original news event' (Sánchez Laws, 2020, p.214). Immersive journalism similarly creates a copied space of a real-life event and invites audiences to explore this space. In this space, audiences can have 'first-person experiences of the events or situation described in news stories' (De la Peña et al., 2010, p.291). In other words, this reveals an ideal of setting the audience, to a certain degree, in the position of the witness.

Rather than focusing on audio-visual representation, the second style of simulation attempts to uncover the 'essence' of things in a relatively abstract way. Chapman (2016) refers to this style as 'conceptual simulation', which can imitate theories and processes (p.69). Frasca (2003) argues that 'to simulate is to model a (source) system through a different system which maintains to somebody some of the behaviors of the original

system' (p.223). Conceptual simulation goes beyond the reconstruction of elements on the surface and produces the mimetic patterns of how things work. For instance, in a flight simulator, the player increases the power of the aircraft, and they will find that the aircraft moves faster (Frasca, 2003). This type of simulation allows the player to explore how the game, as an abstract model of the real-world system, works. It is worth noting that conceptual simulation and realist simulation can be compatible. For example, video games such as *Cities: Skylines* and *Farm Simulator* combine the characteristics of both.

It is worth noting that the player's experience, to a certain degree, is fictional in the context of simulation games. Simulation will create a similar but not identical process to present the original (Frasca, 2003; see also Bogost, 2007), so 'fiction' refers to an explicit and deliberate reconstruction of 'fact'. Simulation makes the game depart from specific events and characters, thereby making the game to a certain degree fictional. This fiction stems from the omission of details and the potential reorganisation of the retained parts. In essence, the fundamental question revolves around whether simulation effectively shapes 'fact' in an appropriate manner, and how truth claims are negotiated within the context of newsgames is in need of investigation.

2.4.4 Strategic Ritual and Transparency

The previous two sections respectively discussed how fact and fiction may be linked to truth claims in newsgames. Due to the challenges that fiction may create, another aspect worth considering is the way in which truth claims in newsgames might be defended. Tuchman (1972) argued that the 'strategic ritual of objectivity' is taken by journalists to reduce potential attacks against their work. The strategic ritual of objectivity consists of four procedures: presentation of conflicting possibilities, presentation of supporting evidence, judicious use of quotation marks, and structuring information in an appropriate sequence (Tuchman, 1972, p.676). These four procedures combine to become a defensive way to accomplish work, allowing journalists to claim that their work is balanced and objective. Given this strategic ritual of objectivity, journalists can assert their possession to make truth claims about real-world events and issues.

Although the idea of objectivity has been challenged in contemporary journalism scholarship, the concept of strategic ritual is increasingly significant in journalism studies. The strategic ritual of emotionality refers to a set of practices, such as providing

personalised storytelling to create news stories that aim to be emotionally resonant (Wahl-Jorgensen, 2013). It has been found that American journalists use the strategic ritual of irony to make moral evaluations of Chinese politics and simultaneously circumvent accusations of bias and unfairness (Song and Lee, 2015). In the process of making news, a range of approaches are used to verify information collected previously, which has resulted in the strategic ritual of verification (Shapiro et al., 2013). Despite the different objectives, there are similarities between the various strategic rituals. They tend to be comprised of a series of practices. The adoption of these practices is rooted in a desire to be protected from external criticism and to claim a certain capability.

Transparency provides an opportunity to further reflect on the links between truth claims and the strategic ritual. Before the advent of the Internet, journalism was in the era of 'trust me', when brands were a major factor in trust and transparency was thought to make reading less fluent (Kovach and Rosenstiel, 2021). A great deal of journalistic work was done behind the scenes (see Higgins-Dobney, 2021; Lewis and Zhong, 2013). The audience may be aware of the existence of such a process, but they still rarely see it. However, there has been a turn from the 'trust me' era to the 'show me' era of news, and even well-known news outlets no longer mean a sense of credibility to most audiences (Kovach and Rosenstiel, 2021; Mor and Reich, 2018). This brings transparency to the forefront of journalism, as it may contribute to reshaping credibility. Craft and Heim (2008) point out that 'transparency has been embraced as a method by which journalists can reestablish trust with the public', and journalists 'pull back the curtain and explain the newsgathering process' (p.127). Presenting the journalistic process, or at least part of the process, to audiences becomes important for making truth claims.

Transparency can mean different things, such as being willing to receive criticism, letting audiences inside the news production, and explaining decision-making (Vos and Craft, 2017). Disclosure transparency can be understood as telling audiences about sources and methods for making news (Karlsson, 2010). In this case, transparency may have positive connotations for making truth claims. To build public trust, reporters should provide audiences with increased access to their raw information and evidence. Participatory transparency refers to inviting audiences to engage in the news production process through a variety of approaches, including direct or indirect influence on the news contents (Karlsson, 2010, p.538). When audiences are situated in the news

production process, they have the potential to gain insight into news stories from an insider's perspective. According to Philips (2010), transparency means that 'journalists, in telling their version of events, should be able to say, with sincerity, that they believe their version of events to be correct' (p.379). This implies that news professionals who practice transparency can be seen as 'trustworthy' because they show that they have worked as hard as possible to create truth claims. An ideal has emerged in which greater transparency allows audiences to evaluate information independently and make informed decisions.

Although transparency may enhance a journalist's credibility, it is important to take the potentially ritual nature of transparency into account. Transparency can be seen as a way of maintaining autonomy and justifying news stories, which is similar to the role of objectivity in the 20th century (Allen, 2008; Revers, 2014). According to Karlsson (2010), transparency in journalistic practices consists of a series of rituals that 'need to be performed in front of the audience' (p.546). Transparency is not a guarantee of truth claims but rather a performative strategy that works in the process of assessing truth claims by the audience. Excessive praise for transparency masks possible problems in transparency. Transparency does not guarantee that the truth claims in news stories are unproblematic as the journalist's own perceptions and the rhetorical devices used will have a significant impact on the conclusion of the news story (Morton, 2015; see also Craft and Heim, 2008; Vos and Craft, 2017).

Newsgames pose unique challenges to transparency. The interaction and simulation provided by video games allow the player to potentially influence the content to some degree, which echoes the expectation of participatory transparency. The relationship between this game-based participation and truth claims has not yet been examined. Some newsgames may clearly state the current events and real-world stories that inspired the production (García-Ortega and García-Avilés, 2020). However, video games may hide part of the underlying process from the player's view to maintain a smooth gameplay experience (Salen and Zimmerman, 2003). This may create tension with the ideal of transparency aimed at disclosing processes and evidence. In the current research, there is still a lack of clarity on whether some procedures have been adopted to resolve the above tension, which is a focus of this thesis.

2.4.5 Conclusion

I have demonstrated that truth claims are a centrepiece of considering newsgames through a cultural approach. This first part has highlighted that we should employ pragmatic epistemology to consider how newsgames make truth claims. This means that the truth claims are shaped by production, media product and consumption together, providing an interpretation of the real world.

I outlined three possible aspects of investigating truth claims in newsgames. First, evidence is widely used in news reporting to support propositions about reality. The contextual nature of the evidence and the interaction are key to considering the evidence in newsgames. Second, the technology and logic of video games enable newsgames to offer new possibilities in terms of truth claims. There are three lenses worth exploring: visual realism, personal experience, and systematic process. However, simulation does not automatically provide a positive impact on making truth claims, and there is a need to consider what 'fiction' means for truth claims. Third, there is a need to consider whether there are ways in the context of newsgames to bridge the distance between reality and fiction, which may be linked to transparency and strategic rituals. These aspects are useful to answer the question of how journalism can function as a system of truth creation in the digital age.

2.5 Entertainment and Audience Engagement

A component of journalism culture is prescriptive and pertains to its roles, or functional contributions, to society (Hanitzsch, 2007). Some dominant views emphasise political primacy at the expense of the role of entertainment (Conboy, 2010). Entertainment in journalism can be considered through two lenses. First, the role of entertainment news, also known as everyday life and lifestyle news, for audiences and society deserves to be examined. This type of news can help the audience in areas of consumption, identity, and emotion, such as seeking entertainment and negotiating their identity (Hanusch, 2020). Entertainment can be linked to community solidarity, quality of life, and personal well-being to highlight its societal worth.

Second, research on the relationship between entertainment and public affairs is still inconclusive. Entertainment has long been investigated on the basis that it endeavours

to divert people's focus away from the more serious aspects of life by directing their attention towards trivial matters (Penney, 2023). However, recent studies have found that entertaining experiences may help audiences learn new things and reflect on news stories (Costera Meijer, 2020, p.397). Hanitzsch and Vos (2018) suggest that the domain of everyday life should be understood as a wide range of news which cannot be simply reduced to politics but still influences public life. The culture of everyday life can shape how people engage with the political sphere by enhancing people's social skills (Dahlgren, 2006, p.273). Corner (2009) argues that the relationship between 'public' and 'popular' is not oppositional but involves proximity and, to some extent, unity. For instance, dramatic forces from popular culture, such as desire and fear, are widely embedded in television news (Corner, 2009, p.145). The neglect of the relationship between entertainment and public service would lead to a narrower vision of journalism than is actually the case.

One expectation of newsgames is to promote audience engagement with the news. Latoya Peterson, digital innovation editor, has argued, proficiency in games and play helps to increase engagement (Albeanu, 2016). This idea is based on the assumption that the newsgame is an entertaining and playful form which may attract audiences and thus increase their engagement. Entertainment and enjoyment are at the core of playing video games (Fang et al., 2010). Newsgames, as a niche and experimental hybrid of journalism and video games, hint at the possibility of combining news with a new force of entertainment. However, an issue arises with newsgames, stemming from the inherent paradox between the entertaining aspect of video games and the emphasis of mainstream news culture on public affairs (Ferrer-Conill et al., 2020, p.462). The hedonic logic of video games may make players more engaged, but the extent to which this engagement is compatible with journalism is still unknown. In 2015, the *BBC* published the newsgame *Syrian Journey: Choose your own escape route*, which tried to illustrate the dilemmas that refugees may face. The *BBC* was criticised for its depiction of a humanitarian tragedy in this game (Stuart, 2015). On the one hand, there is an idea that video games are 'frivolous at best and harmful at worst' (Prensky, 2003, p.21). This means that newsgames may trivialise a topic because it is a medium of entertainment. On the other hand, some researchers argue that news and video games are compatible and even mutually beneficial (Bogost et al., 2010; García-Ortega and García-Avilés, 2020). Whether this conflict can be reconciled and resolved is a matter for investigation.

Therefore, this thesis aims to address whether the entertainment embedded in newsgames is likely to promote audience engagement with news, particularly with content related to public affairs.

I begin by discussing the growing attention that audience engagement is receiving in journalism studies and locating the exploration of newsgames in the engagement with content. I proceed to present the role of entertainment in audience engagement and argue that newsgames should be part of the discussion. Thus, I draw on game studies to illustrate how the entertainment of newsgames should be understood and how the relationship between entertainment and engagement with content should be examined within the context of newsgames.

2.5.1 Audience Engagement

Audience engagement plays an important role in the contemporary media landscape, which is essential for comprehending the dynamics of news consumption. This section will provide an overview of the concept of audience engagement and its significance in understanding audience behaviour.

Two aspects have led journalists, as well as journalism scholars, to focus on audience engagement in recent years. First, the financial sustainability of journalism has become an essential matter of concern (Anderson et al., 2015). Audience payment is seen as a potential solution since advertising revenues in journalism have declined significantly (Himma-Kadakas and Kōuts, 2015; Lauerer, 2019). Increasing the size of the audience and keeping them interested in the news, therefore, have become the focus of debates. Second, the social relevance of journalism is also at risk of diminishing. Bringing users and journalism closer together is seen as an important measure to reshape journalism's place in society (Nelson, 2021; Zayani, 2021). Both aspects point to a focus on the audience, and in particular on how they engage with the news.

Networked digital media have transformed the conditions of communication by corroding the traditional relationships between senders and receivers (Loosen and Schmidt, 2012). Rosen (2006) uses the phrase 'the people formerly known as the audience' to describe the transformation of passive consumers into active participants. This reflects a shift from exposure to engagement, and journalism, from both a practical perspective for

newswriters and a theoretical standpoint for researchers, needs to investigate its audience in more detail. It is vital to reconsider the relationship between audiences and journalists and the place of audiences in journalism (Lewis et al., 2014). The audience should not be treated as mere recipients, and what they actually do with the news should be addressed.

In response to this question of what audiences do with news, several interrelated terms, such as 'audience engagement' (Nelson, 2021), 'news engagement' (Kümpel, 2019) and 'user engagement' (Ksiazek et al., 2016) have been used. These concepts often overlap, but there are subtle differences in specific contexts. Broersma (2019) defines audience engagement as 'cognitive, emotional, or affective experiences that users have with media content or brands' (p.1). This definition highlights audience action and response as an experiential process. In the process, the audience actively invests time and attention in interacting with the news.

Given that the experience of playing newsgames is very different from reading and watching, audience engagement with content is well worth investigating. News content engagement reflects the level of interest and active participation in particular news topics (Ha et al., 2018). Broersma (2019) notes that there are four stages of engagement: start point, actual engagement, disengagement, and reengagement. Actual engagement refers to a process that involves interpreting the story, investing energy, and ultimately linking it to existing knowledge (Broersma, 2019, p.3). In the case of newsgames, this means that it is vital to investigate how newsgames allow the player to interact with them and thus facilitate the acquisition of information. Start point and reengagement are also related to engagement with content, which refers respectively to how the audience's interest in the topics is generated at the start of the engagement and maintained after it has ended (Broersma, 2019, pp.3-4). Whether newsgames can capture the player's attention right from the start and promote further exploration of the topics is also a matter of concern.

Moreover, measuring news engagement is essential for understanding its reach, effectiveness, and impact. In the past, the understanding of audiences was often based on methods such as market research and letters to the editor (Loosen and Schmidt, 2012). Networked digital media offers an opportunity to measure audience engagement

more directly, and this is reflected in the focus on and favouring of metrics. In the past few years, with the advancement of technological media, the importance of audience metrics has increased significantly in the news industry, where metrics are used not only to monitor audience behaviour but also to analyse the underlying factors driving audience engagement (Steensen et al., 2020). The reliance on metrics is also shown in the production of news. Journalistic practices have been influenced by the analysis of audience metrics to make news stories that will effectively captivate the readership (Anderson, 2011; Ferrer-Conill and Tandoc, 2018). The analysis of metrics is used as an important way of providing insight into audience engagement. However, little attention has been given to how newsgame practitioners measure audience engagement with newsgames – a key focus of this thesis.

2.5.2 The Role of Entertainment in Audience Engagement

When it comes to the value of journalism to society, journalism studies has primarily been concerned with the relationship between journalism and the political sphere (Hanusch, 2020). Entertainment is widely overlooked because it has been considered the antithesis of public affairs for a long time (Edgerly and Vraga, 2019). However, the focus on political life has led to some blind spots in journalism studies, and one of them is the connection that exists between entertainment and public service.

Considering journalism, or part of it, as entertainment is not a new idea. Schudson (1981) argues that two types of journalism in the United States – ‘journalism as entertainment’ and ‘journalism as information’ – developed in parallel during the 19th century. Entertainment means that the main role of news is to provide audiences with satisfying aesthetic experiences – in other words, pleasure and enjoyability; information claims to offer verifiable messages and thus it should sound plausible (Schudson, 1981, p.89). With the popularity of television, news as entertainment has been further developed by adding more entertainment elements to news channels and broadcasts (Thussu, 2008). In lifestyle journalism, journalists prioritise keeping their audience in a positive mood and providing entertainment while consuming the content (Hanusch, 2020). It can thus be seen that entertainment has been a part of journalism for a long time.

The relationship between entertainment and public affairs has received academic attention over the last decade (Costera Meijer, 2020). On the one hand, some studies

argue that audiences exposed to news through infotainment are less aware of serious issues than others (see Kim and Vishak, 2008; Prior, 2005). For instance, an earlier study found that British audiences do not perceive celebrity news as creating a meaningful connection with public concerns (Couldry and Markham, 2007).

On the other hand, entertainment is considered likely to facilitate audiences' engagement with public affairs content, especially the acquisition of political information (see Becker, 2011; Xenos and Becker, 2009; Young, 2013). Political journalists have acknowledged that they attempt to provide entertaining news stories to increase the likelihood that audiences would access and engage with political news (Banjac and Hanusch, 2022). Penney (2023) argues that audiences can think about content related to political debates and position subject matter in the context of public affairs as they read celebrity news.

Some studies (Dahlgren and Hill, 2020; Nærland, 2020; O'Brien and Toms, 2008) show that pleasure and enjoyment are very important factors in understanding audience engagement. Corner (2013) argues that the tradition emphasising the analysis of content has led quite a few media studies to ignore formal issues. This has led to little knowledge about whether the entertainment embedded in the form will have an impact on audience engagement with news. Most discussions of forms are focused on television programmes which blur the difference between traditional news and entertainment (Baym, 2008; Pelzer and Raemy, 2022). For example, talk shows such as *The Daily Show* are entertaining to viewers, but they can also offer current events information (Edgerly and Vraga, 2019). In this way, broader public issues can be integrated with a humorous and interesting media genre.

Newsgames provide an opportunity for further discussion on the impact of form on audience engagement. Video games are often seen as a form of entertainment capable of attracting players (Oliver et al., 2016). Ferrer-Conill (2018) argues that one important logic of video games is the hedonic logic that aims to offer a pleasurable and entertaining experience for players (p.71). The question that needs to be addressed is how newsgames may provide entertainment and whether such entertainment can be linked to engagement with content.

2.5.3 Video Games as Entertainment: An Enjoyable Experience

In this section, I draw on game studies to explore the question of how newsgames provide entertainment. In popular culture, entertainment is a fundamental concept. When referring to popular culture, different forms of entertainment that are widely produced and consumed, including music, films, television shows, soap operas, sitcoms, and video games, are usually discussed, and they are assumed to provide leisure and pleasure (Street et al., 2015). Popular culture is a form of empowerment that allows people to gain enjoyment and a source of entertainment that appeals to our playful nature (Danesi, 2018). Thus, within the realm of popular culture, the pursuit of entertainment and fun holds a significant place. It not only offers a space for relaxation, enjoyment, and imaginative exploration but also creates the fabric of our collective experiences and a sense of belonging within communities.

Video games developed gradually from the 1980s, becoming a new form of popular culture (Egenfeldt-Nielsen et al., 2020). The way in which games provide entertainment may be slightly different compared to other cultural forms. Play refers to 'free movement within a more rigid structure' (Salen and Zimmerman, 2003, p.304). When playing video games, the player becomes 'the scriptwriter, actor, and director at once', so they are 'no longer a passive viewer of the spectacle, but a participant in it' (Danesi, 2018). Video games provide a space in which players can take a variety of actions based on the game mechanics. This implies that players need to put more energy and attention into video games to seek entertainment and gain pleasure.

Enjoyment, as a pleasurable experience which 'includes physiological, cognitive, and affective components', is at the core of media entertainment (Vorderer et al., 2004, p.393). First, this means that enjoyment can be seen as a positive reaction toward the media and its contents. Second, enjoyment is not only understood as just a function of media products but also as responses from users to them. There are a large number of game studies that discuss issues of game enjoyment. Relevant keywords cover a wide range, including flow, immersion, engagement, motivation, challenge, and player demographics (Schaffer and Fang, 2019). Although there are many different theories and research focuses, these studies can be broadly divided into two parts: gamer studies and game design. Although newsgames are usually simple and more casual than commercial video games (see Bogost et al., 2010; Plewe and Fürsich, 2018), these

studies still provide a wealth of theories and approaches to investigating playfulness and enjoyment of newsgames.

A focus of research on video games and enjoyment is the player's state. This issue has been discussed by researchers from different but somewhat overlapping perspectives (Wang et al., 2009). Brown and Cairns (2004) use 'immersion' to describe the players' state and argue that as players put in the time, effort, attention and emotion, they may finally be 'cut off from reality' (p.1299). Immersion means players view the game experience (temporarily) as a state of alternative reality. This is similar to 'presence', which refers to the illusion of non-mediation (Lombard and Ditton, 1997). Players in the state of presence may perceive and react to the content of a medium as if that medium does not exist. Flow is initially defined as a psychological experience intensely focused on creativity (Csikszentmihalyi, 2020). In the research on media enjoyment, flow is understood as a sense of total concentration provided by the balance of game difficulty and player skills (Sherry, 2004). In sum, this approach investigates whether players entering a particular state during play contributes to their enjoyment.

Furthermore, expanding the scope of flow is a touchstone to understanding the relationship between game design and player enjoyment in video games. As mentioned earlier, flow could mean a state of concentration and immersion in research on gamer enjoyment. However, concentration based on the match between player ability and game difficulty is not the only reason video games are enjoyable. For instance, players' identification with avatars may increase their enjoyment (Birk et al., 2016). Video games that rely on social networks can also facilitate players' perceived enjoyment through social interactions (Chen et al., 2016). Therefore, it is necessary to go beyond the primitive idea of flow to understand the enjoyment of video games. Sweetser and Wyeth (2005) provide a model to evaluate the enjoyment of video games, which includes eight elements: concentration, challenge, skills, control, clear goals, feedback, immersion, and social interaction (p.4). This model is based on the flow theory but expands the concerns of game enjoyment. The initial idea of flow usually focuses on a sense of concentration formed by the relationship between difficulty and player skill, but this model provides more perspectives to examine the enjoyment of video games. This model provides a detailed set of criteria, allowing for an examination of the link between the game design of newsgames and players' experience from an entertainment and enjoyment

perspective. Neither how the design of newsgames may shape an enjoyable experience nor whether players can derive pleasure from playing newsgames has been closely examined. These inquiries align with the cultural approach that aims to provide a nuanced understanding of how audiences engage with news.

2.5.4 Video Games Beyond Entertainment

As discussed earlier, entertainment is seen as potentially linked to public affairs in the area of journalism. There is a similar idea in the games industry and game studies. Research on serious games suggests that enjoyment and pleasure have the potential to promote the purposes of learning, development, and change (Ritterfeld et al., 2009). This section will focus on the way in which the enjoyable experience can be linked to the player's engagement with the content.

Games were once considered, to a certain degree, separate from the real world and without a touch of seriousness. Huizinga (1949) describes playing games as 'a free activity standing quite consciously outside "ordinary" life as being "not serious"' (p.13). Playing games is thus thought to take place in the 'magic circle', which has its own limitations of time and space with temporary rules of behaviour (Huizinga, 1949, p.10). Salen and Zimmerman (2003) argue that the magic circle is 'a special place in time and space created by a game', and it 'circumscribes is enclosed and separate from the real world' (p.95). This idea suggests that playing games is a temporary interruption from the social context, and its particular meaning is limited inside the circle, which makes it difficult for the game to connect with the serious things in society.

However, it is problematic to assume that games and the real world are completely unrelated. Some scholars suggest that games are not opposed to reality. Rodriguez (2006) argues that the idea of the 'magic circle' illustrates that there is a boundary between playfulness and seriousness, but that it is fluid and modifiable. Games may thus promote players' reflection on reality by enabling interactive and experimental presentation of the real world (Rodriguez, 2006). Other studies challenge the concept of the 'magic circle' and claim that games and reality have a mutual influence on each other. In *Play Matters*, Sicart (2014) claims that playing games should be contextualised in tension with reality and seen as an approach to dealing with reality. Video games offer a significant way to creatively express critical ideas by interpreting the context. Daniel and

Garry (2018) suggest that the player's life experience and their gaming experience are inevitably influenced by each other. This means playing games is not an activity that is suspended in the real world but is a behaviour of being in constant contact with the real world. The relationship between reality and play activity should be explored.

This leads to the question of whether newsgames can promote audience engagement, and, if so, how. As discussed in section 2.5.1, facilitating the acquisition of information and arousing the player's interest in the topics are core factors in considering audience engagement with the content. There are three potential approaches to achieving these goals through an enjoyable experience of playing video games. The first way deploys entertainment as a motivational booster to capture players' attention in the educational content, and in the second approach, entertainment serves as a reward or incentive to complete explicit tasks for access to information (Ritterfeld and Weber, 2006). Compared with the first two ways, the third approach highlights that there is no priority between entertainment and the acquisition of information. In this pathway, the objective of access to information is implicit. Making information a vital part of the enjoyment experience is the most important task in this approach (Ritterfeld and Weber, 2006, p.408).

These different approaches at the macro level can be further broken down into the investigation of more specific mechanisms. Fu and colleagues (2009) developed and updated the model of game flow to create a way of evaluating enjoyment and knowledge acquisition in educational games. This can be linked to the above discussion of video games as a form of entertainment, where game mechanics are not only used to provide an enjoyable experience but can also have an impact on the player's acquisition of information. There are different enjoyable mechanisms of video games that can promote players' engagement with serious issues, and they can work at different stages in the player's gaming experience. More concretely, the investigation of games requires consideration of the interrelationship between interactivity, multimodality, motivation, and knowledge acquisition (Klimmt, 2009, p.255). A range of design principles, such as challenge, feedback, goals and control, contribute to providing an enjoyable experience, which has the potential to enable active learner engagement (Laine and Lindberg, 2020). The investigation of newsgames thus needs to consider a series of means which may link entertainment to players' engagement with content.

A further point that should be considered is whether there may be a negative impact of entertainment on audience engagement with content. While game design often has an assumption about user feedback, how users respond is another matter. Ritterfeld and Weber (2006) argue that there exists a delicate balance between entertainment and education. On the one hand, too much entertainment risks leading to distraction and thus disengagement from the content. On the other hand, too little enjoyment could lead to players being completely uninterested in the content and leaving the game environment. The issue that needs to be addressed is whether the enjoyment of video games is at risk of simplifying or trivialising serious issues (Wang and Singhal, 2009). In the field of journalism studies, some audiences have been found to reject the combination of public affairs and entertainment altogether, while others celebrate the integration and believe that the entertainment increased their interest in the news (Edgerly, 2017). This draws attention to the potential conflict between entertainment and engagement and raises intriguing questions about how newsgame practitioners and players perceive the role of entertainment in their engagement with news content.

2.5.5 Conclusion

I have illustrated that audience engagement is a concept of increasing importance to the news industry and journalism studies. One concern in this area is how entertainment can contribute to audience engagement with content about public affairs. Entertainment and public affairs are not antithetical to each other, and their relationship in terms of journalism is complex and subtle.

Newsgames provide an opportunity to examine this relationship. The first aspect worth considering is that the entertainment of video games is different from traditional forms of journalism, and the formal features of video games deserve attention. I thus highlight the importance of exploring how newsgames provide players with an enjoyable experience. In the study of newsgames, entertainment should not be seen as the ultimate goal, and it is necessary to examine the ways in which the enjoyable experience of newsgames contributes to audience engagement with news content. First, the way in which the playful form and the serious content are combined in newsgames needs to be investigated. Second, we need to consider the complexity of players' experiences of playing newsgames. This will help to address the question of how newsgames may promote engagement with content through entertainment, which has received little

attention from existing scholarship.

2.6 Advocacy

Journalism can be seen as ‘a varied cultural practice embedded within a complicated social landscape’ (Carlson and Lewis, 2015, p.2). In this view, newswriters should be considered as participants in this cultural process or phenomenon. However, there is a fundamental tension between a sense of journalistic practice being objective and subjective, and this is highly relevant to the possibility of making a distinction between values and facts. The dichotomy between fact and value has been questioned by scholars as a complete separation is not possible in practice (Muñoz-Torres, 2012; Thomas, 2018), and subjectivity has gained more and more attention (Godler and Reich, 2013; Ward, 2008).

When subjectivity or the expression of an opinion is regarded as part of journalism, advocacy becomes a focus of scholarship. Advocacy refers to ‘arguing in support of an idea, event or a person’ (Fisher, 2016, p.712). There is an interventionist dimension of journalism which means the pursuit of ‘a particular mission and promote certain values’ (Hanitzsch, 2007, p.372). In this way, there are two opposite tendencies of journalists: one is detached and uninvolved, and the other is to be proactive in social activities. The interventionist role points to ‘advocative-radical’ and ‘developmental-educative’ functions, and journalists aim to speak for specific groups of people, drive social change, contribute to conflict resolution and promote specific ideals (Hanitzsch and Vos, 2018). In these functions, journalism arguably seeks to persuade – in some cases, more than it seeks to inform.

Exploring newsgames and the cultures in which they are created and consumed leads inevitably to some consideration of advocacy. Bogost (2007) argues that video games can present arguments in a unique way because of their procedural features. In the realm of serious games, some games are designed to help people understand social issues or promote social change based on procedural features (Ritterfeld et al., 2009; Peng et al., 2010). The nature of video games as models of dynamic systems seems to offer new possibilities for thinking more broadly about advocacy journalism and the emerging factors that might contribute to persuasive journalistic practice. Existing

journalism studies are inadequate in investigating the relationship between digital media and advocacy. First, studies (Fisher, 2016; Waisbord, 2009) suggest going beyond a narrow view of advocacy to understand the factors that are shaping advocacy. Although they consider the aspect of production, there is a need to expand on this to include the views of audiences. Second, research mostly focuses on text and occasionally images (see Laws and Chojnicka, 2020; Midberry and Dahmen, 2020), and we know very little about digital and especially interactive forms in the context of advocacy. Therefore, this thesis will consider how newsgames may function as a practice of advocacy journalism and interrogate the subtle ways in which newsgames might be seen to support particular ideas, persuade audiences and shape responses.

To fill the research gap, I first historically review the development of advocacy in journalism. I then point out the need for a broader understanding of advocacy, both in terms of its aims and the ways in which it can be achieved, and the features of the video game format are introduced into the discussion. Argumentation and emotion are the focus of the exploration, which involves both drawing from the traditions of journalism and considering the new possibilities offered by video games.

2.6.1 Advocacy Journalism

Advocacy has been an established part of journalism throughout history. Before the 'myth' of objectivity emerged, advocacy used to be the mainstream of US journalism. In the 1860s, the American press was in its most political period and clearly expressed its loyalty to political parties (Firmstone, 2019). At that time, newspaper owners used their publications as tools for political campaigning, so political partisanship significantly influenced American journalism (Fisher, 2016). This suggests that advocacy in American journalism was based on political parties, and the ideas and opinions delivered in the newspapers were closely related to the political parties that supported the news organisation.

By separating 'facts' and 'opinions', advocacy consistent with political partisanship became marginal as objectivity norms emerged as the cornerstone of American journalism. However, this does not mean that opinion has completely disappeared from journalism. Editorials are a unique form that provides a place for news organisations to express their views and positions (Firmstone, 2008; 2019). There are also other formats,

such as commentaries, op-ed pages, and columns, that also allow authors to express opinions. Thomas (2018) argues that 'the delivery of opinion and advocacy is literally compartmentalized away from objective reporting and designated its own section' (p.394). In other words, these formats were reduced in size and assigned to particular sections of the newspapers, which symbolically represented the separation between facts and opinions. A wider global perspective reveals that facts and opinions are not always attempted to be separated in journalistic practices. In many regions of the Global South, news organisations often have close relationships with various parties and stakeholders, resulting in a prevalent blending of facts and opinions (Waisbord, 2009). A similar pattern can be found in the United Kingdom. Opinions, which are usually partisan, are not divided into specific sections in the British press, but they permeate entire newspapers (Thomas, 2018).

2.6.1.1 Broadening Views of Advocacy

However, advocacy journalism today is no longer confined to the interests of political parties. News coverage on environmental policies (Chase, 2020; Vine, 2017), health policies (Dong and Zhu, 2021; D'Angelo et al., 2013) and human development (Ahmad Kamboh and Yousaf, 2020) reveals that advocacy has been widely presented in works of journalism which are not partisan. There is an attempt to broaden ideas about advocacy journalism and distinguish different types of advocacy journalism. Waisbord (2009) argues that there are two models of advocacy journalism. The model discussed above in relation to political parties is called the 'journalist' model, and there is the other 'civil' model in which 'civic organizations aim to raise awareness, generate public debate, influence public opinion and key decision-makers, and promote policy and programmatic changes around specific issues' (Waisbord, 2009, p.371). This model aims to generate social change, which refers to a transformation in the way society is organised to address the distribution of power, harmful societal practices, and structural inequalities (Wilkins et al., 2014).

While this definition of the 'civil' model expands the topics and purposes of advocacy journalism, the subjects of this model are limited to civic organisations. It can be found that non-partisan advocacy reporting is not necessarily conducted by civic organisations. Journalists and news organisations as advocates can also promote social change (Ahmad Kamboh, 2020; Chase, 2020), and some journalists have a mixed identity as

both journalists and members of a civic organisation (Vine, 2017). In contemporary advocacy journalism, people or groups who communicate their views may be from outside, but this does not mean that journalists and news organisations cannot speak for social change and development. For example, journalists can give a voice to those who are underrepresented in the mainstream media (Alvares et al., 2021). Some newswriters see advocacy as political activism and representation with the aim of rectifying power imbalances within society and the media industry (Williams Fayne, 2021).

Contemporary advocacy journalism, or the civic model, aims to promote changes around specific issues, and this can be achieved in a number of ways. Waisbord's (2009) definition highlights that increasing awareness, encouraging public debates, shaping public opinions, and influencing key decision-makers can contribute to the purpose of generating change and development. According to Thomas (2018), there are several ways to understand advocacy journalism, and one of them is making sense of events. This means that the practices of advocacy journalism contain analysis and interpretation of stories and events, which allows audiences to understand the significance and broader context of given issues. It is on this basis that raising awareness and shaping public opinion becomes possible.

In addition, advocacy journalism has a dimension of action. To achieve change and development, taking possible actions within a solution to a specific problem is considered to be part of advocacy journalism (Charles, 2019; Laws and Chojnicka, 2020; Vine, 2017). This idea of activism can be linked to civic engagement as informing what audiences can actually do is a core of civic culture (Dahlgren, 2015; Dahlgren and Hill, 2020). This means that the previously discussed audience engagement may be further developed and transformed into participation in political and public life. This engagement is not necessarily domestic, but audiences may take action in a cosmopolitan context. A cosmopolitan perspective may promote solidarity, understanding and equality on a greater scale (Fenton, 2013; Lindell and Karlsson, 2016). For instance, attempts to get people to act in response to distant suffering can be a practice of advocacy journalism (Bunce et al., 2019).

For the investigation of newsgames, it is necessary to broaden the idea of advocacy

journalism to focus on the objective of advocacy within the context of newsgames. It is also important to consider different ways of achieving the objectives, including a range of possible practices, from explaining the issue to generating action.

2.6.1.2 The Advocacy Continuum

There are other genres of journalism that share similarities with advocacy journalism. Contextual journalism focuses on 'the big picture, providing context for other news' and 'is often explanatory in nature' to offer additional information to traditional stories (Fink and Schudson, 2014, p.10). Similarly, Salgado and Strömbäck (2012) argue that interpretive journalism provides 'journalistic explanations, evaluations, contextualizations, or speculations going beyond verifiable facts or statements by sources' (p.154). What these two types have in common with advocacy journalism is the belief that journalism should not just describe but analyse things in order to play a greater social role. Solutions journalism, also known as constructive journalism, aims at helping people to know how they can respond to social problems (Aitamurto and Varma, 2018; Mast et al., 2019; McIntyre, 2019). It also attempts to explain why solutions work or not (McIntyre et al., 2018; McIntyre and Lough, 2021). Peace journalism requires journalists to actively and formally participate in promoting peace (Lee, 2020). They are similar to advocacy journalism as they are goal-oriented processes and commit to solving problems to achieve positive change and development.

Their difference may lie in the degree of advocacy. Janowitz (1975) distinguishes between 'gatekeeper' and 'advocate' journalists. 'Gatekeeper' maintains objectivity and disconnects facts and opinions, while 'advocate' actively involves in advocating for a particular viewpoint (p.619). Based on this, Fisher (2016) points out that every work of journalism is on the 'advocacy continuum'. Some news stories may only have a few subtle elements of advocacy, such as the selection of sources, while others may be very explicit in their advocacy. These two distinct kinds of journalistic practices are extremes of the advocacy continuum, and a large number of journalistic practices fall between them. A series of factors, including background, organisational factors, journalistic production factors, sources and personal factors, influence the existence of advocacy in news stories, and any decision made by journalists, whether intentionally or not, will result in the inclusion or exclusion of certain stories, voices and opinions (Fisher, 2016, p.722). It is impossible to entirely exclude opinions from reporting, so advocacy more or

less exists in every work of journalism.

There has been a focus on the traditional factors that produce advocacy, particularly content, with issues of form and technology playing only a small part. The type of media, such as television, newspaper and social media, is a factor contributing to advocacy (Fisher, 2016). However, this is very generic, and the focus on form is inadequate compared to content-related elements. Therefore, the exploration of newsgames should expand the scope of the investigation to include the impact of the form, leading to a more comprehensive understanding of advocacy journalism.

Moreover, this thesis does not draw a clear boundary between advocacy journalism and other types of journalism, rather it sees it as a fluid and uncertain field. However, it is necessary to develop a preliminary definition of advocacy journalism to discuss its relationship with newsgames. Thomas (2018, p.393) proposes a working definition of advocacy journalism as a type of journalism which contains a point of view. Making clear its position and attempting to discover possible solutions are both fundamental to quality advocacy journalism (Charles, 2013). Pearson (2021, p.615) discusses the ethics of advocacy journalism and argues that journalists and news organisations should be transparent about their intents and positions with their audiences if they identify themselves as advocates. These illustrate that clarifying the arguments and points of view is an important part of doing advocacy journalism.

Therefore, in this thesis, advocacy journalism is understood to express a clear presentation of positions and arguments to support particular ideas. In a partisan model, the purpose is to serve specific political and economic interests; in a civic or contemporary model, advocacy journalism aims to raise awareness of events or issues, promote people's understanding of them, shape people's opinions or provoke their actions, thus contributing to social change and development. The following sections will discuss how newsgames, especially form-related factors, may be relevant to advocacy journalism.

2.6.2 Argumentation

Advocacy journalism, regardless of the specific model, entails arguing in support of a particular idea or action. Therefore, two things deserve to be focused on: how

newsgames can make specific arguments; and how audiences will respond to these arguments. This section mainly discusses the argumentation of newsgames by sorting through the various forms of argumentation usually used in video games and journalism.

2.6.2.1 Procedural Rhetoric

Ian Bogost (2007) proposes the concept of 'procedural rhetoric' to describe the unique way in which software, especially video games, can be used in the practice of persuasion. Procedural rhetoric is regarded as the primary approach to generating arguments in newsgames (Plewe and Fürsich, 2018; Richardson, 2020; Sicart, 2008b). At the heart of rhetoric is the technique, or specific methods of effective expression, and the purposes of rhetoric can be varied from inducing actions to seeking the approval of others for ideas (Bogost, 2007, p.20). The 'procedural' refers to the computer's 'defining ability to execute a series of rules' (Murray, 1997, p.71, cited in Bogost, 2007, p.4). Bogost, drawing on this definition of the procedural, suggests that procedurality is a way of creating and explaining how systems operate as a set of processes (Bogost, 2007, p.5). In other words, the procedurality can be used to interpret the way things work by creating dynamic models with rules limiting actions. Therefore, procedurality can provide a new and powerful means of explaining processes and things (Bogost, 2007, p.9). To a certain degree, this is similar to the 'conceptual simulation' discussed earlier. Conceptual simulation refers to using a new system to model the initial system (Frasca, 2003, p.223).

Procedurality, however, is a concept more closely associated with rhetoric than simulation. Murray (1997, cited in Bogost, 2007) argues that *Tetris*, which is almost impossible to consider as a simulation game, is a 'perfect enactment of the overtasked lives of Americans in the 1990s – of the constant bombardment of tasks that demand our attention' (p.207). Procedurality may allow *Tetris* to link different processes that have common ground together to create a metaphor. Procedurality offers software, especially video games, a new way to make arguments rather than only employing textual or visual rhetoric.

Bogost (2007) unites two terms – procedurality and rhetoric – to define procedural rhetoric as 'the practice of using processes persuasively' (p.28). More specifically, procedural rhetoric is 'the art of persuasion through rule-based representations and interactions, rather than the spoken word, writing, images, or moving pictures' (Bogost,

2007, p.ix), and 'arguments are made not through the construction of words or images, but through authorship of rules of behavior, the construction of dynamic models' (Bogost, 2007, p.29). Procedural rhetoric thus means making arguments for a range of purposes, including supporting a particular view, seeking to shape opinions, and prompting others to take action. Moreover, it can be summarised from this definition that through interaction with the application, the player fills in the missing part of the system, and this action is restricted by the rules. The role of the audience is therefore particularly important in this mode of argumentation. They will interact with the game, capture the game's arguments, and think about them. Procedural rhetoric can be a robust method of making arguments, but it does not mean players will be more likely to simply agree with arguments proposed by video games, which means that careful investigation of the audience is important.

2.6.2.2 Ways of Making Arguments in Journalism

Procedural rhetoric is a relatively new area in research on rhetoric, and other forms of rhetoric exist in the scope of news. For example, tabloids usually employed rhetorical figures like euphemisms and implicit derogation in editorials on racism (Van Dijk, 1992). The rhetorical figure is defined as 'a form of speech artfully varied from common usage' (Corbett, 2004, p.143). Thus, using a rhetorical figure involves subtly deviating from general and daily patterns to achieve a specific argument. Rhetorical figures include, but are not limited to, antithesis, paradox, irony and metonymy (Bogost, 2007; Leigh, 1994). These can be regarded as micro-level approaches to argumentation.

Besides micro-level approaches, there are also macro-level ways of making arguments in news. News framing is the way in which news organisations employ particular structures to report events and issues, and it may influence how they are understood, interpreted and evaluated by audiences (De Vreese, 2005). Although frames in the news do not necessarily lead to advocacy, there is potential to create arguments in this way. The core of framing is 'making sense of relevant events, suggesting what is at issue' (Gamson and Modigliani, 1989, p.3). According to Entman (1993, p.52), frames consist of four parts: defining problems, diagnosing causes, making moral judgments, and suggesting remedies, and these four parts make certain aspects of news stories more salient. These studies demonstrate that framing is used extensively in journalistic practices to explain events, highlight certain issues and make connections between

things. De Vreese (2005) observes that:

Consequences of framing can be envisaged at the individual and social levels. Consequences at the individual level may be a change of attitude towards something based on exposure to certain frames. At the social level, frames may help to shape processes at the societal level, such as political socialisation, decision-making and collective action. (p.52)

This indicates that because of news framing audiences may recognise and reflect on the arguments and take subsequent actions. News framing is potentially a way to promote newsgames to achieve the purposes of advocacy. For the investigation of newsgames, it is thus necessary to address whether framing or a similar approach has been used practically in newsgames and, if so, whether there are differences between newsgames and other forms of journalism.

There are two points of concern that need to be discussed regarding the relationship between newsgames and news framing. First, it is necessary to explore the ways in which procedural rhetoric might be integrated with news framing. Particular news frames are used to analyse press or television, and some news frames are general and not limited to specific forms (De Vreese, 2005). However, while some frames do not specify a media type, they cannot adequately explain the frames that may be present in newsgames, because identifying frames relies on searching specific elements such as keywords, phrases and metaphors (Entman, 1993; De Vreese, 2012). Procedurality can be seen as an approach that creates a dynamic model with rules limiting actions to interpret how things work. It is impossible to make a complete reconstruction of the original thing, so developers must make complex choices, such as deciding what rules to build and what goals to set. This is consistent with the central idea of news framing, but it cannot be identified in a traditional way. Therefore, the way in which procedural rhetoric is combined with news framing needs to be investigated.

Second, it is important to consider the player's agency in the frames of newsgames. Audience engagement in the digital age is a research gap in news framing (Brüggemann, 2014). In video games, players are usually permitted to act within certain rules (Chapman, 2016). This means that playing is a creative behaviour and players also

shape the meaning of video games (Sicart, 2011). As a result, newsgames may enhance the role of the player in the frame setting. News organisations set up frames for players in newsgames, but there is an opportunity for them to recreate a new frame with newsgames to interpret news for themselves. Newsgames can thus be useful in understanding the role of audiences in news frame settings as they are empowered with more agency in the digital age.

To sum up, we should consider how procedural rhetoric as a means of argumentation works and explore whether other ways of making arguments including rhetoric figures and news framing may also be employed in newsgames. This can help us to explore the questions not yet answered in scholarship: how different approaches work together to make arguments in newsgames; and how players can respond to arguments made in newsgames.

2.6.3 Emotion and Empathy

Journalism studies has pointed out that emotion has been an important part of journalism, and investigating emotion can provide a more comprehensive understanding of contemporary journalistic practice and audience engagement (see Huan, 2017; Peters, 2011; Yell, 2012). The idea associated with advocacy is that reporting emotions may foster understanding of others and encourage the potential for action. This section combines game studies and journalism studies to provide a way to consider the relationship between emotion and advocacy in newsgames.

It is worth noting that there are some debates around the difference between the terms 'emotion' and 'affect'. Although these two terms are usually used interchangeably, some scholars have tried to distinguish them. This thesis employs Wahl-Jorgensen's definition, which is helpful to explore emotion in the context of media discourse. Wahl-Jorgensen (2019) defines emotion as 'the relational interpretation of affect experienced in individual bodies' (p.8). This definition indicates that 'affect' is a bodily sensation without a conscious direction, and 'emotion' can be understood as a subjective interpretation. This definition means that it is possible to consider how audiences describe and explain their emotional experiences of playing newsgames. Furthermore, as Wahl-Jorgensen (2019) argues, it can provide a way to see emotions as 'fundamentally relational, evolving out of the interactions of individuals with culture and underlying social structures' (p.8). The

investigation of newsgames needs to explore whether the player's interaction with newsgames allows for the possibility of social and cultural relevance to the emotions associated with newsgames.

An important role of emotion in journalism is the assumption of emotive devices to cultivate compassion. The differences between compassion, empathy and sympathy are not very clear and are sometimes used interchangeably. These terms are generally invoked to describe a particular kind of emotional resonance relating to an insight into another person's emotions. Sánchez Laws (2020) argues that empathy implies not only the understanding of others' emotions but also further helping behaviours toward them. Similarly, in the context of virtual reality news stories, empathy is related to perspective-taking, finding out more about specific topics, sharing stories with others and volunteering for a related organization (Archer and Finger, 2018). According to Wahl-Jorgensen (2019), cultivating compassion through emotional storytelling aims for social and political change. Although scholars use different terms, it can be found that they tend to agree that the goal of empathy is raising awareness, generating discussion and evoking actions, which may promote certain changes and development. Empathy can thus be a major notion for linking emotions to advocacy.

The ability of video games to generate particular kinds of emotional responses, particularly empathy, is often claimed or assumed. Some experimental studies argue that video games can increase players' empathic attitudes and willingness to help (Gentile et al. 2009; Greitemeyer et al., 2010). It is worth noting that video games may foster empathy in a range of ways (see Belman and Flanagan, 2010). Jerrett and colleagues (2021) developed an empathy spectrum with the aim of drawing out different kinds of broadly empathetic responses, from pity to compassion. Such a spectrum is a useful reminder that emotional responses in general, and empathy in particular, are rarely singular experiences. Therefore, this spectrum emphasises the need to investigate how these different kinds of empathy work together to shape players' emotional experiences in newsgames, helping to make sense of the relationship between players' emotions and others' emotions.

In the empathy spectrum, compassion refers to 'prosocial actions done as a result of empathising with another' (Jerrett et al., 2021, p.639). This is the most challenging type

of empathy to be achieved, as it relies heavily on the player's personal experiences and thoughts. In the context of media studies, prosocial actions do not have to be a direct help but can refer to various behaviours, including donation, digital sharing, participation in campaigns, and interpersonal discussion with others (Cohen, 2014; Lin and Wu, 2020; Peng et al., 2010). Therefore, this thesis incorporates empathy into the context of advocacy journalism and examines how empathy may contribute to raising awareness, shaping opinion and taking action.

The significance of emotion for advocacy journalism has been noted. However, how the features of newsgames foster empathy requires further research. More concretely, it is necessary to explore how newsgames are designed to elicit emotional responses, how players negotiate other persons' emotions with their own in the gaming experience, and whether newsgames can promote the purposes of advocacy journalism.

2.6.4 Conclusion

I have argued that advocacy journalism should be seen as a fluid and uncertain field because almost any piece of news will contain elements of advocacy to a greater or lesser extent. There are different types of advocacy journalism, and advocacy has the potential to address social issues and promote social change. The working definition of advocacy journalism allows me to focus on those news stories with obvious arguments, which can help us to investigate how advocacy is negotiated within the context of newsgames.

Furthermore, I discussed how arguments can be made in newsgames. Procedural rhetoric is a unique way for video games to support or oppose particular ideas. This can be combined with other means of argumentation, thus having the potential to form a unique news frame which emphasises the use of rules, processes and causal relations. Moreover, it is important to explore the agency and experience of players, because they are the most critical actors for ideas to be understood, accepted and even transformed into actions. Emotion and empathy can influence the way in which audiences negotiate their relationships with others who are represented by characters in newsgames. It is thus necessary to investigate how players obtain an emotional experience that leads to an understanding of others. This allows us to explore whether newsgames, as a practice of advocacy journalism, may contribute to change and development.

2.7 The Cultural Approach to Newsgames

In this chapter, I started by reviewing what it means to address journalism from a cultural perspective. I explained that there are two ways to consider journalism: journalism as culture and journalistic cultures. Seeing journalism as a cultural practice helps to address the relationship between ‘the creation and circulation of journalism's sociocultural meanings’ and ‘the social practices surrounding news production and consumption’ (Carlson, 2016, p.350). This means that particular consideration needs to be given to the position of the audience in journalism. Most existing studies on newsgames lack a focus on audiences. Meier (2018) interviews potential audiences for newsgames, but there is still a gap in theory and framework to explain the relationship between audiences and newsgames. The audience is an essential factor in the investigation of newsgames from a cultural perspective. Thus, it is necessary to develop a framework that combines production, media products and consumption to explore the field of newsgames.

Journalistic roles, as an important dimension of journalistic cultures, refer to the ways in which journalism can functionally contribute to society (Hanitzsch, 2007). Journalistic roles are not fixed; we need a broader perspective and a more reflexive approach to the study of journalistic roles. I focused on three tensions related to newsgames. First, this thesis used a pragmatic epistemology to consider how different perspectives shape truth claims. I observed how the notions of evidence and simulation are essential to explore what newsgames mean for truth claims as they may provide a condensed and fictional version of systems and people’s experiences. The second part argued that the relationship between entertainment and public affairs is subtle, so it is necessary to investigate how they are increasingly interrelated in practice. Newsgames provide an opportunity to think about how entertainment might facilitate engagement with the content of the news. Finally, I noted that advocacy journalism is characterised as a dynamic and ambiguous domain due to the presence of varying degrees of advocacy in almost every news item. This thesis focuses on newsgames that clearly support a particular view or idea to explore this area. Procedural rhetoric and emotional experience need to be discussed in the context of advocacy.

