

# “It’s About What We Take With Us And What We Leave Behind”: Investigating the Transformative Potential of Pervasive Games with Various Stakeholders

Adam Jerrett<sup>1</sup>[0000-0003-2409-5756]

<sup>1</sup> University of Portsmouth, UK  
adam.jerrett@port.ac.uk

**Abstract.** This study investigates the experiences of various stakeholders in *What We Take With Us (WWTWU)*, a wellbeing-focused pervasive game comprised of an alternate reality game (ARG), a room-based game, and game-based workshops. Utilising narrative inquiry, the research explores the perspectives of the game's designer, developer, ARG players, room players, and workshop participants, offering a holistic understanding of a multifaceted game. These narratives highlight unique player experiences including the duality of being both player and creator, how games can catalyse lifechanging decisions, the importance of communities to wellbeing, the benefits of physical play spaces, and questions surrounding the nature of games. Findings align with existing pervasive game design principles, emphasising their ability to generate emergent narratives and benefits, their transformative potential, and their effective community utilisation. However, the findings also underscore challenges faced by creators, such as the need to accommodate diverse player types within such communities, difficulties navigating preconceived notions of game experiences, as well as the need for further research into notions of “space and place” in games. Although insightful, the study's limited sample size and specific geographical context may impact the generalisability of its findings. Future research into *WWTWU* and pervasive games more generally could therefore benefit from diverse sample sizes and deployment in a myriad of broad cultural contexts. Finally, the study underscores that, in the end, games’ success relies on the individual experiences of all their stakeholders, what they take with them, and what they leave behind.

**Keywords:** pervasive games, narrative inquiry, wellbeing, transformative play, emergence

## 1 Introduction

Pervasive games are unique in their ability to traverse and transform the boundaries, barriers, and borders of the medium. Pervasive games toy with the “magic circle”, the distinct space where a game’s rules and reality supersede our own, by playing with its borders and expanding it spatially, temporally, or socially into stakeholders’ lived realities [32, 33]. This format allows games like alternate reality games (ARGs), escape rooms, and live-action roleplaying games (larp) to tell new kinds of stories. Through

emergent narratives – players’ individual stories of their experiences [41] – the genre showcases transformative potential through their playful approach to real-world challenges [45].

This study examines *What We Take With Us (WWTWU)* [21], a wellbeing-focused pervasive game comprised of an ARG, a room-based game, and game-based workshops. The research provides a comprehensive view of this multifaceted game by exploring not only the players’ experiences across the three formats but also the experiences of the game’s designer (and researcher) and developer (and actor). It therefore covers many stakeholders within the game’s lifecycle [22]. Examining these five stakeholder perspectives (designer, developer, ARG player, room player and workshop participant), this study highlights the diverse experiences offered by pervasive games. By transforming the boundaries of its magic circle, *WWTWU* sometimes profoundly affected the lives of its stakeholders, emphasising the potential of pervasive games as more than mere entertainment, but as powerful tools for personal progress.

## 2 Background

### 2.1 Serious Pervasive Games

“Serious games” are designed with the primary aim to educate, inform, and train players [31]. Initially, such games favoured education over entertainment, and were often bland [11]. The “theory of fun” instead proposes that “fun” in games comes from the learning process inherent in systemic mastery [24].

Merging education with entertainment, “serious” pervasive games apply gameplay to real-world problems within a fictional context to influence behavioural change [25, 26]. Serious ARG, *World Without Oil (WWO)* [16] tasked players with envisioning the repercussions of a global oil crisis. The game epitomised serious pervasive games’ transformative potential with its lasting impact, with players longitudinally reporting increased knowledge and changed behaviour [57]. Nordic larps, a subset of live-action roleplaying games, take cues from interactive theatre and drama to often address controversial themes [47]. *Just a Little Lovin’*, for example, is set during the onset of the 1980’s AIDS crisis in the USA. It facilitates player engagement with complex themes like death and sexual desire, leading to moments of intense personal reflection for many players [51].

Recent technological advancements have spurred digital pervasive games that diverge from the genre’s analogue roots. *Zombies, Run!* turns a jog into a mission to outrun zombie hordes [43], while *Pokémon, Go!* leverages augmented reality technology to encourage players to explore their surroundings and capture virtual Pokémon [36]. Finally, *SuperBetter* utilises gameful mechanics to help players achieve personal health goals through simple behaviour change like drinking a glass of water to defeat the “liquid calories” boss [26].