By reflecting on the theoretical foundations established earlier, this chapter formulates a

set of key propositions for conducting the in-depth examination of newsgames:

- Journalism can be seen as a cultural practice which is created, modified and shaped by newswriters, media products and audiences together.
- Newsgames should not be merely seen as a technical or instrumental phenomenon, and it is important to consider the ways in which they can create meaning for society.
- Newsgames are influenced by both the ideas of journalism and video games, and they may be compatible or at odds with each other.
- Journalistic roles are not fixed. The interplay of different ideas in the field of newsgames helps to consider how journalistic roles are negotiated.

The cultural approach to newsgames provides a framework for investigation from three perspectives: production, media product, and consumption, which allows a holistic understanding of their intricate dynamics and their significance within the realm of journalism. The cultural approach also locates the study of newsgames in three areas: truth claims, entertainment and audience engagement, and advocacy. This helps to explain the ways in which newsgames reflect the negotiation of different journalistic roles and sheds light on the broader changes in journalism.

Chapter 3 Research Design

In this chapter, I first state the research questions to address the gaps in the existing literature. Then I explain why I collected the primary data via qualitative research methods. Moreover, I discuss the four methods I used to conduct this research and explain why I chose these methods and how I collected and analysed data. In the last two sections, I respectively discuss the ethical considerations and limitations of my research design.

The purpose of this study is to answer the research questions of how newsgames reflect the negotiation of different journalistic roles and what this reveals about the broader changes in journalism. In the previous chapter, I outlined the way in which a cultural approach can be used to explore newsgames and discussed three areas in which tensions may arise in the case of newsgames: truth claims, entertainment and audience engagement, and advocacy. This points to an examination of three issues concerning journalistic roles. Although the informational role is regarded as a core function of journalism, its claim to truth is not self-evident. It is necessary to inquire into how truth claims are shaped in the case of newsgames. The entertainment role may be combined with the public service role in journalism. The ways in which they are combined in newsgames and the implications need to be investigated. The advocacy role is not new to journalism, but the purpose and possible forms of advocacy have changed from a historical perspective. Newsgames bring video games' unique way of presenting arguments into the context of advocacy journalism. Therefore, I pose three research questions:

RQ1: How are truth claims negotiated in the context of newsgames?

RQ2: How does entertainment in newsgames integrate with the pursuit of audience engagement with public affairs?

RQ3: How do newsgames function as a practice of advocacy journalism?

All three questions will be explored from the aspects of production, media product, and consumption, and the methods section of this chapter will provide a detailed explanation of the specific research methods employed to address each aspect.

3.1 Methods

Cultural studies is often informed by qualitative approaches, but quantitative methods such as survey and content analysis are also used in this sphere (Steensen and Ahva, 2015; Stokes, 2021). According to my research questions and theory, I ultimately chose qualitative methods to conduct this project. The qualitative approach emphasises the ways in which people interpret the phenomenon and how social reality is shaped by individuals and is thus constantly changing (Bryman, 2016, p.36). The qualitative approach, therefore, resonates better with the view that production, media product and consumption all contribute to the negotiation of journalistic roles.

To address the research questions, I used four different methods: multi-dimensional analysis of newsgames, semi-structured interviews, gaming interviews, and publicly available sources. First, I created a database of newsgames produced between 2000 and 2022 and chose a sample of 17 newsgames to conduct the multi-dimensional analysis. These newsgames are analysed to provide an understanding of how different elements of newsgames are integrated to fulfil specific journalistic roles. Second, I focused on newsgame practitioners to investigate the ways in which newsgames are created by conducting semi-structured interviews with them. Newsgame practitioners represent people who have participated in the production process of newsgames, such as journalists, editors, programmers, and visual artists. These data provided insight into the ways in which newsgames are conceived and produced. Third, I employed 'gaming interviews' (Johnson and Luo, 2019; Schott and Horrell, 2000) – semi-structured interviews that required participants to play newsgames – to explore audiences' engagement with and views on newsgames. These interviews offered more nuance and detailed insight into the role of players in negotiating journalistic roles. Fourth, I also collected publicly available resources, such as interviews, articles and game instructions, which explained the context and process of making newsgames. Online reviews of newsgames, as publicly available resources, were also used to explore players' perceptions of newsgames. All four methods were used to answer three research questions as they allow for an exploration of the aspects of production, media product and consumption in the context of newsgames.

In the following sections, I start with the multi-dimensional analysis because this

approach also provides a list of candidates (newsgame practitioners) to interview and a list of newsgames to use for my gaming interviews.

3.1.1 Multi-dimensional Analysis of Newsgames

In this section, I first introduce the newsgames selected from my database and the filtering process. Drawing on both journalism studies and game studies, I develop an analytic approach that can be used to provide an integrated investigation of newsgames.

The newsgame is a relatively new and rare journalistic practice. This study, based on a cultural approach, aimed to explore the relationship between newsgames and journalistic roles, which requires a comprehensive investigation of newsgames and their contexts. Therefore, I selected several newsgames to investigate how they can contribute to the social functions of journalism. I created a database of newsgames produced between 2000 and 2022. This database contains a total of 110 newsgames, which I coded using the following set of parameters: original name, English name, year, producer, language, country and region, and main topic (see Appendix 1). These parameters allowed me to cover as many variations of newsgames as possible when I chose the sample.

Although the number of newsgames keeps growing, it is still a relatively rare practice. Thus, I conducted a careful filtering process for newsgames appropriate for addressing the research questions. First, I excluded newsgames which were not in English or Chinese, because I, as a researcher who analyses newsgames, must be able to fully understand the content of the newsgames.

Second, to explore the different ways in which newsgames negotiate journalistic roles and to avoid repetition, the final screening process for selection used the diverse cases strategy (Seawright and Gerring, 2008) to achieve maximum variation. Two considerations are very important to the research questions. The first is the diverse game features and the second is the variety of topics. A further division was made according to Rollings and Adams' (2003) classification of game genres. However, game genres are not precisely delineated and often overlap (Apperley, 2006). When I labelled the newsgames in the database, I marked all possible genres for each game, and this division was mainly done to seek variation. A variation on the topics helps to consider

how newsgames work in different news contexts and how game features are integrated with news content. This division is also not precise but seeks variation. I used at least one label, such as climate change, elections, and policies, to mark each newsgame.

Finally, I reviewed the list of newsgames and chose a sample of 17 games. These games cover a series of topics including elections, climate change, disinformation, human rights, education, economics, and health. The game genres involve puzzles, role-playing, adventure, and management simulation. Some other newsgames will also be briefly mentioned in the analysis to compare with these games. The 17 newsgames were as follows:

1. *Do You Think You Can Tell How a Neighborhood Voted Just by Looking Around?* (New York Times, 2021)

Based on the results of the 2020 United States presidential election, the games provide players with around 20 questions that players use to determine whether the majority of voters in this location voted for Trump or Biden according to the street view.

2. *Pirate Fishing* (Al Jazeera, 2014)

The game places the player in the position of an investigative journalist and takes them on a journey to explore illegal fishing in Sierra Leone. As a member of an investigative team, the player is asked to investigate a problematic fishing boat.

3. *Do You Really Know Waste Sorting* (你真的会垃圾分类吗?) (China Youth Daily, 2019)

The player needs to keep throwing waste into the correct type of bin. On the visual level, this game consists mainly of filmed videos.

4. *Bad News* (DROG and University of Cambridge, 2018)

This game explains how a fake news monger can get as many followers as they can while slowly building up fake credibility as a 'reporter'. Players can explore how various forms of disinformation can be created.

5. *7 Ways to Defy Death* (The Washington Post, 2015)

This game introduces seven promising tools developed by scientists to prolong human

life. Players are allowed to explore the mechanics of how those medical tools are used to treat difficult diseases.

6. *54 Ways to Study Abroad* (通往留学 offer 的 54 条路) (Caixin, 2020)

This newsgame displays how Chinese students prepare for applying to university. To obtain an offer from colleges and universities, prospective international students have to start the preparation months or even years before the application. This game allows players to choose different ways to get an offer.

7. *Spend Like an MP* (Malaysiakini, 2021)

This game starts by asking players to choose to play as either an incumbent government or an opposition politician. Depending on their decision, they will receive funding, but aside from that, the situation will remain unchanged. The goal is to wisely spend money to get re-elected.

8. *Fake It to Make It* (Warner, 2017)

Players are required to establish a website which creates and distributes fake news for profit. This game introduces how misinformation is made, spread, and targeted online with certain strategies and tactics.

9. *Measure Your Carbon Footprint* (测一测你的碳足迹) (ThePaper.cn, 2021)

This game attempts to explain how over-consumption inadvertently puts a burden on the natural environment. Players are asked to make decisions about their personal habits in order to reduce their carbon footprint.

10. *The Climate Game* (Financial Times, 2022)

Players need to take on the role of a 'global minister' who is in charge of making all decisions related to climate change, including changes in every sector of the economy and in how people live. To control the rise in temperature, players need to address a range of manageable and comprehensible questions with limited resources.

11. *College Scholarship Tycoon* (Vox, 2018)

Players put themselves in the shoes of an admissions officer at a college and determine whether to accept the applications of some students and whether to award them

scholarships. The aim is to show the discrimination involved in the allocation of college scholarships.

12. *The Amazon Race* (Australian Broadcasting Corporation, 2019)

This game illustrates what it is like to work in an Amazon warehouse. In the game, the player plays as an employee in an Amazon warehouse who needs to pick up different items and make decisions when unexpected events happen.

13. *The Emergency Room* (急診人生) (The Reporter, 2015)

This newsgame is set in a large medical centre in Taiwan. Faced with the collapse of the health care system and a population that loves to go to big hospitals, the player tries to save the lives of patients in medical emergencies.

14. *The Uber Game* (Financial Times, 2017)

The Uber game is about the life choices that Uber drivers must make to keep their heads above water. The game encourages gamers to take on the role of an Uber driver and make choices throughout the game based on careful planning and budgets.

15. *The Ocean Game* (Los Angeles Times, 2019)

The ocean is rising higher and faster in California, and it brings flooding and erosion which threatens people and their homes. Players are in charge of saving the town in various ways such as building a rock wall and adding sand to widen the beach.

16. *Play Our Game to See if You Can Travel from Glasgow to London on a Typical Day as a Wheelchair User* (Buzzfeed, 2017)

The player takes on the role of a wheelchair user who needs to travel from Glasgow to London by public transport. The player will face a series of difficulties and will need to minimise delays.

17. *Hearing Loss* (我们与听损的距离) (ThePaper.cn, 2022)

This game illustrates how hearing problems can affect people's lives. Players need to test their hearing level and experience what it is like to be hearing impaired.

Addressing the question of how newsgames can contribute to the negotiation of

journalistic roles is a complex issue because they synergise traditional journalistic practices, such as infographics and videos, with video game features, for example, interactivity and simulation. This means that it is necessary to develop a multi-dimensional analytic tool to investigate newsgames. The multi-dimensional analysis will take into account different aspects of form and content.

From a perspective of form, a game system consists of a group of objects which are interrelated, so a slight change in one part can cause a change in the entire system (Järvinen, 2008, p.49; see also Djaouti et al., 2008). Therefore, I started by examining the basic elements of newsgames to generate a comprehensive understanding of video games. My approach drew primarily on the 'formal analysis' (Lankoski and Björk, 2015a) of video games. Formal analysis is 'the name for research where an artifact and its specific elements are examined closely, and the relations of the elements are described in detail' (Lankoski and Björk, 2015a, p.23). According to Lankoski and Björk (2015a, p.23), researchers need to investigate the game rules, game components, goals and their relationships to describe the systemic features of the video game, which finally generates an understanding of a game system. This provides me with an approach to investigating newsgames from introductory to in-depth.

The description of the game system can be combined with the analysis of game content to answer the research questions. Corner (2013) argues that a great number of media studies mainly focus on investigating content without paying enough attention to formal factors. In this study, I paid equal attention to content and form, using formal analysis as a method to analyse game systems. The analysis of game content then helped me to embed the analysis of game systems into certain news contexts. In doing so, this approach allowed me to provide an understanding of how newsgames work and contribute to the social functions of journalism.

The first step was identifying the fundamental elements of game systems. Lankoski and Björk (2015a) define the term 'primitives' as 'the basic types of building blocks of games', and 'the instances of primitives and their associated values define the game state' (p.25). The primitives consist of all kinds of basic elements of games, and their interaction with each other ruled by the game system will have an impact on the specific moment of the game.

There are three main categories of game primitives: components, actions, and goals (Lankoski and Björk, 2015a). 'Components' refer to 'the game entities that can be manipulated by players or the game system', and they also provide 'the boundaries which game components cannot move outside' (Lankoski and Björk, 2015a, p.25). For instance, Mario as the protagonist and the ground in *Super Mario Bros.* are both components.

'Actions' can be divided into three types: player actions, component actions, and system actions (Lankoski and Björk, 2015a, pp.25-26). As the name implies, player actions are initiated by players. For instance, players can control Mario to make him run and jump. Similarly, component actions are initiated by a component that is not controlled by the player. A common example is the enemy's attack, and this can also be found in the above video games. System actions are 'not perceived to originate from players or components' (Lankoski and Björk, 2015a, p.26), such as the reload of NPCs (non-player characters) after they disappear.

'Goals' are related to 'the game state: reaching or failing a goal is tracked by the game system' (Lankoski and Björk, 2015a, p.26). This implies that goals are usually chased by players in order to win the games. The goal is often to win first place in racing games, and players should strive to defeat other players in fighting games.

The second step examined how different primitives relate to each other. Fernández-Vara (2019) argues that understanding how basic elements come together is very important for providing insight into game systems. Game mechanics link basic elements together in order to enable the game system to function (Järvinen, 2008). Sicart defines game mechanics as 'methods invoked by agents, designed for interaction with the game state' (Sicart, 2008a). This means the player as an agent can take actions within the space of possibility based on the game rules, and this kind of interaction will change the game state. In other words, game mechanics transfer an input which enters the game system into a prescribed consequence. This step helped me turn the primitives from isolated elements to interconnected objects, providing a comprehensive understanding of how game systems work.

After completing the analysis of game systems, I combined it with the analysis of content to develop an understanding of how newsgames can contribute to the negotiation of journalistic roles. The analysis of content can be divided into two dimensions: textual and visual elements. According to the specific research questions, the analysis of truth claims considers the two aspects. First, I investigated different types of evidence (Reich and Barnoy, 2021) used in newsgames and how they were deployed in the specific context. In particular, I looked at the way data and documents are used in newsgames and considered how they were integrated with the features of video games. Second, I investigated the relationship between simulation and truth claims in newsgames. I reviewed the visual representation to examine the realist simulation style (Chapman, 2016). Moreover, I examined whether newsgames simulated the experiences of others and/or the causal relationships between things.

I employed a two-step approach to analyse the entertainment of newsgames. I started by investigating the ways in which the newsgame might provide playful and enjoyable experiences. This step drew on a view of game design which can be used to explore the relationship between newsgames and their enjoyment (Hunicke et al., 2004; Sweetser and Wyeth, 2005). Then I analysed the ways in which playful and enjoyable experiences promote audience engagement with news content (Fu et al., 2009; Klimmt, 2009; Laine and Lindberg, 2020) – and concentration, goals, challenge, feedback, control, and involvement are all at the core of the examination. Moreover, entertainment should not be identified as automatically beneficial to audience engagement (see Ritterfeld and Weber, 2006), so I consider the risk of entertainment to audience engagement.

The analysis of the advocacy consists of three parts. First, I investigated emotion by examining the textual and visual elements of newsgames. Emotion words are straightforward expressions of personal feelings such as 'happy', 'fear', 'angry', and 'worried' (Martin and Rose, 2003; Wahl-Jorgensen, 2013). By playing through the newsgames, I identified and recorded the emotion words that appeared in each newsgame and which character expressed such an emotion. The method of investigating visual elements is similar, and I emphasised the emotions contained in images and the people who express emotions. I employed the semiotic approach that considers connotative meanings (Danesi, 2017, p.59; see also Jungblut and Zakareviciute, 2019) to explore how emotions are expressed in the images of

newsgames.

Second, I examined the various ways in which arguments can be proposed in newsgames. Procedural rhetoric (Bogost, 2007) emphasises the overall expression, which is constructed through the interaction between nuanced elements and their interactions. Therefore, I explored how primitives and game mechanics formed procedural rhetoric to understand how the game system contributes to the arguments of newsgames. Rhetorical tactics that consist of basic rhetorical forms and rhetorical figures also need to be considered in newsgames. I analysed rhetorical figures (Corbett, 2004; Leigh, 1994) used in newsgames. These allow me to explore whether textual and visual elements might also contribute to making arguments.

Third, I searched for reasoning devices (Entman, 1993; De Vreese, 2005), including problem definition, causal attribution, evaluation, and treatment recommendation, and framing devices (Quinsaas, 2014; Van Gorp, 2010) such as metaphors and historical examples. This allowed me to investigate whether newsgames could have used a similar approach to news framing. In newsgames, these did not necessarily rely on elements like keywords and phrases, so I considered the ways in which procedural rhetoric might be used to frame issues.

When conducting the investigation of newsgames, it is important to play them multiple times carefully. The game lengths of newsgames are relatively short, so it is easier to explore most parts of the newsgames through multiple playthroughs. Combining this feature of newsgames with some of the strategies for maintaining validity and reliability suggested by Lankoski and Björk (2015a, pp.27-28), I followed the below principles for the analysis of newsgames:

1. Play each newsgame at least five times and try out the different options to explore whole newsgames as much as possible.
2. Continuously check the description of different primitives, the way in which the primitives are combined by game mechanics, and the brief summary of the game system.
3. Analyse the content of the newsgame with the corresponding approach according to different research questions.
4. Synergise the analysis of the content with the analysis of form to provide a rich

and sufficient interpretation of newsgames.

3.1.2 Semi-structured Interviews

In this subsection, I will mainly discuss why and how I used semi-structured interviews with newsgame practitioners in this research. This method is employed to answer questions related to newsgame practitioners' ideas and experiences with producing newsgames. In the section on limitations of methods, I explain why I did not conduct fieldwork to collect data for these questions.

Punch (2013) argues that the interview is a good way to collect data on 'people's perceptions, meanings, definitions of situations and constructions of reality' (p.144). According to the flexibility of questions, academic interviews can mainly be divided into three types: structured, semi-structured, and unstructured interviews (Punch, 2013, p.145). In this research, the semi-structured interview was considered to be the best option. Longhurst (2003, p.143) argues that although the interviewer prepares certain questions (and a frame of questions) in a semi-structured interview, interviewers can chase issues which they believe are important during the interviews. This type of interview allows researchers to ask 'open-ended and flexible questions' which can offer better access to 'interviewees' views, interpretations of events, understandings, experiences and opinions' (Seale, 2012, p.209). First, I mainly focused on three topics – truth claims, entertainment and audience engagement, and advocacy – and guided the conversation around them. Second, interviews were based on certain newsgames in which practitioners had been involved in the production process. This approach is similar to 'reconstruction interviews' which aim to discover the logic behind 'news items, including priorities, considerations, judgments, norms, resources, and (other) constraints' (Reich and Barnoy, 2016, p.477). Therefore, the semi-structured interview can be a suitable and effective tool in terms of understanding practitioners' ideas and experiences regarding the production process of newsgames and the factors that shaped their practices.

There is a certain drawback to this method. Hanitzsch and Vos (2017) point out that statements and practices are not always consistent, and fieldwork may be a better way to study journalistic practice. The planned fieldwork of this thesis was cancelled due to Covid-19 (see section 3.3 and the Covid-19 impact statement). However, there are two

reasons why a semi-structured interview is still a meaningful approach in this research. First, interviews can provide an interpretation of journalistic practices (Lawson, 2021). Statements and practices are not identical, but statements can be seen as perceptions of and reflections on journalistic practices (Hanitzsch and Vos, 2017). Thus, this approach can be used to explore the ways in which practices and ideas affect and shape each other. Second, using news items as prompts for semi-structured interviews helped journalists to recall their ideas and practices (Reich and Barnoy, 2016). The production of newsgames is a relatively infrequent practice in news organisations. This means the opportunity to observe its production is rare and journalists' memories are not always very fresh either as there can be a long gap in time between game production and the interviews. Therefore, I used different newsgames as clues and asked newsgame practitioners to briefly describe the production process. While I conducted the interviews, I found that this approach did help newsgame practitioners recall some important details.

I used two methods to recruit participants for semi-structured interviews. First, I contacted newsgame practitioners who were recorded in my database of newsgames. I also recorded their email address and sent them emails to ask whether they would be interested in taking part in the research project. I sent a total of 38 emails and received 12 responses. Second, I also deployed the 'snowballing' technique to ask existing interviewees whether they could help me contact their colleagues (newsgame practitioners) to get involved in the research. I interviewed 27 newsgame practitioners in total before I reached a level of saturation. Despite differences in detail, several broadly similar statements kept emerging over and over again in interviews. Due to the Covid-19 pandemic and geographical reasons, only six interviews were conducted in person, leaving 21 interviews conducted online. Interviewees included journalists, editors, programme managers, programmers and visual artists. I paid particular attention to newsgame practitioners who managed the entire production of newsgames, such as editors and programme managers, as they usually had a decisive influence on the newsgames. Moreover, interviewees worked for different types of organisations, including traditional news organisations, emerging digital media and non-news organisations. Non-news organisations include technology companies that cooperate with news organisations and independent gaming companies. This variety helped to explore how different types of organisations participated in the negotiation of journalistic roles by producing newsgames.

These interviews were subjected to thematic analysis, which allows researchers to identify the patterns within qualitative data (Braun and Clarks, 2006; Maguire and Delahunt, 2017). Thematic analysis aims to identify the common threads that run through a set of interviews to provide a nuanced analysis of the data (Vaismoradi et al., 2013). First, I read through the interview materials to familiarise myself with the data. Second, because this thesis had already established three aspects for analysis – truth claims, entertainment and audience engagement, and advocacy – the data associated with these aspects were selected to develop initial codes. Third, they were organised into main themes and sub-themes. In this process, I kept reviewing and adapting these themes and sub-themes according to my research questions and literature review. For instance, the theme named *using evidence* consists of three subthemes: *reasons for using evidence*, *how evidence is collected* and *how evidence is used*. *How evidence is used* contains codes such as *used evidence for credibility*, *support for game design* and *hints for players*. Fourth, some of my interviews were conducted in Chinese, and according to different themes, the necessary content in Chinese was translated into English. Fifth, a detailed analysis of these themes was conducted, and I approached the write-up of findings and discussion.

3.1.3 Gaming Interviews

In this section, I first provide the definition of ‘gaming interviews’. Then I explain how this method can help to examine players’ experiences and perceptions of playing newsgames. Moreover, I introduce the general process of conducting gaming interviews in this research.

The gaming interview is a method that combines the observation of a player’s gaming experience and interviews together and allows researchers to communicate with interviewees when they are playing video games (Schott and Horrell, 2000, p.40). In other words, the interviewer invites participants to play video games and talk with them during the interview process, and relevant conversation may also take place before and after the player has finished playing the game. There are three points that explain why the gaming interview is an appropriate method for studying newsgame players’ experiences and perceptions. First, newsgame, to a certain degree, is an unfamiliar and confusing term, and few audiences have been exposed to newsgames or similar forms

of journalism before (Meier, 2018). Gaming interviews allow all participants to try out several newsgames and give their opinion on newsgames and their experiences. Second, this approach creates 'a more relaxed environment than the standard interview context' (Johnson and Luo, 2019, p.871). This means that players' gaming experiences in the interviews might be similar to what they experience in their everyday lives. This was reflected in my interviews as participants reported that they played games in the way they were used to. Third, gaming interviews allow researchers to ask open-ended and flexible questions according to players' specific gaming experiences. In this way, I can focus on three main topics – truth claims, entertainment, and advocacy – and also adjust particular questions during interviews.

My recruitment strategies consisted of convenience sampling and 'snowball' sampling. The recruitment process was affected by the Covid-19 pandemic, which will be further explained in section 3.3 and the Covid-19 impact statement. I created accounts and described myself as a researcher on different forums and social media, including Twitter, Weibo, Reddit, NGA.CN, and Xiaohongshu. I put up posters on the University of Leeds campus and at student accommodation in Leeds (with permission). Then I mainly employed recruitment announcements to contact potential participants. Announcements briefly introduced my profile, research questions, interview description and length of participation. I sent information sheets to interested respondents and answered as many of their questions as I could, including research questions, definitions of terms and ethical considerations. I also asked participants to lead me to more participants if possible. Finally, a total of 28 participants (14 female and 14 male) were willing to take part in the study, all aged between 20 and 35. The focus on a relatively young population was due to an important assumption that newsgames help to (re)capture young people for news consumption (Ferrer-Conill et al., 2020). A total of 25 newsgames, including 17 newsgames that had been analysed in multiple dimensions, were selected for gaming interviews, and each newsgame was played by at least three participants. There were 14 interviewees who spoke Chinese in the interviews, and the other participants who spoke English were from the UK, the US, the Netherlands, and Kenya. English-speaking participants played newsgames in English, and Chinese-speaking participants played newsgames in both Chinese and English. The Chinese-speaking participants all had a basic ability to read English, which may be related to the emphasis placed on English language education in China (Hu, 2005). They also usually used the browser's web

translation to understand the games, so they were able to comprehend the content of newsgames. On rare occasions, I translated the content to help them. Although these participants were not exhaustively representative of potential newsgame player demographics, I sought the variation in my sample by asking specific questions at the beginning of the interviews.

The whole process of gaming interviews consists of three main parts: introduction, playing newsgames, and talking about the games (see Appendix 3). In the beginning, I asked the participants to describe their occupation, age, gender, and nationality. Then I inquired about their news reading habits and their gaming habits: frequency of reading news, channels for reading news, preference for news topics, reasons why they read news, whether they talked about news with others, whether they play video games, preference for type of video games, frequency of playing games, and more. Furthermore, I asked whether they had already played or heard of newsgames and similar forms. This step filled my sample with great variation. For instance, some of the interviewees almost only read political news, while others mainly read celebrity news or sports news. Participants ranged from those who rarely played video games to those who did so every day. Therefore, I was able to consider the relationship between their very different habits and their experiences with the newsgames. In the subsequent recruitment, I sought the maximum number of variables by briefly asking potential interviewees about their habits when I first contacted them.

I picked out about ten newsgames and let participants pick their own afterwards. Some interviewees asked me to help them pick newsgames for the interviews. Every participant played at least two newsgames, and the gaming interviews lasted from 70 to 120 minutes. The longest interview was with a participant who claimed that she enjoyed playing video games carefully and wanted to try more (eventually four) newsgames. As interviewees played games, I encouraged players to let me know if they had any questions. Moreover, I observed them as they played and asked questions about some of their behaviours. In doing so, participants and I had a rich conversation about newsgames and their gaming experiences. After playing all the games, I asked further questions on three topics and let them express their views regarding newsgames.

These interviews were also subjected to thematic analysis (Braun and Clarks, 2006;

Maguire and Delahunt, 2017), and the general process was the same as the analysis of semi-structured interviews with newsgame practitioners. However, I added the information I observed regarding the players' gaming behaviours to the transcription. This helped me examine the relationship between players' gaming experiences and their statements. The data generated from gaming interviews provided insights into the ways in which audiences interacted with and perceived newsgames.

3.1.4 Publicly Available Sources

This section discusses why and how I used publicly available sources, such as interviews, developer notes, game intros and reviews, as an additional method to examine questions related to the production process of newsgames.

'Metajournalistic discourse' describes a discursive field about how journalism should function in society (Carlson, 2016, p.350). It includes a series of public expressions, such as 'reports, books, blog posts, trade press stories, conferences, roundtable discussions, and other public expressions' (Carlson, 2016, p.363), evaluating and discussing the production and consumption of news. These expressions can be employed to investigate the intimate connection between the understanding of journalism and journalistic practices. In this research, I recorded whether there are relevant publicly available sources in the database of newsgames and their hyperlinks. This is not without precedent as Lawson (2020) collected public interviews with journalists to explore how numbers are used to cover humanitarian crises.

To collect these sources, I checked whether each newsgame contained a relevant introduction or link and used the Google search engine to retrieve relevant articles and documents. I refined the results by dividing sources into two categories. The first category includes interviews with newsgame practitioners, developer notes, and game intros, and it describes how and why news organisations made newsgames. The second category consists of reviews of newsgames and reflects how audiences negotiated their gaming experiences and their understanding of newsgames.

I found 23 publicly available sources for the first category. There are 12 interviews, four developer notes and seven introductory articles on newsgames. Moreover, I collected 16 reviews, including four posts on forums and 12 articles (see Appendix 2). I employed

a thematic analysis (Braun and Clarke, 2006; Maguire and Delahunt, 2017) to analyse these sources. This analysis is based on the analysis of semi-structured interviews with newsgame practitioners and gaming interviews with players. The same themes and sub-themes are applied to the data. In doing so, findings related to the production and consumption of newsgames were supplemented further.

3.2 Ethical Considerations

In this study, all newsgames and relevant second-hand sources were available openly online, which suggested they did not involve sensitive data. Moreover, I adhered to several ethical principles when I conducted interviews with newsgame practitioners and players.

Although newsgames as media products are publicly available, this does not mean that the process of making newsgames can be automatically regarded as public knowledge. Therefore, I followed the below steps to tackle the ethical issue. First, in advance of discussions, each interviewee received an information sheet about my project and the interview procedure. On the day of the interview, a corresponding consent form was signed by participants in the case of in-person interviews. For the online interviews, where possible, I had them fill out an electronic consent form. I had other participants read it and then verbally consent to the interview. This form informed participants that I would record the conversation and that they could choose to withdraw from the study at any time. Second, participants were anonymised to protect their privacy. Participants' identifiable indicators were replaced, and I produced a cypher sheet of their identifiable indicators to conduct this research. Furthermore, I was aware that their identity could have been revealed by using specific newsgames to guide discussions. Thus I decided to omit potentially identifiable details from my findings so that they cannot be tracked. I only indicated the types of their positions, such as journalists or programmers, and whether they work for news or non-news organisations. This allowed me to protect sensitive and personal data and make comparisons in the discussion. Third, transcripts of interviews were transferred to secured independent folders on the University of Leeds M: drive and stored on portable encrypted storage. The portable storage was locked in a cabinet when not in use.

The interviews with the players followed a similar basic procedure, but there are two distinct points regarding ethical considerations. First, I video-recorded the screens of the participants as they played newsgames (with their permission). Video files were used for analysis in conjunction with transcripts, and I made sure that the video files did not contain any sensitive and personal data. Second, I mainly used the cypher to identify the player and only mentioned limited personal details when necessary. For example, I might introduce the player's habit of playing video games when I discuss how players consider the simulation in newsgames. The descriptions of the details will be controlled so that participants cannot be identified.

3.3 Limitations of Methods

There are certain limitations to my research. At a broad level, my study has been highly influenced by Covid-19. This biggest impact was the cancellation of planned fieldwork. Hanitzsch and Vos (2017) argue that observation and ethnography are the most meaningful means to examine concrete practices. Although I have suggested that semi-structured interviews and publicly available sources can provide descriptions and explanations of practices, statements and practices are not identical.

Moreover, because of Covid-19 restrictions, the recruitment of participants was partly conducted online through convenience sampling. One of the key disadvantages of online research is sampling issues (Duffy et al., 2005). Newsgames necessarily require audiences to have an electronic device and Internet access to play, so technical literacy did not have a significant impact on the sample. I also tried to seek the maximum variation. However, online recruitment was still based on convenience sampling, so my sample cannot represent an entire population.

Another potential problem is the environment of the interviews. In face-to-face interviews, the interviewee's non-verbal social signals can be easily observed by the interviewer, and it is more likely to create a comfortable atmosphere (Saarijärvi and Bratt, 2021). More than half of the gaming interviews (n=15) were conducted online. During the ethical review phase, I did not anticipate that I would be conducting gaming interviews online. For ethical consideration, I did not require players to turn their cameras on, so I was unable to observe their non-verbal signals (except for their behaviour in the newsgame

interface), which is a flaw in explaining the player's experience, especially their emotional experience. However, I mitigated this impact as much as possible by observing players' actions and talking to them. For instance, when a player showed hesitation in making a choice, I would ask them why and have a brief discussion. I also conducted 13 gaming interviews face-to-face, which allowed me to observe how interviewees played the games. Moreover, some of the online participants reported that online gaming interviews were very close to their everyday experiences because they were in an environment they were familiar with. Nevertheless, I was aware that the experience in either kind of interview was different from the player's everyday experiences as I was an extra observer in the interviews.

Finally, the selection of newsgames is bounded by two major delimitations. First, the study only considered English and Chinese newsgames. Newsgames in other languages were not represented here, and they might have unique regional characteristics (see García-Ortega and García-Avilés, 2020; Rojas-Torrijos, 2020). Second, the definition of newsgames in this study is both boundary and limitation. A large number of journalistic practices share similarities with newsgames (see Usher, 2016), but newsgames in the terms that were defined in Chapter 1 do not apply to those media products. This study focused on the characteristics of video games and therefore drew on analytical methods for video games. However, this does not mean that the findings and discussion in this study have no analytical value for similar practices. For instance, the analysis of interactivity and simulation is also instructive for the analysis of other media products.

3.4 Conclusion

The aim of this chapter was to discuss the research design of this study. In the beginning, I explained why I decided to employ qualitative methods to answer my research questions. Then I outlined my four methods which covered three perspectives – production, media product, and consumption – of the investigation of newsgames. First, I explained how I would use the multi-dimensional analysis to provide an understanding of newsgames. Second, I argued that interviews are needed to gain insight into what newsgame practitioners had thought about and done in the production of newsgames. Third, I explained why gaming interviews are appropriate to examine how audiences

might play and perceive newsgames. Fourth, I collected publicly available sources as additional data on the analysis of the production and consumption of newsgames. Newsgame practitioners talked about their development of the newsgames, and players expressed their views on the newsgames. Taken together, these methods allow for a well-rounded and detailed understanding of how newsgames reflect the negotiation of different journalistic roles.

Chapter 4 Truth Claims

This chapter explores how truth claims are shaped in the context of newsgames. Making truth claims about the real world and informing audiences is a key journalistic role (Hanitzsch and Vos, 2018; Waisbord, 2018). Newsgames bring fiction into the conversation, but this does not necessarily mean that there will be a fundamental conflict with the pursuit of truth. The virtual world of video games has the potential to create connections with the real world (Juul, 2011), and serious games often allow players to learn about real-world issues (Ritterfeld et al., 2009). This raises the question of how the tension between fiction and fact is negotiated in newsgames.

I start this chapter by documenting the importance newsgame practitioners place on truth claims. Then I explore what practitioners have specifically done to defend the way they produce newsgames to make truth claims and briefly discuss the possibilities that newsgames offer. The analysis of newsgames further examines these possibilities and outlines the ways in which games are linked to real-world issues. The analysis emphasises the importance of audience, as newsgames open up spaces for players to negotiate truth claims. Interviews with players support this finding, and players have used different strategies to assess the truth claims. Players see the newsgame as having a unique potential for making truth claims, as well as presenting some critical ideas.

4.1 Newsgame Practitioners

In this section, I discuss how newsgame practitioners perceive truth claims and the influence of their perceptions on the production of newsgames. I show that practitioners have taken several steps to claim that newsgames could be an acceptable journalistic form for making truth claims. The final part outlines how practitioners consider newsgames to be innovative in making truth claims.

4.1.1 Truth Claims Still Matter in Newsgames

Newsgame practitioners implied that there might not be a strict boundary between 'fact' and 'fiction' in the context of newsgames. This is clearly expressed in three extracts below:

Naturally, there are some boundaries that get a bit blurred... if you take a look at an example of something like [a newsgame], can you categorically say that this is a game or a piece of documentary journalism. I think some of those terms start not to make a lot of sense anymore, or you find examples that sit awkwardly in between certain different categories. (Practitioner 6, deputy editor, news organisation in China)

So I don't think it's a binary... There's a spectrum ranging from things. Let's say the super traditional news article where literally everything is verifiable. There's evidence to back up everything... And then supposedly, there is [a newsgame] or another game-like experience. It is condensed from a bunch of interviews and extrapolated all of that. But actually, in the middle, there are a whole bunch of things like documentary filmmaking with reconstructions of past events. For example, what you're seeing is some actors re-enacting and something that happened before what they're portraying. (Practitioner 15, editor, news organisation in the UK)

What we do in all of our games is use real-life examples... We take real-life examples but kind of really blow them up. We try to make it approach a balance between fact and exaggeration. (Practitioner 23, project manager, non-news organisation in the Netherlands)

As these interviewees explained, the advent of newsgames and other interactive media products has made concepts such as fact and truth, at least in terms of practice, less solid. Although newsgame practitioners had to renegotiate ideas such as truth, they did not abandon these ideas completely. Practitioner 5 (director, news organisation in China) argued that, 'I do so really strongly believe that there is some sort of journalistic integrity and calling something that's completely made up journalism is bad', but at the same time they viewed newsgames as exploratory and experimental media products which can help people 'not to think of truth as a simple thing'. In other words, newsgame practitioners believed that newsgames complicate the notion of truth rather than eliminate it.

Almost all newsgame practitioners expressed the importance of truth and facts due to the potential challenge created by newsgames. As one interviewee noted:

Facts are certainly important. They set our games apart from commercial video games. (Practitioner 20, editor, news organisation in the US)

Similarly, Practitioner 13 (journalist, news organisation in China) emphasised that their main purpose of making newsgames is still to 'keep people informed about what happened', just as they did with 'regular news'. There are two points worth noting here. First, truth was seen as a concept that helps draw boundaries between newsgames and other video games. This is similar to Schudson's (2001) observation about journalism differentiating itself from other industries through the articulation of norms. Newsgame practitioners' adherence to truth allowed them to distinguish themselves from commercial game developers, which also applies to distinguishing newsgames from other games. Second, it can be observed that newsgame practitioners applied the consistent idea that already exists in journalism to newsgames. This was commonly expressed when interviewees compared newsgames with other forms of journalism:

Apart from newsgames, I take photographs in my work. There are similarities between the two. I choose the perspective of the story and consider if it shows the most important facts of the story. I hope it allows the audience to discover for themselves what happened. (Practitioner 2, photojournalist, news organisation in China)

This interviewee applied her ideas from photojournalism to the production of newsgames. Such a continuation is also reflected in how some newsgame practitioners learned journalistic cultures:

I didn't receive any professional journalism training in my education... It was only after I came to [a news organisation] that I started to learn about professionalism in journalism and then to take that into account in making news... We designed our games with this [professionalism] in mind. (Practitioner 5, director, news organisation in China)

For newsgame practitioners who knew little about the professional cultures of journalism, they learned about the relationship between truth and journalism in their daily work. In news organisations, how to behave is passed from one generation to another through some form of education (Schudson, 2001, p.152). Newsgame practitioners with diverse backgrounds generally accepted the importance of truth to journalism. The pursuit of truth contributed to the distinctiveness of journalism, and newsgame practitioners considered it a central part of their work. This has not been forgotten with the change from traditional forms to newsgames. This has led to newsgames being claimed as extensions and supplements to existing journalistic forms so that practitioners could legitimate the production of newsgames.

4.1.2 Adherence to Gathering Evidence

The continuation of ideas also shaped practitioners' practices. For Practitioner 12 (editor, news organisation in the UK), the newsgame is an extension of traditional journalistic forms, as traditional practices of gathering evidence were still used in newsgames. Extracts below show a range of means used to gather evidence:

I conducted the interviews as a journalist with two other colleagues... We then specifically tested the software [interviewees] use every day and also read some papers and research... We grabbed some of the data from the largest social platform [used by the group of interviewees]. Then we found a lot of interesting and meaningful issues we hadn't considered before. (Practitioner 10, editor, news organisation in China)

I interviewed a lot of people, from mid-level officials to the head of the organisation. I interviewed a wide range of people to try to capture some of how they think about that exact part of the system. I also look through a lot of data and research on how those decisions are made. (Practitioner 19, journalist, news organisation in the US)

These extracts outline different ways of collecting evidence when producing for newsgames. These approaches are an essential part of journalistic work, which provides news workers with materials to construct news stories (Rich, 2015). Moreover, the idea that newsgathering generates different types of evidence to support truth claims has

undergirded journalism for at least a century (Coddington and Molyneux, 2021). Newsgame practitioners have employed the production practices of traditional journalistic forms in the creation of newsgames. Practitioner 1 (editor, news organisation in China) argued that interviews could be seen as proof that 'the newsgame is based on a real story'. Using traditional newsgathering methods in making newsgames can be seen as a justification for newsgames as a legitimate form of journalism.

This insistence on demonstrating truth is expressed through the continuation of practices, or rather of the ritual. On the surface, newsgame practitioners transferred the conventional approaches of news production to making newsgames, thus claiming that newsgames can make truth claims. Furthermore, it can be regarded as a step of the 'strategic ritual' (Tuchman, 1972) to protect newsgames from criticism. What newsgame practitioners did in the production of newsgames was different from the original four routine procedures of strategic ritual (Tuchman, 1972, p.665), but it represents the similar logic of a defence mechanism. Through adherence to gathering evidence, newsgames were presented as an acceptable journalistic form for making truth claims.

4.1.3 Utilising Teamwork

One step taken by newsgame practitioners was that they assembled temporary and regular teams to develop newsgames. They worked together and spent more time and effort on the production, especially when compared to making other forms of news. Rosanna Xia, a journalist for the *Los Angeles Times*, claimed in an interview with Kristen Hare (2019) that they invited some colleagues and 'mapped out the decision tree with a gazillion sticky notes' for several days. My interviewees commonly reported that the development of newsgames usually took about one week to two months and that many people were involved in the production. One practitioner observed:

We had many meetings... In the early stage, we discussed the overall concept and theme of the game... After we started, we also often went over what elements we should keep and what parts we should drop. A very important thing was how to make players realise that the game is truthful... This process took us a total of six weeks, longer than any other project. (Practitioner 16, journalist, news organisation in the UK)

In explaining how *The Uber Game* was made, Robin Kwong, an editor from the *Financial Times*, talked about how they use paper prototypes to test different game genres to 'highlight the drivers' anecdotes and stories' (Blood et al., 2017). Practitioner 27 (journalist, news organisation in China) noted that the newsgame was new to them, so they frequently discussed how to design it to 'present the important factual information to audiences'. These extracts all illustrate that newsgames presented a challenge in terms of truth claims, and how practitioners attempted to address it was often through team discussions on game design to determine how to make truth claims. Ideas from various practitioners shaped the truth claims, and this process was often discussed multiple times, so it is stated to be thoughtful. This revealed the importance of teamwork, which can be seen as another step in a strategic ritual to make truth claims in newsgames.

However, some newsgame practitioners (n=8) noted that their ideas did not have a direct and significant impact on the production of newsgames. These practitioners often worked as programmers and visual editors in the programming of newsgames. As one interviewee explained:

Although we talked about how to make games, we mostly talked about technical issues. I mean, my colleagues usually asked me if I could help them with a specific function. This was the main part of our conversation. We didn't discuss objectivity or anything like that. (Practitioner 3, programmer, news organisation in China)

Similarly, Practitioner 8 (visual editor, news organisation in the UK), who worked on graphic and visual design in the production of newsgames, said that he had not really talked about 'the potential to explain reality' of newsgames with his colleagues in making them. Practitioner 25 (programmer, non-news organisation in China) handled the technical challenges when a news organisation used their APIs (application programming interfaces) to produce newsgames. Although he had some ideas beyond the technical aspects of newsgames, he believed that he 'should not cross the line'. As these interviewees noted, they were dedicated to their specialised work, so their ideas about truth and reality were not considered in the production of newsgames. The teamwork in newsgames did not necessarily mean a flat structure that challenged

existing hierarchies (see Deuze and Witschge, 2018; Plewe and Fürsich, 2020). Established professional cultures retain significance in this hybrid space. This was not inconsistent with the emphasis on teamwork in negotiating truth claims, but it was not the case that everyone was equally involved.

4.1.4 Designing with Expert Resources

Another specific manifestation of the time and effort invested by practitioners is a new way of using evidence. Practitioners gather evidence to support the design of game systems, as the extract below shows:

We have created this game based on a scientific paper which we have carefully researched... We also investigated a number of databases to support our game design. (Practitioner 7, journalist, news organisation in the UK)

Scientific papers and data were used to guide the construction of the game system. In a similar vein, Sam Joiner, a visual stories editor for the *Financial Times*, also expressed that the design of the game system was supported by a range of evidence:

Other experts and papers were consulted: leading scientists Tim Lenton and Carlos Nobre, on the impact climate change is having on global earth systems; and climate change analysts Nick Mabey and Mike Berners-Lee, on the steps and trade-offs required to get to net zero, among many others... Both were added to the climate model powering the game, with the answers having an impact commensurate with the net zero answers in our energy-related questions. (Joiner, 2022)

Practitioner 6 (deputy editor, news organisation in China) said they collected 'huge amounts of data' to design the balance of numeric relationships in their newsgame. Practitioner 23 (project manager, non-news organisation in the Netherlands) claimed that their newsgames were all 'developed in collaboration with [a university]' and based on 'scientific research', which helped them to 'make sure that the science side of those games was sound'. There was a thoughtful consideration of how evidence can be used to build the game system, and this allowed practitioners to ensure and state that truth claims in newsgames are well-founded and reliable.

On the other hand, the evidence was seldom assessed by newsgame practitioners. Although some interviewees expressed the idea of a lack of resources or time to investigate the evidence, they did spend a considerable amount of time and effort on building the newsgame with evidence. This means that the lack of resources or time was not the main reason that evidence was not verified in the production of newsgames. According to the interview data, there are two important explanations. First, interviewees stated that newsgame practitioners sometimes lacked experience and training in verifying some pieces of evidence:

[A colleague] and I managed the production of this game... Neither of us had very specialised knowledge of this topic... We are not scholars who can examine a professional model. (Practitioner 4, journalist, news organisation in China)

We have very professional people in interviewing, programming and visual design, but we don't have a person who can explain scientific issues very well. (Practitioner 8, visual editor, news organisation in the UK)

These extracts reflect some technical limitations in verifying evidence. Moreover, some interviewees mentioned a shortage of professionals in game design, which supports an existing study about news workers' limited video game design skills (Plewe and Fürsich, 2020). These two constraints together shaped the previously mentioned practice of making newsgames based on documents, data, and interviews with experts. Without the support of evidence, a game design that was considered reliable and sound was unachievable, and a lack of technical expertise often meant an uncritical trust in certain sources.

The second explanation is that using trusted sources to justify news stories has become a common practice of the strategic ritual. As Rosanna Xia, a journalist at the *Los Angeles Times*, explained how expert sources contributed to the production of their newsgame in an interview with Kristen Hare:

Everyone I talked to seemed to acknowledge the problem, but the 'what do you

do part' has been paralyzing communities up and down the coast. If you talk to experts, coastal scientists, planners... they all will end up saying that you only have so many choices to adapt to the rising sea: One is to defend the coastline. Another option is to add sand. The third option is to relocate and migrate inland with the water. (Xia, 2019)

Expert knowledge is seen as trustworthy proof and used to support the design of in-game options. Similar claims also kept coming up in my interviews. For example, Practitioner 5 (director, news organisation in China) said that she contacted 'very professional and trusted medical and sociological scholars' for advice on the newsgame. The reason those scholars were described as professional and trusted was that they had credentials. Moreover, some of them had collaborated with newsgame practitioners before, increasing practitioners' trust in them. This is in line with Lawson's (2021) observation that news workers hide behind trusted, predominantly elite, sources to maintain their professional credibility as a strategic ritual. They only assess the reliability of sources and do not directly interrogate the figures themselves (Lawson, 2021, p.14). A similar step in the strategic ritual also existed in the production of newsgames: interviews with newsgame practitioners further showed that the unverified and uncritical use of evidence is not limited to numbers or data but also includes expertise such as papers and expert opinions.

This, to a certain degree, goes beyond the area of newsgames to touch on a general issue in journalism. Expert sources are widely used in journalism to provide information and a sense of credibility (Boyce, 2006; Vasterman and Ruigrok, 2013). This cannot just be attributed to a lack of attention from newsgame practitioners, especially considering the amount of effort they spent researching how to design the game with documents, data, and interviews with experts. It should be seen as an extension of the widespread journalistic practice of uncritical trust in expert sources – in other words, a consistent feature of journalistic culture, implying that truth claims were supported and reducing risks of criticism.

4.1.5 Informal Tests of Newsgames

Only three interviewees mentioned that their organisations had conducted pilot tests with a sample of audiences before publishing their games. However, how newsgame

practitioners predict the interaction between players and simulation newsgames is not unfounded. Instead of formal pilot tests with audiences, they used other methods to test their games:

That one was interesting because I did like very informal user testing with a lot of people, my friends and friends' friends. It should have been formal, but we just didn't have the resources. I asked them really specific questions, like what did you do in the game and what did you learn in the game. (Practitioner 19, journalist, news organisation in the US)

Lack of resources and funding were the main reasons limiting newsgame practitioners from conducting formal user tests. To overcome this problem, they chose to do tests via their personal networks. Practitioner 7 (journalist, news organisation in the UK) said that 'journalists from other departments' help with testing, and Practitioner 1 (editor, news organisation in China) reported that in addition to colleagues and friends, her 'family members also took part in the test'. Journalists' views of their audiences are partly shaped by their relationships with family, friends, and colleagues (Coddington et al., 2021). While there was clearly a practical reason for testing newsgames with them, it is also important to note that the imagined newsgame players were still influenced by the personal networks of journalists in terms of how players would interact with newsgames.

Based on this type of informal testing, the newsgame practitioners were constantly refining their newsgames. As one interviewee put it:

70% of the people did react exactly as we assumed. The other 30% had some critiques or got confused. Or they were trying to break the game. We were comfortable with that. It helped us to redesign some parts of the game. (Practitioner 22, editor, news organisation in the UK)

Similarly, Practitioner 4 (journalist, news organisation in China) stated that they made several revisions to their newsgame based on informal tests. The informal tests could also be seen as a step in the strategic ritual. On the one hand, testing with family, friends, and colleagues could not entirely reflect actual audience engagement. An over-reliance on personal networks to understand audiences is considered detrimental because it may

lead to blind spots in news reporting (Coddington et al., 2021). On the other hand, newsgame practitioners did receive critical comments in testing, and they adjusted games according to those critiques. Informal testing, as a way to imagine audiences' interactions with newsgames, can be seen as an effective way to help newsgame practitioners identify possible problems in their games.

4.1.6 Presentation of Evidence

Section 4.1.5 illustrated the newsgame practitioners' uncritical use of expert evidence. While explicit reference to sources was rare, sources of evidence in newsgames are nevertheless visible to varying degrees. Claims about the origins of evidence and the processes of collecting evidence can be found in some newsgames. This section focuses on why evidence is presented in newsgames, and the various ways in which evidence is shown and described are left for discussion in section 4.2. One interviewee provided an example of presenting evidence:

We set up some hyperlinks in the game... I think that deliberately interrupting the game experience to bring in facts actually, like is a very good way of bridging the gap between a slightly fictionalised experience with the real actual facts, right? Because what happens when you click the links, you will get the real actual facts. (Practitioner 15, editor, news organisation in the UK)

As this extract above shows, newsgame practitioners attempted to use concrete evidence to link their newsgames to the real world. Practitioner 19 (journalist, news organisation in the US) said he added 'some historical threads to the game' which allowed players to 'understand what happened in the past and why it's like that now'. Newsgame practitioners attempted to tell players that the events taking place in newsgames had a counterpart in the real world and linked the game to social developments. These were approaches to presenting evidence in a very concrete way. Moreover, newsgame practitioners also informed the basis of the game design in their newsgames:

Once the game moves to the end, players can see additional information at the bottom... It describes which databases the game's data was extracted from and which experts provided advice for the game... Players can know that those

numbers and data graphs are extrapolated from a scientific model. (Practitioner 17, programmer, news organisation in the UK)

Practitioner 9 (director, news organisation in China) similarly argued that the 'About' part – explaining that the game is based on a large number of interviews – may improve the credibility of their newsgame. Newsgame practitioners informed players of the evidence on which the game is made and supposed that this approach would provide players with a sense that truth claims in newsgames are trustworthy. The presentation of evidence was closely related to audience orientation. Enhancing audience engagement and attracting the public are often regarded as potential objectives of newsgames (Ferrer-Conill et al., 2020). Furthermore, it is important to make the evidence really visible to the audience. Adding sources of evidence into reporting, which can be seen as a strategy for improving the level of transparency (Mor and Reich, 2018), was found to increase perceived credibility (Henke et al., 2020). Whether the evidence was specific or supportive of the system, they both pointed to the practitioner's hope that the truth claims in newsgames could be accepted or acknowledged by the audiences. This implies that newsgames were, to a considerable extent, audience driven.

An important factor of the strategic ritual is performing in front of audiences (Karlsson, 2010). The presentation of evidence thus constituted the final step in the strategic ritual of making truth claims in newsgames. Practitioners demonstrated to their audiences that newsgames are evidence-based to make truth claims and are like other journalistic forms. There were five steps in the strategic ritual of truth claims: adherence to gathering evidence, utilising teamwork, designing with expert resources, informal tests, and presentation of evidence. These worked as a defence mechanism in responding to the challenges posed by newsgames in the context of making truth claims. This approach might be necessary for newsgames, as newsgame practitioners stated that there was no very clear boundary between 'fact' and 'fiction' in newsgames. However, they still needed to justify that the truth claims of newsgames can represent the real world. This echoes Plewe and Fürsich's (2020) finding that there is usually 'a journalistic premise' in the boundary work of newsgames, suggesting that newsgames are seen as an extension of journalism (p.498). As a result, newsgame practitioners attempted to bridge the gap between 'fact' and 'fiction' to legitimatise newsgames as a form of journalistic innovation. However, there were some problems and risks in relying on such a strategic ritual. There

was a lack of examination and reflection on certain evidence and sources, which were used to shape the design of newsgames, and conducting informal tests might not accurately reflect audience perceptions of truth claims in newsgames.

4.1.7 New Possibilities of Making Truth Claims

The previous subsections focused on how newsgame practitioners responded to the challenges of newsgames in making truth claims. In addition to the challenges, the features of video games also opened up new possibilities for the negotiation of truth claims in journalism. Practitioner 10 (editor, news organisation in China) explained that ‘we want to show news stories in a more interesting way by combining innovative and traditional approaches’. In the production process, the ideas about how simulation can contribute to truth claims were established by newsgame practitioners and then employed to design newsgames. Although practitioners’ ideas and practices were not the same, it is important to note that they share some common premises. As the extract below highlights:

*I think the fictional part of the simulation is a serious and important question. That is a thing that we were worried about. We have been reflecting on how well the game reflects our interviews when making it... But there are some more interesting questions. What is the purpose of simulation? What can it do that other forms cannot? What is it being used for? How is it being used? These are some really important things when we finally decided to make a newsgame.
(Practitioner 9, director, news organisation in China)*

Newsgame practitioners saw newsgames as both a challenge and an opportunity for making truth claims. Practitioner 14 (journalist, news organisation in the US) said that making truth claims through simulation is a subtle approach. Hence, she and her colleagues checked the game many times to make sure it ‘reflected the broad strokes of what would happen in reality’. They realised the risk of simulation – referring to the disconnection between newsgames and the real world – and attempted to balance the relationship between ‘fiction’ and ‘fact’ in the production of newsgames. Nevertheless, they placed greater emphasis on the potential new and effective ways that simulation offers to make truth claims and considered carefully how simulation and news can work together. This aligns with research on journalistic innovation (Lopezosa et al., 2023;

Uricchio et al., 2016), which suggests that the adoption of new techniques allows for diverse forms of presenting information.

More concretely, when newsgame practitioners talked about 'simulation', they primarily pointed to two aspects: individual experience and interpretation of systems. As two interviewees argued:

We wanted to enable our audience to experience, as far as possible, the difficulties of [that group of people's] lives. We tried to recreate the problems in their lives... The traditional forms are pretty bad at explaining where people's motivations come from and people's feelings, while we found that a simulation game could work well in this regard. (Practitioner 10, editor, news organisation in China)

I interviewed a wide range of people to capture their thoughts about that exact part of the system. There was also a huge amount of research and reporting that went into this game. I try to paint a picture of this extremely complicated system. If you keep telling people it's so complicated, then people aren't actually going to understand where they are in the system. You need a way, that is, simulation, for them to get into it and start understanding how the full system works. (Practitioner 12, editor, news organisation in the UK)

These two extracts explain why newsgame practitioners used simulation for news reporting. For newsgames, one type of simulation focuses on putting players into another's shoes, and another attempts to interpret how the system works. These two types of simulation allowed newsgame practitioners to do what would be difficult in other ways. In other words, simulation newsgames were seen as an extension or a supplement to traditional forms of journalism to expand the scope of truth claims. The analysis of newsgames will further discuss how these two types may contribute to making truth claims.

4.1.8 Summary of Section

Newsgame practitioners highlighted the importance of truth claims and expressed that newsgames were also developed to make truth claims about real-world events and

issues. Due to the tension between fiction and fact, practitioners employed five steps: adherence to gathering evidence, utilising teamwork, designing with expert resources, informal tests, and presentation of evidence. These constituted a strategic ritual that allowed practitioners to justify newsgames as an acceptable form of making truth claims, but also implied a lack of verification and reflection. Moreover, practitioners also suggested that newsgames had the potential to amplify the scope of making truth claims in two distinct ways: allowing players to take on the perspective of others and explaining systemic issues.

4.2 Newsgames

This section begins by analysing two types of simulation: playing as someone else; and interpreting systems. I then discuss how newsgames can make truth claims based on data and how other types of evidence can contribute to truth claims. In the final part, I turn to address the relationship between a visual simulation and truth claims.

4.2.1 Simulation (i): Stepping into Others' Shoes

The first type of simulation newsgame is designed to allow players to put themselves into others' shoes. *The Uber Game* (2017), produced by the *Financial Times*, illustrates the financial precarity of Uber drivers and can be seen as a text adventure game. This genre of video game allows players to read textual messages, and they can take action and make enquiries based on these messages (Rollings and Adams, 2003, p.155). This game encourages players to take on the role of an Uber driver and make choices throughout the game based on careful thought.

In *The Uber Game*, the player as an Uber driver needs to pay a \$1,000 mortgage by the end of this week. The game allows players to achieve this aim through three main game mechanics. First, players need to carry out routine tasks – all they have to do is click the button 'Drive' to complete them. The fares the player earns are added to the total amount of money. Second, Uber provides drivers with some extra tasks. For example, in the first half of this game, players get a quest that involves driving 75 trips before 4 am on Friday to receive \$180 extra, which is the second mechanic to help players earn enough money by the end of the week.

Third, unexpected events are the most important mechanic in *The Uber Game*. Players will encounter plenty of unexpected events and they are encouraged to think carefully about their choices, which influence their income. For example, a pebble hits a crack in the glass: players can choose to repair it immediately or ignore it. If players ignore it, as the game progresses, the crack will get bigger and bigger, and players must suspend work to repair it without any help from Uber. In another unexpected event, a passenger will ask the driver to park in a restricted zone. If players do so, they might be fined by the police or be lucky to escape the fine without being caught. If players refuse to drop the passenger in the restricted zone, their ratings will go down due to the passenger's anger, but they will avoid a fine.

The above game mechanics build the main truth claim that drivers are in a vulnerable and exploitative position in their relationship with Uber. This is reflected in many aspects: Uber uses financial incentives to induce and control drivers' actions; Uber prefers to support unfair requests from customers than to support drivers; Uber does little to help drivers with the difficulties they encounter.

More importantly, newsgames may promote a hybrid between individual experience and mediated knowledge to create truth claims based on simulation. Players' interactions with the game become a form of personalised 'first-hand' experience. Players are given options at different points in the story, and their decisions will determine the flow and outcome of the game. *The Uber Game* encourages players to consider the potential correspondence between their own game experiences and the real-life experiences of others. In other words, players can reflect on their own experiences and the possible impact of choices made by others in the real world.

This potential correspondence is highly related to players' emotional experiences. Audiences may see emotions as a part of the whole truth because they can represent the voices of ordinary people (Pantti, 2010; Wahl-Jorgensen, 2019). In traditional journalistic forms, journalists frequently describe the emotions of others, including sources (Wahl-Jorgensen, 2013). However, *The Uber Game* does not rely on descriptions or quotes of emotions. Rather, they encourage players to take a first-person perspective to gain insight into the experiences of Uber drivers through play. The first-person perspective suggests the possibility of producing forms of parallel empathy in

which the player's emotional state is intended to be understood as similar in key respects to that of another (Jerrett et al., 2021). Taking over the role of others in newsgames allows players to experience others' potential emotions at specific moments. More concretely, game mechanics with choices and outcomes allow the player to feel emotions that the drivers might feel if this happened in their real lives. When players encounter unexpected incidents, they must make some decisions. In deciding how to respond to a situation, players are invited to reflect both on their gaming experience and on how this connects to real-world experiences; this may trigger the player's specific emotions. As mentioned above, players pick up a passenger who asks to drop him off at a no parking zone. If players agree to do so, they may get a \$260 traffic ticket – this can arouse the players' anger and frustration. If players refuse this request, the passenger will rate the driver low on the Uber app. Players may be upset with the low ratings but at least feel reassured that they will not be fined. This could foster players' parallel empathy with protagonists, so players are able to imagine drivers' emotions if the situation were real.

Moreover, textual and visual elements also contribute to bridging the gap between players' experiences and the lived experiences of others. For instance, if players decide to drive over to the surge zone, chasing extra money, they will waste time because of busy roads and traffic lights, which may cause players to feel negative emotions such as frustration. There is a 'Darn' button, and players should click it to continue playing the game: 'darn' represents the driver's emotion if the situation were real. Textual elements can be the cue to link players' responses to those of Uber drivers.

Visual elements also contribute to this kind of connection. For instance, in *The Uber Game*, when the players complete or fail to complete extra Uber quests, which give them bonus money, the game will show the figure of the protagonist (see Figure 1). At the moment of success or failure, players may feel positive and negative emotions due to the outcomes of their previous actions, which are ruled by game mechanics. When players successfully finish the task, there will be a happy driver; If players fail to achieve the goal, a sad figure will appear. Because these figures represent the driver, they encourage players to realise that drivers might feel these emotions in a real situation. The visual elements, together with game mechanics, allow players to reflect on the relationship between their gaming experience and others' real-world experience.

The Uber Game makes truth claims about the work of Uber drivers without mentioning a specific person or event. In contrast, based on the above approaches, *The Uber Game* establishes a connection between players and the experiences of a group of people. This connection has two distinct features. Firstly, players gain a vicarious experience through the first-person perspective. Their personal experiences and emotions are integrated into the negotiation of truth claims. This offers in-between participation that blurs the mediated claims and personal experiences. Secondly, the game does not focus on individuals but provides insights into the lives of a group of people. This allows them to realise what Uber drivers do and encounter in their work and gain a better understanding of the truth claim that drivers are vulnerable and exploited in their relationship with Uber.

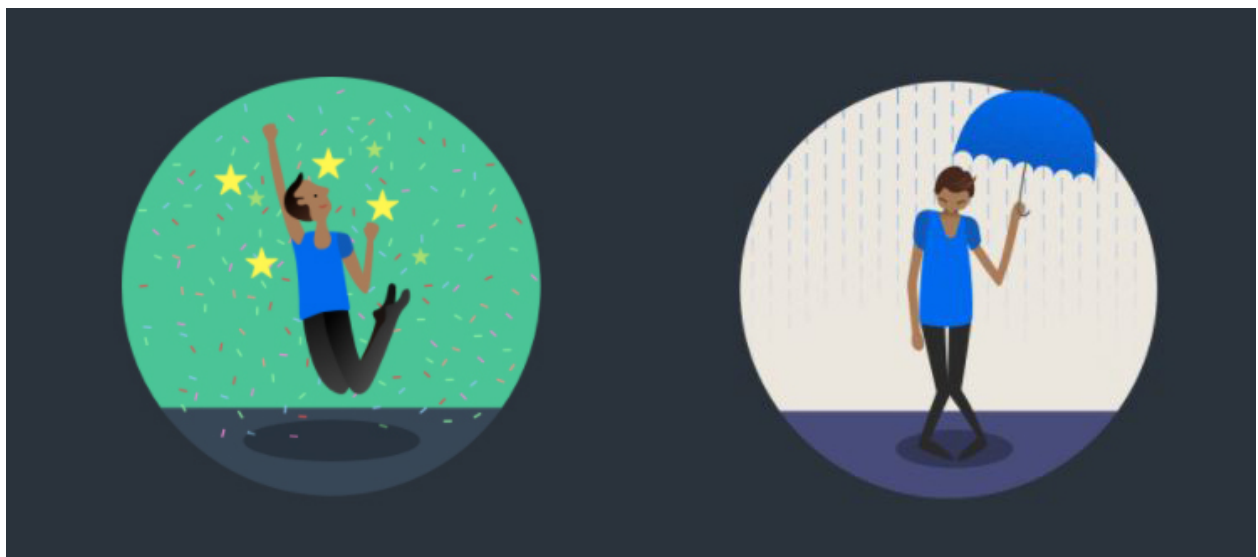


Figure 1. Images of the protagonist with different emotions in *The Uber Game*

However, the analysis of *The Uber Game* shows more of the potential of newsgames or how a player might interact with newsgames. Players' gaming experiences are personalised but still mediated. How players negotiate their experiences with others' real-life experiences and what impact this has on players' perceptions of truth claims is further explored in section 4.3.

4.2.2 Simulation (ii): Interpreting Systems

Simulation can offer different approaches in terms of making truth claims. This difference can be seen in *The Ocean Game* (2019), made by the *Los Angeles Times*, and in *The*

Uber Game. In *The Ocean Game*, players need to protect a town from the growing threat of flooding and erosion due to the rising ocean levels. While *The Uber Game* emphasises the relationship between players and the people represented by the protagonist, *The Ocean Game* is developed to make truth claims about how *systems* work.

At the beginning of *The Ocean Game*, players are informed that the ocean is rising higher and faster and threatening local people. Although *The Ocean Game* allows players to take on the role of a mayor to save the town, players are not encouraged to establish a personal connection with the mayor. The reason for putting the player in the role of the mayor is to provide an entry point into the system. This system, which can be seen as part of local bureaucracy, aims to solve the problem of the rising sea level with limited resources. Playing as a mayor who is in charge of solving the problem allows players to explore the complex management between finance, measures, residents' opinions, and climate change. This sets the stage for the game to make truth claims about the system.

This game first displays some important information about the game mechanics (see Figure 2). At the top of the screen, players can find 'Turn 1 of 8' and 'Funds', representing the goal and their resources. The goal of this game is to save the town within eight turns. This informs players of the real world's problem, which is to keep residents safe from rising sea levels in a finite time with limited resources.



Figure 2. Game mechanics of The Ocean Game

Game mechanics are employed to make truth claims about the issue of rising seas and the complexity of protecting people from this threat. The game provides several measures to withstand sea level rises, and players need to try different measures and find a way to win. There are three available options: building a wall to protect the homes, adding sand to broaden the beach, and hiring a consultant for advice, which respectively cost \$2, \$3, and \$1. Building a wall and adding sand are practical ways to address the issue, but hiring a consultant will not directly contribute to solving the problem. If players click the option 'Hire a consultant for more information', they will see a consultant advising them to 'consider buying out beachfront homeowners to get them out of harm's way'. As a result, players use one turn to have a consultation, and later the third option will be changed to 'Propose a plan to buy out and move homes away from the coast'. Players need to try out different strategies and judge the effectiveness of the strategy based on the outcomes from the game to achieve the goal.

The Ocean Game makes several truth claims around these three options through its mechanics. If the player chooses to add sand in the current turn, the new sand will stop the sea from rising. However, the new sand will be washed away after one turn. Building a rock wall can usually keep the residents by the sea safe for several turns, but it does not guarantee saving the town from the threat of rising seas permanently. The sea will eventually rise over the rock wall and flood the homes on the coast, or there will be massive winter storms destroying the wall. Game mechanics determine the outcomes of different options, so *The Ocean Game* reveals the causes and effects of these two plans. Truth claims that directly reflect the causality of an issue are rare in journalism (Nielsen, 2017). Simulation of systems allows *The Ocean Game* to make the truth claim that these two strategies cannot eliminate the threat of sea level rises permanently.

Because the above two options will not solve the problem completely, buying out residents is the only way to win the game. As players decide to propose a plan to buy out and move homes away from the coast, they need to allocate money to residents to impel them to move their accommodation. First, buying out residents requires a large budget. Different homeowners may have a positive or negative attitude about moving homes due to their family circumstances, and players should determine the amount of incentive offered. It can be noted here that even if each family is allocated only \$1, the total cost of moving home is the most expensive option to solve the problem. This reveals

that buying out residents is a huge strain on local finances.

Second, reaching a compensation plan that everyone agrees to is difficult. When the threat of the ocean is not very serious in the early stage, residents are not likely to agree to move homes. Even if the sea level has risen a lot, families with children, in most cases, will refuse less compensation for moving. The player must balance the compensation given to the different families.

Third, negotiations with the residents usually take a great deal of time. After each failed negotiation, the newsgame automatically progresses to the next turn. When players finally make a plan that is agreed upon by all four homeowners, they will move away from the beach. This will usually take several turns, and at that time, the threat of rising seas is usually quite serious, which might force residents to agree on a compensation plan.

This illustrates the complex dynamics of the local community and environment. The complex dynamics here are not presented in textual or visual elements as in other journalistic forms. It requires players to discover the impact of natural environmental change on the negotiation and what distribution scheme is feasible. In this way, *The Ocean Game* makes the main truth claim that moving homes is the best way to protect residents from rising oceans, but moving residents requires a great deal of effort and expense.

However, simulation always produces a similar but not identical system to reflect the original one (Bogost, 2007; Frasca, 2003). For *The Ocean Game*, there is a risk of using a simplified model to represent a more complex issue. The textual and visual elements provide a more complex account of the system than the game mechanics. First, the complexity of the financial issue is not expressed in the game mechanics. If players retain a large budget, the game will tell players by text that other city departments appreciate them for keeping finances healthy. Nevertheless, the total funds owned by the player are not consumed by other departments in the game. When the player's budget is insufficient and requires taxes to be raised, the game will always show by text that taxpayers are unhappy but finally agree to pay more taxes – the game does not reflect the difficulty of raising taxes.

Second, game mechanics pay no attention to the negotiation of people other than the homeowners. On the right of the screen, there are four small characters with different colours, and they talk from time to time (see Figure 3); they represent homeowners, business owners, tourists, and environmentalists. Game mechanics frame the problem as a negotiation between local government and homeowners but ignore the role of tourism, businesses, and environmental protection in this problem.



Figure 3. Different characters in The Ocean Game

The Ocean Game does not orient towards concrete events but focuses on interpretation of socio-political and technocratic systems. Causal relationships between events are established primarily through the game features, as the game allows players to employ different strategies and discover the corresponding results. This expands the scope of journalism to make truth claims. News has long been characterised by '(a) an orientation towards events over processes, (b) little discussion of causality or teleology, (c) its transient and ephemeral nature' (Park, 1940, cited in Nielsen, 2017, p.96). This reveals that journalism often tends to make brief, direct and even isolated truth claims in practice. However, newsgames can create new systems to model real-world systems, aiming to reveal the interconnection between the different elements of systems. These reflect two different types of truth claims. 'Acquaintance with' means 'knowledge that is more informal, intuitive, and unsystematic', and 'knowledge about' refers to knowledge which is 'relatively more formal, theoretical, and systematic' (Nielsen, 2017, p.94). Newsgames contribute to the diversity of news by making truth claims that are more akin to

'knowledge about'. While the difficulty of negotiating with residents in buying them out is well depicted, *The Ocean Game* reduces the complexity of solving problems that lead to sea rises. Therefore, how players negotiate such truth claims about the interpretation of systems is worthy of further consideration.

4.2.3 Playing with Data

Simulation is not the only way in which newsgames contribute to making truth claims. *Do You Think You Can Tell How a Neighborhood Voted Just by Looking Around? (Do You Think...)* is a newsgame developed by *The New York Times* based on the 2020 United States presidential election. This newsgame makes truth claims about the extent to which people can use cues to understand an increasingly polarised political landscape, providing a touchstone for examining how newsgames may use data and other types of evidence to make truth claims.

First, data is the most important type of evidence for this game. According to its description, newsgame practitioners selected '10,000 voters' addresses from a list of more than 180 million' from a database of L2, and each address was represented by an original image from Google Street View. The game shows players a series of images of street views in the US, and players need to deduce whether the majority of people in the area where each street is located voted for Trump or Biden in 2020. In the end, the game counts how many questions the player answered correctly and compares their scores with other people to rank them on a list which looks like a leaderboard.

Second, visual evidence in *Do You Think...* plays a vital role in creating truth claims. Players can drag the picture around for a 360-degree view of the surrounding landscape. The image of the street view is a very important element that contributes to truth claims in this game. Photographs can provide the physical characteristics of the real world (Newton, 2013) and thus bring players to a specific space. Furthermore, images of the street view are the most important basis for players to make their choices, and players need to identify useful information in these pictures to get higher scores. This game, therefore, encourages the player to look closely at the image to catch key details in the 360-degree images, which will potentially enhance the audience's assessment of truth claims in this game (Kang et al., 2019). The whole aim of the game is to challenge players' established readings of the urban landscape.

Third, textual elements also contribute to truth claims in the game. After players press the 'Biden' or 'Trump' button, the game will tell players whether their choice is right, where the street is located, and how many votes the candidate won by. Textual messages provide players with important feedback that helps them consider the relationship between the information implied in street view images and the data. In this way, the photographs do not merely reflect the physical appearance of different areas but are linked to the data of the 2020 presidential election. It is worth noting that game mechanics (Sicart, 2008a) are the key to linking data and visual evidence. Game mechanics in *Do You Think...* are not complicated. This game allows players to make decisions and shows the results of their choices. This is the basis for players to think about the relationship between the characteristics of the street view and the voting results.

However, a single question in *Do You Think...* is insufficient to make truth claims about the presidential election. Players' one choice and its result can only tell an intuitive and unsystematic message. This game requires the continuous proactive participation of players to make more theoretical and systematic truth claims. Players are expected to answer one question after another and reflect on their previous answers, finally summarising the pattern of election results. In other words, this game asks players to draw subtle connections between the features of images and the election.

Do You Think... makes complex truth claims about the 2020 presidential election and the changing and increasingly polarised political landscape. Housing density, closely related to population density, varies greatly across the street view images and is easily observable. Some questions in this game imply that the regions with high population density preferred Biden, and those with low population density are Trump territory (see Figure 4). Players may thus be aware of the phenomenon that population density is a useful predictor of an area's political tendencies in the US.

However, *Do You Think...* contains a large number of images that are not so distinctive in terms of population density. Although it is possible for players to guess the winner of these areas correctly according to other features in these images, such as architectural styles, vehicle types, or the presence of the US flag, they cause players to make

mistakes more often than the neighbourhoods with clear characteristics of population density. These images, which represent the suburbs, propose the claim that suburbia is a perennial political battleground that decided the 2020 presidential election, and that these neighbourhoods do not look stereotypically Democratic or Republican.

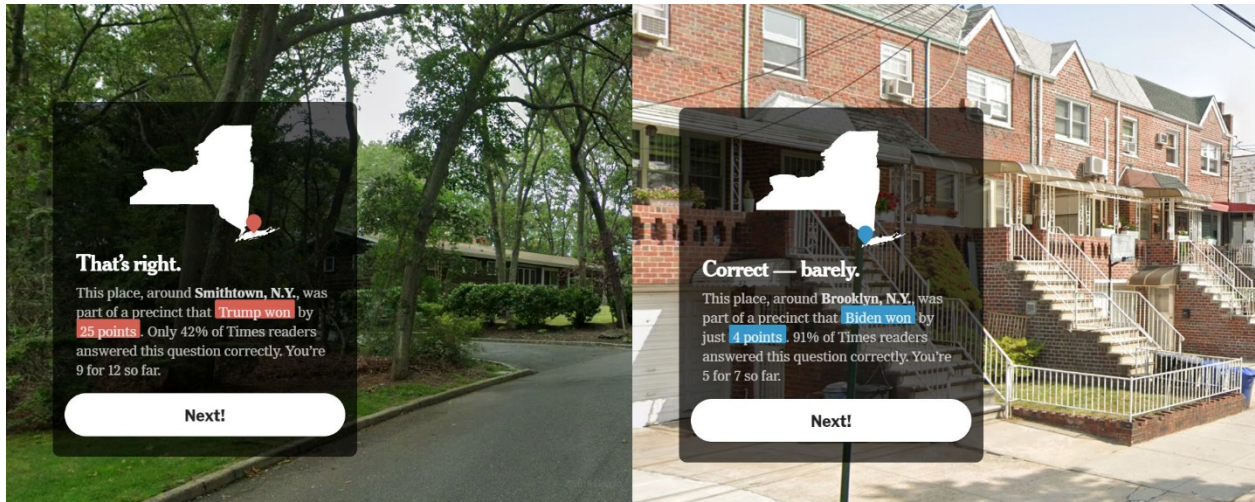


Figure 4. The distinct characteristics of images in Do You Think...

Moreover, there are some places that do not conform to stereotypes at all. For example, the places with row houses preferred Trump in the election, and Biden won by less than one point in the areas filled with country roads and farms. This means that population density is not always an accurate predictor of a region's political tendencies.

The analysis of *Do You Think...* shows how it uses different types of evidence to make truth claims. Data is important evidence in this game, but it does not rely on its revelation of hidden secrets to produce truth claims. Players need to combine different pieces of evidence and employ inductive reasoning to find out the truth claims made by this game. In players' gaming experience, they are continuously identifying street view images. Some pictures will increase their confidence, but others may make them reconsider their choices. Game mechanics of *Do You Think...* allow players to reinforce or challenge their standards of choices. In this way, *Do You Think...* allows players to develop a summary of the changing political geography in the US today. Anderson (2015) argues that there is a tension in data journalism whereby data can be seen as important pieces of information awaiting discovery or a model for extracting evidence from known data to make sense. In this game, audiences are expected to play an active role in building patterns from the data of the presidential election. Finally, players can find connections

between physical landscapes and the presidential election and reveal the truth claim behind those connections: there were distinct electoral tendencies in urban and rural areas of the US, and suburbia is the terrain that decided the election; nevertheless, there were also few areas that do not conform to stereotypes, which shows that elections are complex and not easy to predict. This truth claim may prompt players' reflection on the changing political landscape and the cues they use to judge it.

Other newsgames demonstrate different ways of making truth claims with data. *54 Ways to Study Abroad* (通往留学offer的54条路), made by *Caixin*, illustrates how Chinese students prepare for applying to universities abroad. This newsgame uses a relatively simple and straightforward way of presenting data. It employs static charts and graphs to illustrate different options for Chinese students on their paths to study abroad (see Figure 5). Although the data also contributes to its truth claims about the Chinese study abroad industry, it does not really connect with the game features. Players can make choices at different steps based on the graphics of the data, but this will ultimately only be reflected in the total amount of money spent at the end. The game does not show a different result for each of the choices. Data visualisation is merely interpreted into quantitative information, thereby providing a sense of credibility. In addition, *Play the Credit-Score Game* is a newsgame produced by *The Wall Street Journal* about the influence of financial decisions on credit scores. This game uses data to establish a scoring model to explain the issue, which means data is transformed into a playable element. Players can estimate the impact of a certain behaviour on their credit score and compare it to the impact calculated by the model. However, this game does not make the data closely linked to real-world issues but displays it as an abstract model, which limits the contribution of data to truth claims.

Compared with these newsgames, *Do You Think...* combines a variety of evidence with game features to provide a playful way to make truth claims. However, the game requires players' active engagement to reveal its truth claims: it makes a big assumption about the players' cultural capability and political knowledge. Players are expected to be able to 'read' the political landscape from a street view and to question their own understanding of political cultures, which is a great challenge for a range of audiences who may not share the dominant cultural background. This reveals a problem: newsgames sometimes trade on assumed cultural knowledge for a player's ability to

'understand' video games.

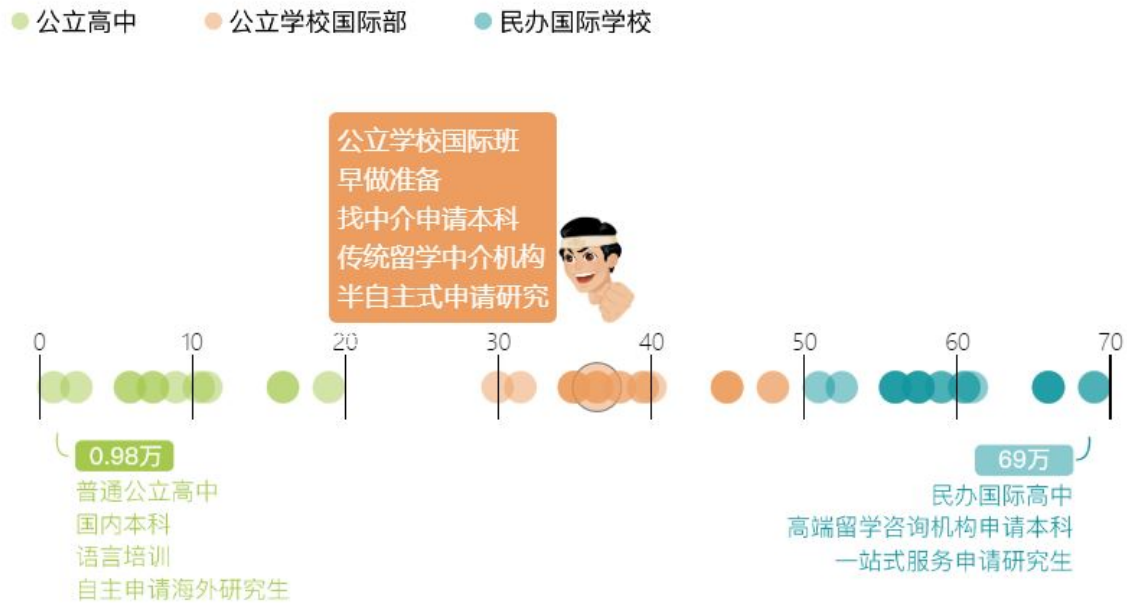


Figure 5. A chart used in 54 Ways to Study Abroad

4.2.4 Evidence and Transparency

In addition to making truth claims around data, other types of evidence contribute to truth claims in four ways. This subsection does not focus on a specific newsgame but rather explores broadly the ways in which newsgames use evidence.

First, some newsgames embed hyperlinks to real-world issues. In *The Trade-off* made by the *Financial Times*, players take on the role of the chief of a fictitious company. They trigger an unexpected event: one charity funded by their company is exposed for hosting a fundraising dinner with inappropriate behaviour. When this happens in the game, players can click a hyperlink to read a news story about a charity fundraiser involving sexual harassment in the UK. *Game of Survival* is a newsgame developed by *The Straits Times* in which players assume the role of an ordinary individual with a limited monthly budget. The game requires them to make wise financial decisions and ensure they have savings at the end of each month. For instance, after players make decisions regarding their commuting options, the game provides them with a hyperlink to an article about the government's budget, specifically addressing transportation costs. Hyperlinks are believed to increase transparency because they offer additional information and allow audiences to track original sources (De Maeyer, 2012; Karlsson and Clerwall, 2018). The

hyperlinks in newsgames show the sources of game plots, allowing players to think about the parallels between the game and real-world issues. In this way, hyperlinks bridge the gaps between newsgames and the real world when the games attempt to describe a general problem or phenomenon without focusing on a specific case.

The second way to provide evidence is by connecting newsgames to other stories on the same topic. Many newsgames were not produced separately but simultaneously with other journalistic forms, especially articles. *Malaysiakini* produced *Spend Like an MP* to explain how MPs spend money to satisfy voters in Malaysia. At the end of this game, players can find a link to an article which can be seen as a textual version of the game, sharing the same topic and sources. *54 Ways to Study Abroad*, made by *Caixin*, can be found embedded in the middle of an article: players need to read the introduction and then move on to the game; after that, they can continue to read the rest of the article, which provides more explanation about the game, including some interviews and statistics. *College Scholarship Tycoon* is a game on the website of *VOX*. During the game, players can read the relevant article by pulling down a webpage. The article is presented with supporting evidence in the form of quotations, hyperlinks, and charts, providing players with additional information and resources to consider the truth claims made by the game. Newsgames provide overviews of issues, and the relevant articles offer more concrete details to support the games. The game and articles form a mutually reinforcing relationship, as they present truth claims about the same issue or event in different ways.

The other two ways of using evidence relate to the use of ancillary evidence to perform transparency. Ancillary evidence refers to 'evidence about other evidence and about the inferences established from that evidence' (Coddington and Molyneux, 2021, p.7). The 'Behind the Story' section in journalism refers to the section below the article text introducing how a story was written and to whom journalists spoke (Curry and Stroud, 2021). The 'Behind the Game' or 'Behind the Story' section has the same function and can be found in many newsgames. In *The Trade-off*, the 'Behind the Game' section introduces that this game was inspired by a model in an academic paper, making a familiar journalistic appeal to academic expertise. In the case of *Bad News*, a newsgame about disinformation, players take on the role of creators of fake news. The 'Behind the Game' section illustrates that this game was developed in collaboration with scientists

and provides a link to explain the scientific research behind it. The collaborators who made the game and the purpose of making the game were also disclosed. The 'Behind the Game' section is not evidence that contributes directly to making truth claims; they are more akin to ancillary evidence showing that the evidence for the game is well-founded and that the design of the game is supported. Therefore, it can be seen as a form of transparency that explains and reveals journalistic practices (Curry and Stroud, 2021, p.914). The 'Behind the Game' section provides indirect clues to prove that the truth claims made by newsgames are properly grounded.

Moreover, the processes of making some newsgames were disclosed in greater detail. The 'Behind the Story' sections are usually very brief, and some newsgames are profiled in a separate article about how they were made. For instance, there is an article (Ruhfus, 2014) illustrating the production of *Pirate Fishing* that not only explains the processes of newsgathering but also introduces the reason for the story being made into a game and the steps in the development of the game, including testing and redesign. Another article about *The Climate Game* (Joiner, 2022) focuses on the explanation of its game design. This article notes that the International Energy Agency's Net Zero By 2050 report offers a basic framework for the transformation of a clean energy system, and the game incorporates additional experts' perspectives and research papers to form a model of climate change. In this way, the news selection and the ways in which newsgames restructure and frame the original materials are interpreted. The disclosure of the production process puts newsgames into context with events and problems in society. It also enables players to understand the concrete game design and consider the degree to which newsgames reflect real-world issues.

However, it should be noted that there are still some problems in deploying these approaches. First, presenting evidence does not directly ensure that it is appropriate for journalists to transform specific cases into general issues. Second, although most examined newsgames contain 'Behind the Game' sections, these sections often only inform players that newsgames are based on some interviews or specific research. These should be seen as strategies demonstrating that traditional journalistic practices are also employed in making newsgames, but the specific transformation of these materials into game elements is not mentioned. Similarly, even in articles disclosing the production process, the focus is often on game development rather than explicitly

mentioning decision-making related to the news aspects. For instance, the article about *The Climate Game* (Joiner, 2022) does not reveal why newsgame practitioners decided to include some aspects, such as behavioural change and green business practices, of climate change in their game. The practice of transparency tends to reveal sources and highlight the practice of collecting evidence but sometimes lacks an explanation of why practitioners select particular evidence and how they use it in newsgame production.

4.2.5 A Sense of Visual Realism

The first two ways in which newsgames make truth claims through simulation can be seen as 'conceptual simulation' (Chapman, 2016), which is a reconstruction of the way things work. In newsgames, the reconstruction can be either a demonstration of individual experience or an explanation of the system. Realist simulation is another form of simulation which highlights visual details as physical evidence of the real world (Chapman, 2016). This part considers how the visual elements of newsgames might create a sense of visual realism.

Visual realism may contribute to making truth claims in three ways. First, the realist visual style, as a custom in journalistic practice, can be used to establish an implication of truthfulness. *Do You Really Know Waste Sorting* (你真的会垃圾分类吗?) is a newsgame made by *China Youth Daily* and it mainly uses filmed video clips to move the story forward (see Figure 6). This game does not describe a specific event but rather provides a fictional story to reflect real-world issues about waste sorting. In traditional journalistic practice, photographs are the most frequently used images in journalism, and there is an idea that photographs can record specific events to represent the real world in a straightforward manner (Mortensen, 2016). However, in *Do You Really Know Waste Sorting*, video clips do not capture a specific occurrence in time and space. They function as a familiar technique which is often employed to make truth claims in journalism, thus these realistic visual elements should not be seen as a guarantee of truth claims but as a hint for newsgame players. This realist visual style is in line with the convention of journalistic practice and can thus satisfy players' expectations of what journalistic images should look like. In this way, *Do you really know waste sorting* can be identified as an acceptable news product to bridge the gap between a fictional story and the real-world issue.

Second, realistic visual elements are reminders for players to discover the relevance of newsgames to the real world. *7 Ways to Defy Death*, made by *The Washington Post*, introduces a series of promising tools to prolong human life. This game does not use photographs or filmed video clips but instead uses drawings that contain a rich amount of detail (see Figure 7). For example, compared with *The Uber Game* and *The Ocean Game*, *7 Ways to Defy Death* provides a more realistic human figure and alludes to scientific illustration, which is a particular type of realist representation. Such images create a sense that the game aims to pursue a representation of real-world issues. The images directly show disease sites as well as their effects, so new medical tools, which have not yet been officially mass-produced, are linked to specific diseases and conditions. Similarly, in *Do You Really Know Waste Sorting*, the details provided in the photographs help to elicit memories of what it was like to sort out waste in player's lives. Visual elements provide a means of capturing 'the physicality of the referent' (Corner, 2007) by depicting details and thus contributing to truth claims by reminding players of similarities in their everyday lives.



Figure 6. The interface of *Do You Really Know Waste Sorting*

Third, realistic visual elements can be integrated with the conceptual simulation. *Pirate Fishing*, developed by *Al Jazeera*, invites the player to take on the role of an investigative journalist to explore illegal fishing in Sierra Leone. In this game, players watch numerous videos and photos and must categorise them as evidence, notes, or background information. Players are placed in a simulated situation of the original news event, which

creates a sense of being there. More importantly, players are not just eyewitnesses to the event but vicariously participate in the process of investigation. Compared with *The Uber Game*, *Pirate Fishing* revolves around a specific and concrete real-world event, which makes it more conducive to being combined with the realist visual style. The resources which are also used to make an accompanying television documentary can be divided into a series of game events, and the visual records of the investigation are the basis of the simulated process in the game. In contrast to documentary journalism, games provide an interactive space where players can explore different parts of the game to accomplish the objective. The process of exploration resonates with the nature of investigative journalism. In this approach, visual elements put players in a particular situation and serve as evidence for players to collect, sift and judge, allowing players to experience how truth claims are constructed from a first-person perspective.

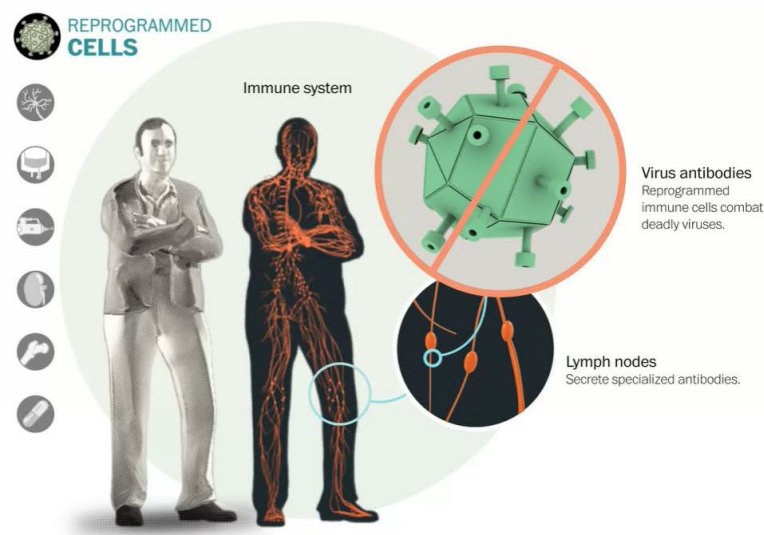


Figure 7. The interface of 7 Ways to Defy Death

4.2.6 Summary of Section

This section analysed two forms of simulation deployed in newsgames. One approach places players in the perspective of others thereby gaining insights into others' experiences, and another approach allows players to delve into systemic issues to understand the connections between things. In addition, newsgames can also turn data into an interactive way for players to explore truth claims. More importantly, players' participation is a key factor in shaping truth claims. Evidence is an important factor in helping players connect newsgames to real-world issues, bridging the gap between fact and fiction. Newsgames can also provide a sense of realism, drawing on visual elements.

4.3 Newsgame Players

The previous two sections reflected the importance of players in negotiating truth claims, and this section further investigates newsgames from the audience's perspective. I first explore players' perceptions of truth claims in the news and find that players often verify truth claims in their consumption. I then outline the different ways in which players assess truth claims in the case of newsgames.

4.3.1 Audience Perceptions of Truth Claims

This subsection focuses on how audiences (newsgame players) perceive truth claims in journalism. All extracts in this subsection came from interviews made before interviewees played newsgames during the interviews, laying the foundations for later discussion on audiences' view of truth claims in newsgames. Although interview participants had personal and unique views due to their varied backgrounds and media experiences, their views can generally be divided into two forms: critical and trusting.

Some interviewees (n=17) expressed a critical view of journalism and its truth claims. These interviewees offered varying reasons for doubting or not easily believing the truth claims in the news. First, the proliferation of misinformation has left audiences with a general distrust of news:

I find that more and more people are reporting or talking about news on social media. It's not easy to tell if what they're saying is true or not. Some will be verified and some are completely fabricated... So sometimes I tend to doubt the news at first. (Player 12, female, 26, British)

In a similar vein, Player 19 (female, 22, Chinese) noted that some stories reported by mainstream media were later found to be inaccurate, so she did not think 'the news media is necessarily better than the audience' at verifying information. In an era where misinformation can easily be presented as news, audiences tend to question the credibility and accuracy of news. This distrust extends beyond the content itself and affects the overall perception of journalism. Newman and Fletcher (2017) argued that trust in news takes time to establish, but it can also run down quickly if the news turns

out to be inaccurate. As a result, these audiences have a negative attitude towards journalism and its truth claims.

Another significant factor in public mistrust of the news is a concern about bias and hidden agendas. As interviewees reported, they observed that the news media often have specific and implicit positions:

It's hard for me to really believe someone when the media have different narratives. I think the media are sponsored or supported, and it's actually hard to find one that is absolutely neutral... I think truth in journalism is very important, but it's hard for anyone to achieve that nowadays. Nobody can do that. (Player 1, male, 23, Chinese)

It's an inevitable contradiction in journalism. You know, they have to speak for one side or the other. They need to get the money to survive, or they are part of some big corporate group... That's all the media can do in today's society. Otherwise, they will disappear or go bankrupt. (Player 8, male, 28, American)

These claims echo existing work in journalism studies about bias and agendas as important causes of audiences' recent distrust of the news (Lee, 2010; Newman and Fletcher, 2017). The media is believed to have adopted a particular perspective in reporting, thus providing truth claims about only part of the news story. Some interviewees developed this criticism and pointed out that subjectivity is unavoidable in journalism. The extract below provides a typical example:

There is nothing wrong with the media having a position. Absolute objectivity is also not possible. The problem is that the media may boast they have no position... News media and journalists are used to talking about others but lack self-reflection and introspection. They should not pretend that they can be so-called objective. (Player 4, male, 27, Chinese)

This interviewee did not think having a position is inherently problematic but criticised news media for masking their position and interests under the guise of objectivity norm. Player 2 (female, 26, British) had a similar understanding of journalism and saw the news

as a means to develop her 'own understanding of the world'. Journalism and its truth claims were still considered valuable because they provide essential information for audiences to make sense of the real world. This made verification of truth claims an important step in these 'critical' interviewees' news consumption. For instance, Player 6 (female, 23, Dutch) indicated that she would combine different pieces of information to verify news to come up with a comprehensive story. Verification has become an important skill for consumers when judging the truth claims made by media (Edgerly et al., 2020; Zaryan, 2017). In that sense, although a proportion of the interviewees did not easily accept truth claims made by news organisations for different reasons, they still saw portraying the world as a very important role of journalism. Therefore, they were more active and attempted to assess and negotiate truth claims in their own ways.

Some interviewees (n=11) upheld a trusting view of journalism, but they generally expressed that verification existed in their news consumption. As the extract below highlights, audiences wanted to gain information about the external world by consuming news:

I read a lot of financial news because of my major [business]. I want to get a quick overview of what's happening in the financial markets. The news media can accurately cover these things in a timely manner. (Player 7, male, 23, American)

I want to know what's going on in the world. This is the most important point in journalism. I watch sports news because I want to know who has won, and political news to keep up with political development. They are not the same, but they are both related to information. (Player 3, male, 25, Chinese)

Both interviewees explicitly expressed the importance of access to information for the consumption of news. Journalism met their need by informing them about what is happening in the real world. Player 26 (female, 26, Chinese) visited 'trustworthy and credible' news sites and news apps, including *The Wall Street Journal*, *The New York Times* and *Caixin*, to 'learn about public affairs and current events through them'. Specific news outlets were considered credible by this interviewee, so she tended to see their truth claims as accurate. Player 24 (female, 35, Chinese) noted that tone, such as

'the use of adjectives', was an important criterion by which she judged truth claims, and Player 22 (female, 21, British) sometimes paid attention to 'sources in the news'. These interviewees had a relatively high level of trust in truth claims, but like interviewees with a critical view, they still verified truth claims in their news consumption.

4.3.2 Evidence

The previous subsection showed that regardless of the level of trust, there is a greater or lesser attempt at verification of truth claims by interviewees. In the context of newsgames, most of them (n=21) saw evidence as a key factor for evaluating truth claims in newsgames. As one interviewee explained:

I think this [evidence] is very important. It shows that journalists did interview some people, as they often do, and then made this game. (Player 12, female, 26, British)

There are two points to highlight here. First, evidence is seen as an effective element in making truth claims. This is consistent with research findings that evidence can make news more credible and trustworthy to the audience (Henke et al., 2020). Second, there is an implicit comparison, which is the comparison of newsgames with traditional journalistic forms. Player 8 (male, 28, American) said that providing sources of evidence is 'a common practice' of journalism that makes him feel that the game is based on real-world events. Players compared their previous experience of consuming news with the experience of playing newsgames, and then carried over the previous criteria for evaluating truth claims to the evaluation of newsgames.

This corresponds with the production of newsgames: practitioners adopted traditional evidence-gathering practices and believed it was important to present evidence. For newsgame players, looking for evidence becomes a workable tactic to assess the truth claims made in newsgames. Such a parallel between practitioners and players highlights the importance of evidence in making truth claims.

Interviewees often emphasised the importance of evidence in newsgames, but the biggest problem with the use of evidence in newsgames was the 'visibility' of the evidence. In other words, interviewees were sometimes unaware of the existence of

evidence because it was not apparent in their gaming experiences or they missed it. This can be observed in the interaction below:

Player: Is this game real or made up?

Interviewer: Well, it depends on how you think about it.

Player: I don't feel like this game is made up. I found some parts of it quite real. But why are there no hints or something else [to illustrate that this game is based on real-world events]?

Interviewer: It does have. If you had read the introduction at the beginning, you would have noticed that. But I noticed that you clicked the 'Got it!' button immediately.

*Player: Who would read such a thing? I never read that when I play games.
(Player 1, male, 23, Chinese)*

This conversation shows how the player missed the presentation of evidence and thus has doubts about the game's truth claims. This certainly relates to some players' habits, but it also demonstrates the importance of the place of evidence in newsgames. Similarly, Player 9 (male, 31, Chinese) found out where the 'Behind the Game' section was after asking the interviewer and complained that it was 'too difficult to find'. When Player 14 (male, 24, British) was playing a newsgame, he opened a hyperlink but closed the webpage quickly. Later he explained that he did not want to read such a long article while playing games. These observations illustrate that the evidence in newsgames was not always noticed by the audience. Moreover, it can be found that the absence of evidence, or uncovered evidence, has a negative impact on truth claims. Player 5 (female, 23, Chinese) compared two newsgames, one for which she found evidence and the other for which she did not, and argued that she was sceptical of the game without evidence until the end. As such, audiences should be seen as a critical force in the negotiation of truth claims: evidence can only contribute to truth claims when it is discovered and evaluated by audiences.

When newsgame players emphasised the importance of evidence, they often noted that the hyperlinks and 'Behind the Game' section helped them negotiate and assess truth claims. For instance, when Player 16 (female, 24, Chinese) played *The Trade-off*, she wondered whether the unexpected events presented in the game were reliable. The

hyperlinks allowed her to learn that ‘these events indeed had real-world origins’. By incorporating hyperlinks, newsgames effectively bridge the gap between the fictional world of the game and the real world it seeks to portray. This provides players with an opportunity to contemplate the connections between the game and real-world issues. After Player 21 (male, 22, British) finished *The Climate Game*, he browsed further reading about how this game was made. Player 21 said that he had been ‘a bit sceptical of this game’, especially its simulation, but the article explained in great detail how the game ‘was meticulously designed’, which largely dispelled his suspicions. The ‘Behind the Game’ section served as a transparency technique to illustrate how the game was produced. As Player 11 (female, 24, Chinese) noted, the ‘Behind the Game’ section made it easier for her to ‘understand the background of the news’. Explaining how news production is conducted revealed the processes of turning events and issues into news stories, which made the truth claims more credible to the interviewees.