## 2.2 Emergent Narratives in Pervasive Play

Game narratives typically fall into two categories: embedded and emergent narratives [41]. While embedded narratives consist of fixed story elements, emergent narratives evolve based on players' interactions with game mechanics [1]. In pervasive games, emergent narratives play a crucial role as reality is integrated into the game, leading to personal and dynamic narrative experiences. Players "do things for real" [34].

ARGs showcase how player behaviours can actively shape the embedded narrative, creating a "puppet master problem" for designers [27]. Within pervasive games, designers must account for the potentiality that players can do anything, which may change the game's designed narrative. During *Go Game*, players literally obliged when prompted to "drop your pants and dance". The phrase was merely meant to signal the start of play. In such games, players' personal journeys often become more significant than the designed narrative, particularly in larps, which are often not about what *happened*, but rather what was *felt* [13].

Pervasive play's inherent unpredictability can also lead to unexpected, emergent benefits. While *SFZero* was not advertised as "serious", its players become more outgoing, creative, and wise by embracing the game's ambiguous design, which tasked players to perform arbitrary tasks like finding some "Things You Can Run Through" [14]. Similarly, players of *The Beast*, an entertainment-focused promotional ARG for the film *Artificial Intelligence*, adopted a playful attitude in attempting to "solve" the mystery of 9/11 [28]. The emergent narratives, and benefit, of pervasive play can fundamentally transform players by providing them with "golden moments" that keep them returning to the genre [4].

## 2.3 Transformative Play

Transformative play fundamentally alters a game's contextual experience. These changes can apply to the structure of the game itself, how or where it's played, or even shifts in players' thinking or changes to their real-world contexts [41]. Within games, transformative play can be encouraged within four contexts: conformant, explorative, creative, and transgressive play [2]. A related but different form of transformative play, derived from theatre, may also occur as a result of acting and roleplay experiences [49]. Such transformational experiences are increasingly advocated for, with design pillars for transformative digital game experiences being mapped to existential psychotherapy principles, myth and ritual, and the creation of experiential games that "seek to be felt rather than read" [37]. Many of these techniques are already implemented in serious pervasive games, such as the use of ritual, briefing and debriefing, and a focus on dynamics over systems [20].

"Bleed", a key component of transformation in pervasive games refers to the blurring of boundaries between players and characters during roleplay. Aspects of the game can "bleed out" and affect the player, or real thoughts and feelings can "bleed in" and affect the roleplaying experience [46]. Despite potential undesirable outcomes and challenges in managing bleed during gameplay, "playing for bleed" is gaining popularity among players [8, 50]. Intense in-game events can trigger bleed, provoke strong emotional

responses, and thus challenge players' preconceived values to catalyse transformative experiences [45]. “Transformative bleed” [5] can therefore allow players to, through their characters, explore personal dilemmas and encourage personal growth [44]. This mirrors the “disorienting dilemma” of transformative learning theories which instigates self-reflection, reassessment of assumptions, and development of new actions based on the reintegration of new knowledge [30].

Bleed can also extend to other pervasive game types, as seen in the player experiences in *World Without Oil* and *The Beast* [28, 57]. By requiring players to perform tasks as themselves in reality, rather than through a digital avatar or roleplayed character, pervasive games can allow bleed to be a potent force for change [20]. When players play *Kind Words* and comfort other players, they are not merely simulating compassion – they are manifesting it, transforming themselves, the game, and the world around them in the process [19].