Moreover, interviewees also talked about the role of data as a type of evidence. On the one hand, like the findings of a previous study (Henke et al., 2020), interviewees said that statistical information and their visualisation did make them feel that the truth claims of newsgames are credible. Player 7 (male, 23, American) saw the infographic as ‘an additional source’ to support the truth claims of the newsgame as it provides ‘a macroscopic description’ of the newsgame’s topic. Furthermore, Player 5 (female, 23, Chinese) claimed that visualisation makes statistical data ‘clear and explicit’ so she could easily understand it. This suggests that visualisation allows data to be transformed into an easy-to-understand form and helps players to identify the truth claims of newsgames.

On the other hand, the source of data is not always helpful for players to perceive and negotiate truth claims. Compared to infographics, interviewees found it difficult to understand the data source:

This page lets me know that the game is based on data. It’s great, but they are very complicated. I can’t understand them immediately. (Player 6, female, 23, Dutch)

Although providing the source of data may increase the credibility of truth claims, it appears to be due to a sense that the game is well-grounded rather than increased

comprehensibility. In that sense, simply providing raw data may contribute to transparency, but it is important to note that this should be seen as a performative step of the strategic ritual to protect newsgames from attack. However, how raw data is reassembled to make meaning and form truth claims about complex issues remains unclear to audiences.

The analysis of newsgames showed that they have the potential to use data to make truth claims in a playful way, but there are still some discrepancies between such potential and the actual experiences of newsgame players. Extracts below show the differences between players' experiences of *Do You Think...*:

I don't have a clue. Most of the questions I'm just guessing. I would have expected that places with outdated houses and roads may be more likely to support Biden because they might want a new president to improve their standard of living. But that doesn't seem to be the case. (Player 18, male, 25, Chinese)

[Do You Think...] is a good use of data. It captured some of my thoughts on politics... I tried to look for some cues, like the economic level of the area and American flags... Big cities might prefer Biden. (Player 27, female, 22, American)

Of the nine interviewees who played *Do You Think...*, three (two Americans) were aware of the truth claims about population density, while the other six were not. Interviewees used their own criteria to guess questions. Player 26 (female, 26, Chinese) focused on the tidiness of the area around the bins, and Player 13 (male, 28, Dutch) relied on estimating the average price of all the vehicles in the photo. Both reported that they did not realise population density was a predictor before talking about this issue with the interviewer.

There are two points to be discussed here. First, there may be too much demand on the player's capability to unpack truth claims based on their gaming experiences, which can limit the opportunities for audiences to understand political and social issues. However, the inconsistency between what players perceive and the truth claims that newsgames imply is not automatically a case of the player opposing the truth claims after finding

them out. The way evidence was used in newsgames provided greater space for the negotiation of truth claims because newsgame players wanted to know why they did not receive a high score. This experience served as a motivation to engage with the issue. After playing *Do You Think...*, most interviewees skimmed the article that appeared at the end of the game, seeking further explanations regarding the truth claims. Player 26 (female, 26, Chinese) thought it answered her confusion as the article and the game corroborated each other's claims. This mutual corroboration is important for players to negotiate truth claims, especially when the game places excessive demands on players' abilities.

Second, while data undoubtedly plays an important role, other factors come into play that shape the negotiation of truth claims. The interviews reflected that American participants seemed to be more likely to identify truth claims, as these players had more background knowledge of the issues involved. Data does not speak for itself but collaborates with other elements to contribute to making truth claims. The broader social and political contexts, the presentation of data, and the audience's interaction weave the fabric of meaning in the context of newsgames, which transforms data into certain patterns.

4.3.3 Simulation

One reason newsgame players value evidence is that newsgames make extensive use of simulations to make truth claims. While opening up new possibilities for truth claims, simulation newsgames raise several potential problems. Before discussing how players play newsgames, it is necessary to explore the different preconceived ideas that players have about simulation games. The conversation below shows a sceptical attitude:

Player: I think video games are fictional. At least the games I've played are fictional.

Interviewer: Have you ever played a simulation game? Like a game that simulates farming. Do you think that is fictional?

*Player: No, but I've heard of some. I think I'll assume it's fictional before I play it.
(Player 12, female, 26, British)*

The interviewees (n=8) who saw simulation games as fiction often had less exposure to

video games in terms of both quantity and variety. They spent less time playing video games and usually played online games with friends or casual games. As a result, they would not initially think that simulation games may relate to the real world. Other interviewees were relatively optimistic or neutral about the simulation:

I don't think it's easy to say. I need to look at the specific game... Even if they're all simulation games, it may be that one is more fantasy and one is more realistic.
(Player 23, male, 30, Chinese)

This interviewee believes that simulation games have the potential to reflect the real world but do not always attempt to do so. Interviewees who often played video games or described themselves as gaming enthusiasts tended to think this way. Furthermore, interviewees who had rarely played simulation games had similar ideas. Player 15 (female, 25, British) did not have experience playing simulation games but thought that simulation meant the reconstruction of the real world. These interviewees anticipated that simulation games had the potential to make truth claims about real-world issues.

4.3.3.1 Visual Realism

Audiences use varied tactics to assess the truth claims made in news reporting (Swart and Broersma, 2022; Zaryan, 2017). Looking for evidence was not the only approach taken by players to do so. My interviews revealed how visual realism in newsgames was perceived by players, as the extracts below show:

Of the few games I've just played, I think the one with the photos was the best. It gave me a sense of journalism. The other games are good too, but visually, the photos would make it easier for me to think that it's real. I can see real-life scenes in the photos. (Player 9, male, 31, Chinese)

I prefer [7 ways to defy death] to [Pick your own Brexit]. The appearances of the characters are very different... [7 Ways to Defy Death] is more realistic, but the character in [Pick your own Brexit] is very much a cartoon character. (Player 6, female, 23, Dutch)

There are two points to be noted here. First, the use of photographs is seen by audiences

as a feature of journalism, as photographs are the visual element to which audiences are most often exposed in their daily news consumption. Photographs as an icon of journalism align newsgames with consistent journalistic practices, so truth claims were perceived as more credible by players.

Second, these interviewees suggested that the more realistic the images, the better. Photography is seen as an approach to indexically preserved moments to make truth claims (Hedley, 2012). The photographs in newsgames provide more visual particulars that portray the real world. Players also preferred a higher degree of realism in terms of the painted images. 'Realist simulation style' (Chapman, 2016) refers to a type of simulation which aims to capture the physical characteristics of the real world. A higher level of visual realism provides more concrete details in the visual aspect. My interviewees noted that presenting more visual details can provide a realistic texture, aligning with studies (Aitamurto et al., 2022; Lin and Wu, 2020) that argue a realist visual style can enhance the credibility of truth claims.

Moreover, interviewees also mentioned the sense of exploration provided by visual realism. For example, Player 25 (female, 20, Kenyan) said that *Pirate Fishing* made her feel like she 'was investigating on the spot', so she could gradually find the truth of the matter. Player 17 (male, 20, Chinese) also noted that 'the local environment shown in the videos' made him feel engaged in the investigation. Visual components put players in a specific situation, effectively placing them within the narrative. As players navigated through this situation, they gathered and evaluated evidence to grasp the process of constructing truth claims.

4.3.3.2 From First-person Experience to Truth Claims

In addition to visual realism, simulation may allow players to vicariously experience others' lives. However, when playing the newsgames that allow players to put themselves into others' shoes, players are not always able to experience the perspectives of others. Player 2 (female, 26, British) talked about the differences between himself and the main character: the differences in their living situations and experiences made it difficult for her to make choices like the person represented by the main character. Player 1 (male, 23, Chinese) felt he was 'relying on my intuition to make choices for another person's life' due to his unfamiliarity with the main character.

Background information about the characters is not only evidence but also a key factor in whether players are able to experience the perspective of others vicariously. Players draw on this information to consider and imagine how others would behave in the real world. These interviewees could not step into the role because they were unfamiliar with the people represented by the game characters.

In contrast, the interviewees who said they could put themselves into other's shoes reported that they related the game to their own experiences and prior knowledge:

[The Amazon Race] reminded me of some of my own experiences at work. Communicating with supervisors is full of pressure and uncertainty. I think this game really shows the problems that workers face. (Player 4, male, 27, Chinese)

I read a piece of news earlier that also talked about the problems with Uber and other ride-hailing apps. I think some problems are shown in [The Uber Game], like how Uber used the rating system to control its drivers. I did experience a bit of this sense of control in the game. (Player 13, male, 28, Dutch)

These extracts highlight the importance of constructing a connection between player and character as an influential factor in vicariously taking on the perspective of others. Game players often mentioned their personal circumstances to explain their actions in gaming experiences (Nash, 2015). My interviews show that, in addition to players' own situations, they also use their prior knowledge related to newsgames to do so. Players link and compare their gaming experiences with their own lives and knowledge. This helps them to put themselves into others' shoes and then assess the game's truth claims.

However, some players argued that the condensation of others' experiences posed a problem in newsgames. Player 11 (female, 24, Chinese) doubted *The Uber Game* was exaggerating the problem as 'there were so many things that happened in just one week' in this game. Newsgames combine different people's experiences together to reflect common problems they face, but it does make the player sceptical of the truth claims.

Players stated that the first-person experience allowed them to understand others' difficulties and relevant emotions better. The extract below provides a typical example:

I felt distressed when I decided to work in the evening instead of helping the child with homework. It was awful not to fulfil a promise to the family, but I needed the extra reward badly. If I were a driver, I would really struggle with making such a decision. That is indeed a tough choice to make. (Player 10, female, 29, Chinese)

Interviewees saw emotional engagement as a helpful way of thinking about others' difficult experiences. Player 9 (male, 31, Chinese) found *The Uber Game* made her feel more like a driver than a spectator. Player 15 (female, 26, British) talked about how making a bad decision led her to 'feel upset by myself' rather than 'read someone feeling it', and the feeling was thus 'more intense'. In other words, newsgames provide players with an opportunity to develop parallel empathy with others. Simulation allows newsgames to make truth claims about others' difficulties and emotions, and emotional engagement makes players feel that these truth claims are credible.

Furthermore, when players attempted to link their own emotions to others' emotions, the textual elements were believed to play an important role. Player 18 (male, 25, Chinese) talked about the emotions described in words giving him 'a feeling that the character's emotions might be similar to mine'. Player 12 (female, 26, British) was concerned that her emotions would differ from those of a real Uber driver. She found that the text was quite important because it could help her to confirm that an Uber driver's 'feelings in a real situation' are more or less the same as hers. Both interviewees saw textual emotional expression as reflecting other people's possible emotions. This suggests that they regarded the protagonist as a representative of the group of Uber drivers while noting individual differences. In this way, the gap between players' experiences and those of others was bridged, and the insights of others' difficulties and emotions became a guarantor of truth claims for players.

This approach provides players with a mediated but personal experience. Van Zoonen (2012) argues that audiences have relied on their own personal experiences as a source of truth and question the information provided by official institutions and experts. This suggests that audiences may give more weight to their first-hand experience than information from the media. Some empirical studies (Livio and Cohen, 2018; Swart et

al., 2019) indicate that people tend to discuss news in relation to their personal experience and news that contradicts personal experience is less trusted. Simulation, however, seems to allow video games to offer an in-between participation that blurs mediated and personal knowledge because they may require players to experience stories in their first-person perspective, allowing players to negotiate truth claims.

4.3.3.3 Assessing Simulation of Systems

The other form of simulation aims to interpret certain systems, and many players (n=15) stated that newsgames promoted their understanding of systems. They explained why newsgames do this better than other journalistic forms. As one interviewee put it:

I like [The Ocean Game] because it tells the contradiction between long-term and short-term solutions.... If I hadn't seen this problem from a decision-maker's perspective, I wouldn't have known how difficult this was. Some plans are good in the short term and make people happy. But they don't solve the problem completely. (Player 4, male, 27, Chinese)

This shows the importance of simulating newsgames to help players get inside the systems. Player 14 (male, 24, British) played another newsgame about climate change, *The Climate Game*. He explained that this game provided him with a more macro-level view of how to tackle climate change rather than the more everyday perspective he is used to. Simulation newsgames allow players to temporarily remove themselves from the viewpoint they are accustomed to and step into a position that has a significant impact on a particular system, thus generating an understanding of how the system works.

However, players do not easily believe truth claims about how systems work. When they were playing games, they often evaluated the simulation of systems, and some players discussed this with the interviewer, as seen in the conversation below:

Player: It seems that investors and stakeholders do not value the investment in long-term development.

Interviewer: It does seem to be the case. They won't criticise you even if you put in very little.

Player: I think this is quite true. The long-term development is inconspicuous. People are more concerned with growth targets. (Player 7, male, 23, American)

Player 7 was doing a business degree when he participated in the interview. He used his business knowledge to evaluate the truth claims made by newsgames. Players also used personal experience to assess the simulation of systems when systems intersect with their daily lives. For instance, Player 23 (male, 30, Chinese) compared *The Climate Game* with what happened in his city. He stated that the truth claim in newsgames is very reliable because addressing environmental issues did have a negative impact on the lives of the local population. Due to the potential gap between fiction and fact, players usually had a cautious attitude towards simulation and used their own experiences and prior knowledge to verify the truth claims about systems. In this way, the truth claims of newsgames were negotiated by players in a broader context and linked to other issues.

This is supported by discussions and comments posted by players about newsgames. In a Reddit post (zninjamonkey, 2017) about *College Scholarship Tycoon*, players shared different opinions on whether the game was accurate based on their own experience, but the consensus that emerged from their discussion was that the game did effectively reflect the important issue in college admissions. Similarly, Although Jenkins (2022) argued that *The Climate Game* 'gives more weight to public opinion than our current approach to policymaking does', this game 'could be converted into a checklist for policymakers'. Players rarely found that the simulation of newsgames was accurate enough to be unquestionable, but that did not mean they rejected the truth claims. They negotiated truth claims to judge whether newsgames captured the core and essence of problems.

Moreover, players attempted to assess the truth claims about causality, which is based on the game's output in response to the player's input. Players' personal experience and knowledge would only be used if they were familiar with the systems. The assessment of causality was often observed in my interviews, even if players did not know the system very well at first:

I think the results of investments in new technologies are very reasonable in [The Climate Game]. They all looked awesome, but in the end, I found some of

them were useless. This will probably be the case in the real world. Not all investments will pay off. (Player 3, male, 25, Chinese)

Players' assessment of causality does not rely on knowledge and experience directly relevant to systems but is based on their broader understanding of the real world. Players may consider whether the results are exaggerated or if the system reflects the complexity and uncertainty of real issues. Player 19 (female, 22, Chinese) expressed her doubt about the negotiation with residents in *The Ocean Game*. She supposed that there might be very stubborn people who would be dead set against moving out, no matter how much the government would pay them. In other words, the claim that financial assistance can make residents move out is questionable for Player 19. Verifying causality was a practical approach for players to negotiate the truth claims about systems in the context of newsgames.

Interviewees also complained about the limited options offered by newsgames. This can be observed in the extract below:

I think newsgames' options sometimes oversimplify what people can do in reality. I can only cancel or keep the contract [in The Trade-off]. Why can't I sign a new contract? (Player 20, male, 25, British)

This extract shows that because of simplified choices, players would doubt whether truth claims made by simulation newsgames reflected real-world issues. The player considers not only whether the output matches the input, but also whether the input is restricted. Newsgames may force problematic binaries onto complex problems (Plewe and Fürsich, 2018). My interviews with players show that this concern is important and necessary. For simulation newsgames, this can lead to criticism and scepticism from players about truth claims.

Furthermore, section 4.3.2 showed that audiences see evidence as an important factor for evaluating truth claims, and this was also demonstrated in players' comments on simulation:

I think this game does tell me the difficulties of the warehouse workers. Some

tasks are difficult to complete. Interviews inserted in the game are also very important. They let me know that in the real world the difficulties they faced were probably much greater. (Player 26, female, 26, Chinese)

Simulation is seen by newsgame players as a helpful means of making truth claims about the real world, but it rarely works alone. Player 5 (female, 23, Chinese) expressed her concern about 'the lack of characters' background', and this made her feel that the characters' experiences in the game were somewhat unsupported by real-world conditions. Players examined whether there is consistency between the simulation and evidence, which illustrates that audiences use an integrated approach to evaluate truth claims.

Newsgames which interpret systems do not merely focus on individual occurrences in isolation but strive to illuminate the interconnections between events. More importantly, players are encouraged to negotiate truth claims on an analytical level, contributing to a more comprehensive and nuanced understanding of complex processes. Players' ideas about truth claims are rarely binary; rather they take various approaches to consider whether newsgames are sufficiently reliable.

4.3.4 Summary of Section

First, players saw making truth claims as an important journalistic role, and they wanted to be informed about what happened in their news consumption. However, players did not easily believe truth claims in news stories and usually verified them in their own ways. This was also reflected in the processes through which they played newsgames. Players attempted to find evidence to connect newsgames to real issues, and a lack of evidence caused them to question truth claims. Moreover, data usually needs to be connected to a wider context through players' interactions to generate truth claims, and the realism that comes from the visual is seen as another important factor. In general, players saw both the first-person perspective and the simulation of systems as powerful ways to make truth claims, and this was based on their comprehensive evaluation of truth claims.

4.4 Conclusion

This chapter focused on the tension between 'fact' and 'fiction' in the case of newsgames.

Newsgame practitioners emphasised the importance of making truth claims, so they took a series of steps to justify their approach in newsgames. First, there was an adherence to traditional evidence-gathering practices, and practitioners could claim that newsgames were produced based on evidence about real-world events and issues. Second, practitioners stated that they spent much time and effort in the production of newsgames. Newsgame practitioners usually had several meetings to adapt the way evidence was used to design newsgames. Therefore, they could demonstrate that the truth claims made were carefully reviewed, but editors and journalists often still held the power to decide how truth claims were shaped and presented. In this process, it could be found that there was, to some degree, uncritical use of expert sources and evidence. Third, they engaged in informal testing prior to releasing the newsgames, allowing practitioners to refine how newsgames made truth claims, without the constraints of limited money and time. Finally, showing evidence was regarded as an important step to inform players that truth claims made by newsgames were supported. The above steps, taken together, can be viewed as a strategic ritual to legitimise newsgames and thus protect truth claims from criticism, in the context of the possible tension between fact and fiction.

Newsgames allow journalists to make truth claims in new ways. The case of *The Uber Game* demonstrates how newsgames hold the potential to connect players' gaming processes to other individuals' lived experiences, and this connection is also supported by textual and visual cues. *The Ocean Game* offers insights into how newsgames interpret systemic issues, with the simulation of process serving as the cornerstone of truth claims. Players are prompted to fill in gaps to establish a causal relationship between different events. Additionally, *Do you think...* requires players to put the torrent of data in a broader political context to produce truth claims. However, because of the tension between fact and fiction, newsgames need to be linked more closely to real-world issues. The incorporation of evidence within newsgames provides concrete details, and the exposure of the production process is consistent with the pursuit of transparency. Visual elements also contribute to providing a sense of realism. The analysis of newsgames illustrates the powerful potential of making truth claims in diverse ways, which all emphasise the importance of audiences in negotiating truth claims.

Players argued that informing audiences is still a very important journalistic role,

although they did not readily believe what news media said. Therefore, they usually evaluated truth claims in their news consumption. In the context of newsgames, players found that evidence, as a common factor of journalistic practices, could help them to locate newsgames in real-world issues. Revealing the process of making newsgames was also considered to be helpful in assessing truth claims. However, some newsgames did not show obvious evidence to players, leading players to doubt the truth claims. In addition, data, as a form of evidence, was important for truth claims, but newsgames often needed players to link data to broader issues to actively generate truth claims.

Players were aware that there is a relationship between fact and fiction in the case of simulation, and they used additional tactics to evaluate truth claims. A realistic visual style was considered as important; this style is not only in line with consistent journalistic practice but also provides visual details and a sense of being there. Players generally agreed that newsgames offered more possibilities to make truth claims, as they opened a space for players to think more deeply. First, the first-person perspective allowed them to have a mediated but personal experience so that they could have a better understanding of others' lives. Second, newsgames could explain the relationship between events, and players used their knowledge and experiences to evaluate such a relationship. It should be noted that players made some criticisms of newsgames, including simplification of issues and lack of understanding of others' circumstances.

Chapter 5 Entertainment and Audience Engagement

In this chapter, I move from truth claims to the ways in which entertainment might promote audience engagement with the news. There is an attempt in contemporary journalism to both inform and entertain to make news more popular and, in some cases, enhance audience engagement with public life (Hanitzsch, 2007). Newsgames come into the conversation in an unusual way because they rely on playfulness to generate enjoyment and entertainment. Playfulness can be seen as the use of game logics, such as rule-based interaction and algorithmic power, which allows video games to provide a different experience from reading and watching (Ferrer-Conill et al., 2020).

I begin the chapter by outlining how newsgame practitioners perceive audience engagement and entertainment in journalism. These findings then direct the discussion to reasons why newsgames, as a playful approach, are used to engage audiences with news content. Following this, I outline the practices adopted by practitioners to promote audience engagement in the case of newsgames. The second section focuses on several newsgames. I explore how newsgames provide enjoyment for players. Furthermore, by analysing and comparing different games, I show the possibilities and risks of using enjoyment experiences to promote audience engagement. The third part of this chapter documents players' expectations of newsgames and whether these expectations have been met in their gaming experiences. I illustrate how players perceive the enjoyable experiences of newsgames and how this can help them engage with news content.

5.1 Newsgame Practitioners

In my interviews with newsgame practitioners, we discussed a range of questions about games as a playful and pleasurable form of journalism. Different terms, such as fun, entertainment, pleasure, enjoyment, and playfulness, were used by practitioners. Newsgames were described as a meaningful way to promote players' engagement with content. This led to a discussion that is not entirely limited to newsgames but reflects the issue of how to understand audiences.

5.1.1 Prioritising Public Affairs Issues

According to my interviews, the production of newsgames often required the collaboration of several newsgame practitioners, and they were responsible for different parts of the production process. Interviewees had different job titles such as (interactive/data/visualisation) journalist, editor, programmer, and director. Hardly any of them indicated they had a background working on entertainment-oriented news or considered entertainment to be a priority in their work. Newsgame Practitioner 4 (journalist, news organisation in China) was 'not opposed to covering entertainment stories' if they are relevant to her beat, but entertainment-oriented news is not a major part of the work. Entertainment, in this case, is understood in relation to topics and content, such as celebrities, lifestyle, and sport.

Furthermore, many newsgame practitioners talked about the importance they place on public affairs, with relevant topics and content considered central to their work. As one interviewee put it:

Entertainment isn't really my thing. It's not my area of expertise, and I haven't spent a lot of time covering it. I'm more focused on other topics, like politics and business. (Practitioner 22, editor, news organisation in the UK)

Similar thoughts were very common in my interviews. Practitioner 14 (journalist, news organisation in the US) indicated that 'politics and social issues' were the main topics they covered. Practitioner 1 (editor, news organisation in China) said that 'financial topics and related policies' were what they reported most often. Covering these topics is seen as an essential practice of journalism by interviewees. Practitioner 11 (journalist, news organisation in China) argued that journalists should care about public affairs because it may 'help audiences to make decisions about certain things'. Some newsgame practitioners consider public affairs to be important matters that audiences ought to know about, so newsgame practitioners tend to cover these topics more. In general, interviewees highlighted the importance of public affairs for journalism and had a higher preference for them.

5.1.2 Linking Entertainment to Public Affairs

Although the interviewees' preference for public affairs news was observed, its emphasis

did not equate to a complete rejection of entertainment. Some journalism studies (Otto et al., 2017; Thussu, 2008) argue that there has been an erosion, expansion and blurring of the boundaries of journalism as a result of the introduction of entertainment elements. During my interviews, newsgame practitioners mentioned two ways to merge entertainment with public affairs. The first relates to the integration of topics: by focusing on different aspects simultaneously, entertainment can be linked to public affairs. Practitioner 3 (programmer, news organisation in China) mentioned a project he participated in on the Chinese Lunar New Year. That project involves both the domain of everyday life and serious content related to economics, and the two are mutually supportive. One interviewee talked about the mixture of political news and celebrity news:

So, for example, the news about Boris Johnson can be political news or celebrity gossip. It has the qualities of both, right? There is no clear line between them. They are often mixed together. (Practitioner 22, editor, news organisation in the UK)

This extract shows that most of the news is not exclusively about public affairs or entertainment in the current media landscape, and there is a considerable amount of news that has characteristics of both. Practitioner 7 (journalist, news organisation in the UK) claimed that they attempted to discover the links between entertainment and public affairs and present them in their coverage. This echoes the finding that entertainment content can help audiences connect with public issues (Penney, 2023).

This approach rarely had a direct and obvious impact on the production of newsgames but made journalists think about new forms of integration. As Practitioner 5 (director, news organisation in China) suggested, the blurring boundary between public affairs and entertainment opened their eyes to more possibilities for journalism, which in turn made them think about whether they 'could create other interesting ways of reporting the news'. This led to the second way of combining entertainment with public affairs, which sees the form as a possibility of providing pleasure. When interviewees talked about this approach, the term 'entertainment' was rarely used directly by the interviewees, but they claimed that delivering engaging and interesting news stories was part of their work. As one interviewee stated:

We have two dimensions to consider. One is whether it is important, and the other is whether it is interesting. It is best to have a balance of both... Some news stories are pleasant and interesting. They can engage the audience. Capturing their attention is also important to us... So, we have explored various new forms for our coverage. (Practitioner 9, director, news organisation in China)

In the context of newsgames, entertainment and importance are regarded as different but not contradictory dimensions. This opens up space for reporting public affairs in an interesting and enjoyable form. Practitioner 12 (editor, news organisation in the UK) noted that they used interactive forms as a novel means to make news stories about public affairs more engaging and reach a wider audience. These claims are in line with a shift toward generic hybridity in news, with the combination of entertaining formats and styles, such as talk shows and short video applications (Negreira-Rey et al., 2022; Otto et al., 2017; Reinemann et al., 2012). Newsgame practitioners still valued the topic and content of public affairs but also believed that it could be merged with entertainment in journalism. The emphasis on public affairs and the attempts at convergence are also reflected in the production of newsgames.

5.1.3 Employing a Playful Approach to Audience Engagement

‘Enjoyment’, ‘pleasure’, and ‘fun’ were words often mentioned in the interviews to characterise newsgames:

I think newsgames should be interesting and fun. That's the thing about games, isn't it? That's what sets it apart from other forms. (Practitioner 5, director, news organisation in China)

The newsgame is seen as a unique form of journalism, which is characterised by its ability to provide pleasure and enjoyment for audiences in its own way. The appeal of video games is that players can be entertained as active participants (Danesi, 2018). My interviews revealed the important point that the entertainment of newsgames is not in the same dimension as entertainment news. The entertainment in newsgames is derived from the enjoyment experience implied by the game format. The way in which video games generate enjoyment was relatively new to newsgame practitioners at first, so they needed to refer to several sources to design their games. Practitioner 4 (journalist, news

organisation in China) reported that they consulted a game company and looked at some successful commercial games to explore how video games can attract players. Practitioner 18 (programmer, news organisation in the UK) said that they produced newsgames based on some neuroscience and user experience (UX) research. This echoes the increasingly central place of the audience and their pleasure in the news production process.

In terms of enjoyment, newsgame practitioners had two main ideas about audiences. First, newsgames were seen as an attempt to build audiences. Practitioner 1 (editor, news organisation in China) noted that in today's media environment, 'people are more likely to focus on what's interesting', and newsgames may make people take notice of their organisation. The enjoyment added an extra attractive quality to the news, which provided a unique opportunity to compete for public attention. Attracting audiences is an economic imperative for most news organisations. Second, in addition to linking engagement with attracting audiences, the emphasis on audiences was further reflected in the idea that newsgames could promote audience engagement with content, especially news coverage about public affairs. As one interviewee said:

Conceptually, I think in a newsroom context where other journalists are working on like very serious written stories, I'm making a game about something really serious... We need to kind of break through this idea that games can only be fun and entertaining... Games can allow players to focus on content [related to social issues]. (Practitioner 19, journalist, news organisation in the US)

In the context of newsgames, the value of playfulness was not talked about on its own but in combination with players' attention towards the content. As Practitioner 10 (editor, news organisation in China) explained, newsgames allow players to have fun and thus pay attention to content, which means they are more likely to 'absorb important information'. Practitioner 14 (journalist, news organisation in the US) believed that newsgames could give audiences 'a spark of knowledge' based on providing 'a spark of pleasure'. Providing pleasure is acknowledged by newsgame practitioners as the purpose, and the potential for pleasure to facilitate audience engagement with content is more important than the pleasure itself from the perspective of newsgame practitioners. Practitioners here considered engagement as a process wherein audiences invest

energy to understand the content within newsgames. Practitioner 15 (editor, news organisation in the UK) talked about the similarity between newsgames and comics. He believed that they should not be 'presumed to be certain entertaining things', as both can be used to convey public affairs. This resonates with the findings that political journalists make serious topics more accessible by making them more interesting (Banjac and Hanusch, 2022). For newsgames, playfulness is perceived as a catalyst for audiences to understand the wider social and political world.

It is worth noting that promoting audience engagement with public affairs content through playfulness was still largely experimental in practice. As one interviewee put it:

We learnt how to create a game and how games can be fun and help people to learn. Then we took those lessons and applied them to our own game... I was a beginner, after all, so I can't say for certain if our game has what it takes to hold players' attention. (Practitioner 16, journalist, news organisation in the UK)

This reflects the complexity of making newsgames. As newsgames were unfamiliar to many practitioners at the beginning, they researched and explored how to develop a playful approach to promote audience engagement. Practitioner 17 (programmer, news organisation in the UK) stated that their team investigated how video games were used in education before they started to develop newsgames. As Practitioner 27 (journalist, news organisation in China) claimed, although they asked several questions of game developers with experience in making serious games in other fields, after the game was released, she found that it still had 'room for improvement' to 'make important content more prominent' in the game. These claims show the attempts of newsgame practitioners to enhance audience engagement with content through playfulness. Developing newsgames is often an experiment, and newsgame practitioners need to learn and explore to achieve this objective.

5.1.4 Assessing the Playful Approach

What journalists want to do and what they really do are two related but different things (Hanitzsch and Vos, 2017). Likewise, although newsgame practitioners attempted to make newsgames that were fun to play and guided audiences into deep interaction with public affairs news, the extent to which their aims will be achieved is unclear. The

uncertainty and complexity of newsgames seem to imply a need to evaluate the playful approach. However, improving engagement with content through playfulness, to a certain degree, should be seen as assumptions made by newsgame practitioners about their games. As Practitioner 3 (programmer, news organisation in China) said, they did not track players' gaming experience or conduct any post-release survey. Practitioner 21 (editor, news organisation in the US) admitted that they did not investigate 'whether players are having fun or enjoy playing the game'. These examples illustrate that newsgame practitioners' assumptions about newsgames often remained at the hypothetical stage and were not measured.

However, some newsgame practitioners did make attempts to measure the extent to which their assumptions or objectives were being achieved in practice. Chapter 4 mentions that newsgame practitioners relied on their personal networks to do pilot tests in the production process of newsgames. In those tests, some participants were also asked about their perception of playfulness. Practitioner 11 (journalist, news organisation in China) said that they had changed the game genre from shooting to puzzle solving because participants reported that shooting had caused them to miss the content completely. Informal testing, as a way to observe audiences' interaction with newsgames, can be seen as an effective way to help newsgame practitioners identify possible problems in their games, which shapes the playful approach to audience engagement.

Metrics are a more common means employed by newsgame practitioners to measure their goal of promoting audience engagement. The extracts below show how interviewees collected and used metrics:

We counted how many times the game was played, how many reposts and shares it received on different platforms, and how many people actually played it to the end. The numbers show that our game was more popular than we expected. (Practitioner 2, photojournalist, news organisation in China)

I think one of the things that we were thinking at the beginning is there're so many buttons. Are people actually gonna get through it? ... But in this case, we actually found with the data that people were really willing to click through the entire thing. (Practitioner 24, director, non-news organisation in the Netherlands)

Similarly, in the article about how *The Uber Game* was made, Joanna Kao (Blood et al., 2017) talked about what types of metrics were used:

We tracked every time a player began the game, reached the beginning or end of a work day and clicked through each of the ending summary screens. To answer our questions about fatigue, we also kept track of how many decisions they had to make before they left the game. (Kao, 2017)

The above three extracts illustrate that newsgame practitioners rely on audience metrics to assess their newsgames. First, they still use some 'traditional' metrics, such as 'likes', 'reposts', and 'shares', to evaluate if their newsgames are popular. This helps them to explore whether the game format promotes the widespread transmission of content. Second, the characteristics of video games allow newsgame practitioners to assess the entertaining and enjoyable experience that newsgames provide to players. Players' behaviour and choices in the games can be learnt through metrics. For instance, practitioners can speculate on what parts of their games might not be pleasurable enough, leading to players quitting partway through.

However, metrics cannot help newsgame practitioners explore how players engage with and perceive the content of newsgames. Newswriters' reliance on data is growing, and this, in turn, influences their news decisions (Anderson, 2011). This has narrowed the assessment of newsgames because metrics only show a part of audience engagement. Although attracting audiences was an important reason for making newsgames, an over-reliance on metrics did not help explore how games actually enhance audience engagement with content. This also led to a lack of iteration (Foxman, 2017), which refers to learning from past productions to enhance subsequent practice. As Practitioner 17 (programmer, news organisation in the UK) said, they only adjusted the length of newsgames they developed later based on 'how long and how many things have to click to get through it'. Metrics rarely helped newsgame practitioners learn from the games they had already produced to make subsequent newsgames offer more effective audience engagement with content.

In addition to metrics, some newsgame practitioners searched players' comments to

revisit and assess this goal after their games were released. Interviewees described the comments they found:

I skimmed through almost all of the comments on our social media. Most of the comments are positive and relatively brief. But some said that the game lacked challenge and was not fun enough to play... This was inspiring for developing games. (Practitioner 1, editor, news organisation in China)

We saw that very clearly in the reaction and the feedback to the game. There was one person who said the game was rubbish because you could never win. It was anti-[a company] propaganda. It's an opinion, basically. We had a different person that said this is complete rubbish. It was probably funded secretly by [a company]. It was so easy, and I just made a lot of money... These helped to inform what to keep and what to drop in [another newsgame]. (Practitioner 15, editor, news organisation in the UK)

These abstracts reveal that reviews were a common way for practitioners to learn about players' ideas and feedback on newsgames. In the reviews, there were both comments on the enjoyment of newsgames as well as thoughts about the content. Newsgames practitioners considered these when they developed newsgames later. Compared with metrics, this was a more direct and concrete way to understand players' engagement with content and their expectations of newsgames. However, reviews of newsgames were often rare. Practitioner 4 (journalist, news organisation in China) said that there were only a few dozen comments on their newsgames, but 'fewer than ten comments were helpful for them' in reflecting on newsgames. The insufficient number of comments limited practitioners' understanding of audience engagement and improvements to newsgames developed later.

5.1.5 Summary of Section

This section began with the importance that newsgame practitioners placed on public affairs issues. They often reported on political and economic topics in practice but also noted the increasingly blurred boundaries between public affairs and entertainment in journalism. This has promoted various activities, including making newsgames. A key expectation for newsgames was to promote players' engagement with content about

public affairs. The production of newsgames was experimental in nature, and practitioners were often left to figure things out as they went along. As a result, they did not quite know to what extent their goals had been achieved, which created a need to evaluate the game after its release. Evaluation of newsgames was very metric-dependent. This may be helpful in measuring the exposure of newsgames, but it remains unknown to practitioners whether enjoyable experiences could contribute to players' engagement with the content. Although players' comments were helpful in understanding engagement behaviours, the number of comments remained relatively limited.

5.2 Newsgames

This section concerns newsgames on two topics: climate change and disinformation, exploring how newsgames provide a playful and enjoyable experience and how this experience can shape players' engagement with content. I make comparisons between the games to show the differences in enjoyable experiences. It is worth noting that the analysis of newsgames reveals possibilities for players' interaction with games. In other words, it shows the potential of newsgames rather than the players' actual experience.

5.2.1 Newsgames about Climate Change

Climate change is a common topic for newsgames (García-Ortega and García-Avilés, 2020; Gómez-García and De La Hera, 2022). For instance, *The Ocean Game* discussed in Chapter 4 covers the influence of rising sea levels on people's lives. This section analyses *The Climate Game* and *Measure Your Carbon Footprint* (测一测你的碳足迹) to examine how newsgames can enhance audience engagement.

5.2.1.1 The Climate Game

The Climate Game, published by the *Financial Times*, allows players to develop policies on climate change. This game does not ask players to defeat an enemy, but players need to manage resources to achieve specific goals and make decisions based on provided messages. At the beginning of *The Climate Game*, players are informed that they have been appointed as the global minister for future generations who has extensive powers over the countries of the world. The game tells players that the goal is to reduce global greenhouse emissions and keep temperatures from rising more than 1.5 degrees Celsius by 2050. Explaining the explicit game goals at the very beginning

has two potential impacts. First, this clarifies the direction of the player's efforts and thus increases the likelihood that players enjoy the gaming experience (Fu et al., 2009; Sweetser and Wyeth, 2005). A clear goal allows players to know the conditions for failure and success, and as players approach the goal, they may obtain the pleasure of mastery. Second, this also directly links the game to the topic of climate change and provides a real-world background.

As the game progresses, players can select an adviser to help them cut emissions. The potential function of choosing an adviser in the game is also multi-dimensional. At the level of providing a playable experience, it implies that this game will offer some 'hints' that help players overcome challenges. Players are then less likely to get stuck in a challenge and become overwhelmed. Challenging but not overly difficult tasks are likely to increase the enjoyment players receive (Fu et al., 2009). At the level of promoting audience engagement with content, the adviser as an NPC (non-player character) will not only tell players the basics of how to complete activities but also explain the information in the game. This can be seen as a way of combining the guidance of learning and the tutorial of the game (Arnab et al., 2015). Finally, these four characters are used to frame and contextualise the different aspects of climate change issues. Gina Green, alluding to the real-world figure Greta Thunberg, is described as a teen climate-change activist who is designed to reveal the impact of activism on climate change. Waldo Watts hints at how new technologies may shape the shifts in temperatures and weather patterns. David Deals is an influential businessman among leaders of all nations. This character highlights the important role of large corporations in climate change. As the name suggests, Catalina Congress represents politicians who commit to driving policy changes in order to solve the issues of climate change.

The main game mechanic shapes the player's potential enjoyment experience. Players are informed by the adviser that they have a budget of 100 effort points to spend on mitigating climate change. As the adviser explains, actions will cost more as the game progresses, but investing wisely will help players earn points back. If players run out of points completely, they will lose the game. This means that the main game mechanics are similar to 'a pure business simulation' (Rollings and Adams, 2003), which requires players to make reasonable spending to achieve the goal without undertaking construction. As a result, the enjoyment of *The Climate Game* comes from 'control' and

'challenge' (Sweetser and Wyeth, 2005). Players are expected to feel a sense of control over the management and go through an appropriate series of distinct and challenging situations.

The game interface consists of two main parts. The top left part shows the important indicators, and the middle part is the space where the player interacts with the game (see Figure 8). There are three important indicators: effort points, CO₂ (carbon dioxide) emissions, and time. This once again emphasises the goal, reminding players that they need to use effort points wisely to reduce the impact of greenhouse gas emissions on the planet within a set time frame. Players need to make choices, and the options will require dissimilar effort points and then achieve certain results. *The Climate Game* shows results in three ways. First, the indicators of effort points and CO₂ emissions will change with the player's choices. Players can assess the effectiveness of different mitigations.

Second, in addition to the change in indicators, *The Climate Game* provides textual explanations of important questions. For instance, there is a question about whether they want to deal with methane. If players choose to carry out the action, they will win bonus points and the game will also inform them that 'slashing methane emissions is the quickest way to slow global warming' and what measures can cut methane emissions. Feedback on players' actions is an important factor in increasing player enjoyment (Fu et al., 2009). Feedback allows players to assess distance and progress towards goals. The reward of points also informs players that they have made the right choices. Furthermore, feedback can reinforce important messages in video games (Arnab et al., 2015). Textual information included as prompts tells players why their choices work well and enhances the relevance of this game to the real world. In this way, *The Climate Game* employs appropriate feedback to enjoyable experiences and explains the content of climate change simultaneously.

Third, some feedback on players' choices is not immediate. There is a question in round 2 about whether players would like to spend effort points to protect people from weather extremes in the future. After players make decisions, there is no immediate feedback. As the game progresses to round 3, the impact of the previous choices will be seen. If players do not choose to help people improve their lives, they will protest when extreme

weather occurs, which causes players to lose effort points. Immediate feedback is often used to enhance the player's enjoyment (Desurvire et al., 2004; Sweetser and Wyeth, 2005). However, *The Climate Game* often provides delayed feedback messages to reflect the similarities with the real world. The above example illustrates this point: not investing in climate adaptation does not have a direct and immediate impact but may have a negative effect in the long run. *The Climate Game* puts more emphasis on promoting engagement with content through a playful approach rather than merely providing entertainment.

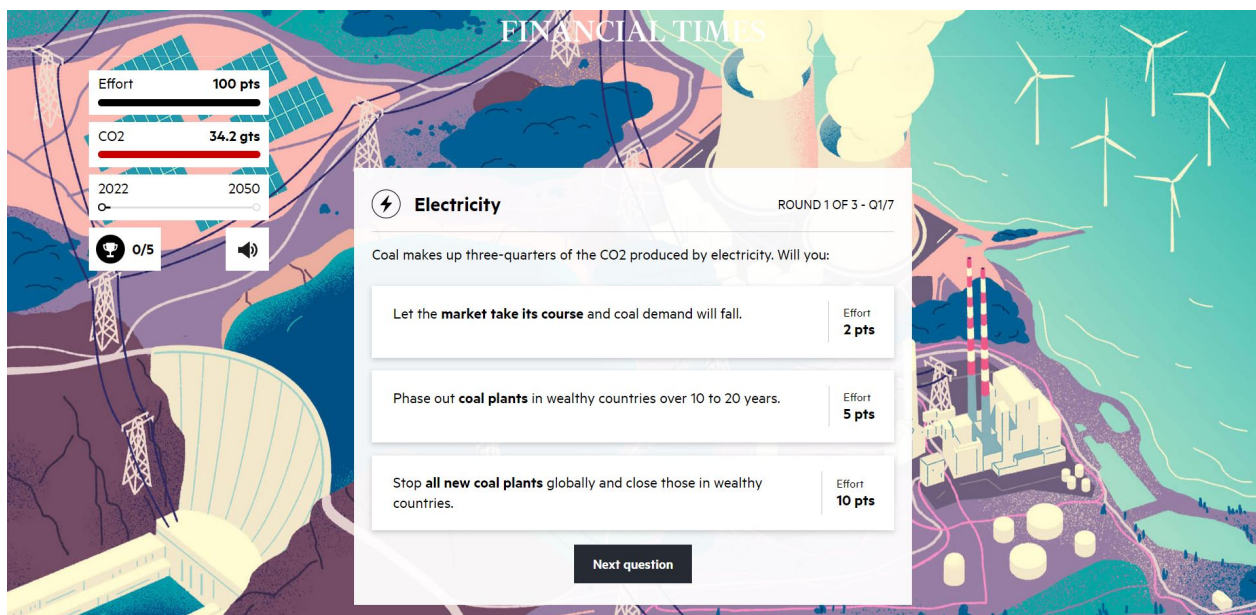


Figure 8. The interface of The Climate Game

There are other game mechanics that can contribute to audience engagement in this game. Players can invest in six types of new technology in the early stage, and advisers tell them the results of their investments later. Some investments will work out but others will fail. Suspense is an effective driver of players' enjoyment because it creates the expectation of a positive outcome (Klimmt et al., 2009; Moulard et al., 2019). This encourages players to focus on the results of their choices. At the level of content, this suspense mechanic underlines the uncertainty of solving climate issues with new technology.

Furthermore, *The Climate Game* sets up five rewards for the player. When players make a specific choice, they may unlock the corresponding award and earn extra points. Changing how people use land, for example, gives the player a reward called 'Nature'.

When players receive that reward, the game will praise the player's choice and inform them that planting a large number of trees and changing poor farming practices takes a great step towards saving our planet. Rewards have been used on news sites to promote user interaction with the system (Ferrer-Conill, 2018). In a similar vein, rewards, as a factor in improving player enjoyment, can enhance players' awareness of important information in *The Climate Game*.

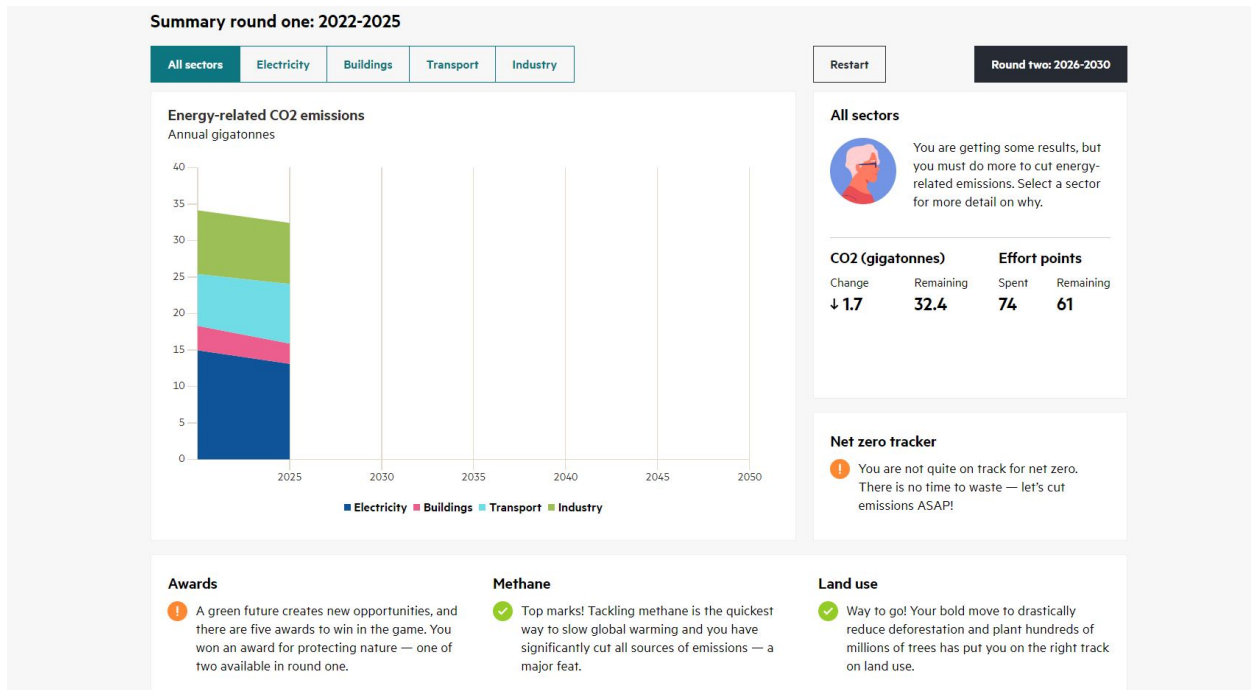


Figure 9. The summary board of The Climate Game

Moreover, there are 'intermissions' between different rounds in *The Climate Game*. In the 'intermission', players can see a statistics board of CO2 emissions and records of how they did in the last round (see Figure 9). They can also select a sector tracker to receive specific messages from the adviser. These messages explain what choices made a positive impact on climate change mitigation and where players need to continue their efforts. The role of feedback in reinforcing information can be noted here once again. This also shows how *The Climate Game* provides hints and support to help players overcome the challenges. In this way, players can reflect on previous decisions and make plans for future choices. This can promote players' enjoyment and motivation to think about game content (Klimmt, 2009). Hints and support also allow players to think about the causal relationship between choices and results, which helps them to better understand the information about climate change.

However, it is important to note that the pursuit of an enjoyable experience also leads to some problems. First, players will receive bonus points when they select particular options or achieve some stage goals. As discussed above, such rewards are helpful in providing an enjoyable gaming experience and may thus promote players' understanding of issues. The problem is that these rewards provide players with effort points. In this game, effort points can be seen as various resources, including money and manpower. It is questionable whether such resources can be replenished as a result of the completion of targets. In other words, there is a risk that *The Climate Game*, in order to offer an enjoyable experience, may make the information inconsistent with the real world.

Second, *The Climate Game* contains some deliberately exaggerated and funny content. There are many ways in which video games can generate enjoyment (Schaffer and Fang, 2019). Visual and textual elements can also contribute to the pleasurable experience of video games (see Lepre, 2015). In this game, players can request that all protein in diets must come from insects or send a spacecraft to Mars to mine for lithium. To a certain degree, these options are designed to contrast with the real world to produce a funny effect. However, it may make players feel that the information is too flippant to be credible.

5.2.1.2 Measure Your Carbon Footprint

Measure Your Carbon Footprint (测一测你的碳足迹) is another newsgame made by *ThePaper.cn*. Like *The Climate Game*, this game aims to provide information about climate change. However, *Measure Your Carbon Footprint* focuses more on how personal habits can inadvertently contribute to greenhouse gas emissions. This is also reflected in the way in which audience engagement is shaped.

This game offers a typical element of casual games – ‘easy to learn’ – referring to an uncomplicated game design that allows players to quickly understand how to play the game and have an enjoyable experience (Johnson, 2019). This element can also be used to establish a clear connection between game mechanics and content (King, 2021). In its introduction, *Measure Your Carbon Footprint* references obvious textual cues to clearly inform players that they need to find items producing excess CO₂ emissions and reduce overall emissions. This hints at how the game is played and emphasises that the game is closely related to climate change.

Once the game starts, players see an illustration of a residence (see Figure 10). Players can adjust the angle of the camera and zoom in/out of the illustration to find those items. When players successfully find an item and click it, a pop-up box appears. For instance, if players click the shower enclosure, they will be asked how long they will spend in the shower. After they input a number, they can see the change in CO₂ emissions in the upper right corner. This is the main mechanic of this game, and players need to find as many items as possible. Compared with *The Climate Game*, *Measure Your Carbon Footprint* is designed to encourage players to discover how to reduce greenhouse gas emissions from the little things around them. This encourages players to establish a connection between themselves and the content of the game. The increased self-relevance can enhance players' enjoyment and create a form of comprehension that is based on their own actions and corresponding results (Klimmt, 2009). This means that *Measure Your Carbon Footprint* can prompt players to think about the relationship between their own habits and CO₂ emissions.



Figure 10. The interface of Measure Your Carbon Footprint

Moreover, this game has a time limit (see Figure 10). Players should try to find all the items before the time runs out. Because items are not very easily found, the design of the time limit can create a sense of urgency. Quickly capturing the player's attention and

maintaining that attention during the entire game contributes to providing an enjoyable experience for gamers (Sweetser and Wyeth, 2005). *Measure Your Carbon Footprint* thus allows players to concentrate on the game, especially the climate change content.

Concentration can be further enhanced by providing different levels of challenges. *Measure Your Carbon Footprint* has simple game mechanics, but this is not the same thing as being easy. In the beginning, players are allowed to choose from three types of accommodation. The size of each residence varies, as do the furnishings within. Video games that have different levels of challenge are more likely to provide an enjoyable experience and make players concentrate on the tasks in the game (Federoff, 2002). In this game, different places of residence correspond to different levels of challenge. A larger and fancier residence means more items and distractions, so players spend more time and concentrate more on finding the right items. Players can try out the challenge that suits their game skills and are more likely to have an enjoyable experience. This can also direct the players' attention to the content of this game.

However, there are some problems with the potential audience engagement in *Measure Your Carbon Footprint*. Comparing this game and *The Climate Game*, the explanations for climate change issues in this game are insufficient. As mentioned above, *The Climate Game* tells players why their choices work for reducing CO₂ emissions in the 'intermission' part. In contrast, *Measure Your Carbon Footprint* mainly shows changes in numerical values and does not explain much about how the players' actions have an impact on emissions. This is likely to result in players not adequately understanding the link between their personal habits and climate change.

This game also counts how much CO₂ emissions the player's actions will help them reduce. Although players are told the weight of CO₂ emission reduction at the end, they are not told how to interpret this number. At the level of providing enjoyment, players do not have a way to measure their game performance, which reduces their likelihood of repeated play to overcome challenges. This will result in less exposure to information. At the level of promoting engagement with content, players cannot understand how their numbers relate to broader issues, such as the potential environmental impact of such a quantity of emissions.

5.2.2 Newsgames about Disinformation

Disinformation is another popular topic covered by newsgames (Grace and Hone, 2019; Roozenbeek and Van der Linden, 2019). This section compares *Fake It to Make It* and *Bad News* to analyse the ways in which newsgames allow players to understand how disinformation is created and disseminated.

5.2.2.1 Fake It to Make It

Fake It to Make It is designed by Amanda Warner and aims to explain the issue of false information, which is deliberately intended to mislead. Players need to run websites and produce false information to make a profit. This game begins with character selection and choosing what the main character wants to buy, corresponding to different prices. As discussed above, having a clear goal in a game helps players understand where to focus their efforts, which in turn increases the chance that they will have a positive and enjoyable gaming experience. More importantly, this selection emphasises the importance of money in this game and reveals that it focuses on how disinformation generates monetary benefits for the practitioner. The subsequent contextual information also reinforces this point as it tells players that they can profit when people view and click on advertisements on websites spreading fake news.

Fake It to Make It is a complex game that requires players to balance various factors, such as expenses and credibility rating, to progress. This can also be observed from the interface which contains a considerable amount of information (see Figure 11). However, the area where the most interaction takes place occupies most of the screen to capture players' attention. 'Goals' in the top right corner refer to the game's stage targets. In this way, the game constantly provides the player with intermediate goals and feedback. These can inform players of the 'distance and progress towards objectives' to enhance enjoyable experiences (Sweetser and Wyeth, 2005, p.9).

An important feature of *Fake It to Make It* is that it offers a non-linear gaming experience. Some of the games analysed earlier, such as the climate games, have a linear narrative, which means the sequence of events is fixed. In contrast, there is no stable sequence in *Fake It to Make It*, and players can explore it at their own pace. A significant benefit of utilising a non-linear narrative is the increased sense of freedom for players. This gives players the impression that they have control over the story progression (Ip, 2011). A

greater sense of control is considered to be one of the keys to generating enjoyment (Fu et al., 2009). This promotes the possibility for players to explore the game. More concretely, it allows players to discover how credibility and drama contribute to the dissemination of fake news. In this way, players can discover the complex dynamics of disinformation production, including setting up websites, writing and duplicating articles, purchasing social media profiles, infiltrating relevant groups on different social media, and keeping track of trending topics.

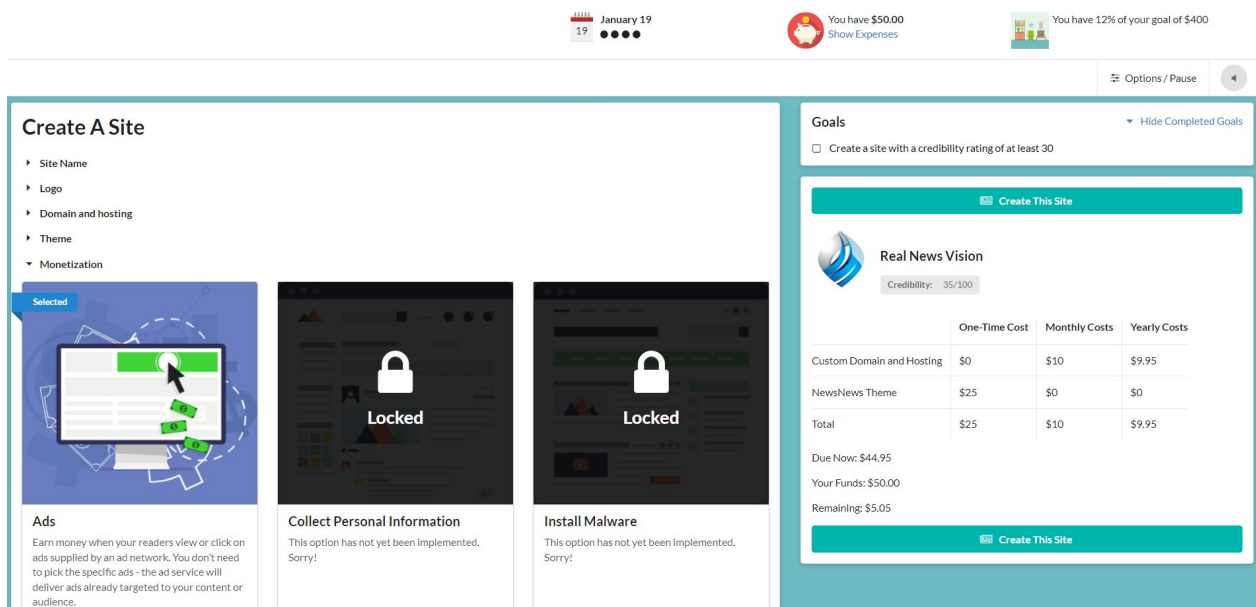


Figure 11. The interface of Fake It to Make It

The difficulty of *Fake It to Make It* can also contribute to audience engagement with content. This game is not easy, and achieving the final goal requires repeated attempts to figure out how to craft convincing and widely distributed disinformation. In this way, this game provides an adequate challenge, and players need to put in considerable effort to overcome it. This can increase players' enjoyment and may motivate them to repeat playing (Sweetser and Wyeth, 2005). Constant exposure to video games is an important element in promoting players' 'learning and knowledge acquisition from media messages' (Klimmt, 2009, p.258). *Fake It to Make It* thus has the potential to keep players exploring information through the process of trial and error.

When *Fake It to Make It* is considered as a whole, concentration is key to fostering player engagement with the content. The more players' attention is absorbed by the gaming activity, the more likely they are to have an enjoyable experience (Csikszentmihalyi,

2020; Wang et al., 2009). All gaming tasks are related to the content of disinformation, and players are encouraged to complete these tasks to achieve the goal. In other words, players need to concentrate on the content to make their gaming experience more enjoyable. Moreover, in this process, they can integrate the information and apply it to their decisions in the game. An important step of audience engagement with content is that audiences interpret news content and invest effort in understanding it by linking it to existing knowledge (Broersma, 2019). By grabbing players' attention, this game allows them to incorporate game content into their understanding of disinformation.

However, there are problems and risks with this game in continuing to provide enjoyable experiences and promote engagement with information. First, this game does not provide enough support and hints to help the player through the difficulties. For instance, one of the tasks is to make an article viral, but how an article is considered viral is not adequately explained. Players are less aware of which strategies are likely to be most effective and the correlation between different options and outcomes. This could potentially lead to the player being lost and unable to pass the challenges the game offers. Difficulty in completing challenges can take enjoyment away from players and prevent them from understanding the relevant messages.

Second, *Fake It to Make It* also has a relative lack of connection to the real world in terms of the acquisition of information. Despite this game being placed in a context based on two-party politics, the game represents an abstract confrontation between the 'Orange' and 'Purple' parties. The articles that players can write in the game largely describe broad themes without any concrete connection to real-world issues.

Furthermore, *Fake It to Make It* lacks a description of why disinformation can be widely disseminated and how it may impact consumers, as the perspective provided is entirely focused on production. The developer of *Fake It to Make It* describes it as aiming to help players be more sceptical of potential disinformation by showing them how it is written and spread. This game does have the potential to generate pleasure and further facilitate engagement with information. The problem is that enjoyment in this game is based on making financial benefits through the successful production of disinformation. It is difficult for players to understand the characteristics of disinformation and to be aware of its negative implications. In other words, this game might limit the player's possibilities of

understanding how to combat and resist disinformation. This poses a challenge to the design of newsgames. While playfulness can be used to provide enjoyable experiences, whether it appropriately allows players to engage with critical information is something that deserves more careful consideration.

5.2.2.2 Bad News

Bad News is a newsgame made by the Dutch company DROG together with the University of Cambridge. This game also invites players to take on the role of fake news creators to get as many followers as possible. In this way, game designers aim to expose the strategies and methods employed to deceive people and achieve political and economic purposes.

The game starts with players being told that they, as fake news creators, need to attract as many followers as possible while also maximising credibility. This goal is similar to that of *Fake It to Make It*, but *Bad News* does not make players manage resources. It is driven by the dialogue between players and the game. Therefore, the interface of this game is relatively simple (see Figure 12). In the visual part, it simulates social media applications like Twitter/X. This enables players to position the game in the context in which the issue of disinformation often occurs.

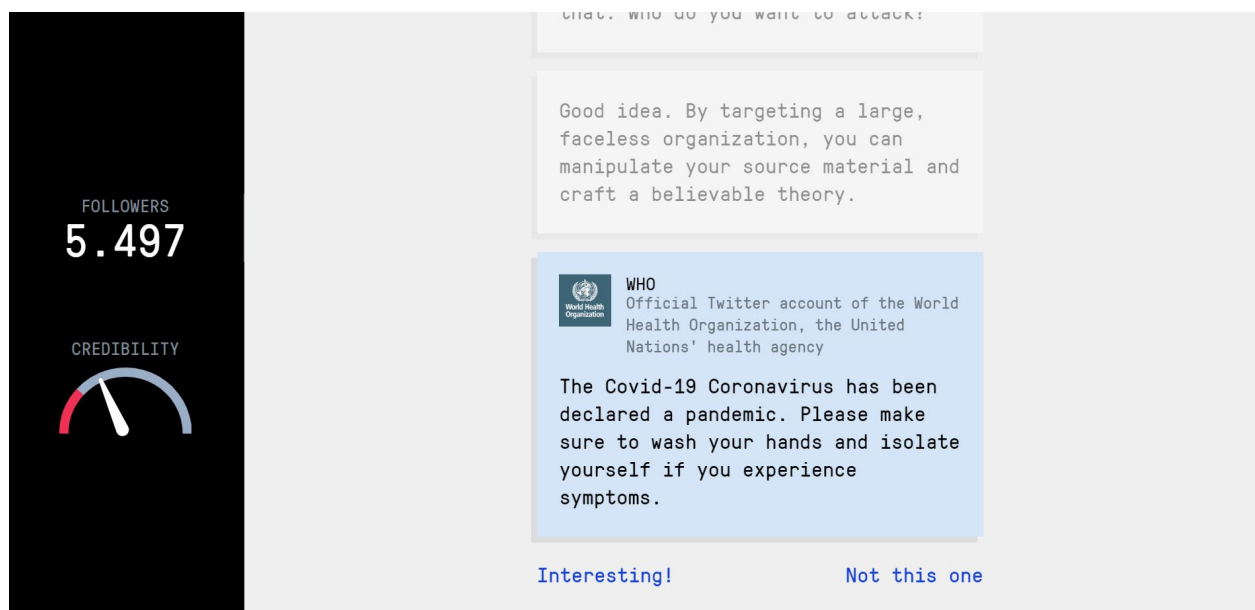


Figure 12. The interface of Bad News

Furthermore, it can be found that players need to make binary decisions to progress in

this game. Although players' selection can affect the metrics of followers and credibility, its narrative is still linear. The player can only drive the story forward in a relatively fixed process and is not free to explore the various parts of the game. This means that this game offers a lower sense of control than *Fake It to Make It*.

Despite this, *Bad News* still builds a bridge between enjoyment experiences and engagement with information. It has clear goals and helpful hints to make players' experiences as enjoyable as possible. Players are encouraged to build a broad base of followers and establish a high level of 'credibility'. In this game, there are six major scenarios focusing on different common strategies for creating disinformation. Players may choose less effective options, and the game usually reminds them at this point that their choice is not optimal and explains why. For instance, when players choose to post a conspiracy theory about aliens having built the pyramids, their followers do not believe it. Then the game suggests that 'a good conspiracy starts out with something realistic and expands on that'. This allows the player to correct mistakes and get closer to the goal. The dialogue-based gaming process provides immediate feedback to players to evaluate their previous choices, thus enhancing an enjoyable experience for the player. It also explains the content of the game and improves the player's understanding of how disinformation can spread widely.

Moreover, players gain badges and rewards if they successfully use the strategies learnt in the game, while they are punished for selecting ethical or invalid options for creating disinformation. The reward is an important factor in promoting an enjoyable experience for players (Lyons, 2015). For *Bad News*, this encourages players to explore strategies for producing fake news and allows them to understand how effective these strategies can be. By combining rewards and feedback, this game illustrates how impersonation, emotional elements, group polarisation, conspiratorial content, discrediting others, and trolling work for the dissemination of disinformation.

This game clearly describes the characteristics that may be present in disinformation, which opens up the possibility for players to defend themselves against it. Examples highly relevant to the real world are used to illustrate strategies for creating disinformation. For instance, the game employs a tweet about Covid-19 written by the WHO (World Health Organization) to explain how conspiracy theories are spread (see

Figure 12). 'Background and contextual information' is helpful for players to work through newsgames (Gómez-García and De La Hera, 2022, p.17). Likewise, these examples allow players to link their enjoyable gaming experience to the real world, and players can have a better understanding of strategies for creating disinformation. However, when players post false information in the game, it provides a few comments from followers but does not show the broader consequences of players' posts, such as being harmful to public health. This raises a potential risk that players will not learn why resistance to disinformation is urgent and important.

Considering the four games discussed together, it can be seen that newsgames usually integrate substantive content into enjoyable gaming elements. In the context of newsgames, the enjoyable experience inherently implies engagement with the content. Research on educational games suggests that such a parallel experience may be the most effective for players' learning and understanding of information (Ritterfeld and Weber, 2006). In this way, newsgames create a dynamic synergy between the two seemingly disparate aspects, and the playful approach can enhance players' engagement with content. This creates an environment that empowers players to engage with the content on their terms.

5.2.3 Summary of Section

In this section, I compared four newsgames respectively covering climate change and disinformation. It was shown that there is great potential for newsgames to provide an enjoyable experience and that such an experience is likely to facilitate players' engagement with content. The analysis showed that concentration, goals, feedback, challenge and control are key factors shaping players' engagement. They not only help players derive pleasure from playing games but also direct the player's attention to the content. Players need to be proactive to interact with games and understand the content to win. It should be noted, however, that this potential for playfulness is seldom adequately exploited in newsgames. The process of transferring from providing enjoyment to enhancing engagement, in particular, still needed improvement. There is a risk that newsgames may overly emphasise entertainment and become disconnected from public affairs issues. Moreover, this section mainly revealed the possibilities of newsgames rather than players' actual interaction with them. Players' gaming experiences are personalised, so they may have different understandings of the games

– this will be discussed further in the next section.

5.3 Newsgame Players

This section discusses players' understandings of newsgames and their gaming experiences. I open the section by outlining players' views on news and video games, which lays the foundation to analyse their perceptions of newsgames. I then document their thoughts on engagement with public affairs issues through newsgames and how they recognise the potential problems and risks.

5.3.1 Paying Attention to Public Affairs News

Most of the newsgame players (n=23) highlighted their interest in accessing public affairs news in their consumption of news and usually referred to topics such as politics, international affairs and economics. The extracts below show their interest in public affairs coverage:

I keep up with world news and politics. They regularly appear in the headlines on news sites and apps. I check these feeds every day from time to time. (Player 10, female, 29, Chinese)

I would read articles about politics or economics. These are urgent and important to me... I pay more attention to them. (Player 14, male, 24, British)

Public affairs news is seen as essential information that needs to be reported in a timely manner. It featured prominently in the news consumption of some interviewees and was marked as a matter of priority. About half of the interviewees (n=15) reported that they consumed entertainment news, and some of them expressed the idea that public affairs is more important than entertainment. This can be observed in the interaction below:

Player: I often read current affairs on news apps, such as Tencent News. I also read news on social media.

Interviewer: What kind of news do you read on social media?

Player: Mostly entertainment news. Well, should entertainment be seen as news?

Interviewer: Maybe. What do you think about that?

Player: I think it's sort of news, but it's not quite the same as other news. They are not very essential or important. I think it is still news, though. After all, it's also something that happened recently. (Player 5, female, 23, Chinese)

Similarly, Player 18 (male, 25, Chinese) stated that he sought out different types of news, but 'political and economic news' is more important to him. Entertainment news was in their news diet, but they considered public affairs to take precedence over entertainment.

Moreover, my interviews demonstrated that some newsgame players did not completely separate entertainment and public affairs in their daily consumption. First, some interviewees found that entertainment news is an available route to engaging in public affairs. Player 6 (female, 23, Dutch) often read news stories about popular culture and paid attention to issues about 'racism and sexism'. Player 20 (male, 25, British) claimed that he was interested in news reports that covered 'sports celebrities speaking out on politics'. Entertainment and public affairs were meaningfully linked at the content level.

Second, interviewees found that content on public affairs can be combined with forms of entertainment. Player 15 (female, 25, British) thought political talk shows and comedy shows could be highly related to news and offer a mixture of public affairs and entertainment. One interviewee mentioned that he watched the news on TikTok:

I watch TikTok every day, such as basketball and cars... I sometimes come across news content. Some news stories seem to be very serious, like telecom fraud, but the news media adds some funny elements. (Player 1, male, 23, Chinese)

Interviewees found that news is no longer confined to traditional forms of distribution but has expanded its range. Players' attitudes towards such a hybrid shaped their expectations of newsgames before they played them. Player 22 (female, 21, British) hoped that newsgames could make news more interesting and easier to understand. Players with a positive attitude often hoped to learn about news content while having an enjoyable experience. Player 4 (male, 27, Chinese) expressed concern that forms of entertainment may 'trivialise in-depth coverage' and important content would be overlooked as a result. Players who had a negative attitude worried that the

entertainment would crowd out the content in the context of newsgames. Despite the different attitudes, a common thread that can be observed is the emphasis on content: players expected that newsgames could provide a space where they could effectively engage with content.

5.3.2 Purpose of Playing Video Games

The previous subsection discussed how interviewees perceived the integration of public affairs and entertainment that exists in journalism; it is important to consider their preconceived ideas of the relationship between enjoyment and video games. For those interviewees who, at least occasionally, played video games, the hedonic dimension was the most frequently given reason. Almost all players used words including enjoyment, entertainment, and pleasure to describe their experience of playing video games, as the extracts below show:

I just play games for pleasure. I would like to be alone for a bit during the day and let myself relax. Playing games is my choice. (Player 1, male, 23, Chinese)

For me, playing a video game is for fun and entertainment... I love playing with friends, but it's also important that the game is interesting. (Player 15, female, 25, British)

Pleasure and similar words were employed by interview participants to explain why they spent time playing games. Interviewees mentioned different ways of getting pleasure from playing video games. Player 2 (female, 26, British) said that 'the process of character creation' was the part she found interesting. Player 7 (male, 23, American) saw 'winning the match' as an important source of enjoyment when he played multiplayer games. Player 24 (female, 35, Chinese) was keen on simulation games and 'overcoming challenges' and 'doing creative things' – both made her happy when she played video games. Although they derived pleasure in different ways, they all attempted to have fun by playing games. As Player 2 (female, 26, British) explained, she always hoped the game she was about to play would be enjoyable. Because interviewees want to have an enjoyable experience, they usually expect games to have such potential. In other words, games are supposed to be enjoyable and not boring.

Some interviewees mentioned that they had been exposed to some games which were not merely hedonic. Interviewees are usually not actively searching or looking for those games but rather stumble upon them. One interviewee talked about some casual games he had played before:

I've played some advertising games. I think it is a public relations tactic. Some companies use games to lift brand awareness or engage target audiences... Some games are good, and others are terrible. I mean, some of them are boring and rough. (Player 26, female, 26, Chinese)

Player 10 (female, 29, Chinese) also played a free online game about environmental conservation in which she saw a national park from the perspective of a bear, and she thought that 'the game was new at first, but then became boring'. It can be found that participants still see entertainment as an important element in assessing video games which are not purely hedonic. This means that their expectations of newsgames are likely to be similar, and they will want to have an enjoyable experience by playing them.

Moreover, some interviewees mentioned learning as a purpose of playing video games. They usually evaluated the game from two aspects: enjoyment and effectiveness of learning. Player 1 (male, 23, Chinese) played a game about economics that required all students in a module to participate. He remarked that the game was quite challenging, and he had fun, which helped him 'understand the content in lectures'. Player 8 (male, 28, American) had tried an educational game that helps people get started with programming; he criticised the game for being too easy and boring, so the game did not make him feel that his learning performance had been enhanced. In these newsgames, players considered whether the game promoted their mastery of the content to be a key purpose. In addition, enjoyment is considered to be the key to video games, and whether it is enjoyable or not has an influence on players' engagement with content.

5.3.3 Engagement with News Content through Newsgames

Most newsgame players (n=20) indicated that they found some newsgames interesting during and after playing the games. The interaction below shows the fun that players experienced in the game:

Player: This game [College Scholarship Tycoon] is far more interesting than I thought it would be.

Interviewer: What did you think the game might be like before?

Player: I thought it might be a particularly easy and silly game, like a tile-matching game. But this is not bad. It's quite fun. I need to work out how to allocate the funds. (Player 3, male, 25, Chinese)

This interviewee found playing newsgames to be more pleasurable than expected. This was a common finding in my interviews. Player 14 (male, 24, British) had supposed newsgames would be very bland, but after playing some, he thought they were mostly well-made and interesting casual games. The previously mentioned expectation that players think the game should be enjoyable still works for playing newsgames, while they believed that newsgames were likely to fall short of this expectation before actually engaging with them. However, after playing the newsgames, interviewees usually considered their experiences to have been enjoyable.

Enjoyment is recognised as key to promoting engagement with content. Jenkins (2022) commented that *The Climate Game*, as a confluence of news and video games, made issues about climate change 'much more accessible' as 'playing is a lot more fun'. More concretely, concentration played an important role in promoting interviewees' engagement with content. The state of concentration can provide players with enjoyable and valuable experiences when they are playing video games (Johnson and Wiles, 2003). During interviews, it could be observed that players often hesitated to make decisions. Player 15 (female, 25, British) almost always spent more than 30 seconds making choices when she played *The Climate Game*. Another interviewee explained why she was so cautious during play:

I didn't realise I spent such a long time. The game made me feel like my choices mattered, so I got caught up in [The Climate Game]. (Player 24, female, 35, Chinese)

This shows that Player 24 might have experienced 'flow' (Csikszentmihalyi, 1990) when she played newsgames. Her sense of time was altered, and she was not distracted from her surroundings. The flow experience was rare in my interviews, and only three

interviewees reported they were once in a similar state. However, many newsgame players claimed that they were very focused on content when they played newsgames. Player 4 (male, 27, Chinese), for example, said that the newsgame did not allow him to concentrate as much as playing a commercial game, but it grabbed his attention far better than a written story or a short video. Players did not see newsgames as trivial entertainment but as an approach to grab their attention. In addition to the enjoyable experience, such a sense of concentration also allowed players to think about public affairs content.

Players described the different ways in which they became focused and thus derived pleasure from newsgames. First, some interviewees stated that they had a feeling of exploration when they played newsgames:

Playing newsgames is a whole different experience. It's like I'm on an adventure or something, just exploring and figuring things out. I enjoyed discovering new things. (Player 27, female, 22, American)

This can also be observed in the claim of Player 11 (female, 24, Chinese) in that what she liked about newsgames was that they gave her 'the power to control how I consume the news'. For these interviewees, the sense of control allowed them to play newsgames at their own pace and enjoy the gaming experiences, which enabled them to better explore the content. This matches the argument of Konjin and Bijvank (2009) that becoming 'active participants' and 'position learners' helps players to grasp the knowledge in serious games. The interplay between playfulness and content allowed for a uniquely engaging and informative experience that captivated players and left them with a deeper understanding of public affairs content.

Second, the challenge is seen as another important factor for newsgames to provide an enjoyable gaming experience. As the above extract shows, Player 3 (male, 25, Chinese) needed to think deliberately to achieve the goals. When Player 25 (female, 20, Kenyan) played *The Amazon Race*, she said that she wanted to play better to get her points back up after seeing them drop. It made her feel happy to raise her points by completing tasks. The mastery of challenges is a key part of the enjoyable experience for newsgame players.

To overcome challenges, some interviewees said they paid considerable attention to the content of newsgames. One interviewee talked about his efforts to conquer the challenges in *The Climate Game*:

After playing the first round, I looked at the text and felt I should be a bit more aggressive to complete the objective. So I considered more carefully which options are more helpful... My performance became better. I think the climate issue just needs more aggressive measures to be addressed. (Player 23, male, 30, Chinese)

This extract shows that the idea of overcoming challenges and completing objectives makes players more conscious of the content in the newsgame. Player 9 (male, 31, Chinese) noted that he 'learnt the game mechanics and gradually found the key to winning' in *The Climate Game*, which was similar to his experiences of playing other simulation games. Players think about the content to develop their strategies for tackling the challenges and think about the effectiveness of their actions by whether they could overcome challenges. By requiring players to think critically and strategically about the content presented in the game, players are prompted to become more conscious of the underlying topics and issues.

Third, hints and feedback were described as key to facilitating an enjoyable experience. Although Player 20 (male, 25, British) knew less about the policy issue of sea level rises before playing *The Ocean Game*, 'the consultant's explanation of the various measures' in the game allowed him to adopt an effective strategy to win the game and to understand that issue. When Player 26 (female, 26, Chinese) played *The Climate Game*, she carefully checked the changes created by her choices. Player 26 wanted to know 'why the decisions are effective or not in addressing climate change'. From the perspective of enjoyment, this makes solving challenges traceable, and players are more likely to know how to win the game. The problem and the corresponding solution are also linked more intuitively. Therefore, players are guided appropriately in understanding the public affairs content presented in newsgames.

Fourth, repetitive play is an important factor in increasing players' attention to content.

Some interviewees suggested the idea that they would like to replay a newsgame:

Player: I think I could have won. Can I play again?

Interviewer: Yes, we have enough time.

Player: Now I understand how to win. I didn't get it at first. By the time I realised what this game was talking about, it was too late. (Player 24, female, 35, Chinese)

Challenging newsgames can make some players think of repeated attempts. Similarly, Player 21 (male, 22, British) played *The Uber Game* twice and tried the hard level the second time. This is related to the difficulty of the game itself and to the players. Those who can derive pleasure from winning the games are more likely to keep trying, and the appropriate level of difficulty increases the possibility of replaying games. As they play the game repeatedly, players gain a deeper understanding of the content, which helps them increase their chances of winning.

Furthermore, enjoyment can also come from a subversive and creative play style. As discussed above, there were different sources of enjoyment when interviewees played video games, such as creating characters and completing objectives. In the context of newsgames, a few players (n=4) did not attempt to accomplish the goals directly. Play can be seen as an activity in which players can move freely within a structured space (Salen and Zimmerman, 2003). As one interviewee noted:

*I sometimes want to try going off the beaten track because it's fun. So I just tried to pick some options that seemed surprising and unusual [in *The Climate Game*]. (Player 17, male, 20, Chinese)*

This approach of freely experimenting against the game's original intent could also provide enjoyment for players. When Player 21 (male, 22, British) played *Fake It to Make It*, instead of following the trajectory set by the game, he took some time to create news that did not contain false elements. Player 21 explained that such a process allowed him to find out why 'disinformation can spread rapidly'. As players learnt what happened if they did not complete goals, they could think about what the game revealed from a comparative perspective. The enjoyment that came from this subversive play style

similarly helped players engage better with public affairs content.

In the disengagement stage, players may decide to post a comment or take other actual behaviours. At the end of newsgames, players are often invited to share the games and their journeys on social media. Because of the experimental context of interviews, none of the participants did so. Instead, I asked them about their willingness to share newsgames. More than half of the players (n=17) did not think they would share newsgames, and this was highly relevant to their social media usage habits. As Player 4 (male, 27, Chinese) said, the reason he did not want to share newsgames is that he almost never does such things on social media. This aligns with the finding that few players would be willing to share the documentary simulation game (Nash, 2015). For those newsgame players who were willing to share, two reasons were repeatedly mentioned:

Of all these games, the one I'm most likely to share is The Uber Game. It's the most interesting game and provides a clear picture of a driver's life. I have my own standards for what I share and don't want to share anything that is too low quality. (Player 1, male, 23, Chinese)

[The Climate Game] is actually like learning something in an interesting way. I think it's helpful to understand climate change. It explains what will work and what might not work too well, covering various aspects... I think I might share it with my friends. (Player 25, female, 20, Kenyan)

First, newsgames were characterised as an engaging and distinct approach to accessing news content. This not only captured the attention of players but also prompted them to share this novel method of news consumption with friends or relatives. Second, some newsgames were praised by players because of the depth and detail with which newsgames address issues. This led to the content being deemed worthy of wider spread, thereby increasing the likelihood of sharing by interviewees.

The reengagement stage refers to users choosing to engage with similar content again (Broersma, 2019), and newsgames could exploit this process. First, newsgames developed players' interest and motivation; the extracts below provide typical examples:

I didn't care about the story about Uber before, but The Uber Game draws me into that. Now I want to learn more about Uber. (Player 12, female, 26, British)

[The Climate Game] was interesting and showed me something I didn't know before about climate change. The ones related to buildings, for example, hadn't occurred to me at all before. I would like to look further into it. (Player 16, female, 24, Chinese)

It was clear across the interviews that newsgames can foster an interest in public affairs news, even around issues players had not intended to learn about. Although interviewees generally expressed the importance of public affairs issues before playing newsgames, not all topics were of interest to them. Video games are believed to reduce resistance and avoidance of certain messages (Klimmt, 2009). Player 14 (male, 24, British) said *The Climate Game* made climate change, which he found to be a banal topic, interesting, and he discovered novelty as he played it. The enjoyment of newsgames can help players get past the potential resistance to messages at the beginning, and then the enjoyment of playing games generates interest in the content. A study discussing players' different media preferences shows that some audiences may unintentionally avoid exposure to public affairs issues (Skovsgaard and Andersen, 2020). However, newsgames have the potential to evoke and revive their interest in such matters. Playfulness brings enjoyment to public affairs news, which generates renewed interest in the topic for part of the audience.

Second, the cultivation of interest is also reflected in 'the extended reading'. Newsgames are often embedded in a series of reports, and there are different journalistic forms covering the same topic. Player 1 (male, 23, Chinese) clicked on a link to an article immediately after the game, which he later reported was because '[The Amazon Race] is interesting, and it caught my attention'. Player 27 (female, 22, American) expressed her willingness to investigate the issue of admissions after playing *College Scholarship Tycoon*. It can be found that players' interest in the topic could be piqued immediately after their gaming experiences. The effectiveness of the series of reports is demonstrated, as players' focus is likely to immediately lead them to more coverage.

'The extended reading' could enhance players' engagement with the content. As one interviewee explained:

These interviews really shed some light on things. Now I get why the college had to make those tough decisions. Playing [College Scholarship Tycoon] made me feel bad about what happened to the students. The interviews provide another perspective. (Player 12, female, 26, British)

Likewise, after playing *7 Ways to Defy Death*, Player 8 (male, 28, American) took time to read the related article because he wanted to confirm how far the medical technologies in the game had developed in the real world. Newsgames, together with news coverage in other forms, were considered to provide a more comprehensive picture of the problem than newsgames on their own. Relevant news stories can lead players player to discover more details or see another angle of an issue, which enhances players' engagement with content.

5.3.4 Problems and Risks

The above subsection illustrated that newsgames can foster players' interest in public affairs news and promote their engagement with content. However, it is worth noting that this type of acquisition varies from person to person and from game to game. In other words, interviewees found some newsgames interesting and others boring, and one newsgame could also be rated differently by different players. The first problem is that the experience of playing some newsgames can be mediocre or even boring:

[The Uber Game] is not that fun for me because there's nothing unexpected. It didn't catch my attention. (Player 2, female, 26, British)

To be honest, I found [Bad News] a bit dull. It didn't really feel like a game to me. I wanted to quit the game halfway through. (Player 6, female, 26, British)

Although *The Uber Game* was considered enjoyable by many of the interviewees, Player 2 found their experience boring. Some other newsgames were considered by many people to be monotonous. For instance, Player 17 (male, 20, Chinese) and Player 26 (female, 26, Chinese) all found *Making Money with Funds* boring. In an article about *The*

Uber Game, Kaser (2017) thought not being able to actually drive is disappointing in terms of gameplay. In such cases, interviewees often claimed that they were not attracted to the games and were not impressed with the content. As two interviewees noted:

I don't like those simple games. They don't interest me, and it seems like the game is over before I learn anything. I doubt whether those would really qualify as news. (Player 7, male, 23, American)

I don't think I would have finished [The Amazon Race] if I wasn't in the interview. This game didn't attract me at first, and it's a little too long to play. (Player 11, female, 24, Chinese)

Enjoyment was an important condition for getting players to take the initiative to understand a game's content. In the same way that newsgames could increase players' interest in a topic, the lack of enjoyment caused players to avoid engaging with the content. This is in line with the argument of King (2021) that serious games should be 'immediately fun' to make players focus on messages. Games that fail to provide players with a sense of enjoyment find it difficult to retain players to completion, thus reducing the possibility of players engaging with the information conveyed by newsgames.

Moreover, players talked about the appropriate combination of playfulness and content. Player 5 (female, 23, Chinese) stated that newsgames are less interesting than video games she had played before, for example, the *Super Mario* series, adding that newsgames have 'the additional value of explaining real-world problems'. Enjoyment did not stand alone as an important factor in newsgames, and keeping players focused on the content in an enjoyable way was important for players. Player 21 (male, 22, British) remarked that *Brexit Bus* did not explain why Brexit was very difficult as it only allowed players to control a bus through a rough road. As Player 19 (female, 22, Chinese) explained, she thought the game design of *Steer through the Suez Canal* was not effective because it did not tell players why the ship was difficult to move after it became stuck. This reflects players' expectations that newsgames should help them better understand a problem rather than simply act as entertainment.

A risk of newsgames relates to holding the player's attention. The above subsection showed that playfulness can help players concentrate on the content when they are playing. However, the player's attention was not always drawn to the content:

[Fake It to Make It] is really interesting... I just wanted to win but did not think about the fake news itself. (Player 22, female, 21, British)

This extract shows that remaining focused on newsgames does not necessarily transfer attention to content. Some interviewees focused on the content, while others did not, depending on the interaction of the specific player with the particular game. Player 3 (male, 25, Chinese) stated that *Fake It to Make It* made him consider in depth the reasons for the creation of fake news. Player 28 (Male, 24, Dutch) played *The Uber Game*, observing that he thought more about how to make money as a driver rather than the imbalanced relationship between Uber and drivers. The subjectivity of players has a significant impact. More importantly, however, there was a risk that the newsgame would leave players more obsessed with winning than understanding what the game was about.

Furthermore, some interviewees expressed concern about whether playfulness would undermine the presentation of public affairs in newsgames:

I think the [Bad News] may exaggerate things. It is very dramatic, and the impacts of tweets are exaggerated. I can understand that this is a game after all. It's hard to strike a balance. (Player 13, male, 28, Dutch)

Chapter 4 points out that there is a risk of newsgame oversimplifying real-world issues, which can lead to questioning of truth claims. Likewise, the over-pursuit of enjoyment may cause exaggeration, and this can also make players suspicious and even distrustful of the content. Player 17 (male, 20, Chinese) sometimes felt that *College Scholarship Tycoon* 'did not thoroughly explain the problems' as it did not show how students applied for college. Player 27 (female, 22, American) thought it would be better if *The Climate Game* could show more about the impact of policies on people's lives. Newsgames are often designed to provide players with a specific and playful perspective (Arafat, 2020; García-Ortega and García-Avilés, 2020), which may lead to a relatively narrow account of the news story. In that sense, the enjoyable experiences did not automatically

enhance players' engagement with content. How to manage the balance of playfulness and content is an important challenge for newsgame design.

5.3.5 Summary of Section

This section revealed that interviewees often saw public affairs news as an important part of their news consumption. I gathered interviewees' views and experiences of combining public affairs and entertainment in the news. Players thought it was possible and highlighted the idea of engaging with content in interesting ways. Players' perceptions of video games suggested that they expected games to be enjoyable and interesting, even though they might also have purposes such as learning. This set the stage for a discussion of players' interactions with and perceptions of newsgames. In general, players often found newsgames to provide an enjoyable experience due to their playful nature, and some stated that newsgames could make them concentrate more on the content than other forms of journalism. This raised players' interest in public affairs issues and helped them develop a deeper understanding of the issues. It is important to note that there were still problems and risks, including failure to generate interest and where players focus their attention in these games.

5.4 Conclusion of Chapter

In this chapter, I explored the idea that the enjoyable experience provided by newsgames can promote audience engagement. The first section offered an overview of how newsgame practitioners perceived this idea and applied it to journalistic practices. Newsgame practitioners emphasised the importance of public affairs news in their work and noted the blurred boundaries between public affairs and entertainment. Such an integration did not remain at the level of content but has been extended to form as well. Newsgames are considered to provide an enjoyable experience and thus promote players' engagement with public affairs issues. The development of newsgames has been largely experimental. Therefore, practitioners have explored how video games could offer enjoyment and how they might facilitate players' mastery of content, including studying serious games and consulting game developers. For practitioners, this also led to a need to evaluate newsgames. However, practitioners were limited in their assessment of the effectiveness of the enjoyment experience. While metrics could demonstrate a broad profile of players, they do not allow practitioners to understand how

players engage with content. Comments and reviews of newsgames could provide some insights into engagement, but the number of such comments the games attracted was relatively small.

The next section focused on newsgames themselves to address the ways in which the enjoyable experiences of playing newsgames may contribute to audience engagement with content. Newsgames do not deploy enjoyment merely as a reward for engagement or as a 'door opener' to motivate players. Gaining enjoyment and engaging with content often occur simultaneously in newsgames. From a detailed point of view, I found that a range of factors, including concentration, goals, feedback, challenge, and control can all contribute to players' interactions with newsgames. These factors are the foundation of an enjoyable experience, and they also direct the player's attention to the content. Newsgames require players to engage with and understand the content so that they can tackle the challenges and ultimately achieve the goals of the games. However, the analysis of newsgames revealed that newsgames did not fulfil their potential. Newsgames sometimes place too much emphasis on enjoyment and thus limit the potential for players to connect games to the real world.

In the final section, I investigated players' actual engagement with newsgames. Players' preferences in news consumption and experiences of playing video games shaped their expectations of newsgames. They thought that newsgames should be enjoyable and entertaining and help them understand the content better. Newsgame players compared newsgames with other journalistic forms and found that newsgames offered more enjoyable experiences, and enjoyment was highly correlated with concentration. The sense of exploration, challenge, feedback, hints, repetitive play, and subversive play style all shaped players' concentration, which also allowed players to focus on understanding and applying the content. Furthermore, newsgames could foster interest in particular public affairs issues after finishing the games, and a few players were willing to share newsgames on social media. Newsgames not only promoted audience engagement with content during play but also had the potential to enhance the disengagement and reengagement phases. It is worth noting that there were some problems and risks identified with newsgames. A lack of pleasure could lead to the players' attention not being drawn to the game's content. Some players noted that while newsgames provided a sufficiently enjoyable experience, they just wanted to win without

thinking deeply about content related to public affairs. In the context of newsgames, the optimal balance between entertainment and content remained a challenge in shaping audience engagement with news.

Chapter 6 Advocacy

The chapter considers what it means to view newsgames as a form of advocacy journalism, interrogating the subtle ways in which they might be seen to give visibility to social issues, make arguments and shape responses. Advocacy had been a feature of journalistic culture before the ideal of objectivity prevailed (Janowitz, 1975; Schudson, 2001; Waisbord, 2009). Despite its current popularity and historical significance, advocacy journalism has been chronically under studied (Thomas, 2018). Advocacy journalism is a fluid and uncertain area, and it is important to examine how advocacy exists in journalistic practice. Waisbord (2009) distinguishes, in terms of purpose, between two different models of advocacy journalism: those oriented toward personal and political interests; and those oriented toward promoting social change. Advocacy journalism also shares similarities with other concepts, such as explanatory journalism (Salgado and Strömbäck, 2012) and solutions journalism (Walth et al., 2019), as it highlights opinion and analysis. Moreover, 'type of media platform' and 'story format' are considered to impact the degree to which advocacy exists in news stories (Fisher, 2016). This takes newsgames into the debate on advocacy journalism. Video games can develop arguments towards issues based on game logics and experiential engagement (Bogost, 2007). In this way, newsgames may differ from other journalistic forms because they highlight a way for players to interact with games to present arguments, which seems to offer new possibilities for engaging audiences and connecting them with social issues.

The chapter begins by outlining newsgame practitioners' careful approach to advocacy journalism. These findings set the ground for how they produce two types of advocacy newsgames and justify the experiment with newsgames to advocate. Then the chapter moves to several newsgames, and I analyse in detail two ways in which advocacy exists in newsgames. This links to how newsgames frame issues and suggests action for change. The final part focuses on players and their experiences with advocacy newsgames. This subsection investigates what types of advocacy they found acceptable, how they negotiated the game's arguments through interaction, and why they acted or chose not to.

6.1 Newsgame Practitioners

This thesis sees advocacy journalism as the practice of expressing positions and arguments to support particular ideas. In my interviews, newsgame practitioners explained how they thought about advocacy in journalism and how they made newsgames which may contain a certain degree of advocacy. First, newsgame practitioners were cautious about the concept of advocacy. Second, newsgame practitioners employed a series of tactics to justify the production of newsgames with the potential of advocacy. Third, advocacy newsgames they produced could be grouped into two categories.

6.1.1 Being Cautious about Advocacy

During interviews, newsgame practitioners almost never defined themselves as people who specialise in making newsgames, claiming that the production of newsgames is only a part of their work. Therefore, how newsgame practitioners perceived the relationship between advocacy and journalism in a larger context became an important issue in exploring newsgames. Some newsgame practitioners (n=8) claimed that advocacy is not the goal of their jobs. This can be observed in the extract below:

I don't think our intention is to advocate something. The intention was absolutely not to be persuasive or biased in one way or the other. We just want to tell people about what's going on. (Practitioner 5, director, news organisation in China)

This interviewee described her coverage as informing audiences, and she did not want her job to be seen as advocacy. It can be found that this interviewee used 'biased' as a substitute for advocacy or persuasion. In other words, the goal of advocacy is believed to result in biased ideas in the coverage. From a historical view, coverage containing arguments and opinions was separated from mainstream journalism for a long time in the 20th century (Schudson, 2001; Thomas, 2018). This allowed newswriters to claim that their reporting was so-called 'objective'. This separation can be found to still affect journalism, specifically in the cognitive role of some journalists – in what journalists want to achieve through their work (Hanitzsch and Vos, 2017). Practitioner 13 (journalist, news organisation in China) stated that providing a viewpoint will likely lead to a

misunderstanding of the news story. For these interviewees, the advocative function is regarded as risky or problematic, so they did not want their work to be linked to advocacy. As Practitioner 20 (editor, news organisation in the US) explained, advocacy is not what he intended to do, but drawing audiences' attention to important issues is at the core of his job. Although Practitioner 20 expressed avoidance of advocacy, his quote about capturing attention to important problems echoes 'the civic model of advocacy journalism' (Waisbord, 2009), which highlights increasing public awareness and stimulating public discourse on particular issues. This reveals that there were elements of advocacy, to a greater or lesser extent, in the practices of newsgame practitioners.

Moreover, some interviewees explicitly saw advocacy as a feature of journalistic practice. These interviewees suggested that advocacy was common but overlooked in journalistic practices. One interviewee offered a typical example of this view:

When it comes to journalism, we should remember that advocacy can sometimes be part of the picture... We should consider advocacy carefully rather than pretend it doesn't exist. This idea guided how we made our newsgame... We still need to research the issue and present different sides of it. (Practitioner 21, editor, news organisation in the US)

Similarly, Practitioner 19 (journalist, news organisation in the US) indicated that their team spent several days discussing how to present and support different perspectives on the issue when they were making their game. Practitioner 27 (journalist, news organisation in China) said that it was common to see news that supported specific ideas, and in this regard, newsgames were not fundamentally different from other journalistic forms. There are two points to unpack here. First, this highlights the idea that advocacy was believed to be deeply rooted in journalistic practice. This aligns with the idea of the 'advocacy continuum', suggesting that advocacy is present in almost all news to varying degrees (Fisher, 2016). Second, some practitioners considered how to configure advocacy. As a result of noting that advocacy in newsgames may be more visible and intense, newsgame practitioners were more careful about advocacy. They attempted to ensure that the ideas they advocated were well-founded and were mindful of how they approached advocacy.

The second point was more widely reflected in my interviews. Some interviewees did not explicitly state that advocacy was inevitable but acknowledged that it existed in their journalistic practice. Although Practitioner 16 (journalist, news organisation in the UK) admitted that sometimes she would mention solutions to address social problems in practice, she always strives not to create bias. Practitioner 4 (journalist, news organisation in China) stated that they carefully considered whether the resources they had were sufficient and sound enough to support their thought and appeal. Advocacy, as an interventionist idea, has long been marginalised and even seen as incompatible with mainstream journalism (Janowitz, 1975; Thomas, 2018). This deliberate approach exemplifies how journalism game practitioners attempt to navigate and, in some cases, justify advocacy as a journalistic role. Newsgame practitioners recognise advocacy as a challenge which is reflected in their cautious approach to advocacy within the newsgame space.

6.1.2 The Strategic Ritual of Advocacy Newsgames

The cautious attitude towards advocacy was further reflected in the production of newsgames. Chapter 4 found that the new type of 'strategic ritual' (Tuchman, 1972) was used to defend the presentation of truth claims in newsgames. Similarly, newsgame practitioners adopted several steps to claim that it was justified to produce newsgames that made arguments about issues. Newsgame practitioners mainly negotiated rather than questioned the basic maxims of traditional journalism. Newsgame practitioners' caution in adopting advocacy is first demonstrated in their choice of topics. The choices underwent extensive and careful discussions among newsgame practitioners, as the extract below shows:

We've taken the time to really delve into it... We discussed if the topic might cause controversy or potential risks... Only when we confirmed that our idea was rigorous and meaningful we would move to the next step. (Practitioner 15, editor, news organisation in the UK)

Based on the cautious attitude of advocacy, practitioners avoided topics that would be controversial and risky when they planned to make newsgames. This is different from the early development of newsgames, where there was a tendency to use games to express political and partisan ideas (García-Avilés et al., 2022; Treanor and Mateas,

2009). This is related to the production costs of newsgames. As Practitioner 22 (editor, news organisation in the UK) argued, the reason they are making fewer and fewer newsgames is that the cost investment is too high, so they want to ensure that each game is at least fairly successful. Because of the limited production conditions, controversial ideas were shunned to avoid too much criticism and lack of acceptance.

The second step is emphasising the social relevance of advocacy newsgames. During interviews, topics such as environmental issues, social justice, and distant suffering came up frequently when interviewees talked about the production of newsgames. For example:

Refugees are more than numbers. They're real people. By telling their stories, we can help to make the issue more relatable. Players can notice this and pay enough attention to it, perhaps leading to some kind of change. (Practitioner 7, journalist, news organisation in the UK)

I cover environment and clean energy issues... I want to bring people's attention to the issues and give a voice to those who are affected by climate change... Sometimes, I covered how to address some problems if those solutions prove to be effective. (Practitioner 16, journalist, news organisation in the UK)

In this way, a distinction between different models of advocacy journalism was further made by newsgame practitioners. One model calls for progressive change and development, and another model can be regarded as a vehicle for promoting political and economic interests (Laws and Chojnicka, 2020; Thomas, 2018; Waisbord, 2009). Some interviewees not only saw themselves as disseminators but took on a more active and interventionist role. Newsgames were linked to promoting changes in important social issues. In these cases, promoting positive social change was predominantly seen as a result of engaging people in public conversation and inviting people to take action. Newsgame practitioners, therefore, justified the production of newsgames by linking advocacy to the idea of a critically minded and active citizenry. Thus, advocacy, as a benefit to public life, is valued for its alignment with the ideals of journalism.

Third, those practitioners who considered their role in terms of advocacy noted that they

retained a commitment to journalism as a practice of revealing truths. As one interviewee explained:

Facts are important to us. If we are going to make any point, it must be supported by facts... Otherwise, we risked spreading misinformation and losing credibility. (Practitioner 6, deputy editor, news organisation in China)

This interviewee saw truth claims as the basis of arguments made in newsgames. Truth claims not only bridge the newsgames and real-world issues but also become the premises of arguments. Practitioner 8 (visual editor, news organisation in the UK) claimed they took the time to do the due diligence to have 'solid evidence to support arguments'. The favouring of evidence is clear in making problematic processes comprehensible. As one newsgame practitioner put it:

You need to have evidence of how things work in order to draw meaningful conclusions. Without that evidence, simulation is just a shot in the dark. Think of it like this: if you're playing a game of chess, you need to know where all the pieces are on the board in order to make a good move. The position of the pieces on the board is evidence. Without it, you're just guessing, and your chances of winning are slim... So, whether we're making games about the climate, the economy, or any other complex system, evidence is our guide. It's the backbone of any serious conclusions. (Practitioner 12, editor, news organisation in the UK)

The subtle difference between the implications of the evidence for truth claims and for advocacy should be noted here. In the chapter on truth claims, newsgame practitioners saw evidence as direct support for truth claims or a transparent proof of collection. Evidence for advocacy was articulated as bricks to make arguments, which allows the player to explore the definition, attribution and evaluation of certain issues. This is in line with McIntyre and Lough's (2021) findings that evidence – such as reliable numerical data and a thorough description of the details of the problem – makes a solutions journalism story more rigorous. Similarly, in the context of advocacy newsgames, evidence was deployed as the proposition in rhetorical deductive reasoning, guaranteeing that the conclusion or argument is reliable. As a result, advocacy is

considered to be grounded in truth claims that can be supported by evidence.

Both steps are also reflected in the practice of some non-news organisations, which develop their own newsgames and do not rely on cooperation with traditional news organisations. According to the definition of newsgames in this thesis, newsgames should focus on current events, and some non-news organisations have developed games that meet this definition. For instance, *Next Gen Personal Finance*, a non-profit organisation, made the newsgame *Payback*. Although only a few interviewees came from non-news organisations, interviews with them still provided insights. Practitioner 26 (director, non-news organisation in China) said that they 'did carefully consider the content' of their games and that statistics are used to back up the games. Another interviewee explained their practice:

Our relationship with journalism is sort of subtle. We don't have that traditional coverage and just focus on games. But the games are also carefully thought out to make sure that they can raise awareness of social issues... the overall idea is based on real-life events... I wouldn't call ourselves a news medium, but our games are indeed highly relevant to news. (Practitioner 24, director, non-news organisation in the Netherlands)

Non-news organisations were well aware of the differences between themselves and news organisations. However, interviewees from non-news organisations also emphasised the social relevance of games, the support for arguments and a careful discussion of advocacy, demonstrating a certain similarity in production between journalism insiders and outsiders. People from non-news organisations did not have a background in journalism, but they did not think that advocacy could be naturally justified without support. This reveals the importance of taking certain steps to legitimise the analysis and evaluation of real-world issues in the context of newsgames.

The fourth step was often found in the collaboration between news media and non-news organisations. More concretely, this was reflected in the involvement of foundations, as outsiders, in the production of newsgames:

We worked with a [foundation] to make this game. This partnership was

important in providing the resources and support needed to tackle complex stories... We did not receive grants and donations from them. They just provided some essential data and information. I think we took control of how the game is made. (Practitioner 4, journalist, news organisation in China)

The extract above highlights the complexities of funding from sources with an explicit agenda. Tensions around editorial control were often dismissed by claims of journalistic authority. Scott and colleagues (2019) found that even those news organisations which received funding from foundations largely retained their autonomy. Similarly, Practitioner 5 (director, news organisation in China) stated that they only worked together with non-news organisations when 'news stories were originally intended to be covered' by them. This can be seen as 'an acceptable compromise' (Scott et al., 2019, p.2048) on behalf of newsgame practitioners. This reveals the considerations that practitioners considered when trying to explore and expand their practice around advocacy. They did not want to be driven by external forces and needed to legitimise this cooperation. By describing the Foundation as support, practitioners can claim that they have managed to preserve their autonomy in the process of making newsgames. In this process, the subjectivity of newsgame practitioners, including the choice of topics and making arguments, becomes an indication of autonomy. Autonomy creates legitimacy and credibility for the cooperation adopted by newsgame practitioners (Deuze, 2005b).

It is worth noting that the arguments in newsgames are not always made by practitioners entirely on their own. They could rely on 'experts' or 'professional resources' to present their arguments:

We spoke with specialists and incorporated their perspectives into the game... Of course, it's important to choose our experts carefully. They're credible and respected in their field. (Practitioner 12, editor, news organisation in the UK)

Practitioner 2 (photojournalist, news organisation in China) explained that they had 'revised their initial idea' following expert advice. Expert sources are considered to provide a sense of authority to the views expressed in news stories (Laursen and Trapp, 2021). In the production of newsgames, they combined expert resources with their own opinions to present the arguments. This leads to a difference in that the opinions in the

newsgame are often not 'outsourced' as they are in other journalistic forms. Outsourcing here means that journalists are more likely to quote experts than express themselves. In newsgames, expert opinion is combined with that of journalists or used as a reference to influence the game design.

On the one hand, this may help newsgame practitioners to make arguments for solutions to the problem. Kogen (2019) found that journalists covering international humanitarian crises appeared reluctant to report on the potential responses to an issue because they could not come up with solutions for complex matters. The expert opinion allows the practitioner to suggest actions and treatments for issues.

On the other hand, there may be a risk in relying on 'expert sources' and their 'conflicts of interest' (Holland et al., 2014). The line between expert and advocate is clearly becoming increasingly blurred (Laurson and Trapp, 2021). The visibility of experts in newsgames was lower than that in other journalistic forms, and newsgame practitioners did not critically examine whether there was a potential conflict of interest in the resources provided by foundations. This may leave advocacy for change caught up in issues for specific political and economic interests. Players could not realise this issue because newsgames did not show the impact of expert sources on arguments.

Taken together, newsgame practitioners followed four steps: a cautious choice of topics; emphasising the social relevance of newsgames; supporting arguments with facts; and retaining autonomy. There was usually a cautious approach to advocacy, and practitioners avoided topics that risked being criticised. Then they emphasised the social relevance to claim that newsgames could be seen as a means to promote social change. Advocacy involved supporting specific viewpoints and groups of people, and practitioners indicated that the ideas they expressed in newsgames were backed by facts. In working with external organisations, practitioners stated that they still retained autonomy, demonstrating that they proactively made arguments rather than were required to do so. These steps were used to justify the production of advocacy newsgames, which can be seen as deploying a strategic ritual of advocacy. This ritual consisted of two levels: advocacy for progressive social changes was described as consistent with journalistic ideals, and newsgames could be used to support specific topics. This was further developed into the two types of advocacy newsgames discussed

in the section 6.1.3.

6.1.3 Two Types of Advocacy Newsgames

There are two broad ways in which newsgames are understood to facilitate advocacy. The first way is giving voice to the voiceless, by providing players with a degree of insight into the experiences of marginalised groups. Practitioner 16 (journalist, news organisation in the UK) saw giving voices to people affected by climate change as part of their work. Practitioner 11 (journalist, news organisation in China) provided an example of their newsgame, which gives players the chance to experience the lives of visually impaired people and finally lets them know the different ways in which they can help. This reflects the idea that journalists can be a voice for the disadvantaged in society (Hanitzsch and Vos, 2018; Janowitz, 1975). More importantly, newsgame practitioners believed that the way newsgames give voice to the voiceless is unique in that they allow players to vicariously experience the lives of others, which goes one step towards making truth claims about what happens to others. In this way, newsgames might make others' concrete suffering palpable by blending the 'reality' of others and the experience of play.

Emotion was seen as one of the most important factors for giving voices. Robin Kwong, a newsgame practitioner, talked about the relationship between emotion and newsgames in an online article:

In 2017, we created The Uber Game in an attempt to combine the emotional truths of stories with the facts of the system of the sharing economy... Emotional storytelling can have a big impact. These are widely reported topics, where the facts are abundant and evident. But they're also topics on which people have already formed strong opinions on, and are probably fatigued from hearing about the facts. Emotional storytelling lets us break through that and help people look at these issues with fresh eyes and a fresh perspective. (Robin Kwong, 2019)

In a similar vein, Practitioner 9 (director, news organisation in China) linked emotional storytelling to advocacy, understood as a form of voice-giving by suggesting that emotions might allow people to 'understand the challenges encountered by others'. The

above extracts demonstrate that emotion is regarded as a catalyst that can foster a deeper sense of connection and understanding among players. In the context of newsgames, where the objective was to engage players in social issues, empathy became a strategic tool for giving voice to those who are often overlooked or silenced. Practitioner 22 (editor, news organisation in the UK) expected that emotional understanding could allow players to revisit the refugee issue and 'relate it to the reality'. This way of presenting suffering helped to build a relationship of emotional identification so that the audience would feel that the suffering is authentic. How newsgames might do this and how players respond will be further analysed in section 6.2 and 6.3.

Secondly, newsgames could be seen as making problematic processes comprehensible. As one practitioner explained:

Newsgames let you know what's causing the problems... You have the opportunity to discover the underlying factors, uncover the layers, and explore how everything fits together. (Practitioner 19, journalist, news organisation in the US)

In this case, advocacy was based on the truth claims arising from the interpretation of the systems. Practitioner 16 (journalist, news organisation in the UK) noted that explaining the problem in newsgames may show 'what the potential solution is' with the assumption that this has the potential to 'promote positive change'. Thus, this approach had certain aspects in common with interpretive journalism and solutions journalism. Interpretive journalism analyses things and can, but need not, evaluate them (Salgado and Strömbäck, 2012). Solutions journalism addresses the issue and how to respond to it (McIntyre and Lough, 2021). Newsgames were often created in relation to social injustice and social problems, promoting issues by engaging players in a critical exploration of the relationships between elements in a dynamic system. For example, newsgames can be used to reveal violence propagated by structural racism (Richardson, 2020). The interventionist nature of this advocacy is reflected in the need to imply change by explaining the breakdown of the system. In this approach, newsgame practitioners did not stay away but took the initiative to participate in promoting change (Hanitzsch and Vos, 2018).

Newsgame practitioners widely expressed their assumptions about arousing awareness of the problems. As Practitioner 10 (editor, news organisation in China) noted, they hope that, by pointing out the negative consequences of the problem, their game could make players 'aware that the problem needs to be addressed as soon as possible'. There was variation, however, in the extent to which practitioners saw themselves as advocating specific forms of social change. Practitioner 14 (journalist, news organisation in the US) said that 'the intention was absolutely not to persuade audiences to do something'. Despite the relative caution involved in notions of journalism being socially transformative, there seems to be a willingness to create games that give players an idea of where changes need to be made and perhaps allow them to act. This will be investigated further in the sections on games and players that follow.

6.1.4 Summary of Section

This section started by showing newsgame practitioners' cautious attitudes toward advocacy. Practitioners noted that they thought carefully about what and how they advocate in the case of newsgames. In doing so, they have adopted a range of steps to demonstrate that advocacy newsgames can be seen as an acceptable practice of journalism. Those strategies contained the cautious choice of topics, emphasising the social relevance of newsgames, supporting arguments with facts, and retaining autonomy. However, there was a lack of reflection on the impact of expert sources on advocacy newsgames, especially since they do not appear in the form of direct references. Furthermore, a distinction was made between the different models of advocacy by practitioners, and the practice of making newsgames was positioned to promote progressive change. Giving voice to the voiceless and making problematic processes comprehensible were the two types of advocacy newsgames identified during the interviews, and these were regarded as valuable contributions of journalism to society.

6.2 Newsgames

In this section, newsgames, which are consistent with the civic model of advocacy journalism, are examined to discuss how newsgames can make arguments and may achieve a range of goals for advocacy journalism, including raising awareness, shaping opinion, and promoting action. The following analysis focuses on the two forms of

advocacy mentioned earlier. The first subsection addresses how newsgames reveal the existing problems in certain processes and make them comprehensible. In the second subsection, emotions, empathy and gaming experience are the focus, and there will be further discussion between these and giving voice to the voiceless.

6.2.1 Making Problematic Processes Comprehensible

One type of advocacy newsgame aims to make problematic processes comprehensible. This subsection analyses two games: *College Scholarship Tycoon* and *The Daily Life of The Emergency Room* (急診人生). *College Scholarship Tycoon*, a newsgame developed by VOX, is a news report about the university admissions system in the United States. This game aims to show the issue of discrimination against poor students as a result of the incentives set by the US university admissions system. *The Daily Life of The Emergency Room*, produced by *The Reporter*, is set in a large medical centre in Taiwan, with players tasked to treat patients in the emergency room. This newsgame illustrates the medical dilemmas associated with emergency medical care.

In general, both games use a way of interpreting issues that is similar to the attribution of responsibility frame (Semetko and Valkenburg, 2000). This frame unpacks problems by placing responsibility for their causes or solutions on the government, individuals or groups (Semetko and Valkenburg, 2000, p.96). However, there is still a considerable difference between the way newsgames interpret problems and the known frame of attribution of responsibility. Framing devices and reasoning devices, which are based on textual and visual messages, are the key points in the analysis of news frames (see Quinsaat, 2014). In addition to this, these two newsgames employ the features of video games, such as goals and game mechanics, to frame issues. For a better understanding of how newsgames advocate, this subsection explores how newsgames create dynamic models and use different types of elements to make arguments about problematic processes.

6.2.1.1 College Scholarship Tycoon

College Scholarship Tycoon attempts to reveal the problem with the US university admissions system through various video game features, such as perspective, goals and game mechanics. Taking a particular perspective is an important approach to presenting arguments in this game. In the beginning, players are told to play as an

admissions officer who can determine whether to accept students and whether to award them scholarships. Compared with commercial video games which use the black box technique to cover up their algorithmic relationships, newsgames are usually designed to show their inner systems (Sicart, 2008b). The admissions officer holds great power in the admissions system, and the admissions process is also not transparent to outsiders (McGrath, 2014). Therefore, taking on the perspective of an admissions officer is more likely to help players reveal the inner workings of the game system which represents the admissions system in reality. Such a perspective invites players to go inside the system, which can be seen as the starting point of argumentation in *College Scholarship Tycoon*.

College Scholarship Tycoon then uses verbal rhetoric based on textual elements to make arguments. In this way, textual elements serve as the reasoning device named 'problem definition' (Entman, 1993). Based on a conversation between the protagonist and their assistant, the game frames the issue of the university admission system as a tension between rankings and students' household income.

The formal goal of *College Scholarship Tycoon* also contributes to defining the problem. Shortly after the game starts, it encourages players to pursue the goal of improving the school's rankings into the top 70 within three years. Furthermore, players are asked to improve the school's rankings without discriminating against the poor (see Figure 13). This is an additional and implicit goal in this game. When players improve their rankings, they will notice that the protagonist asks the assistant, 'We improved our rankings, but did we have any trade-off?' These details remind players to be aware of the implicit goal. It can be noted that there is tension embedded in the implicit goal – the tension between improving rankings and non-discrimination against the poor. *College Scholarship Tycoon* again makes the argument previously presented through verbal rhetoric. This forms the rhetorical figure of repetition which can be used to emphasise arguments (Leigh, 1994). This can bring clarity to the problem being defined, which highlights where change is needed and its necessity.

Moreover, game mechanics allow players to build arguments and attribute the responsibility to universities from their gaming experience. By building a causal chain, it is possible to show who is responsible for the problem (Entman, 1993). The game mechanics of *College Scholarship Tycoon* consist of two parts: deciding which students

to enrol and then considering how to allocate the scholarships. In the first part, players need to compare students' scores and financial statements with the college's average SAT scores and household income; in the second part, players need to allocate a limited amount of scholarships to six students. If the player tries to chase the implicit goal of improving rankings without discriminating against the poor, they will struggle. The presentation of arguments is based on the procedural enthymeme which requires players to interact with games to fill in the missing part of the syllogism (Bogost, 2007, p.34). Players can find that offering scholarships to poor students with low SAT scores will drop their rankings, but improving the rankings requires using considerable money to attract rich students with high scores. Through its game mechanics, this game presents the irreconcilable conflict between rankings and scholarship allocation – universities have been criticised for being one of the parties responsible for this conflict.

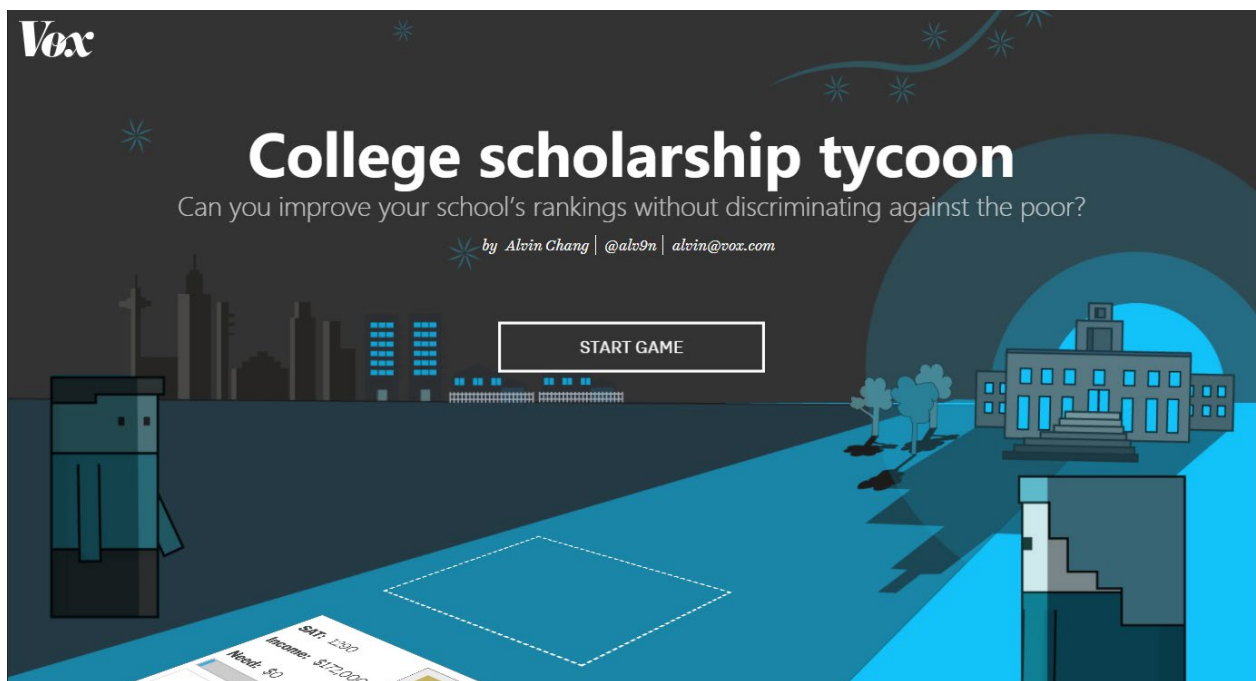


Figure 13. Start screen of College Scholarship Tycoon

Visual and textual elements are also used to attribute responsibility. In Figure 14, there is an image and a conversation concerning the story of a previous solution that was forbidden by the government. This is a framing device known as a historical example (Van Gorp, 2010), which allows the game to attribute responsibility to the government.

Furthermore, *College Scholarship Tycoon* highlights the attribution through the goals and whether they can be achieved by players. This game deploys a unique kind of procedural

rhetoric – ‘the rhetoric of failure’ (Bogost, 2007, p.87) – around its goal of building arguments. The rhetoric of failure means that the game does not allow players to win; in the process, it usually aims to reveal insurmountable problems.

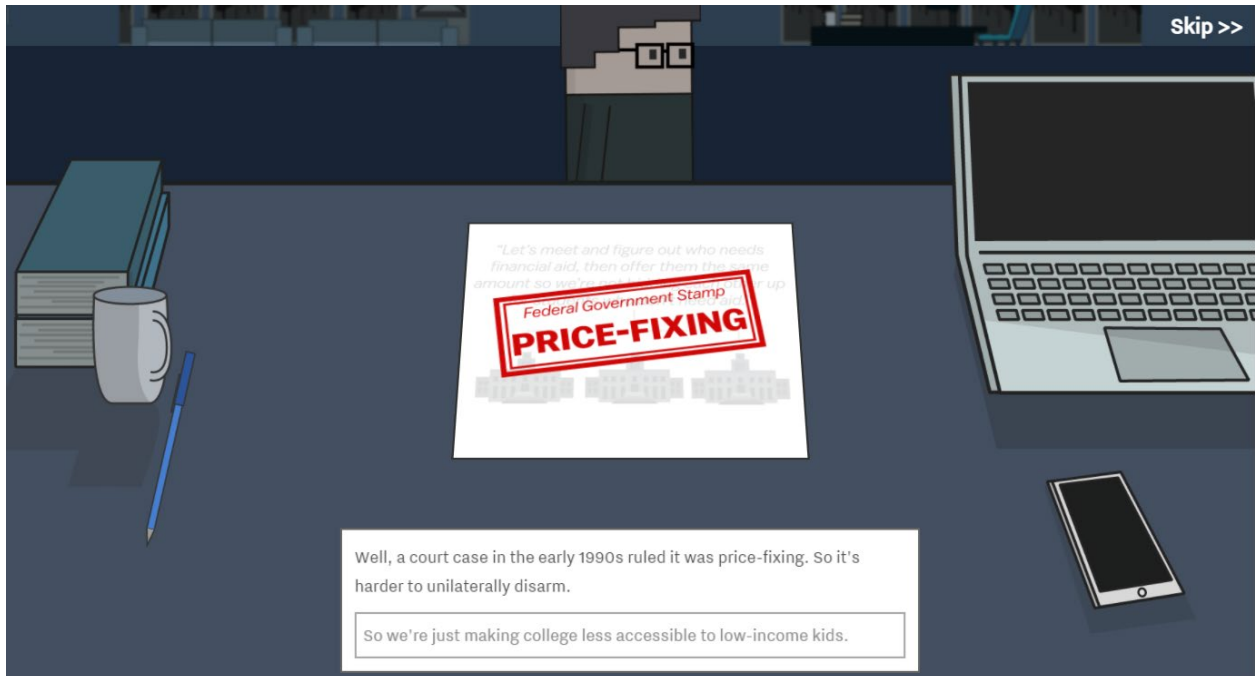


Figure 14. The historical example in College Scholarship Tycoon

In *College Scholarship Tycoon*, trying to achieve the implicit goal will inevitably lead to a failed ending. The rhetoric of failure nudges players to think about this ending because the failure is very likely to turn the player from an ‘in-gaming loser’ into an ‘off-gaming thinker’ (Lee, 2003). This suggests games can nudge players to think about why they lost the game.

Goals that cannot be reached can be used to form arguments about some problems that are deep-rooted and difficult to solve. This is not ‘because of a player's lack of aptitude but due to a game design that embodies a tragic form’ (Lee, 2003). The rhetoric of failure can be used to propose a desired reality that is unachievable, and players can explore the reason why they will finally fail to reveal the argument of newsgames. They are likely to realise that there is an irreconcilable conflict between improving rankings and not discriminating against poor students in the real-world system.

Players can deduce the main idea of *College Scholarship Tycoon*: universities have to offer more scholarships to high-scoring students who do not really need them to improve

rankings, which leads to discrimination against poor students. The main argument illustrates that a particular social system works to entrench privilege and maintain the social gap, and the government has not made any efforts to solve this problem. As a result, the government becomes the party with primary responsibility, and the university is the party with secondary responsibility.

In addition, *College Scholarship Tycoon* evaluates the different parties involved in the issue of admission. Making value judgements about agents and issues is one part of framing (Arafat, 2020). Colleges and the government are depicted negatively in the game. Players can employ certain strategies to reach the formal goal – improving their rank in the top 70. However, this game uses the rhetorical figure of irony, which refers to the ‘use of a word in such a way as to convey a meaning opposite to the literal meaning of the word’ (Corbett, 2004). In this game, success comes at a cost because the school only accepts very few students from low-income families, which ultimately leads to failure. The assistant will also say, ‘They’re a good-looking group – the future of this country’ (see Figure 15). Bogost (2007) argues that the procedural rhetoric of a winnable game which requires players’ effort to win can be richer and more subtle than the simple rhetoric of failure. The rhetoric of *College Scholarship Tycoon* has a similar subtlety in an ironic way. Players choose better options when they are playing in order to win the game, but the ending promotes reflection on the supposed ‘success’ of the players. This allows players to notice the negative evaluation of the government as well as the college. This once again reinforces the need to make changes and emphasises the responsibilities of universities and the government.

The method of making problematic processes comprehensible echoes one of the objectives of investigative journalism which seeks to uncover instances of systemic failure and institutional disorder that have gone unnoticed or are intentionally hidden from the public eye (Ettema and Glasser, 1998). The above analysis illustrates how *College Scholarship Tycoon* makes arguments to frame the issue of the tension between real-world problems and desired but unachievable reality by using a similar method to the attribution of responsibility frame. This great contrast illustrates the contradiction between ideal and reality and highlights the social injustice of the moment. Meanwhile, the fact that the player will fail anyway demonstrates the difficulty of solving the problem from within the system, which implies that problem-solving requires outside intervention.

This can be seen as seeking policy changes around the admissions system.

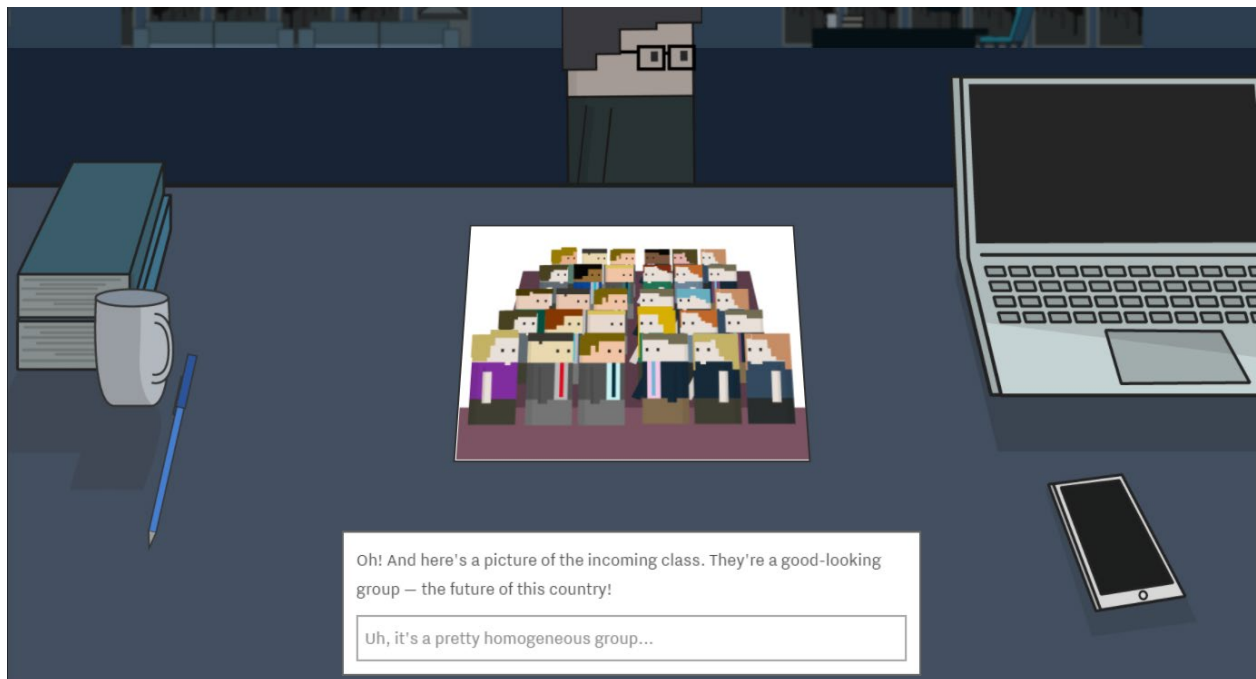


Figure 15. The picture of the incoming class in College Scholarship Tycoon

As an example of advocacy newsgames, *College Scholarship Tycoon* highlights the actual problem and frames the underlying structure. The revelation of the process contributes to the raising of public awareness and the influencing of public opinion, which are identified by Waisbord (2009) as the achievement of advocacy journalism. This not only reveals the urgency for taking action but also points out where changes are needed. The game implies that the government should make changes to restrict colleges from using scholarships to compete for students because of their rankings, but what players should do to facilitate this change is not directly stated.

This reflects how *College Scholarship Tycoon* has adopted a nudge approach to advocacy. Nudges uphold individuals' freedom to choose while also guiding them towards making appropriate decisions (Sunstein, 2014, p.17). Thomas (2016) argues that nudges allow journalism to expand opportunities for people to make meaningful choices and expand their autonomy. Nudges are not compulsory but give players the option to take personalised actions through interaction with the news. In this way, *College Scholarship Tycoon* does not explicitly suggest treatment recommendations for the problem but provides context and direction for how players might act to get involved in problem-solving.

On the one hand, the game does not provide a direct answer but looks in-depth at the admissions system. This ensures that complex social changes are not simplified by the game (Mitgutsch and Alvarado, 2012). On the other hand, the lack of suggested response or action may prevent players from becoming involved in the problem-solving process. Solutions can help players understand how to take action to facilitate change (McIntyre and Lough, 2021). It may be helpful to allow players to discuss the reliability of arguments and the feasibility of actions through playing games. Players can explore how solutions may or may not work and how these solutions relate to their lives.

6.2.1.2 The Daily Life of The Emergency Room

The Daily Life of The Emergency Room (The Emergency Room) shows various problems in the healthcare system, and, as discussed above, this game utilises a method which is similar to the attribution of responsibility frame to interpret issues. Different types of elements are used in this process. In the beginning, textual elements are used to define the problem: the game describes the emergency room as 'overcrowded' (擁塞) and asks players to 'rescue' (拯救) the emergency room. Word choice as a framing device positions the problem in the emergency room with too many patients and highlights the severity of the problem.

Different parties were brought into *The Emergency Room* for causal attribution. First, it allows players to take on the perspective of an emergency physician, so players can discover what may happen in the emergency room and what may help to solve the problem. Second, there is a tutorial section for players to understand the game mechanics. Here, the patients appear in the game and become a group in the cause attribution.

The game mechanics consist of three main parts (see Figure 16). First, players offer different treatments depending on the patient's condition. The colours red, yellow and green, respectively represent serious, common and minor health conditions. Players have to make sure the patients receive the correct treatment in time. Second, players need to appease patients who are temporarily hospitalised. If they are not appeased in time, players must spend extra time comforting them, which limits players' ability to complete other tasks during this time. Third, players should control the protagonist to

drink water, eat food and go to the toilet. If players do not do these things in a timely way, their stamina bar will go down.

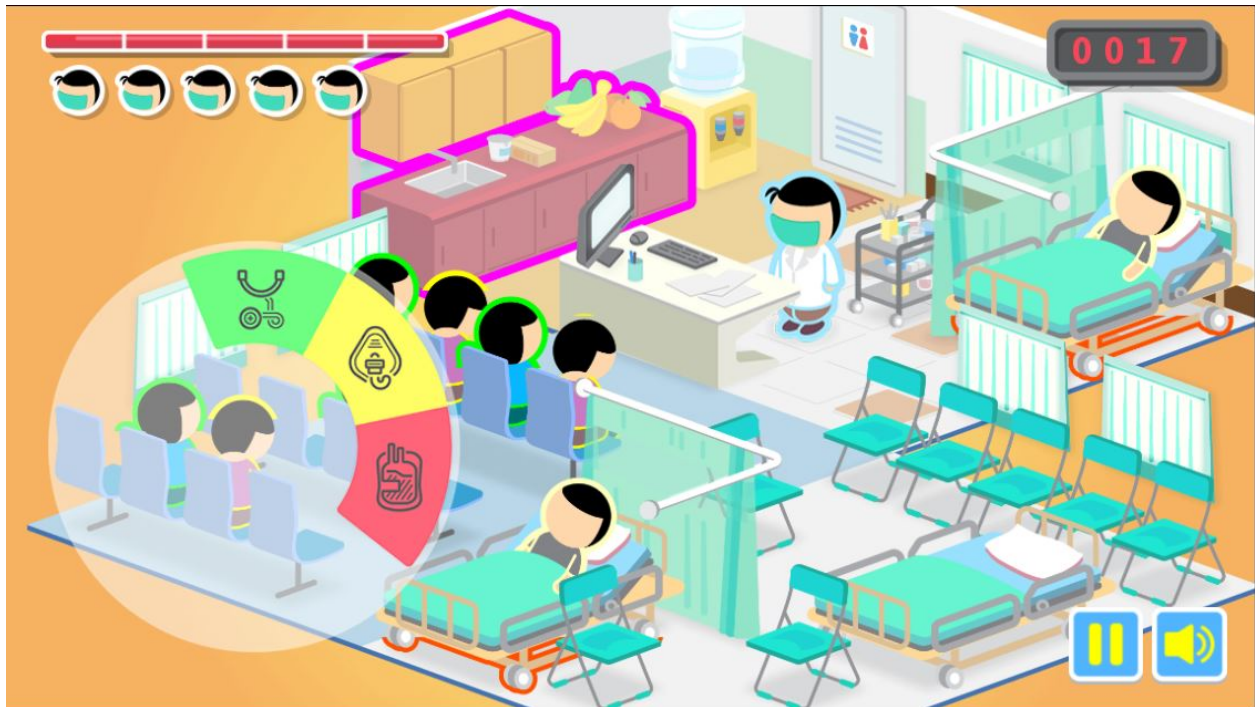


Figure 16. The game mechanics of The Emergency Room

Based on these game mechanics, *The Emergency Room* make arguments and attributes responsibility to three different parties. First, this game mechanic highlights the responsibility of the government. Red, yellow and green characters represent patients with different medical states, and all these patients appear in the same emergency room. This suggests that the emergency care system does not allow different patients to be treated separately and in a timely manner. This emphasises that the government is responsible for the problem in the healthcare system.

Second, the argument that hospital beds are fully occupied, and many patients thus cannot get treatments, shows the responsibility of the government and the hospital. *The Emergency Room* deploys a game mechanic to explain this problem. The patients who are temporarily hospitalised will be angry if players do not appease them. Players can see that even if they appease the patients lying on hospital beds, they will stay in the emergency room. As the game progresses, hospital beds will be fully occupied by those patients. This indicates that emergency patients are not referred in time, resulting in new patients not being able to access emergency care services. Instead of addressing this

issue, hospitals put considerable pressure on emergency physicians to treat patients while caring for other patients. This also shows that the current healthcare system cannot help hospitals refer patients to the right places. The responsibility of the government and the hospital is highlighted.

In addition, green patients may not require emergency treatment at all as they have only very minor health problems that can be dealt with themselves. However, players cannot know this in advance and will spend time on their treatment. Through this game mechanic, *The Emergency Room* presents an argument: many people go to emergency rooms for minor health conditions, which increases the strain on emergency medical services. This highlights the responsibility of the general public in the dilemma of the healthcare system. This can be seen as an appeal to players to refrain from unnecessarily utilising emergency care services. It aims at raising public awareness and evoking their actions.

The last argument of *The Emergency Room* is that being an emergency physician is a tough job, and this attributes responsibility to hospitals. Players need to occasionally click on the food, water and toilet which represent basic physiological needs, and a large number of patients can leave physicians with insufficient time to complete these tasks. This suggests that emergency physicians are overworked, leading to a lack of time for rest, and physiological needs can only be met in a very short period. This demonstrates the responsibility of hospitals, as unreasonable work schedules overwork emergency physicians.

Emergency physicians are presented in the game as not being responsible for the problem, and *The Emergency Room* employs the rhetoric of failure to make this argument. There is a rapid increase in patients due to a factory explosion, so it is almost impossible for players to win. This makes a claim that Taiwan's healthcare system is incapable of responding to unexpected incidents, and there is nothing emergency physicians can do about such an issue. The player's perspective, together with the goal, enables the player to take on a specific role and experience the inevitable failure, allowing players to realise that the problem is systemic.

However, this attribution of responsibility may not be agreed upon by players. *College*

Scholarship Tycoon opens a space for players to experiment with how things work in the admissions system. Players can use different game strategies to chase the formal or implicit goal. This enhances the persuasive power of games because it allows players to test their understanding of arguments (Bogost, 2007). When no opposing views are presented, it becomes less likely to lead to a consensus on arguments (Blair, 2008). Game mechanics of *The Emergency Room* determine the relatively narrow responses resulting from the player's decisions and do not provide rich branches which may encourage players to raise objections to arguments.

Moreover, it appears that the game lacks an evaluation of the government and hospital. Visual elements describe patients as being irritable, and game mechanics demonstrate that some patients are using emergency services with minor health conditions. Although this game reveals the responsibilities of the government and hospitals, neither is directly evaluated. As a result, parties that require change do not receive adequate visibility.

Treatment recommendations provided by *The Emergency Room* are also questionable. This game points out that patients should make sure their situation is urgent before going to the emergency room, which is a clearly suggested action that players can take. The government is most responsible for the issue, and it needs to enact policy change. However, the game does not explicitly show how the government can reduce the pressure on emergency services, nor does it specify what actions players should take to prompt such a change.

Both *The Emergency Room* and *College Scholarship Tycoon* make problematic processes comprehensible and reveal where changes need to be made. *College Scholarship Tycoon* presents a distinctly negative view of universities and the government and nudges players to think about how to take action against these responsible parties. However, *The Emergency Room* presents both the evaluation and the treatment from the patient's perspective, a very narrow focus. While players may still attribute responsibility to the government and hospitals, their attention is distracted because of the emphasis on the patients. The ways in which this individual perspective gets linked to a sense of a social problem is challenging, as it does not allow *The Emergency Room* to encourage action at a more collective level. This does not mean that calls for individual action should be discarded, only that consideration should be

given to which actions should be more central to advocacy. In *The Emergency Room*, the approach that allows players to consider their behaviours as patients may lead to balkanising tendencies, which means dividing individuals rather than creating the potential for cooperation. While allowing the player to retain freedom of choice, the news game can steer the player's direction of action. The important thing is how this action may be conceived as a collective one, which in most cases may be expressed as accountability to the government.

6.2.2 Giving Voice to the Voiceless

The other type of advocacy newsgame is giving voice to the voiceless, which is dedicated to building emotional bonds and providing emotional experiences. One objective of advocacy journalism is to speak on behalf of disadvantaged and marginalised groups (Hanitzsch and Vos, 2018; Laws and Chojnicka, 2020). This subsection examines three newsgames: *The Amazon Race*, *Play Our Game to See if You Can Travel from Glasgow to London on a Typical Day as a Wheelchair User (A Wheelchair User)*, and *Hearing Loss (我们与听损的距离)*. *The Amazon Race*, developed by the *Australian Broadcasting Corporation*, illustrates what it is like to work in an Amazon warehouse. *A Wheelchair User* and *Hearing Loss* are respectively made by *BuzzFeed* and *ThePaper.cn*. They both illustrate the experiences of people with disabilities and what kind of difficulties these people face in their lives. *The Amazon Race* is thus analysed separately, and the remaining two games are grouped together.

These games generally cover news stories with an approach similar to the human-interest frame, using an emotional approach to present an event or problem (Semetko and Valkenburg, 2000). This allows news stories to highlight the impact of the problem on individuals and groups. For these newsgames, the way in which game features provide an emotional experience and facilitate change is the focus of the analysis.

6.2.2.1. The Amazon Race

At the beginning of *The Amazon Race*, textual and visual elements are used to define the problem. The textual introduction shows that this game is about the experience of working in an Amazon warehouse. Moreover, this game offers different choices of avatars for players, but regardless of which avatar the player chooses, the character's fate is generally similar. These avatars, used as a framing device, imply an argument

that almost all of Amazon's temporary employees are easily exploited by Amazon. In this way, the problem of exploitation is defined as widespread in the Amazon warehouse. Another newsgame entitled *Easy Level Life* uses a similar tactic, employing an ambiguous gender main character to imply that 'both Black boys and girls are vulnerable to police brutality' (Richardson, 2020, p.541).

Moreover, the goal chased by players further refines the problem. *The Amazon Race* does not directly provide a specific goal, but players need to maintain a high 'pick rate' which is presented as a proxy for the efficiency of the workers in the Amazon warehouse. If the player's pick rate slows, the game will warn the player that their shift may be cancelled due to poor performance. Maintaining a high pick rate thus becomes a goal of *The Amazon Race*. First, the issue is refined into an exploitation issue about how Amazon assesses the performance of temporary employees. Second, the goal is to create a play situation providing emotional insights into the issue being reported. This provides the basis for characterising the problem in terms of a human-interest frame.

Considering the implications of emotions is essential when putting forth an argument and framing the issue. *The Amazon Race* allows players to experience what it is like to work as pickers inside the huge Amazon warehouse, which means it invites audiences to put themselves into other's shoes to 'play' the news. Journalists often portray the emotions of their sources in traditional journalism practices (Wahl-Jorgensen, 2013). In *The Amazon Race*, putting players into Amazon workers' shoes aims to create a sense of 'parallel empathy' in which players' emotional state is meant to be like that of someone else (Jerrett et al., 2021). In this way, players' emotional state is meant to be relatable to that of another individual. This describes a group of human emotions and has the potential to generate empathy in the player, much like the human-interest frame.

More concretely, *The Amazon Race* generates parallel empathy in two key ways. First, the game contains a mechanic asking players to control the protagonist to pick up items. Players need to finish picking before the countdown ends, otherwise, their pick rate will decline. As the game progresses, the time for picking gets shorter and shorter, and it is more and more difficult to complete tasks in time. As a result, players will receive messages informing them that their low pick rate may have an influence on their shifts. In this case, the ultra-rapid clicking required to keep the player's pick rate high creates

a frantic feeling. However, players who put in the effort may still fail to accomplish the challenge, and this may frustrate players. In this way, players can find out how hard the job in an Amazon warehouse is and understand the negative emotions of not getting the job done on time through their parallel empathy.

Second, players must make tough choices when unexpected events happen. For example, if players decide to drink water, the pick rate which mirrors the work efficiency will go down because the protagonist spends some time going to the toilet. Drinking water and going to the toilet are physiological needs, so it is problematic for the pick rate to go down because of these things. Therefore, players will feel worried or even scared because of the declining rate and have a feeling of anger about the unfair treatment of employees. This type of anger, which is different from the potential upset of Amazon workers, can be seen as 'reactive empathy' (Jerrett et al., 2021). Reactive empathy and parallel empathy work together to require the players as spectators to emotionally respond to the lives of others and to imagine others' emotions through their gaming experiences. This can reconfigure the relationship between audiences and others in the news and allow audiences to get as close to the others' psychological world as possible. At the same time, this is also helpful to maintain 'proper distance' (Silverstone, 2004; Nash, 2021) with Amazon workers which means they will not cover up other people's real lives with their gaming experience. In the above two ways, *The Amazon Race* structures a game space that is, potentially, emotional and in which an emotional response is tied to the players' ability to link gaming experiences to real-world issues.

Furthermore, textual and visual elements also contribute to shaping players' emotional experiences. They are depictions that serve as a framing device, cueing players to link their own emotional responses to the characters' emotions. If players choose to do a colleague a small favour, they may be happy until they notice their picking rate decreases because of their choice. The game includes the note that 'you feel good about yourself until you remember that your pick rate will go down.' This may be consistent with the transition from positive to negative emotions felt by players, which can also contribute to players' parallel empathy. Similarly, *The Amazon Race* provides several facial emojis showing the character's emotions. Facial emojis are visual symbols that usually represent specific emotional expressions (Danesi, 2017). The emoji shows the protagonist's disappointment when the shift is cancelled (see Figure 17). Players can

connect their emotional experiences to the protagonist's emotions.

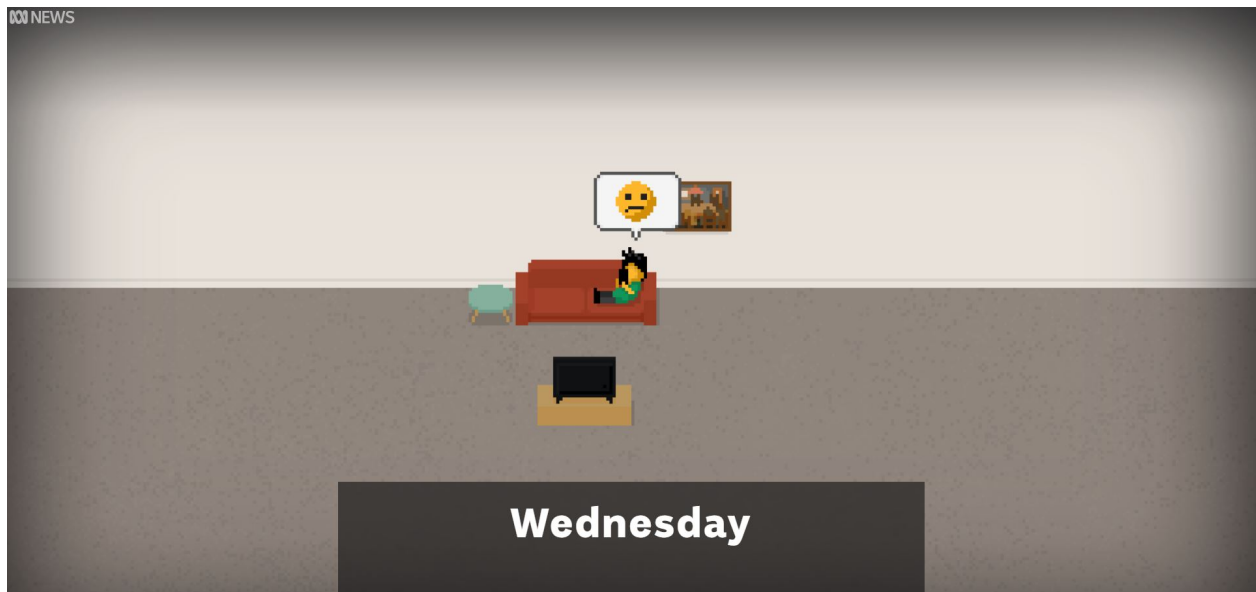


Figure 17. An emoji in *The Amazon Race*

The depictions of NPCs' emotions can be used to express a collective emotion shared by a group of people. A colleague in the game tells players that the supervisor has asked about her low pick rate so she is worried her shifts will be cut. This depiction illustrates the anxiety of that character. It is important to note that both the colleague and the protagonist belong to the group of Amazon warehouse workers. Colleagues, as framing devices called 'sources', demonstrate the widespread presence of negative emotions, so players can realise that this emotion is a collective emotion shared by this group. This keeps a balance between the audiences' empathy fatigue (Plewe and Fürsich, 2018) and the improper distance (Nash, 2021) in a game context, where it is proximate to evoke empathy and understanding, yet distant to make players reflect on their relationship with the workers. The audience will not become numb to the suffering of others, but they can still form opinions and emotional responses in relation to real-world issues.

The Amazon Race is heavily stylised, creating an arcade game feel, but draws attention to their factual status through textual elements such as information boxes. For example, this game informs players that workers' target pick rate is about 120 small items per hour – roughly two items per minute in a very large warehouse. Although this kind of information does not contain emotional words, it reveals to players the demanding work requirements. These information boxes are helpful in fostering players' cognitive

empathy, which means understanding how others feel given their situation (Jerrett et al., 2021). In this case, it reveals the link between the emotional experience and the work environment. The textual elements create more forms of empathetic response to foster a comprehensive emotional understanding of workers and serve to link the experience of play to the defined issue by providing a factual update, highlighting the importance of the problem and the urgency of change.

Players' emotional experiences together with textual and visual elements allow this game to provide causal attribution and evaluation of the issue. In *The Amazon Race*, the main way of orienting arguments through emotional experiences is to make players think about why they and the characters they control have complex emotional changes. Regardless of whether the player's pick rate is high or low, they will end up not getting any shifts at all. Therefore, players can discover that employees at the Amazon warehouse are severely exploited due to problems in the employment relationship, and Amazon is evaluated negatively in this game.

Giving voice to the voiceless, as a type of advocacy newsgame, echoes one accomplishment of investigative journalism which is 'establishing an empathetic link between those who have suffered in the situation and the rest of us' (Ettema and Glasser, 1998, p.189). *The Amazon Race* enables the player to understand the suffering of others through a vicarious experience, which has the potential to convey a deeper understanding of the real-world problem. The human-interest frame often emphasises the expression of the emotions of others and places personal stories above social issues (Naoroz and Cleary, 2021). Although there is consistency in the emphasis on emotion, *The Amazon Race* does not focus too much on individual stories. This game attempts to shed light on the difficulties Amazon workers, as a group, encounter in their work. *The Amazon Race* can be seen to demonstrate the exploitation problem that exists between Amazon, one of the Tech Giants, and its employees. In this way, *The Amazon Race* can raise public awareness and influence public opinion.

One goal of advocacy journalism, as a spokesperson for specific groups (Janowitz, 1975; Hanitzsch, and Vos, 2018), is more tangible in this game. Players and 'others' are interconnected in the process of playing, leading players to think about issues and causes on an empathetic basis. To a certain degree, this has parallels with the

relationship between us and the distant sufferer in humanitarianism. Recognising suffering as authentic on the basis of empathy is a legitimate reason for people to contemplate what they can do about distant suffering (Chouliaraki, 2013). Although in *The Amazon Race*, it should not be assumed that workers' suffering is distant, differences between players and others still exist. The proper distance (Silverstone, 2004) between players and others, which is neither an inability to distinguish between self and other nor a status of strangeness, is thus still important. Emotional proximity and allowing the player to judge the issue helps the player to raise the question of why acting on the problem is necessary, which can lead to a call for change.

However, this game does not present corresponding solutions for the issue. By providing solutions, players can gain a better understanding of how to take action and facilitate meaningful changes (McIntyre and Lough, 2021). Whether players will take actions, such as refusing to use the services of Amazon or calling on the government to investigate the problem, is uncertain.

6.2.2.2 Newsgames about People with Disabilities

A Wheelchair User shows players the experience of a wheelchair user travelling from Glasgow to London, and *Hearing Loss* aims to illustrate how hearing problems can affect people's lives. Although both newsgames employ a method which is similar to the human-interest frame, there are still some differences in how the issue is constructed.

In terms of problem definition, *Hearing Loss* relies on textual elements. Themes and word choices are commonly employed in *Hearing Loss* to define the problem. This game sets three themes – the difficulty in restoring hearing, sign language for equality, and what we can do – to frame the issues around healthcare, equality and work for disabled people. Textual elements such as 'differences' (差异) and 'understanding' (理解) are often used to reflect the difficulties faced by people with disabilities.

A Wheelchair User also uses several framing devices at the beginning. First, it uses contrast (Boesman et al., 2017) by emphasising the 'improvements' in public transport and the 'challenging' experience of disabled people. Second, the word choice of 'swearing is okay though' implies the emotions of disabled people who face difficulties when travelling. This encourages players to express their simulated frustration as a way

of performatively engaging with the experiences of disabled others. Third, this game shows an image of a finger pressing the disabled symbol button. These framing devices locate the issue in the imperfections of public transport.

In addition, *A Wheelchair User* counts how long the player was delayed in the journey, which sets a goal for players to aim for. This allows players to link their gaming experience closer to the problem defined by this game. *Hearing Loss* does not achieve this as it relies solely on textual elements to define the issue.

The story of *A Wheelchair User* is progressed through the dialogue between players and the game. This means that players need to read the plot and then make several choices. Each choice increases the likelihood that players will develop parallel empathy with the protagonist. For instance, when the protagonist wants to get on a bus, the ramp for wheelchairs does not work, and there is no one to help. This can make players feel emotions such as disappointment or anger, however, the game offers little challenge, and players can easily overcome obstacles and emerge victorious. This reduces the likelihood that the player will end up reflecting on negative emotions to recognise the problem.

In *A Wheelchair User*, potential emotional experiences are also shaped by visual elements. This game uses images to show where the story takes place, for example, in a train coach (see Figure 18). Such images as a framing device help players associate the game with scenes they are familiar with and think about their experiences in the real world. This has the potential to promote reactive empathy as players temporarily step out of the protagonist's perspective, thus allowing players to play the game at a proper distance.

Hearing Loss does not invite players to put themselves into other's shoes. The mechanics of this game consists of two parts: the first asks players to listen to some faint sounds, as a sort of hearing test; the second simulates what a person with hearing loss might hear and asks the player to distinguish what is being said. Although this reflects some difficulties that people with disabilities face in everyday conversations, it does not show the further inconvenience this may cause to such people in daily life. For example, people with hearing impairments may have very limited job opportunities or be

discriminated against in terms of pay. As a result, it is difficult to foster players' parallel empathy in this game. There is still some textual expression of emotion in the game, mainly through quoting sources and describing the emotions of groups. For example, a person's fear of surgery is shown in a direct quote. This is similar to the approach taken in news reporting practices in articles (Wahl-Jorgensen, 2013).

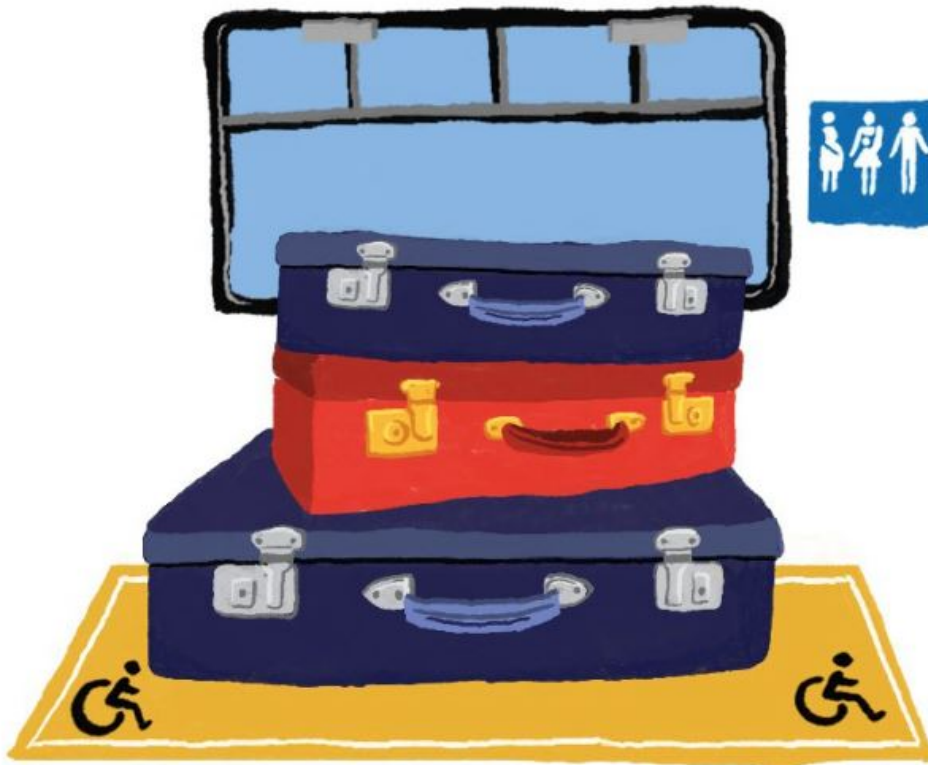


Figure 18. An image used in A Wheelchair User

The differences between the two games also have an impact on their causal attribution and evaluation. *Hearing Loss* does not present a causal chain or evaluate certain parties through its game mechanics, instead, it uses text and diagrams to attribute and assess the previously defined problems. *Hearing Loss* reveals treatment recommendations mainly through textual elements. However, it is questionable whether players are willing to take action to make changes, especially considering that this game does not allow players to take the perspective of others. This echoes the findings that some newsgames do not take advantage of the distinctive communicative potential that video games possess (Gómez-García and De La Hera, 2022).

A Wheelchair User attributes the cause of the problem to three different parties. First, the general public has an impact on disabled people's travel: facilities adapted for disabled people are inappropriately used in the game, and this creates an inconvenience to the protagonist's travel. Second, public transport operators also contribute as they often do not provide enough services and properly functioning facilities to assist people with disabilities. Third, the responsibility of the government is implied in *A Wheelchair User* when it is mentioned that the laws are not effectively enforced, and some operators, such as London Underground Limited, are government bodies. These three parties are presented negatively in the game. Some non-disabled people are described as impassive and unconscious. Few services provided by public transport operators are available in a timely manner to assist disabled people, and government action is absent.

A Wheelchair User offers treatment recommendations from a variety of perspectives. The game shows the player the importance and urgency of the problem by putting them into the shoes of another. It calls on people to change existing problems by considering whether their real-world actions have a negative impact on people with disabilities. The points at which operators and the government should make changes are also clearly identified, although more detailed suggested actions to help players realise what they can do to make these changes are missing.

It can be seen that giving voice to the voiceless is the same objective of the three games analysed above. All the games provide a vicarious experience for players, attempting to increase understanding of the suffering of others and its causes. Moreover, as with making problematic processes comprehensible, advocacy in these games is also reflected in the form of nudges (Sunstein, 2014; Thomas, 2016). These games do not suggest concrete recommendations for solutions but invite players to reflect on the problems to think about the necessity and possibility of action. In other words, newsgames do not place personal stories above social issues but rather establish a connection between them. This is the difference between the newsgames which give voice to the voiceless and a typical human-interest frame (Naoroz and Cleary, 2021).

There are also some differences between these games. For example, in shaping the player's relationship with others, *Hearing Loss* has the problem of keeping the player at too much of a distance from others, which may result in the player not being able to

develop an emotional connection with them. This can lead to difficulties and suffering faced by others not being perceived explicitly by players. The lack of empathy may not allow the player to think further about the need for action (Chouliaraki, 2013). Enabling players to vicariously experience others' emotions and to be aware of the differences between themselves and others can be important for newsgames. Players' emotional experiences allow them to reflect on issues involving others and respond to them.

6.2.3 Summary of Section

This section explored the ways in which newsgames can make arguments and nudge players to take action towards progressive change and development. Newsgames provide innovative approaches to advocacy but still share similarities with traditional news frames. One method is designed to reveal problems and where changes need to be made through the interaction between players and games. The other method allows players to have vicarious experiences and develop empathy with others. Both approaches contribute to raising awareness and shaping opinions on issues. They also rely on nudging players, enabling them to consider the possibility of taking personal action to promote social change.

6.3 Newsgame Players

This section explores how newsgame players perceive advocacy and interact with advocacy newsgames. After first analysing players' perceptions of advocacy as a whole, the focus shifts to how players negotiate arguments and whether they ultimately would like to take certain actions.

6.3.1 Reconsidering Advocacy after Playing Newsgames

Before playing newsgames, interviewees expressed their views on advocacy and relevant terms, such as opinions and arguments. After playing newsgames, they presented some new ideas. These ideas were not specific to a particular news story but to the whole perception of advocacy journalism. Some interviewees expressed a negative or cautious attitude towards advocacy in the beginning. Two said they thought journalism should not include too many opinions:

I think news media should be more neutral. Those partisan outlets made people become increasingly polarised... This ultimately erodes the trust that people have in the news... I don't easily believe the news today. (Player 7, male, 23, American)

News outlets that remain neutral and present the facts objectively can earn the trust of audiences. Expressing a lot of opinions may spread bias and lies. Look at how the Chinese and American media cover each other's countries. No one can understand things as they are from those media's reporting. (Player 11, female, 24, Chinese)

These two interviewees discussed the relationship between journalism and advocacy from a domestic partisan and an international perspective respectively. In both cases, advocacy and opinion are tied to prejudice and lies. Advocacy was understood as serving and giving voice to specific political groups, creating opinions that do not stand up to scrutiny and are even marked by bias. There is widespread criticism of a model of advocacy journalism that is based on specific political and economic interests (Thomas, 2018; Waisbord, 2009). From this perspective, advocacy is characterised by harmful bias and hidden interests, and journalism and advocacy are considered incompatible.

Other interviewees mentioned a cautious attitude to advocacy:

Personally, I don't think opinions are good things for journalism... the news should still mainly report the facts... but some conclusions can be drawn if they are based on facts. The proportion between opinion and fact is more important in the news, and it should be supported by facts. (Player 17, male, 20, Chinese)

This interviewee saw advocacy as a marginal journalism matter and emphasised that arguments in the news should be backed by truth claims. Such a view was common in interviews. Newsgame players often perceived advocacy as risky and believed that arguments and opinions should be presented with care. Only a small group of players (n=3) were relatively open to advocacy, but this was based on the idea that advocacy is inevitable. As Player 2 (female, 26, British) explained, the expression of opinions is an inseparable part of journalism, and it is important that positions are transparent and

opinions are carefully discussed.

One finding indicated a subtle shift in players' attitudes towards advocacy. As some interviewees reconsidered their ideas about advocacy after playing newsgames, they reported that their ideas about advocacy had at least slightly changed. This type of change was mainly seen in people who had a negative attitude towards advocacy. They became cautious rather than resistant to advocacy:

[College Scholarship Tycoon] is a good game. It has a good explanation of the problems in admissions... I'm not sure it counts as opinion or advocacy. It's not what I thought it would be, but it does seem to be calling for a change... This game is not biased but carefully discusses what the problem is. I mean, this kind of advocacy is fine with me. (Player 7, male, 23, American)

I didn't expect a game about climate change. I just hadn't thought of the possibility of a newsgame with such a theme... [The Climate Game] is quite interesting, and the ideas expressed in it are also quite thought-provoking. (Player 23, male, 30, Chinese)

There are two points to highlight here. First, it was important that the arguments were carefully elaborated – players wanted arguments to be well-founded. Second, topics of advocacy were evaluated by the interviewees who believed that social justice and social change were acceptable topics in advocacy journalism. This is consistent with the civic model of advocacy as supporting marginalised voices and interests (Waisbord, 2009).

One explanation for this shift is that the audience's news experience can, to some degree, reconfigure the audience's perception of journalism. Interviewees' previous understanding of advocacy journalism might be driven by the 'metajournalistic discourse' which shapes 'the boundaries of acceptable journalistic practices and the limits of what can or cannot be done' (Carlson, 2016, p.349). Audiences are rarely exposed to positive meta-discourse about advocacy journalism but may see advocacy as being associated with bias and lies. There are two types of advocacy journalism: progressive and conservative. Conservative advocacy, which relates to partisan journalism, limits the challenge to existing power relations (Fielding, 2022). Progressive advocacy seeks to

represent individuals who do not have a voice and to address issues of unequal power distribution, leading to social change (Laws and Chojnicka, 2020; Thomas, 2018). Players found a progressive perspective on advocacy journalism by playing newsgames and saw the challenge of existing power imbalances as a goal to be pursued by journalism. This does not mean that newsgames changed players' views on advocacy, but rather enabled them to rethink their views on the relationship between advocacy and journalism. By playing newsgames, players discovered and accepted a model of advocacy journalism that promoted progressive change.

6.3.2 Arguments, Awareness and Opinions

The analysis of newsgames points out two unique models of advocacy newsgames. The first approach is making problematic processes comprehensible. Interviewees expressed the importance of taking on a specific perspective in newsgames:

The good thing about [College Scholarship Tycoon] is that it gives a different perspective. I've applied to universities and received rejection letters, but I wouldn't think of it that way. From the perspective of the universities, you will find that they have to do that. So the problem is not with a particular college but at a larger level. (Player 8, male, 28, American)

Experiencing an unfamiliar position helped newsgame players to understand how a system works so that they could explore arguments about the problems within it. In the above extract, the game allowed the player to explore the problem from the university's point of view. Player 8 implied that the whole admissions system is flawed on a much larger level, and that the greatest responsibility for the problem does not lie with the university but with the government. Taking on another's perspective enabled players to consider a problem from a different perspective, and they could reason out the responsibility of different parties, which raised players' awareness of the problem.

Another finding was that players valued the process of argumentation. Players did not always agree with the points made by the games but often had a positive opinion of how arguments were made in them, as observed in the extract below:

I don't think pushing for all vehicles to be electric is really good for the

environment. We have to consider what to do with those end-of-life batteries. [The Climate Game] overestimates the benefits of electrification, but that's not something uncommon... This game does reflect the impact of different factors on climate change, and you need to balance all aspects and consider the connections between them while playing. Overall, I thought it was good. (Player 16, female, 24, Chinese)

This interviewee did not agree with one of the game's arguments but thought that the game overall was well-argued. Player 25 (female, 20, Kenyan) also described her playing experience as 'an interesting conversation' that invited her to discuss the possible solutions to the problem. Players might have to make decisions that affect the outcome of the game's story, or they might have to solve puzzles that require them to understand the relationships between different objects or characters in the game. By examining causal attribution in the newsgame, players could learn to identify logical problems and evaluate arguments based on evidence and reason. Even if they did not ultimately agree with the arguments, they negotiated the arguments in their gaming experiences.

The evaluation of arguments was important for advocacy newsgames. As Player 27 (female, 22, American) claimed, the evaluation of the player's performance in *College Scholarship Tycoon* allowed her to 'reflect on the choices' made before, which helped her realise that there was no 'perfectly balanced solution'. In the end, she agreed that the government's responsibility for the problem is clear. Player 12 (female, 26, British) found that the statement 'Amazon expects employees to be ready to work as soon as the break is over' seemed to support the argument that Amazon exploited employees, and this type of explanation made her feel that the issue discussed in *The Amazon Race* was worth addressing. Players carefully examined the arguments when they were playing, prompting them to reflect on the significance of the issues. In doing so, players developed a more nuanced understanding of how newsgames could be linked to the broader societal context, and then they generated personal opinions on these issues. Newsgames achieved the objectives of advocacy journalism by increasing awareness and shaping public opinion. It should be noted that this shaping should not be understood as an influence on players but as the result of players' negotiation of arguments.

This point was further reflected by some interviewees who noted that arguments are not always very clear and sound:

I'm not sure if [The Emergency Room] says emergency services need improvement... Well, I think the article [in the same series as the game] is a bit different from what I thought before. I wouldn't have thought of that if I was only playing the game, but after reading the article I would again think that the game does seem to express this view. (Player 4, male, 27, Chinese)

Player 23 (male, 30, Chinese) believed that *Measure Your Carbon Footprint* lacked an explanation of 'how individual life choices can be linked to larger environmental issues'. One challenge with newsgames was that they might not always be able to express arguments clearly and might not provide enough detail for players to fully grasp the complexities of the issue. Players did not endorse the game's analysis of the problem, which resulted in the potential public opinion not being formed. In contrast, when Player 6 (female, 23, Dutch) played *The Climate Game*, she spent some time examining the intermission part which explains why some measures were effective. Therefore, Player 6 knew exactly 'what this game was trying to say' and thought that there were 'some very valuable ideas' on climate change. By providing additional context and explanation, newsgames helped players negotiate the arguments they presented.

The second form of advocacy relies on giving voice to the voiceless. Some interviewees played *The Amazon Race* and then read the relevant article in the series. One interviewee compared the newsgame with the article:

I think the game draws my attention to the issues more. I might forget the article within a couple of days of reading it. However, playing the game gives me a sense of engagement or immersion, because I experienced that tough and tangled feeling. This is more impressive. (Player 5, female, 23, Chinese)

The intensely emotional experience enabled this player to develop a sense of concern for the problem. In this way, advocacy newsgames could contribute to raising public awareness. Furthermore, emotional experiences facilitated players' thinking about arguments. As interviewees put it:

[The Amazon Race] can give you a sense of that depressing work environment... Then frustration and anxiety come with it. This makes you realise it is problematic. (Player 10, female, 29, Chinese)

[The Amazon Race] is a simulation, but it did make me feel like I experienced something. It gets me thinking about why I had those negative emotions and whether those employees would have the same emotions... Finally, you will think about what the problem is and why this is happening. (Player 15, female, 25, British)

The case of parallel empathy could be observed in these extracts. Parallel empathy means the player's emotional state is similar in key respects to another's (Jerrett et al., 2021). Players associated their own emotional experiences with other people's states in real life and explored the game's arguments by thinking about why they were having such an emotional experience. In this way, newsgames engaged players in an experiential way to prompt an emotional response to the suffering of others, so players reflected on the problems faced by others.

Emotions could thus make players aware that the problem is critical and that changes need to be made promptly. Player 21 (male, 22, British) expressed the importance of 'handling it on my own' because he could understand 'what causes anxiety and fear'. Player 6 (female, 23, Dutch) stated that the inconvenience of using a wheelchair annoyed her in the game and found that 'this problem is far more serious than it seems'. These extracts reveal the value of vicarious experiences for advocacy. It provided players with an opportunity to explore things that they might not typically encounter by placing them in the others' shoes. This made it possible for them to notice how problems affected others, leading to an opinion that there was an urgent need to solve problems.

Interviewees also reported that they noticed the emotional descriptions of the characters. Player 9 (male, 31, Chinese) said that texts describing the character's emotions in newsgames made him aware of the differences and similarities between himself and the character. There was a risk that video games might foster improper distance whereby players would prioritise their gaming experiences over others' real experiences (see

Nash, 2021). However, textual elements could reduce this risk by informing players of the character's emotions.

Maintaining a proper distance between players and others was helpful for understanding arguments. As Player 19 (female, 22, Chinese) explained, she worried that she was 'underestimating the difficulties of workers in reality' as the depression generated by the game may be relatively minimal. Interviewees considered the possibility that the games may only partially represent other people's emotions. Player 3 (male, 25, Chinese) played *The Emergency Room* and believed that the stress of not being able to finish it was not comparable to real stress. He did not consider this difference a problem but stated that there would be 'a huge mental and physical burden for emergency physicians' if the issue were more serious in the real world. This shows that players could better understand the game's proposed ideas as they were aware that the problems were more serious in the real world. Players were motivated to extend the argument of newsgames beyond the confines of the gaming experience, which could help to raise awareness or form opinions.

Newsgame players saw background information as an important factor in establishing emotional connections between themselves and others. Some interviewees said they expected more messages to understand others emotionally:

These games have really given me an insight into what other people's lives are like, but they are still far from my own. For example, I don't know exactly what's going on in the homelands of those refugees, but the game seems to assume I know a lot about that. (Player 18, male, 25, Chinese)

Although players tried to explore the arguments in newsgames, some failed to understand the problems in depth. People who are not familiar with others' 'cultural norms, values, and beliefs' do not have enough basis for understanding them (Belman and Flanagan, 2010). Emotional engagement was likely to require more background information, which might be from the game itself or other coverage in the same series. After playing *The Uber Game*, Player 13 (male, 28, Dutch) skimmed the article attached at the end, and he understood better 'why Uber drivers have to work so hard'. In the context of newsgames, background information served as a bridge between the player's

personal journey within the game and the real-world struggles faced by distant others, which enabled players to generate awareness and opinions on issues.

6.3.3 Taking Action (or Not)

Raising awareness and generating opinions are goals of advocacy journalism, which aims to promote social change and development (Waisbord, 2009; Thomas, 2018). In addition, advocacy journalism might allow players to take certain actions that could contribute more specifically to change (Charles, 2019; Aitamurto and Varma, 2018). Because of the experimental context of the interviews, I asked about willingness to take action. First, interviewees reported that emotional experiences can arouse their desire to act, as the extract below illustrates:

I imagined how I would feel if I did encounter these problems, and the more I pondered on it, the worse I felt. I considered if there was something I could do.
(Player 26, female, 26, Chinese)

Players saw newsgames as a kind of imaginary space where they could explore their emotions in the face of real-world issues, which also awakened their desire to act. Player 20 (male, 25, British) said that *The Amazon Race* reminded him of a similar experience in his life. This made him feel that the problem 'should be addressed' and that he 'should do something'. Players may compare the games with their previous experiences. When players find that others' emotions can be potentially intense, they are motivated to act. Players imagining their reactions and relating newsgames to previous experiences were two different ways of generating emotional connections, but both reveal how empathy can shape players' willingness to act in the context of playing newsgames.

Moreover, some players identified differences between themselves and others. As Player 27 (female, 22, American) explained, the conflict between passenger and driver in *The Uber Game* reminded her of her usual role as a passenger. This made her think about how she 'should communicate with drivers afterwards' and 'whether Uber should be investigated'. This shows that keeping players at a proper distance from others was important for the player's willingness to act and prompt change. This distance provided players with more room for reflection. Their gaming experiences would not overshadow the real-life experiences of others, and it nudged players to contemplate what actions

they could take in response to the issues.

Players believed that well-argued newsgames could help them get involved in social changes. As section 6.3.2 highlighted, players found it helpful to show the complexity of the issues to negotiate arguments. The following extracts show how this relates to the willingness to act:

It's pretty clear in [College Scholarship Tycoon] that universities can't fix this problem on their own. The game allows you to try different or even opposite strategies to see which one actually works. It's really up to the government to step in and make some changes... If action is taken, it should be in relation to a change in public policy. (Player 8, male, 28, American)

[The Climate Game] really discussed a lot. It's all about figuring out what actions actually make a difference and what just doesn't cut it, from social media campaigns to changing food choices... And the best part is, that it makes me reflect on my life and lets me know what I can do. (Player 22, female, 21, British)

There are two main aspects to be unpacked here. First, by examining and presenting multifaceted aspects of issues, newsgames provided a heightened sense of delving into issues with depth and intricacy. This allowed the player to identify the problem by exploring different parts of the newsgames. In this way, players could discover potential solutions to the problems demonstrated by newsgames. Player 19 (female, 22, Chinese) stated that *Hearing Loss* did not clearly explain the cause of the problems, so she was not sure how to participate in promoting change. Newsgames do not provide clear calls for action in the same way that solutions journalism does (see Aitamurto and Varma, 2018), but the articulation of problems nudges players to think about how taking action is possible. The orientation of the player's thinking remains to promote change to address social issues.

Second, it is important to consider the geographical and relational distance between players and issues. 'Proximity' and 'personal relevance' (Schrøder, 2019) are important indicators of the types of news favoured by audiences. The above extracts show that they also play important roles in players' willingness to take action for change. Players

were likely to know what they could do if the issue was closer and more relevant to their lives.

The implications of proximity, in turn, raise the question of whether newsgames can facilitate action in response to the suffering of distant others. Newsgames are found to have 'the potential to diminish compassion fatigue' (Plewe and Fürsich, 2018, p.2482). On the one hand, newsgame players found that newsgames evoked their empathy and fostered their understanding of distant others. As Player 17 (male, 20, Chinese) said, *Syrian Journey* helped him to understand the experiences and emotions of refugees, especially as he had little sense of them before. On the other hand, players often did not know what they could do:

[Syrian Journey] did give me some new ideas about refugee issues, but it is not clear what you can do. You just know that they had a tough experience. At this point, the game doesn't seem that different from other pieces of news I've seen before. (Player 13, male, 28, Dutch)

It can be seen that the way in which some newsgames covered distant issues was still perceived as lacking the potential for further engagement. Newsgames hardly helped players foster forms of action toward distant others. This reflects the limitations of newsgames in a global context. For topics like climate change, players were likely to discover potential solutions and relate them to their lives. However, for issues such as refugees, existing newsgames were dedicated to forging an emotional connection with no indication of how players could respond to promote change. It was difficult for players to imagine and think about which actions were possible or desirable. This echoes the concern that without careful design, newsgames do not encourage participation (Plewe and Fürsich, 2018).

Some players considered whether the distant issues in newsgames could shed light on issues intimately connected to their lives. As one interviewee put it:

[The Ocean Game] got me thinking about my hometown. There are some houses near the coast that are now uninhabitable because of the rising sea levels. Of course, there are definitely differences from place to place, but the

game is also enlightening. It's not just an environmental issue, but what people should do about it. (Player 9, male, 31, Chinese)

This reveals a way in which players respond to newsgames. Instead of generating a direct response to a distant question, players attempted to identify the way in which newsgames might relate to their lives. Similarly, Player 10 (female, 29, Chinese) believed that exploitation of employees by Tech Giants like Amazon is widespread around the world, including in China, where she lived. She thought people should take action against this exploitation. Player 14 (male, 24, British) noticed that *The Uber Game* was talking about Los Angeles, but it also made him consider whether there was a similar problem with the local ride-hailing service that needed to be changed. When players related the problems to their own lives, they found it more likely that they would take action to make a change. This demonstrates one potential of newsgames. While some games were set up to focus on a particular region, they could resonate on a wider scale, contributing to making a difference in a global context.

Whether newsgames were closely related to players' experiences or not, they often expressed the importance of suggested actions and potential solutions. After playing newsgames, one interviewee explained what they expected:

The Climate Game is really good because it helps you figure out both small things you can do in your life and bigger policy changes that need to happen. It is important to have solutions. [A Wheelchair User] made me a bit, well, overwhelmed because it does not give you a course of action or something else. (Player 21, male, 22, British)

Other players also expressed their interest in the proposed solutions and actions. Player 2 (female, 26, British) hoped newsgames would expand on how to respond to distant issues rather than just showing suffering. Player 27 (female, 22, American) thought that *The Uber Game* could have ended with a note on 'how to address the problem'. If suggested responses or actions were not provided, players often perceived themselves as being left out of the problem-solving process.

Nudges were the main approach for advocacy newsgames to foster willingness to take

action. The core of nudges is to provide guidance while allowing people to retain their autonomy (Sunstein, 2014; Thomas, 2016). As players sometimes got stuck in a situation where they had no idea about potential action, presenting solutions and ideas for a possible future in advocacy newsgames was essential. The above analysis suggests that players can negotiate arguments, so it is equally to be expected that players can negotiate solutions. Players' expectation of a solution does not mean complete agreement with the solution without judgement. Although keeping a balance between 'a delicate act between judgement without over-rationalization' and 'emotion without sentimentalism' is a hard task, it enables us to think about the critical question of what other actions can be taken besides monetary donations (Chouliaraki, 2013, p.205). Judgement can be seen as the process of public debate on different possible courses of action towards distant issues (Chouliaraki, 2013, p.195). For newsgames, it is worth considering the player's judgement of the solution. The combination of such judgement and empathy at the proper distance is important to generate the player's willingness to act. This also explains why players tended to associate advocacy newsgames with issues close to their own lives, as they had more knowledge about areas they were familiar with and therefore had a greater ability to judge.

6.3.4 Summary of section

This section first revealed that players were often initially sceptical about the link between advocacy and journalism. However, some players identified an unfamiliar model of advocacy, which aims to catalyse progressive change and development, after playing newsgames, and they saw this model as acceptable journalistic practice. They negotiated the arguments in newsgames by checking that the games reflected the complexity of the issue and had a robust explanation. The interviews also showed that emotional connection is important for raising awareness and shaping opinions. The willingness of players to take action was complicated, related to whether the player found the arguments to be sound. Proximity, personal relevance and potential solutions also had implications for players' willingness to act. The potential of newsgames in a global context could be seen, but their capacity to facilitate action on distant issues remained underdeveloped.

6.4 Conclusion

This chapter investigated the ways in which newsgames are brought into the space of advocacy journalism. The first part focused on newsgame practitioners and explored their perceptions and practices of making advocacy newsgames. In general, they expressed a cautious attitude toward advocacy, as such an interventionist approach might lead to introducing bias or attracting criticism. Therefore, practitioners employed a set of practices, which formed a strategic ritual, to claim that advocacy newsgames can be viewed as a legitimate form of journalism. There were four steps in the strategic ritual: the cautious choice of topics, emphasising the social relevance of newsgames, supporting arguments with facts, and retaining autonomy. Though they approached advocacy with caution and thoroughness, there was still a lack of reflection on the influence of sources. Sources who might have conflicts of interest became less visible in newsgames, but their ideas often shaped the arguments presented. During the interviews, two types of advocacy newsgames were identified: giving voice to the voiceless and making problematic processes comprehensible. These two types were linked to social justice and progressive social change, so they were articulated as potentials for journalism to contribute to society.

The analysis of newsgames explained how they could make arguments to support specific people or ideas. I found similarities between newsgames and other journalistic forms in terms of framing news. However, newsgames provide a more interactive and reflective space in which players can negotiate arguments. Along with the features of video games, textual and visual elements also contribute to advocacy. Furthermore, two types of advocacy newsgames were examined. One type involves unpacking problems through player-game interaction: players are invited to uncover arguments through interaction with the game so that they can identify the parties responsible for the problems. The other type encourages players to develop empathy and emotional understanding towards others. Newsgames attempt to maintain a proper distance, allowing players to both feel empathy and realise the differences between themselves and others. In addition to raising awareness and shaping opinions on issues, newsgames nudge players to consider how they can respond and take action to promote potential change. Nudges mean retaining players' autonomy while also providing some direction for the player's actions and a rationale for why they need to act.

At the beginning of the interviews, players usually questioned whether advocacy should be part of journalism. Some players identified a different form of advocacy that aimed to bring about change and progress after playing the newsgames, and they deemed such advocacy to be acceptable. Players' responses indicated that newsgames were effective in raising awareness and shaping opinions. They often explored the game space to negotiate the arguments. Newsgames about problematic processes allowed them to capture which parties were responsible for problems. They also valued the emotional understanding of others and considered whether real-world issues were more serious than issues in newsgames. The willingness of players to take action was complex and affected by a series of factors: negotiation of arguments, proximity, personal relevance, and potential solutions. Some newsgames reported on distant suffering, and players developed empathy by playing those games. However, they did not know how they could take effective action. Players could sometimes compare distant problems with similar ones locally, leading to a willingness to take action on closer issues. Suggesting a course of action and leaving space for players to negotiate or even oppose it was important for players to engage with change and development, especially when distant problems were involved.

Chapter 7 Discussion and Conclusion

This chapter starts by discussing my findings from the previous empirical chapters to answer my three research questions. I outline the negotiation of truth claims in the case of newsgames (RQ1) and then explain how entertainment in newsgames can be linked to audience engagement (RQ2). Furthermore, I review the ways in which advocacy is shaped and understood in newsgames (RQ3). Having answered these questions, I bring them together to provide a critical examination of newsgames, journalistic roles and the broader changes in journalism. This allows me to conclude by suggesting the potential future of newsgames and journalism. Finally, this chapter summarises the contributions, limitations, and future research on the topic.

7.1 Answering the Research Questions

In this section, I propose answers to my three research questions. Following these initial sets of answers, I discuss how these ideas can help us understand journalism in the next section.

7.1.1 RQ1: How are truth claims negotiated in the context of newsgames?

My first research question is based on the tension between ‘fact’ and ‘fiction’ in the context of newsgames. While the informational role of journalism has the ideal of making truth claims about the real world, video games often provide a fictional space for news reporting. To answer this question, I examined three aspects of the negotiation: production, media products, and consumption.

Newsgame practitioners recognised that there is a fictional aspect to newsgames, but they still valued truth claims. Therefore, they took a series of steps to justify the practice of making truth claims in newsgames. Evidence-gathering practices like interviews and documents are widespread in the production process of newsgames. This can be seen as adherence to traditional practices, so practitioners could claim that newsgames have similarities to other forms of journalism. Evidence is the basis of newsgames, which makes them an acceptable form to make truth claims about real-world events and issues.

Practitioners spend a great deal of time and effort constructing newsgames using evidence. There are usually several team discussions regarding the tweaking of game designs, and truth claims are carefully considered by practitioners in these meetings. This is in line with the growing importance of teamwork in journalism practice (Grubenmann, 2017; Plewe and Fürsich, 2020). However, at least in the realm of newsgames, editors and journalists remain at the centre, determining how truth claims should be shaped and presented. A challenge manifests in practitioners lacking experience in presenting truth claims in the context of video games. Expert opinion is used as a reference to support the design of newsgames. This is due to both a lack of expertise and the long-term reliance on expert sources in journalistic practices.

Moreover, practitioners conduct informal tests to update and revise their newsgames before publishing them. The informal test with 'imagined audiences' (Coddington et al., 2021) is a compromised but helpful way that allows practitioners to identify the problems in making truth claims in the absence of funds and time. A challenge was identified in how to convince players that the truth claims made by newsgames are credible. In response, a step was introduced to show evidence or to indicate that they collected evidence in the games. This shows that practitioners were concerned with how audiences made sense of the truth claims being made.

The above steps, taken together, can be viewed as a strategic ritual of truth claims. The purpose of strategic ritual is legitimising the work and thus protecting it from external criticism (Tuchman, 1972). For newsgames, this strategic ritual aims to claim that even though they might involve a blend of fact and fiction, newsgames have the legitimacy to make truth claims. Reminding audiences about or performing this legitimacy is necessary.

Furthermore, practitioners saw newsgames as a way to broaden the scope of truth claims made by journalism. Practitioners can explain systemic issues or enable players to vicariously experience other people's stories. This is in line with the literature on journalistic innovation (Lopezosa et al., 2023; Uricchio et al., 2016), arguing that the new storytelling techniques can handle and deliver information in different ways than traditional journalism.

The analysis of newsgames revealed that different approaches to making truth claims were used in newsgames. *The Uber Game* exemplifies how newsgames can potentially bridge the gap between players' gaming experiences and the lived experiences of others. In relation to those games that foster playing from a first-person perspective, gaming experiences are integrated into the negotiation of truth claims, blurring the mediated claims and personal experiences and prioritising emotional ways of engaging with the experiences of others. Textual and visual elements that serve as clues contribute to this connection. *The Ocean Game* helps to illustrate how newsgames explain systematic issues; simulation of the system is the key point in making truth claims. News reporting often captures independent events but seldom covers processes (Nielsen, 2017). By contrast, this game requires players to fill in the blanks, linking different parts of the system together through game mechanics to create a complex causal explanation.

This reflects two trends in journalism. The first trend is the practice of incorporating personalised stories into truth claims (Grabe et al., 2017; Wahl-Jorgensen, 2019). Newsgames could be considered an experimental exploration of these shifts. Second, news stories have been found to be more and more interpretive (Cushion, 2015; Soontjens, 2019). Newsgames not only cover isolated events but also attempt to provide 'knowledge about', which explains the relationship between events.

In addition to these approaches, I also found that newsgames offer a new way of integrating data to make truth claims. *Do you think...* emphasises the important role of players as they need to reason inductively to link data to a real-world issue. In this way, data is seen as a massive thing that can produce truth claims by being placed in a particular context (Anderson, 2015). The above three approaches demonstrate the diversity of newsgames, but all emphasise the importance of the audience. This aligns with the ideal of integrating audiences into journalistic processes in unprecedented ways (Costera Meijer, 2020; Meier et al., 2018). The player's experience with and perception of newsgames is key to negotiating truth claims.

Given the potential fictional elements, newsgames need to establish a connection between themselves and reality. The presentation of evidence in newsgames can help shape truth claims as it provides concrete details of real-world events and issues. The

production process of some newsgames is also revealed to players, which can be seen as a practice consistent with the pursuit of transparency (Karlsson and Clerwall, 2018). The visual elements also contribute to providing a sense of realism. They have the potential to provide a familiar journalistic texture and an experience of investigating as a journalist.

The results of the audience research revealed how players interact with newsgames and perceive truth claims. Players generally agreed that the news media should make truth claims, but they did not always believe what the media portrays. Therefore, they evaluate truth claims when they consume news. Players did value evidence, which they believed was a key factor in helping them link newsgames to real-world issues. Players also saw the disclosure of the production process as a useful means of assessing truth claims. However, they found that some newsgames did not provide clear evidence, and they often missed the parts where newsgames disclosed the production process. This led to them being sceptical about truth claims. Players believed that data is an important type of evidence, and players' interpretations of newsgames and their background knowledge are key to whether data could be linked to truth claims.

Because newsgames were novel to players, they used some additional tactics to make judgements about their truth claims. The visual element is seen as a factor in enabling players to recognise truth claims. Photos and filmed video clips could remind them of familiar news items, and a realistic visual style captured the physical characteristics of the real world.

Players used their lived experiences to make judgements and described a careful consideration of the causal relationships presented by newsgames. Van Zoonen (2012) argues that audiences 'have come to suspect the knowledge coming from official institutions and experts, and have replaced it with the truth coming from their own individual experience and opinions' (p.56). My findings suggest that it is possible for newsgames to reconfigure this issue about truth claims, as players said that newsgames provided a space for them to think more deeply. More concretely, players evaluated the extent to which their gaming process could represent what happens to others, and they considered whether truth claims about systemic issues are justified and self-consistent. After assessing the link between newsgames and the real world, many players accepted

newsgames as a form of journalism, believing that they offer more possibilities to make truth claims. However, certain criticisms were made by players, including the oversimplification of complex issues and a possible lack of understanding of the particular circumstances of others.

In sum, despite the tension between fiction and fact, newsgames can still be relevant to the real world. In terms of making truth claims, newsgames can be both particular and universal. What makes newsgames unique is their ability to deploy novel approaches to make truth claims through the characteristics of video games. This can serve as a complement to existing forms of journalism to make diverse truth claims. The more general significance of newsgames for truth claims is that the audience is placed at the centre. From a production perspective, convincing players that newsgames can represent real-world issues and events is one of the main challenges, and the efforts of practitioners to do this are reflected in the games. The audience, as players, evaluated newsgames in a comprehensive way to think about the truth claims. This means that truth claims were important to audiences, but they did not believe such claims easily. Many of the ideas and practices about truth claims were not unique to the field of newsgames but emerged from the broader production and consumption of news. When we consider the crisis in trust as the central challenge of journalism (Fink, 2019), we need to have a full understanding of the actual experiences and practices of audiences, especially how truth claims are identified and evaluated by them.

7.1.2 RQ2: How does entertainment in newsgames integrate with the pursuit of audience engagement with public affairs?

The second question was developed from the expectation that newsgames might help to enhance audience engagement (Ferrer-Conill et al., 2020). Engagement here refers to how people pay attention to and interact with news. Playing video games is seen as an enjoyable experience, and newsgames could be located within the hybrid of public affairs and entertainment media. This question was also addressed from three perspectives: production, media products, and consumption.

The investigation of newsgame production suggested that newsgame practitioners did typically consider promoting audience engagement as a goal of making newsgames. First, newsgame practitioners expressed the importance of economic, political, and

social issues in their journalistic practices. My finding also lends weight to existing work that highlights journalists' attempts to provide entertaining news items in an effort to increase audiences' access to public affairs (Banjac and Hanusch, 2022; Hanusch, 2019). The hybrid of public affairs and entertainment developed from the level of content to that of form, and this encouraged practitioners to experiment with newsgames. Practitioners believed that newsgames could provide enjoyment in terms of form. However, the enjoyable experience is not regarded as the ultimate goal of newsgames, and the value of pleasure is largely seen as building audiences and facilitating their engagement with the content. As a result, practitioners delved into the potential of video games to provide entertainment and facilitate players' understanding of content. This included researching serious games and consulting with game developers.

My interviews further pointed towards a lack of adequate assessment of audience engagement. The production of newsgames was experimental in nature, so practitioners attempted to evaluate the extent to which the goal of enhancing audience engagement could be achieved. Practitioners mainly relied on two approaches to assess audience engagement. First, they checked social media for comments on newsgames. While there were some critical and in-depth thoughts, the comments are sparse in number. Second, some practitioners noted that they used a series of metrics to measure the player's gaming experience. This reliance on metrics is consistent with the existing literature (Anderson, 2011; Powers, 2018). The use of audience metrics has been said to reduce the quality of journalism, leading to a decrease in concern for the public interest (Ferrucci, 2020; Fürst, 2020). My finding is subtly different in that metrics mainly provided a superficial understanding of the gaming experience because they only reflected the enjoyment provided by newsgames. Metrics do not tell practitioners about players' actual experiences where engagement with content is considered the ultimate goal. Practitioners rarely use metrics to improve audience engagement in the subsequent production of newsgames.

Newsgames on the topics of climate change and disinformation were investigated to address the ways in which newsgames provide enjoyment and how enjoyment may contribute to engagement with content. From a macro view, enjoyment and content are intertwined in newsgames. Enjoyment is not merely a 'door opener' that leads players to engage with content or as a reward for their engagement. Newsgames tend to combine

the enjoyable experience and engagement with content in a tightly knit way.

Although the newsgames I considered deployed different approaches to provide enjoyable experiences and facilitate engagement with content, they shared several common key factors. First, concentration is a core factor that emphasises grabbing the attention of players over a period of time. Players need to concentrate to some degree to enjoy playing games, and newsgames strategically set news content as the object of players' attention. A clear goal is a factor that helps players concentrate, as it clarifies what they need to work towards if they want to win. In the process of reaching the goal, players need to understand the content and apply it back to the game. This allows players to derive pleasure from overcoming a series of challenges. Furthermore, control can also promote players' engagement with the content, as the control offers players a sense of enjoyment in exploration. Rather than being given information directly, players can discover it by exploring the game environment. In addition, feedback and hints not only enhance players' enjoyment in overcoming challenges but also clearly convey important information to the players. Together, these factors shape the way newsgames provide an enjoyable experience and have the potential to increase engagement with the content.

However, while some studies indicate that existing newsgames have not fulfilled their full potential (Gómez-García and De La Hera, 2022; Plewe and Fürsich, 2018), my investigation also revealed that newsgames should not simply be celebrated as powerful possibilities to promote audience engagement. The first thing to note is that some newsgames might not keep the player's attention on the content and may lead to the neglect of some key messages. Another risk is connected with the first research question, where the pursuit of enjoyable experiences sometimes leads players' engagement to be confined to a limited game space without generating a reflection on real-world issues.

Gaming interviews with audiences provided a useful complement to game analysis, helping to examine how the possibilities of newsgames are responded to and perceived by players. Most interviewees identified public affairs news as an important part of their news consumption. Penney (2023) points out that audiences seek and identify the link between public issues and entertainment news, and my interviews also provided empirical evidence for this argument. When some players consumed entertainment

news, they would seek information about public affairs. Players' experiences with video games suggested that they thought good games should be pleasurable, and this was also applied to games with educational and training purposes. Taken together, players had two expectations of newsgames: that they were both entertaining and informative, allowing them to gain useful information through playing.

By comparing the process of playing newsgames with their daily experience of consuming other forms of journalism, players generally agreed that newsgames helped them engage better with content. On a more specific experiential level, the player's responses and thoughts were mainly consistent with the analysis of newsgames. The most prominent idea was that playing newsgames required focusing on important information. The sense of exploration, challenges, feedback, and hints all contributed to the state of concentration. Therefore, newsgames could grab players' attention to content related to public affairs over a period of time. Furthermore, some players like to play newsgames repeatedly to win, and this process facilitated their engagement with content. A few players took a subversive and creative play style that did not pursue the game's goals directly. This approach also provided enjoyment for players and helped them to engage with content.

My findings also revealed the importance of proper enjoyment for audience engagement with content. There is a view in game studies that there should be a balance between entertainment and education, as both excessive and insufficient entertainment can be detrimental to the acquisition of information (Ritterfeld and Weber, 2006). In my interviews, players found that some newsgames did not provide them with enjoyable experiences, so the content of games was rendered completely unappealing to them. Some players said they only focused on how to win, and too much emphasis on entertainment could cause them to unintentionally ignore the content. When newsgames did provide enjoyment to players, and this enjoyment was still based on the understanding of key information, newsgames could enhance players' engagement with content.

Moreover, newsgames could also enhance audience engagement after players finished them. I found that newsgames had a very powerful potential to raise players' interest in specific topics, even though they did not pay attention to them before. As a result, some

players expressed a willingness to search and learn more about the relevant information. Sharing on social media is seen as an indicator of engagement by newswriters (Ferrer-Conill and Tandoc, 2018). On the one hand, many players' media habits were not consistent with this, so they did not have a willingness to share newsgames. On the other hand, the focus on important issues and the enjoyment newsgames provided were reasons some players were willing to share, so newsgames held the potential to increase the likelihood that public affairs news was communicated.

To sum up, newsgames provide a potentially effective way of engaging with news content, and this is highly correlated with the concentration driven by enjoyment. For some players, newsgames are likely to better capture the attention of players during their exposure to the news compared to other forms of journalism. However, newsgames should not be regarded as a panacea for promoting engagement. My research found some newsgames did not appeal to players or put too much emphasis on entertainment. As the evaluation in journalistic practices is still limited, this may lead to practitioners' inadequate understanding of how newsgame players engage with content. This undermines the possibility of striking a balance between enjoyment and information, which is important for fostering better player engagement with the content. If we place this research question in a broader journalistic context, its answer will contribute to understanding audiences' attention. News media attempt to capture attention in an increasingly competitive environment, as people spend a limited amount of time on an expanding array of media choices (Nielsen, 2020). Audience engagement is regarded as a key concept in addressing such a challenge, but it is most often used as a commercial response without consideration of higher-level objectives, such as access to public affairs (Costera Meijer, 2020; Poell and Van Dijck, 2014). My findings suggest that considering audience engagement itself as the ultimate goal is problematic, because it may result in audiences' detachment from the news content. A more nuanced debate about what engagement means for audiences themselves is essential for understanding audience engagement.

7.1.3 RQ3: How do newsgames function as a practice of advocacy journalism?

The answer to this research question allows me to reflect on the role of advocacy in journalism and how newsgames could be incorporated into the conversation. This has

to do with taking a more practical view of how journalism functions in society, as well as the potential for video games to make arguments and drive change. Like the above questions, I considered this question from the aspects of production, media products, and consumption.

Newsgame practitioners had cautious attitudes toward advocacy. Some newsgame practitioners indicated that advocacy was not part of their work. This might be related to a contested but widely influential ideal that journalists should act as neutral spectators. It should also be noted that at least some other practitioners would regard themselves as active participants in the marketplace of ideas. They considered advocacy to be an acceptable journalistic practice and claimed that they always evaluated advocacy carefully. This aligns with findings that advocacy is gaining prominence in journalism (Robbins and Wheatley, 2021; Schäfer and Painter, 2021).

A strategic ritual was also observed in the practice of advocacy newsgames. This strategic ritual is a defence mechanism aimed at protecting their newsgames from the risk of external criticism. Such a ritual of advocacy newsgames often consisted of four main steps: the cautious choice of topics, emphasising the social relevance of newsgames, supporting arguments with facts, and retaining autonomy. Practitioners avoided potentially controversial topics and carefully considered what they advocated. They further attempted to establish social relevance for advocacy newsgames, thereby claiming that newsgames were beneficial to public life. Practitioners emphasised that the arguments in newsgames were not unfounded but supported by facts. In collaboration with external organisations, practitioners stated that they still retained autonomy regarding advocacy. In this way, advocacy was justified as being consistent with journalistic ideals and the production of advocacy newsgames could be an acceptable practice. However, newsgame practitioners seldom considered the potential conflicts of interest of expert sources or collaborators. This was a risk that cannot be ignored for advocacy newsgames that aimed to promote change rather than specific political and economic interests. This risk is not unique to newsgames but also exists in the broader journalistic field (Holland et al., 2014).

In my interviews, I found that giving voice to the voiceless and making the problematic process comprehensible were the approaches to advocacy used in the context of

newsgames. Both approaches could be seen as a model of advocacy that attempts to promote social change and development, rather than the partisan model for specific political and economic interests (Laws and Chojnicka, 2020; Waisbord, 2009). Practitioners could thus claim their newsgames as the valuable contribution of journalism to society.

The analysis of newsgames explored the ways in which newsgames argued in support of certain ideas or people. Newsgames offer innovative approaches to advocacy but still cover the issue in a similar way to other forms of journalism. Framing devices and reasoning devices are widely used in news stories to make sense of issues and highlight certain aspects of them (Entman, 1993; Van Gorp, 2010). Framing can be a useful term in the study of newsgames, although as demonstrated in this study it is imperative to consider the ways in which interactivity and the process of playing contribute to players' unpacking of arguments made by newsgames. Newsgames require the player to interact with them to explore how they define the problem and attribute responsibility, which provides the player with space for more reflective thinking. This is not to imply that textual and visual elements do not contribute to framing the issues. The exploration of newsgames revealed that video game features could form a multidimensional method of advocacy alongside textual and visual elements.

More specifically, making the problematic process comprehensible and giving voice to the voiceless are two primary types of advocacy newsgames. Making the problematic process comprehensible represented an effort to expose hidden problems and simultaneously hint at the necessity for solving them. Newsgames offer a new way to cover complex problems by inviting players to understand what factors shape or cause problems. Newsgames often use the rhetoric of failure to highlight the seriousness of the problems and the urgency of solving them. Giving voice to the voiceless describes an idea of reconfiguration of existing power relations, aiming to support the weak or the vulnerable. This approach helps players to establish an emotional link with others through empathy. While newsgames often foreground emotional connection, they generally attempt to maintain proper distance between players and others. Players are invited to understand the suffering of others through vicarious experiences, while also using textual and visual elements to make players aware of the differences between themselves and others. Both types can be helpful to contribute to raising awareness and

shaping opinions on certain issues.

I also found a connection between newsgames and the idea of 'nudging' the public. Newsgames demonstrated the role of practitioners as active advocates, but this did not imply a mandatory requirement for audiences to act. This is suggested by the freedom of players in the space of play while also being guided towards appropriate decision-making. One finding was that the treatment recommendation, or the potential solution to the problem, was absent from some newsgames. For newsgames aimed at advocacy, this means that a risk is that players do not know how they can take actions that would contribute to social change and development.

Interviews with players explored the ways in which players respond to and perceive advocacy newsgames. Before playing newsgames, many players were sceptical about the link between advocacy and journalism, and they assumed that an interventionist position would lead to bias. Metajournalistic discourse provides the boundaries of acceptable journalistic practices (Carlson, 2016), and the discourse to which audiences were often exposed shaped their perceptions of advocacy. However, some interviewees, after playing newsgames, believed that advocacy newsgames, aiming at catalysing progressive change and development, are appropriate journalistic practices. This was not to say that newsgames changed their minds, but rather that the games showed players new possibilities, thus allowing them to consider advocacy.

Most players thought newsgames did draw their attention to specific issues and provided important arguments. There were some parallels between the interviews and the analysis of newsgames. Rather than simply agreeing with the arguments presented by newsgames, the players negotiated these arguments within the game space. They experimented with different strategies to test explanations of issues and checked whether newsgames reflected the complexity of problems. They could recognise the responsible parties for the problems in the newsgames about problematic processes. Additionally, players described their empathy for others and noted that newsgames allowed them to understand the difficult situations of others better than other forms of journalism. Players also maintained proper distance from others, as they thought about whether others would react differently in real life. All of these aspects helped players to become aware of the problems and form opinions about them.

However, whether newsgames could actually provoke audiences to take action for change is complicated. Only when players considered the arguments in newsgames to be sound, they would be willing to act. Negotiation of arguments, proximity, personal relevance, and potential solutions all influenced players' willingness to act. Players had a higher willingness to respond to closer and more relevant issues, while responses to distant questions relied on newsgames presenting a course of action. In other words, newsgames fell short in effectively encouraging players to take action on distant issues. The use of new technologies for reporting on distant suffering is an academic concern, but virtual reality was found not to have a significant impact on audiences' willingness to act (Van Damme et al., 2019). Similarly, existing newsgames might still be inadequate in achieving this goal. However, players often considered whether there were issues around them similar to those presented in newsgames. In this case, players showed a higher willingness to take action to promote change as they knew better what they could do. Suggesting a course of action can be key to facilitating action on distant issues.

In sum, I found that newsgames can function as a form of advocacy journalism, and newsgames are often positioned as a progressive model of advocacy that is oriented towards social change and development. The uniqueness of newsgames lies in their capacity to provide players with a space to reflect. Players can explore and critically think about arguments, as well as imagine the suffering of others through emotional connection. In a broad context, nudges embedded in newsgames help to consider the relationship between journalists and audiences in an interventionist tendency. If media engagement is seen as positively related to civic engagement or political participation (Dahlgren and Hill, 2020; Ha et al., 2018), nudges may be a feasible way to conceptualise the role of newsgames. Supporting specific people and ideas in journalism does not necessarily imply limiting or restricting the autonomy of audiences. Journalists can invite audiences to join 'a world of contending forces as an observer at a play' (Carey, 2008, p.17). Journalism provides the stage for audiences, and they can think about whether and how to act in responding to represented issues. My findings, however, show that this idea is still largely idealised, especially in the case of distant issues, but it still provides an approach worth exploring.

7.2 Implications for Newsgames, Journalistic Roles and Broader Changes in Journalism

The answers to my three research questions allow me to address how newsgames reflect the negotiation of different journalistic roles and what this reveals about broader changes in journalism. The three key notions here are newsgames, journalistic roles, and broader changes, and they are all closely related. I discuss them separately and then explain the connection between them.

My findings validate a view about newsgames that they are still experimental and at an early stage. Newsgames emerged as a concept as early as 20 years ago, but they have remained relatively marginal in mainstream journalistic practices (Bogost et al., 2010; Ferrer-Conill et al., 2020). Limitations of time, money, and technical expertise are found to hinder the innovation of newsgames (Plewe and Fürsich, 2020), and my investigation of newsgame production supports this idea. More importantly, their experimental nature is also reflected in the goals of making newsgames. Newsgame practitioners have various expectations and assumptions about the games they make, drawing from both their professional experience and their exploration of video games, but these ideas are rarely adequately evaluated. This can be interpreted as engagement often being a response to ongoing economic pressures. Metrics received the most attention in measuring audience engagement (Lawrence et al., 2018). This had two potential consequences for newsgames. First, newsgames are still side projects or experiments, and their production may become less frequent. Discovering shortcomings and making improvements is an essential step in the iterative process of newsgames (Foxman, 2017). As a result, the experience of making newsgames may not inspire and reflect on other journalistic practices. If we consider the most extreme scenario, where newsgames fail completely and disappear, the lack of evaluation could leave practitioners unable to gain a deep understanding of the reasons behind such failure.

The strategic ritual of newsgames reveals how journalistic innovations can be incorporated into appropriate journalistic practice. Due to the potential fiction involved in newsgames, the strategic ritual is used to demonstrate that newsgames can make truth claims. Moreover, a series of steps are used to claim that advocacy newsgames are meaningful journalistic practices that help promote social change. There are tensions

between newsgames, as an innovation, and mainstream journalistic cultures, and practitioners need to justify their work. There are two more key ideas in the justification. First, practitioners emphasised the similarities that still exist between newsgames and other forms of journalism, and traditional journalistic practices are still widely employed in the production of newsgames. Second, newsgames were carefully considered and examined, as practitioners discussed some of the possible accusations and defended their games in advance. In this way, newsgames can be seen to grow out of established journalistic cultures, with genuine innovation deliberately policed and disciplined.

Moreover, we can see the promising potential of newsgames as an experimental and innovative form of journalism, and the analysis of newsgames and interviews with players both pointed towards this. The earliest experiments were in the 1990s, and participants of focus groups were asked to imagine that they were journalists and write news stories with images from broadcast news (see Kitzinger, 1994; Philo, 1990). Such attempts were used to explore how audiences interact with information and thus develop their own understanding of real-world events. Plewe and Fürsich (2018) argue that newsgames, based on video game technology, can be meaningful supplements to existing journalistic forms that enhance journalism. My findings further developed this idea and provided explanations. Newsgames provide a field that expands our understanding of truth claims, news engagement and advocacy, and an important value of newsgames is that they promise audiences a degree of agency and autonomy. According to Lee's (2003) idea of 'I lose, therefore I think', some politically critical video games force players to lose, so players will think about the reason why they lost. Although some newsgames use the rhetoric of failure, most newsgames still allow players to win. Therefore, a meaningful idea for newsgames could be 'I play, therefore I think'. In the space of the newsgame, players can take personalised actions and get different outcomes, and this process makes players think. For instance, interviewees considered whether games attribute responsibility for real-world problems and reflected on whether they could take action to promote change. The significance of newsgames lies not only in the expansion of the storytelling paradigm offered by game format but also in their empowerment of audiences to actively engage with the news. This game-based engagement also implies that players need to think critically about the news content, rather than quickly clicking and browsing it.

Newsgames are regarded as a novel means to capture young audiences (Ferrer-Conill et al., 2020; García-Avilés et al., 2022). This is related to a broader belief that gaming is a young people's media practice (Ijsselsteijn et al., 2007), but it also reflects the niche appeal of newsgames. My research on consumption, which primarily covered a relatively young group, has shown that audience awareness remained limited, but most players had relatively positive evaluations of newsgames after playing them. Such a finding suggests that newsgames have the potential to deliver news to those who are alienated from traditional news, and dissemination or visibility is one of the most important challenges faced by newsgames. In that sense, we should not be optimistic about the future of newsgames. It is not just the production of newsgames that may hinder their prospects; how they are disseminated and circulated in the media environment also determines their future.

In a broader context, although newsgames might not be a mainstream journalistic form, they can represent a field for understanding the negotiation of different journalistic roles. Journalistic roles, as an integral part of journalistic cultures, are defined as normative responsibilities and functional contributions of journalism to society (Hanitzsch, 2007, p.371). Research on journalistic roles often focuses on investigating cultural differences between different regions and countries (see Mellado et al., 2017; Standaert et al., 2021). It should be noted that a few studies have also begun to consider the relationship between new technologies and journalistic roles (Negreira-Rey et al., 2022), and my findings provide explanations for understanding such a relationship. In the context of newsgames, a reshaping of journalistic roles has been observed. However, we should not perceive that it is technology that has changed journalistic roles. Instead, when newsgame practitioners applied new technologies to journalistic practices, the characteristics of the technology made the practitioners reconsider journalistic roles. Plewe and Fürsich (2020) focus on the cooperation between journalists and game developers and argue that the collaborative process should not be understood as a struggle between the professions but as an expansion aimed at telling news stories in an innovative way. In a similar vein, video games have not fundamentally impacted or changed journalistic roles, but rather they have adapted and integrated with each other. The investigation of production suggested that practitioners still employed some traditional practices and ideas to make, describe, and justify newsgames, but there is a degree of reflection and exploration in the production process. This has allowed

journalistic roles to be negotiated to adapt to the changing media landscape. For instance, the advocacy role is framed as a model that contributes to social change, and nudges are used to catalyse audiences into action.

In this thesis, the primary insight into broader changes in journalism reflected on the concept of audiences. The core of understanding journalism as a cultural practice is paying attention to what audiences do with the news (Carey, 2008; Hartley, 2012). My findings supported the idea that paying attention to audiences has been becoming increasingly important in journalistic practice. Few newsgame practitioners specialise in making newsgames but are involved in other journalistic practices. Therefore, we may say that their idea of audiences has shaped the production of a series of news stories. Because of a lack of time and money, they were rarely able to gain a sophisticated and immediate understanding of audiences. However, they tried to consider and anticipate audience responses as much as possible and placed audience reactions at the centre of the practice of newsgames. This was reflected in informal testing of newsgames and tracking of player feedback. As game developers usually evaluate user experience and target user groups (McAllister and White, 2015), understanding audiences through multiple means can be seen as an influence of gaming culture on journalistic practice. From the perspective of journalism, providing valuable news experiences – including learning new things and enhancing the understanding of others (Costera Meijer, 2022) – has been a key objective of journalistic work. Furthermore, existing newsgames may not be directly helpful in addressing the economic challenge of journalism, but offering valuable news experiences is found to be potentially profitable (Costera Meijer, 2022, p.242).

The investigation of players also validated the idea that audiences' experiences and their perceptions of journalistic roles can mutually influence and shape each other. Although this thesis focused primarily on newsgames, it can be noted that players often compared newsgames to other forms of journalism and applied their views about news to their engagement with newsgames. In that sense, their perceptions of what journalism ought to do shaped their experiences of news – in my case, of newsgames especially. Yet their perceptions were not set in stone, and they identified and negotiated the differences between media products and their views. Audiences can accept or reject new ideas they encounter, or they may also slightly adjust some perceptions to reconcile differences.

For example, players thought about the relationship between advocacy and journalism through their engagement with newsgames. This creates a cyclical process in which the audience's news experience and their perceptions are constantly reshaping each other.

Moreover, audiences sometimes express an understanding of how journalism should function in society on social media and forums. In the case of newsgames, this can be shown by players' comments on newsgames. This meta-journalistic discourse from audiences may construct or challenge the roles of journalism in society (Carlson, 2016). However, the negotiation of journalistic roles is primarily considered from a production perspective (Hanitzsch and Vos, 2017; Raemy and Vos, 2021). Audiences' perceptions were usually positioned in the audience orientation of news organisations or general expectations in society. I do not see this idea as problematic but rather suggest that a more nuanced investigation is needed in this area. It is important to consider the factors that may have shaped audience perceptions and how such expectations may in turn influence journalism itself. The research on newsgames provides an example of practitioners searching for player comments and critically incorporating the audience's thoughts into their future journalistic practice. In this way, audience perceptions may also shape journalistic roles. I synthesise this step with the above ideas and visualise the key elements in Figure 19.

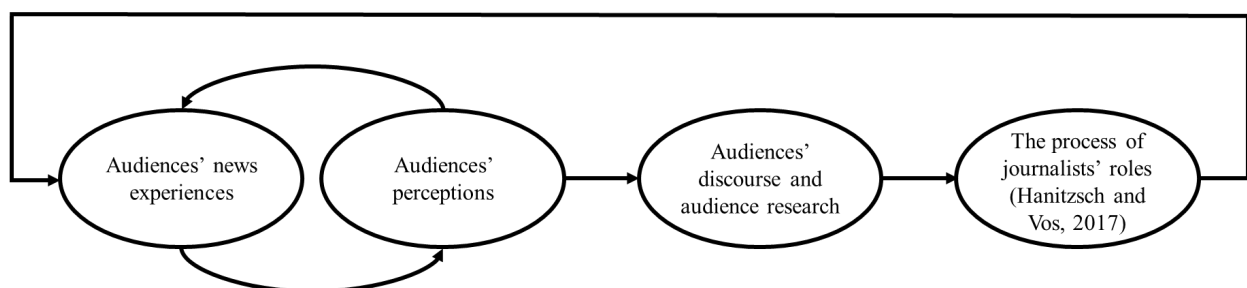


Figure 19. The process of journalistic roles between audiences and journalists

This process sees journalistic roles as variable, and the interplay of audiences and journalists shapes them, which allows us to understand journalistic roles from a cultural perspective. Audiences' news experiences are rooted in their daily consumption. In such experiences, they encounter and interact with a wide variety of news on different topics, forms, and from different news outlets. Audiences' perceptions, which refer to their ideas about how journalism should play roles in society, can be shaped by many factors. For instance, media systems and countries (Hallin and Mancini, 2004; Willnat et al., 2013)

can have an impact on audience perceptions. What is emphasised in this model is the cyclical process between audiences' experiences and their perceptions. As shown in my findings, players' perceptions of news have shaped their interactions with newsgames, and their gaming experiences have allowed them to rethink, to some degree, how journalism can function in society. As a result, audience perceptions are not fixed and their daily consumption of news is one of the factors that creates change, which emphasises the active nature of audiences.

Audiences can proactively express their views of journalism, and their views can also be investigated. In the context of newsgames, these were reflected in audience comments and discussions, the measurement of metrics and the testing of imagined audiences. Such an investigation may still be insufficient, but academic research on audiences' perceptions can be complementary. The key to this step is that the audience's perceptions of journalism are not ambiguous and unclear but become something that can be comprehended and analysed. It is important for journalists to hear 'a public brimming with ideas and curiosities' (Schmidt et al., 2022, p.7). Audiences' discourse and audience research are both helpful in revealing what audiences want from news and what audiences actually do with news.

In the model proposed by Hanitzsch and Vos (2017), journalistic roles can be seen as a process that consists of normative roles, cognitive roles, practised roles, and narrated roles. Normative roles are the generalised and aggregate expectations of journalism. Audiences' discourse and audience research can provide insights into normative roles, which allows journalists to understand the aspirations of audiences. Practised roles refer to what journalists actually make and are reflected in news items. These news items are the most frequently encountered by audiences in their daily news consumption, and their news experiences emerge from this exposure. In this way, news production and consumption constantly influence each other, and journalistic roles are shaped by such a process between audiences and journalists.

This process provides a nuanced perspective for understanding active audiences. The idea of active audiences tends to capture the obvious and conscious involvement, such as sharing, comments, and collaborative content (Spyridou, 2019). The importance of these is still emphasised in this process, which is reflected in the step of audiences'

discourse and audience research. However, audiences' news experiences and their perceptions are rarely discussed or made explicit in the context of active audiences. Audiences can be quite active in news consumption, evaluating news items as well as journalistic roles. Paying attention to this part of the process is critical to a more comprehensive understanding of audiences.

This process of involving audiences in the negotiation of journalistic roles was also reflected in the three specific aspects discussed in this thesis. The concern for truth claims demonstrates how the informational role has been reconsidered. Interpretation about processes and personalised storytelling are two aspects that extend the discussion of this role, and audiences have shown some interest in them, which may help to increase their understanding of complex issues and others. The investigation of entertainment and audience engagement reveals that the roles of political life and of everyday life can be increasingly interrelated. For audiences, reasons for consuming news are rarely singular, and attracting audiences to public affairs through entertaining and intelligible content becomes a feasible approach. Advocate is a controversial journalistic role, but the progressive model of advocacy may be understood as acceptable and even beneficial by audiences. As a result, it has become much more possible for journalism to nudge players into taking action on specific causes and groups of people, opening up the opportunity for journalism to contribute to social change and development.

7.3 The Future of Newsgames and Journalism

Reflecting on newsgames allows us to provide a projection on possible future trends and outcomes. First, I discuss the potential risks and benefits of newsgames, which are based on what has been investigated in this thesis. Then I move to broader issues and provide a picture of the evolution and adaptation of the future of journalism.

7.3.1 Potential Risks and Benefits of Newsgames

Newsgames reflect a branch of some existing shifts in journalism. Ferrer-Conill (2018) examined the close relative of newsgames, known as the gamification of journalism, and suggests that it should be viewed through four trends: 'apparent necessity to fight change with change', 'ongoing audience-orientation', 'fascination with technology', and

'the continuous blurring of journalistic boundaries' (p.241). These represent the context for many journalistic innovations and are equally applicable to newsgames. Nevertheless, there are certain differences between newsgames and the gamification of journalism in terms of their specific connections with these contexts. Through these specific connections, the risks and benefits of newsgames are manifested.

The risks of newsgames can be divided into two parts: the disappearance of newsgames, and their potential negative impact on journalism. Nash (2021) noted that many interactive documentaries have become inaccessible because of technological obsolescence. A similar phenomenon can be found in the field of newsgames. This is indeed a loss for research on newsgames, but the bigger problem is that the production of newsgames continues to be scarce. Economic sustainability and audience fragmentation are two important challenges faced by journalism. However, the development of newsgames often requires considerable costs in time and money, and they cannot directly provide profitability for news organisations. In other words, their short-term investment does not directly correspond to immediate returns. Although newsgames have the potential to attract young audiences, this potential has not yet been fully realised in existing practices, which could be related to the dissemination of newsgames. If we believe that newsgames have the potential to benefit journalism, then finding a way to produce newsgames and expand the impact of this format consistently is essential.

One of the negative influences of newsgames on journalism is that their target audience is relatively narrow. A widespread idea is that newsgames can capture the attention of young people who might often avoid the news. Although the number of gamers has exceeded half the population in many regions (Jovanovic, 2023), some are likely to be softcore or casual players, who do not spend a significant part of their time on video games. According to the analysis of newsgames and players, newsgames may require players to have certain gaming experiences in advance, which means that they have some knowledge of the logic of video games. This makes the potential audiences for newsgames even narrower than envisaged. If a newsgame is used to report on an issue, this may result in the issue being noticed and understood by fewer people. People who do not like video games may simply avoid them, and people who lack gaming experience may not identify the issue discussed by the game. One solution that has been partially

applied by practitioners is to cover news stories through a series, with newsgames as an alternative form of reporting.

The other danger of newsgames is the inadequate presentation of conflicts of interest. Newsgames were often developed with suggestions from a variety of experts and other organisations, and this can shape the way newsgames frame issues. While journalists claimed to maintain journalistic autonomy, they rarely investigated their sources' conflicts of interest. Newsgames may make this conflict less obvious, and this should raise serious concerns among practitioners.

On the other hand, the potential benefits of newsgames, as an experimental form of journalism, can be seen in three aspects. The first is that newsgames offer new ways of reporting news stories. More issues and injustices may be presented to audiences in the future, thus increasing journalism's contribution to society. This approach to storytelling also emphasises empowering audiences as well as providing a valuable news experience. Therefore, newsgames can provide audiences with a greater sense of engagement, prompting them to think critically or broaden their perspectives. These still depend, however, on the extent to which the potential of the game format may be further developed in the context of newsgames.

Moreover, ideas and practices about newsgames may also be useful for the production of other news coverage. Making newsgames allows practitioners to learn and understand game thinking and game logic, and these ideas can be used for more than just newsgames. This may be employed for gamification to simply engage the audience, or to consider how the concept of interaction may benefit other forms of journalism. The investigation of newsgames also revealed a considerable amount of internal cooperation during the production phase. Practitioners with different job roles sometimes formed an ad hoc group and worked together to develop newsgames. The diversity in job roles is not new in the news industry (Deuze and Witschge, 2018), but it is important to consider what this cooperation may mean for journalism. The collaboration may foster other journalistic innovations beyond newsgames, providing other interesting and enriching news experiences for audiences.

The production of newsgames sometimes involves cooperation with external

organisations, and the disadvantage of this has already been mentioned. We should also note that there are benefits at the same time. Collaboration with technology companies can compensate for the technological weaknesses of some news organisations, which may be further deepened and migrated to other projects. The risk of foundation funding on journalistic autonomy should not be ignored, but this also helps to address the financial difficulties of news organisations.

These potential benefits are still hypothetical, and newsgames should not be seen as a cure-all. These possibilities need to receive more attention from the news industry and academia in the future.

7.3.2 The Possible Future of Journalism

In addition to the potential risks and benefits of newsgames, I also consider what all this means for the future of journalism. The research design and conclusion of this thesis put the audience at the centre of understanding journalism. For the news industry, the audience is also very important. While the importance of the audience in newsgames has been emphasised, I suggest that this be developed further. Journalists may need to have a closer connection with their audiences, rather than just relying on metrics to understand audience behaviour. This is not to say that metrics are ineffective, but better interpretation of them may be needed. Qualitative and quantitative approaches can run in parallel to understand audiences. This could help to improve economic issues while enabling journalism to have a greater impact on society. Moreover, this may benefit from collaboration between industry and academia, as researchers have already paid more attention to audiences recently.

Continuing investment in journalistic innovations is helpful wherever possible. Technologies such as radio, television, and the Internet have all historically shaped journalism. I am not attempting to make a technological determinist argument but rather point out that we should consider how technology might be used for the production and consumption of journalism. Answering this question requires continuous journalistic innovations. Trial and error is an important logic for commercial video game development, and this can be enlightening for journalism. Quite a few video games that were created with high expectations have failed to attract significant audiences. This did not make game developers give up quickly, but they learned from their mistakes and developed

new video games. It is not hard to imagine a fair number of journalistic innovations being marginalised or even failing, but it is still helpful to learn from them for future innovations. These new formats may allow journalists to provide quality journalism in the future.

Another possible future concerns the different work positions within news organisations and collaboration between news organisations and external parties. The production of newsgames often involves teamwork and some non-news organisations participate in this process. These types of collaboration help to access more data sources, technological resources, and expertise, contributing to the development of new business models under economic pressures (de-Lima-Santos, 2023). Moreover, they could also extend beyond newsgames, so newswriters can explore newsgathering, production, and distribution in more innovative and radical ways, which further helps us to explore what journalism can and should do.

The diversity of journalistic roles and journalistic cultures should not be confined to scholarship, and the news industry may also need to take this into consideration. In the context of newsgames, practitioners have begun exploring this area, as there are different assumptions and expectations for a series of games. It is important to understand how this attempt can be expanded to a larger scale in journalism. For example, politics and lifestyle news have been implicitly interpenetrating each other for a while (Banjac and Hanusch, 2022). Rather than rejecting this change and drawing clear boundaries, practitioners should think more about whether they could benefit from taking on more diverse journalistic roles. This may help alleviate financial pressures, and journalists can provide valuable news experiences and contribute to society in more ways.

7.4 Contributions, Limitations and Future Research

This section first concludes the empirical, theoretical, and methodological contributions made in this thesis. There are some limitations to this research, and these limitations are turned into suggestions for future research. I also suggest a couple of interesting aspects of newsgames research that have not yet received academic attention.

7.4.1 Contributions

The most direct empirical contribution of this thesis is to complement existing research on newsgames. While some scholars have already investigated newsgames as media products (Arafat, 2020; Bogost et al., 2010; García-Ortega and García-Avilés, 2020) and the production of newsgames (Foxman, 2017; Plewe and Fürsich, 2020), audience research is not common in scholarship on newsgames. My study provides rich and detailed experiential player accounts, and this has shed more light on the consumption and meaning-making around newsgames. In addition, I offer more empirical evidence about production and media products to update the study of newsgames. These findings contribute to forming a comprehensive understanding of newsgames.

The second empirical contribution is reflected in the exploration of journalistic roles. Although newsgames remain experimental, it is still an important field for understanding how journalists and audiences see journalism's function in society. However, many studies of journalistic roles are based on surveys, and there is little research on what audiences think (see Hanusch, 2019; Willnat et al., 2019). This study reveals the nuanced changes in journalistic roles through qualitative methods, specifically supplementing the perceptions of audiences.

Employing a cultural approach to investigating newsgames is the first theoretical contribution. This study proposes a comprehensive framework for the investigation of newsgames that combines three aspects: production, media products and consumption. Although incorporating ideas from cultural studies into journalism research is not a new approach (Carey, 2008; Hartley, 2012; Zelizer, 2004), such an attempt is relatively underdeveloped in relation to digital journalism (Steensen et al., 2019). This framework can be used to explore other innovative forms of journalism in the future, allowing us to address the question of how journalism can create meaning for society and how the development of journalism should be understood in the broader social context.

In this research, I also propose a process model to incorporate audiences into the negotiation of journalistic roles. Rather than regarding journalistic roles as something fixed, this process considers journalistic roles as constantly changing and developing. Journalistic roles involve negotiation in the circular process of contact between the audience and the journalist. This echoes the idea that journalism is not a fixed point; it

is important to address what journalism has become (Carlson, 2015; Deuze and Witschge, 2018). Moreover, this model helps to explore how 'normative roles' (Hanitzsch and Vos, 2017) are shaped and also provides a possible explanation for the interplay between the audience's experiences and perceptions.

This research makes several methodological contributions to the scholarship. The first contribution is based on the cultural approach. Research designs covering production, media products, and consumption can be critical if we want to develop a deep understanding of digital journalism and journalistic innovations. Specifically, I also offer methods for investigating newsgames and audiences in detail. The investigation of newsgames brings the level of form and content together to consider their interplay. This is not only applicable to newsgames but can also be adapted to study other forms of journalism, especially emerging ones. This fills the gap in the focus on form in scholarship (Corner, 2013). Gaming interviews are commonly used in the field of game studies (Schott and Horrell, 2000), but the focus on 'news experience' (Costera Meijer, 2020) is not often found in empirical studies of journalism. This method may be enlightening for other researchers who may want to analyse the relationship between audiences' experiences and perceptions.

7.4.2 Limitations

It is necessary to acknowledge that there are several limitations to this study. In Chapter 3, I pointed out that Covid-19 restrictions influenced my research significantly. This led to the sampling imbalances of newsgames and interviews in this research. I planned to conduct an international comparison to investigate newsgames, but Covid-19 restrictions prevented me from doing so. Moreover, the limited sample does not allow me to make larger claims about newsgames and journalistic roles, so I cannot generalise from my sample to the entire field of newsgames. However, I still provide conclusions that can be further examined in the future and a theoretical framework and model that allows for interpretation.

There is also a limitation to the interviews with newsgame practitioners and players. Newsgames can be seen as an experimental and emerging field, and some concepts and terms are not even agreed upon in academia. Some ideas of practitioners are derived from their practices, and the perceptions of players are generated from the

knowledge and experience they already have. Therefore, both practitioners and players are not very familiar with and clear about the various ideas in this field. I needed to clarify and explain the topics and terms discussed during the interviews and to ensure an accurate presentation of the interviewees' thoughts in the analysis.

Another limitation lies in the interviews with newsgame players, which was already mentioned in the chapter on research design. This is primarily due to the difference between the gaming interview environment and the audience's daily engagement with the news, as I was an interviewer and an observer, which may have had a potential impact on player behaviour.

7.4.3 Future Research

The above limitations form my suggestions for future research. First, an international comparison can be helpful to understand newsgames and other journalistic innovations. Although technology is important, it is not the only factor that influences innovative journalistic practices. Politics, economics, institutions, and organisations can all be useful lenses to investigate the shifts in journalism. The international comparison can help explore the extent to which journalistic innovations are developing in different regions and how different factors might shape them.

Second, cultural studies often pays attention to ideology, class, ethnicity, gender, and identity (Ahva and Steensen, 2020). This thesis places audiences at the centre, but due to various constraints, does not provide a more nuanced discussion of audiences in relation to these factors. They can be further considered when exploring audiences' perceptions of how journalism should function in society, and these factors can be looked at to examine the audience's news experience. This would help fill the gap in the differences between the production and consumption of journalism.

Third, investigations into news production also require more fieldwork as the method can offer the most direct and meaningful understanding of journalistic practices. However, the impact of the Covid-19 pandemic should also be noted, and it is foreseeable that more remote work may occur in the news industry. Researchers can explore how such a change in work practices may potentially affect news production.

Finally, it would be beneficial to draw more lessons from other areas, for example, game studies, into journalism studies. Many studies have found that the boundaries between journalism and other fields are becoming increasingly blurred (Carlson and Lewis, 2015; Edgerly and Vraga, 2019; Negreira-Rey et al., 2022). Without neglecting the distinctiveness and essence of journalism, more thought needs to be given to what such blurred boundaries mean or how the expansion and reshaping of journalism's periphery might impact its core. This is useful for understanding the ever-changing media environment and journalism.

7.5 Concluding Remarks

When I started this study five years ago, I thought that newsgames might be a potentially powerful form of journalism. While I have never believed newsgames would be a panacea, I also did not expect them to become more marginalised nowadays. I do not think there is necessarily no future for newsgames, but rather that the time is not right to make newsgames on a larger scale. Newsgames still have considerable untapped potential, especially if we consider serious games growing by leaps and bounds in other areas. Too much optimism and too much pessimism can be problematic.

Things started to get complicated and interesting for me as I looked beyond newsgames to the larger issues of journalism. What journalism might contribute to society and what audiences will do with news became two concerns of my thesis. Both questions are critical to the future of journalism. Journalism needs to gain relevance and maintain its legitimacy when there is more and more interplay between journalism and neighbouring fields. Rather than having overly simplistic and monolithic preconceptions about journalism, it is essential to consider and explore as many different roles as possible. We seem to promise a focus on audiences, but both industry and scholarship may not pay sufficient attention to them in practice. It is notable to consider how the expectations of audiences can be met without becoming totally profit-orientated. For the news industry and academia, achieving these goals may be more challenging than we might imagine, but the endeavour is worth it for a better future of journalism. I would be more than happy if my work contributes to this future.

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Appendix 1: List of Newsgames

Original name	English name	Year	Producer	Language	Country/ Region	Main topic
Fojba2000	Fojba2000	2000	Mladina	Slovenian	Slovenia	History
September 12th: A Toy World	September 12th: A Toy World	2003	Gonzalo Frasca	English	Uruguay	Terrorism
Madrid	Madrid	2004	Gonzalo Frasca	English	Uruguay	Terrorism
Against All Odds	Against All Odds	2005	UNHCR	Swedish	Sweden	Refugees
Climate Challenge	Climate Challenge	2006	BBC	English	UK	Climate Challenge
Darfur is dying	Darfur is dying	2006	Susana Ruiz	English	USA	Human Rights
Food import folly	Food import folly	2007	New York Times	English	USA	Economy
Points of Entry: An Immigration Challenge	Points of Entry: An Immigration Challenge	2007	New York Times	English	USA	Immigration
Stop Disasters	Stop Disasters	2007	PlayerThree and United Nations	English	UK	Environment
Budget Hero	Budget Hero	2008	American Public Media	English	USA	Economy
Oiligarchy	Oiligarchy	2008	Molleindustria	English	Italy	Economy
Journey to the end of coal	Journey to the end of coal	2008	Le Monde & Honkytonk Films	English	France	Human Rights
Catchment detox	Catchment detox	2008	Australian Broadcasting corporation	English	Australia	Environment
Presidential Pong	Presidential Pong	2008	CNN and Persuasive Games	English	USA	Politics
Cutthroat capitalism	Cutthroat capitalism	2009	WIRED	English	USA	Economy
Playspent	Playspent	2011	McKinney	English	USA	Economy
Tu huella ambiental	Your environmental footprint	2012	El Comercio	Spanish	Ecuador	Environment
Could you be a medallist?	Could you be a medallist?	2012	The Guardian	English	UK	Sports
The federator	The federator	2013	Wall Street Journal	English	USA	Economy
Tallanasty Ethics Game	Tallanasty Ethics Game	2013	Miami Herald	English	USA	Politics

Original name	English name	Year	Producer	Language	Country/ Region	Main topic
HeartSaver	HeartSaver	2013	ProPublica	English	USA	Health
The refugee challenge: can you break into Fortress Europe?	The refugee challenge: can you break into Fortress Europe?	2014	The Guardian	English	UK	Refugees
Spot the ball	Spot the ball	2014	The Guardian	English	UK	Sports
Pirate Fishing	Pirate Fishing	2014	Al Jazeera	English	Qatar	Environment
This game will show you	This game will show you	2015	Quartz	English	USA	Economy
Are You Good Enough to Be a Tennis Line Judge?	Are You Good Enough to Be a Tennis Line Judge?	2015	Wall Street Journal	English	USA	Sports
Chasseurs d'infos	News hunters	2015	France TV	French	France	Journalism
Two billion miles	Two billion miles	2015	Channel 4	English	UK	Refugees
Can you navigate a day with depression?	Can you navigate a day with depression?	2015	Buzzfeed	English	USA	Health
The Trading Game	The Trading Game	2015	Bloomberg	English	USA	Economy
Syrian journey: choose your own escape route	Syrian journey: choose your own escape route	2015	BBC	English	UK	Refugees
逃跑人的日常	The daily life of fugitive	2015	NetEase News	Chinese	China	History
7 ways to defy death	7 ways to defy death	2015	Washington Post	English	USA	Health
急診人生	The Emergency Room	2015	The Reporter	Chinese	Taiwan	Health
Opposition RadioActive	Opposition RadioActive	2016	Master Journalisme et Médias numériques à Metz	French	France	Environment
一座承載着「香港本土」的商場	A local Hong Kong shopping mall	2016	Initium Media	Chinese	Hong Kong	History
The Lone climate changer Denier	The Lone climate changer Denier	2016	The Guardian	English	UK	Environment (Climate Change)
#Hacked	#Hacked	2016	Al Jazeera	English	Qatar	Internet security
¿Crees que eres un buen conductor?	Do you think you are a good driver?	2016	El Confidencial	Spanish	Spain	Transport

Original name	English name	Year	Producer	Language	Country/ Region	Main topic
Río 2016: corré la carrera de 200m y enfrentá a Bolt desde el teclado de tu computadora	Río 2016: Run 200m Race Against Bolt From Your Computer Keyboard	2016	LA NACION	Spanish	Argentina	Sports
Armchair Olympian	Armchair Olympian	2016	Wall Street Journal	English	USA	Sports
Olympic Bodies: Can You Guess Their Sport?	Olympic Bodies: Can You Guess Their Sport?	2016	New York Times	English	USA	Sports
The voter suppression trail	The voter suppression trail	2016	New York Times	English	USA	Politics
Floppy candidate	Floppy candidate	2016	Washington Post	English	USA	Politics (Election)
如果你是陪審團，你會判梁彼得無罪嗎？	Sentencing for Peter Liang	2016	Initium Media	Chinese	Hong Kong	Politics
Sauve une vie	Save a life	2017	Liège et l'Université and RTBF	English	Belgium	Health
你真的了解你所在的城市吗？	Do You Really Know About Your City?	2017	Yicai Media Group	Chinese	China	History
好人不怕	Help strangers	2017	Tencent News	Chinese	China	Health (Politics)
香港回歸 20 年變化	The change of Hong Kong	2017	United Daily News	Chinese	Taiwan	Politics (Economy)
Objectif budget	Budget target	2017	Le Figaro	French	France	Economy
The Game of oil	The Game of oil	2017	Yle	English	Finland	Economy
President evil	President evil	2017	ZDF (Heute Show)	English	Germany	Politics
The Good, the Bad and the Accountant	The Good, the Bad and the Accountant	2017	Journalism++	English	Sweden	Politics
Build your own trading bot	Build your own trading bot	2017	Wall Street Journal	English	USA	Economy
Brexit Bus	Brexit Bus	2017	Advisa.se	English	Sweden	Politics
Payback	Payback	2017	Next Gen Personal Finance	English	USA	Economy
You draw it: what got better or worse during Obama's presidency	You draw it: what got better or worse during Obama's presidency	2017	New York Times	English	USA	Politics
怪天氣大作戰	Summer Weather	2017	United Daily News	Chinese	Taiwan	Environment

Original name	English name	Year	Producer	Language	Country/ Region	Main topic
Fake It to Make It	Fake It to Make It	2017	Amanda Warner	English	Sweden	Disinformation
The Uber Game	The Uber Game	2017	Financial Times	English	UK	Economy
Play Our Game To See If You Can Travel From Glasgow To London On A Typical Day As A Wheelchair User	Play Our Game To See If You Can Travel From Glasgow To London On A Typical Day As A Wheelchair User	2017	Buzzfeed	English	USA	Human Rights (Disabled People)
Death in Custody	Death in Custody	2018	Malaysiakini	English	Malaysia	Human Rights
Build your own city	Build your own city	2018	Vers Beton	Dutch	The Netherlands	Economy
NHS at 70: How well do you know the health service?	NHS at 70: How well do you know the health service?	2018	The Guardian	English	UK	Health
Hack the factory	Hack the factory	2018	German Electrical and Electronic Manufacturers' Association	German	Germany	Internet security
教育能翻轉人生嗎	Can education change the life	2018	The Reporter	Chinese	Taiwan	Education
Dans la peau d'un borugmestre	In the shoes of a borugmestre	2018	L'avenir.net	French	Belgium	Politics
American mall game	American mall game	2018	Bloomberg	English	USA	Economy
Pick your own Brexit	Pick your own Brexit	2018	Bloomberg	English	USA	Politics (Brexit)
You are Jeff Bezos, where should HQ2 go?	You are Jeff Bezos, where should HQ2 go?	2018	GateHouse Media	English	USA	Economy
The waiting game	The waiting game	2018	ProPublica	English	USA	Immigration
Think military strikes could stop North Korea? Try it and see	Think military strikes could stop North Korea? Try it and see	2018	New York Times	English	USA	Politics
The Betsy Devos BoardGame	The Betsy Devos BoardGame	2018	Washington Post	English	USA	Politics
Coding like a girl	Coding like a girl	2018	Al Jazeera	English	Qatar	Feminism
Game of \$urvival	Game of \$urvival	2018	The Straits Times	English	Singapore	Economy
I reporter	I reporter	2018	BBC	English	UK	Journalism

Original name	English name	Year	Producer	Language	Country/ Region	Main topic
Could you be a cricket umpire?	Could you be a cricket umpire?	2018	The Times	English	UK	Sports
改革开放 40 年	40th anniversary of economic reform	2018	ThePaper.cn	Chinese	China	Economy (History)
攻坚时刻：决胜全面小康	Moderately prosperous society	2018	China Youth Daily	Chinese	China	Economy
这可能是今年两会最具挑战的游戏	Two sessions	2018	China Youth Daily	Chinese	China	Politics
囚租人生	Life as a renter	2018	The Reporter	Chinese	Taiwan	Economy (Policy)
Bad News	Bad News	2018	DROG and University of Cambridge	English	The Netherlands	Disinformation
College Scholarship Tycoon	College Scholarship Tycoon	2018	VOX	English	USA	Education
Play the credit score game	Play the credit score game	2019	Wall Street Journal	English	USA	Economy
Troll Factory	Troll Factory	2019	Yle	English	Finland	Disinformation
The Trade-off	The Trade-off	2019	Financial Times	English	UK	Economy
The nest egg game	The nest egg game	2019	Wall Street Journal	English	USA	Economy
Survive the century	Survive the century	2019	Sam Beckbessinger	English	UK	Politics (Environment)
Poverty Game	Poverty Game	2019	RTL Nieuws	Dutch	The Netherlands	Economy
Could you be a speaker	Could you be a speaker	2019	The Times	English	UK	Politics
垃圾分类大挑战	Waste sorting challenge	2019	Tencent News	Chinese	China	Environment (Policy)
Choose your own adventure: Renting	Choose your own adventure: Renting	2019	Vice	English	UK	Economy
Dodging Trump's tariffs	Dodging Trump's tariffs	2019	Financial Times	English	UK	Politics (Economy)
你真的会垃圾分类吗？	Do you really know waste sorting	2019	China Youth Daily	Chinese	China	Environment (Policy)
The Amazon Race	The Amazon Race	2019	Australian Broadcasting Corporation	English	Australia	Economy (Exploitation)
The Ocean Game	The Ocean Game	2019	Los Angeles Times	English	USA	Environment (Climate Change)

Original name	English name	Year	Producer	Language	Country/ Region	Main topic
Quatre Appart & Un Confinement	Four Apartments & One Containment	2020	Le Temps	French	Switzerland	Covid-19
Harmony Square	Harmony Square	2020	DROG and University of Cambridge	English	The Netherlands	Disinformation
Choose your own fake news	Choose your own fake news	2020	Pollicy	English	Uganda	Disinformation
通往留学 offer 的 54 条路	54 ways to study abroad	2020	Caixin	Chinese	China	Education
What will it be like when we go back to the office?	What will it be like when we go back to the office?	2021	Reuters	English	UK	Covid-19
Steer through the Suez Canal	Steer through the Suez Canal	2021	CNN	English	USA	Transport
On your marks	On your marks	2021	Financial Times	English	UK	Sports
Go Viral	Go Viral	2021	DROG and University of Cambridge	English	The Netherlands	Disinformation (Covid-19)
基金理财赚钱的秘诀	Making money with funds	2021	Caixin	Chinese	China	Economy
Do You Think You Can Tell How a Neighborhood Voted Just by Looking Around?	Do You Think You Can Tell How a Neighborhood Voted Just by Looking Around?	2021	New York Times	English	USA	Politics
Spend like an MP	Spend like an MP	2021	Malaysiakini	English	Malaysia	Politics (Election)
测一测你的碳足迹	Measure your carbon footprint	2021	ThePaper.cn	Chinese	China	Environment (Climate Change)
The Climate Game	The Climate Game	2022	Financial Times	English	UK	Environment (Climate Change)
我们与听损的距离	Hearing Loss	2022	ThePaper.cn	Chinese	China	Human Rights (Disabled People)

Appendix 2: Publicly Available Sources

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Appendix 3: Interview Schedule

Interviews with Practitioners:

- 1 What is your position or job in your organisation? Did you cover other news stories other than newsgames?
- 2 What was your task when you made newsgames?
- 3 Why did you or your organisation start to make newsgames?
- 4 Which newsgame impressed you the most? Can you help me walk through the production process of it?
 - 4.1 Why was this game made? Where did the idea to make this game come from?
 - 4.2 What is the context of this game?
 - 4.3 How long did it take to make this game?
 - 4.4 Did you have any teams? Who was on the team? Did you work in partnership with other organisations? How did the collaboration work?
 - 4.5 Did you have any difficulties developing the game? How did you solve them?
 - 4.6 What standards did you follow when developing newsgames? Did your organisation have any guidelines on newsgames or similar items?
 - 4.7 Did you have any goals for your newsgame? Did you assess the extent to which your goals have been achieved?
- 5 What do you think about newsgames in general (not necessarily about the above newsgame, but also other games you have made)?
 - 5.1 What do you think makes newsgames different from other forms of journalism?
 - 5.2 Have you considered the fictional side of newsgames? Do you think this will influence journalism's ideal of pursuing the truth? Did you do anything about it?
 - 5.3 How do you think about entertainment and enjoyment in newsgames? Do you see this as conflicting or compatible with journalism? What did you do about it?
 - 5.4 Do you think your games support a specific idea or group of people? What do you think is the relationship between such a practice and journalism? Did you do anything about it?
 - 5.5 How do you think about the audience's place in the newsgame and in journalism? Did you do anything to understand your audience?
- 6 Did your earlier newsgames influence the games you developed later?
- 7 Will the production of newsgames continue? What are the reasons?
- 8 Have newsgames inspired any of your journalistic practices? Have they influenced any of your other journalistic innovations?
- 9 Are there any other parts of your newsgames that we have not covered?

Interviews with Players:

- 1 First, I ask for the player's name, age, self-identified gender and occupation.
- 2 Can you talk about your news consumption habits (ways/platforms of consuming news, time and frequency, topics and content, whether they talk about the news with others)? Do you have any ideas about what journalism or journalists should do?
- 3 Do you play video games? Can you talk about your habits of playing video games?

(ways/platforms of playing games, time and frequency, favourite games and game genres)

- 4 Have you approached any video games that are not entirely entertaining because they may have other purposes? Have you heard of newsgames or something similar?
- 5 Here is a list of newsgames we can play today. Is there anything that catches your interest? If not, I can pick them out at random for you.
- 6 I tell the players they can ask me questions anytime while they are playing the game. As players play the game, I observe their behaviour and ask them questions when necessary.
- 7 After playing newsgames, we continued to discuss them further.
 - 7.1 Do you think these games are news? Are there reasons for that? You can point out the differences between these games and point out why some of them are more in line with your idea of news.
 - 7.2 What do you think makes newsgames different from other forms of journalism?
 - 7.3 How do you consider the fictional side of newsgames? Do you think this will influence journalism's ideal of pursuing the truth? Why?
 - 7.4 Do you think newsgames are interesting or enjoyable? Does this have any implications for your consumption of news? Why?
 - 7.5 Do you find that some games support a specific idea or group of people? Do you think it fits your idea of journalism? Why?
- 8 Are there any other thoughts about newsgames that we have not discussed?

Appendix 4: List of Interviewees

Newsgame Practitioners

Quoted as	Role	Organisation
Practitioner 1	Editor	News organisation in China
Practitioner 2	Photojournalist	News organisation in China
Practitioner 3	Programmer	News organisation in China
Practitioner 4	Journalist	News organisation in China
Practitioner 5	Director	News organisation in China
Practitioner 6	Deputy Editor	News organisation in China
Practitioner 7	Journalist	News organisation in the UK
Practitioner 8	Visual Editor	News organisation in the UK
Practitioner 9	Director	News organisation in China
Practitioner 10	Editor	News organisation in China
Practitioner 11	Journalist	News organisation in China
Practitioner 12	Editor	News organisation in the UK
Practitioner 13	Journalist	News organisation in China
Practitioner 14	Journalist	News organisation in the US
Practitioner 15	Editor	News organisation in the UK
Practitioner 16	Journalist	News organisation in the UK
Practitioner 17	Programmer	News organisation in the UK
Practitioner 18	Programmer	News organisation in the UK
Practitioner 19	Journalist	News organisation in the US
Practitioner 20	Editor	News organisation in the US
Practitioner 21	Editor	News organisation in the US
Practitioner 22	Editor	News organisation in the UK
Practitioner 23	Project manager	Non-news organisation in the Netherlands
Practitioner 24	Director	Non-news organisation in the Netherlands
Practitioner 25	Programmer	Non-news organisation in China
Practitioner 26	Director	Non-news organisation in China
Practitioner 27	Journalist	News organisation in China

Newsgame Players

Quoted as	Gender	Age	Nationality
Player 1	Male	23	Chinese
Player 2	Female	26	British
Player 3	Male	25	Chinese
Player 4	Male	27	Chinese
Player 5	Female	23	Chinese
Player 6	Female	23	Dutch
Player 7	Male	23	American
Player 8	Male	28	American
Player 9	Male	31	Chinese
Player 10	Female	29	Chinese
Player 11	Female	24	Chinese
Player 12	Female	26	British
Player 13	Male	28	Dutch
Player 14	Male	24	British
Player 15	Female	25	British
Player 16	Female	24	Chinese
Player 17	Male	20	Chinese
Player 18	Male	25	Chinese
Player 19	Female	22	Chinese
Player 20	Male	25	British
Player 21	Male	22	British
Player 22	Female	21	British
Player 23	Male	30	Chinese
Player 24	Female	35	Chinese
Player 25	Female	20	Kenyan
Player 26	Female	26	Chinese
Player 27	Female	22	American
Player 28	Male	24	Dutch

Appendix 5: Information Sheet

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Information Sheet: Exploring Newsgames as An Experimental Form

Thank you for taking the time to consider participating in this research project. This sheet will tell you what this study will involve and what we are going to do if you decide to participate. Please read this information sheet carefully before you move on to the consent form.

What is this study about?

In this study, I want to investigate newsgames to understand the negotiation of journalistic roles and study what roles newsgames have as forms of journalism. The newsgame is a relatively new form that indicates a demonstration of news by using the game format as a basis of narrative construction, and newsgames have already become popular attempts in journalism. I hope that this research can go some way to addressing why and how newswriters produce newsgames and the audience's ideas about newsgames. It can help me to know the transformation of journalism, especially journalistic roles, and the special functions of newsgames, which may be useful for journalism.

Do I have to take part?

Taking part in the research is totally voluntary, and that refusal to agree to participate will involve no penalty or loss of benefits.

What are we going to do?

For practitioners: I will ask you about your experiences and ideas for newsgames. For instance, you may be questioned about how you communicate with programmers and designers when you are making newsgames and what the major problem is in the

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process of developing newsgames. Generally, I want to know the journalistic practices around newsgames and the roles of newsgames.

For players: I will ask some questions to explore your views on journalism and video games. Then I invite you to play some newsgames. I will offer some choices, and you can choose some to play. After playing, we are going to discuss your gaming experience and your understanding of newsgames. The interview will be recorded, and a transcript of the interview will be produced.

How long these events would last?

The length of a typical interview is between 60 to 90 minutes.

Will my information be confidential?

Your privacy will be protected through anonymisation and data protection. You will be anonymised in the analysis and discussions of data in order to protect your privacy. The information provided will be cited in my PhD dissertation, so it will not be confidential. However, your identifiable indicators will be replaced, and I will produce a code sheet of your identifiable indicators to conduct this research. It means that no identifying information will be published. No one outside the project will be allowed access to the code sheet, recordings and transcripts.

What are the risks of taking part in this study?

Questions are normal and ordinary, and there is no risk in answering those questions. However, you can stop the interview at any point or choose not to answer some questions.

Can I withdraw from the study at any time?

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Yes, you can withdraw at any stage of this research without any reason. Any research data related to you will be deleted after your notification. The participation is entirely voluntary.

What will happen to the results of the research?

The results of this will be published in academic publications and presented at conferences.

If I have further questions about this research, who can I contact?

If you have any further questions regarding this study, please feel free to contact me, Hao Sun. I am a PhD student in the School of Media and Communications, University of Leeds. You can email me at mehs@leeds.ac.uk, or talk to me in person.

If you do not feel comfortable contacting me, you can contact my supervisor, Dr Kate Nash (K.Nash@leeds.ac.uk), in the School of Media and Communications, University of Leeds.

The document was translated into Chinese for use by native Chinese speakers.

Appendix 6: Consent Form

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Consent to take part in Newsgames and Journalistic Practices

	Add your initials next to the statements you agree with
I confirm that I have read and understand the information sheet explaining the research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw at any stage of this research without giving any reason and without there being any negative consequences.	
I understand that if I agree to take part in this project, it will be recorded.	
I understand that I am free to refuse to answer any question, without giving any reason and without there being any negative consequences.	
I understand that my privacy will be protected through anonymization and data protection. I understand that my legal name will not be required in the research, and I will not be identified or identifiable in the report or reports that result from the research. I understand that my legal name will not be required in the research, and I will not be identified or identifiable in the report or reports that result from the research.	
I agree that the data collected from me to be used in relevant future research in an anonymised form.	
I agree to take part in this research project.	

Name of participant	
Participant's signature	
Date	
Name of lead researcher	
Signature	
Date*	

*To be signed and dated in the presence of the participant.

Once this has been signed by all parties, the participant should receive a copy of the signed and dated participant consent form, the letter/ pre-written script/ information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be kept with the project's main documents which must be kept in a secure location.

The document was translated into Chinese for use by native Chinese speakers.

Appendix 7: Ethical Approval

The Secretariat
University of Leeds
Leeds, LS2 9JT
Tel: 0113 343 4873
Email: ResearchEthics@leeds.ac.uk



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Hao Sun
School of Media and Communication
University of Leeds
Leeds, LS2 9JT

**Faculty of Arts, Humanities and Cultures Research Ethics Committee
University of Leeds**

11 September 2023

Dear Hao

Title of study **Newsgames and journalistic practices: The roles of
newsgames as forms of journalism and the shifts of
journalistic practices**
Ethics reference **FAHC 19-048**

I am pleased to inform you that the above research application has been reviewed by the Faculty of Arts, Humanities and Cultures Research Ethics Committee and I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

<i>Document</i>	<i>Version</i>	<i>Date</i>
FAHC 19-048 New_ethical_review_form_v2.1 HS_v2.doc	1	11/12/19
FAHC 19-048 Recruitment_materials.docx	1	11/12/19
FAHC 19-048 Information_sheet_focus_group_v1.docx	1	11/12/19
FAHC 19-048 Information_sheet_interview_v1.docx	1	11/12/19
FAHC 19-048 Information_sheet_interview_v2.docx	1	11/12/19
FAHC 19-048 Information_sheet_observation_v1.docx	1	11/12/19
FAHC 19-048 Consent_form_focus_group_v1.docx	1	11/12/19
FAHC 19-048 Consent_form_interview_v1.docx	1	11/12/19
FAHC 19-048 Consent_form_interview_v2.docx	1	11/12/19
FAHC 19-048 Consent_form_observation_v1.docx	1	11/12/19
FAHC 19-048 Data_management_plan.docx	1	11/12/19
FAHC 19-048 Fieldwork_Risk_Assessment_Form.docx	1	11/12/19

Committee members made the following comments about your application:

- The research being proposed here is original and fun. The researcher has considerable local knowledge which will be exploited to good effect. The ethical and safety dimensions of this proposal have been carefully considered. Matters of data storage have also been satisfactorily addressed. Those taking part in the focus group sessions will not be unduly put at risk. This proposal is ethically sound.

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must

receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation and other documents relating to the study, including any risk assessments. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Jennifer Blaikie
Senior Research Ethics Administrator, the Secretariat
On behalf of Prof Robert Jones, Chair, [AHC FREC](#)

CC: Student's supervisor(s)