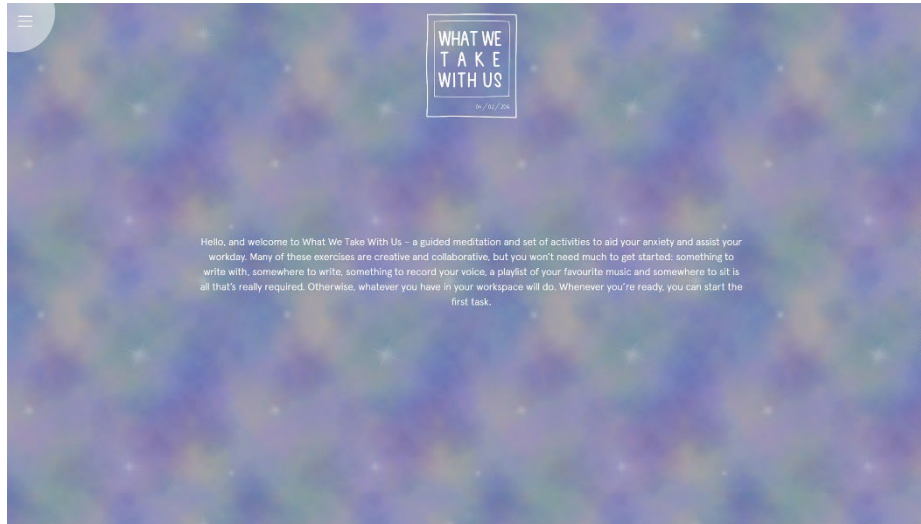
### 3 What We Take With Us Overview

WWTWU is a multifaceted game emphasizing "wellbeing" through values-centred design. It is split into three parts: a physical room-based game, an online Discord-based ARG, and a website, each enriching the overall story. This section outlines the game mechanics, describes into the narrative, and explains its structure. Lastly, its deployment as a pervasive game is briefly discussed.

#### 3.1 Mechanics

*WWTWU*, initially conceptualised as an empathy-based escape room, deviated from traditional mechanics by eschewing timers and locked doors, only keeping the genre's fixed location and its narrative framing [35]. The game mechanics were thus concerned with what players would be doing in the room: a series of 11 tasks presented to a single player. These tasks were inspired by wellbeing practices, and included organizing a workspace, acknowledging their feelings, creating art, dancing, telling stories, and engaging in self-talk, among others. The game's tasks were presented on a website [21] that evolved through design to be playable anywhere. This allowed for both remote play (which was the impetus for the creation of the ARG), as well as planned location-based play.

**Fig. 1.** The *WWTWU* game website that showcases the game's tasks.



In both the ARG and room-based game, players utilise a Discord server where the creator of the server, game protagonist Ana Kirlitz, regularly shares 'past playthroughs' of the game that document her experiences from 2020 to 2023. Room players play *WWTWU* in Ana's abandoned office in Portsmouth, UK, where they can additionally discover epistolary artefacts she has left behind.

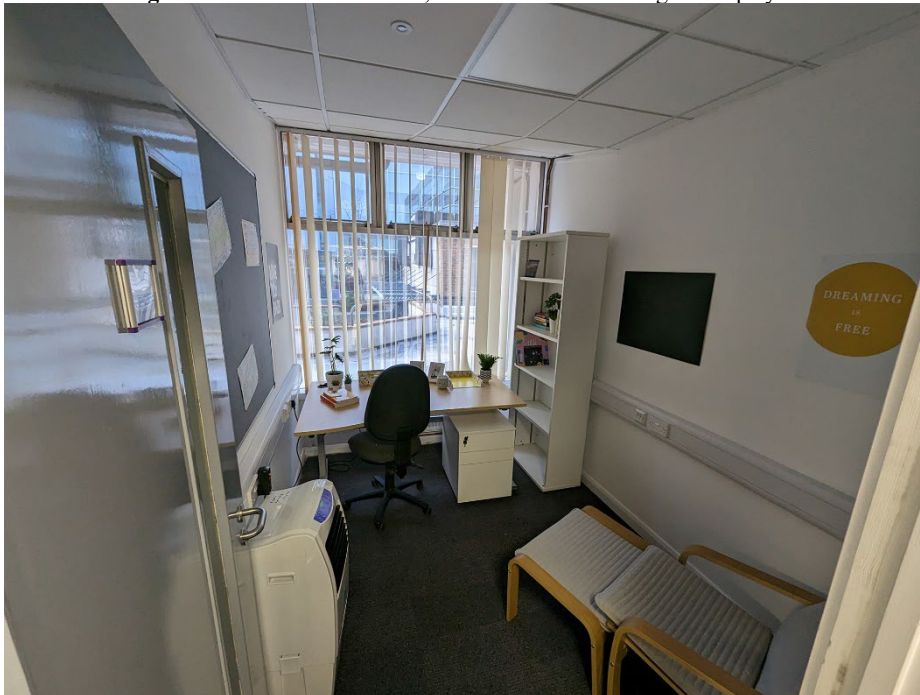
### 3.2 Narrative

**Fig. 2.** Ana Kirlitz, *WWTWU*'s protagonist.



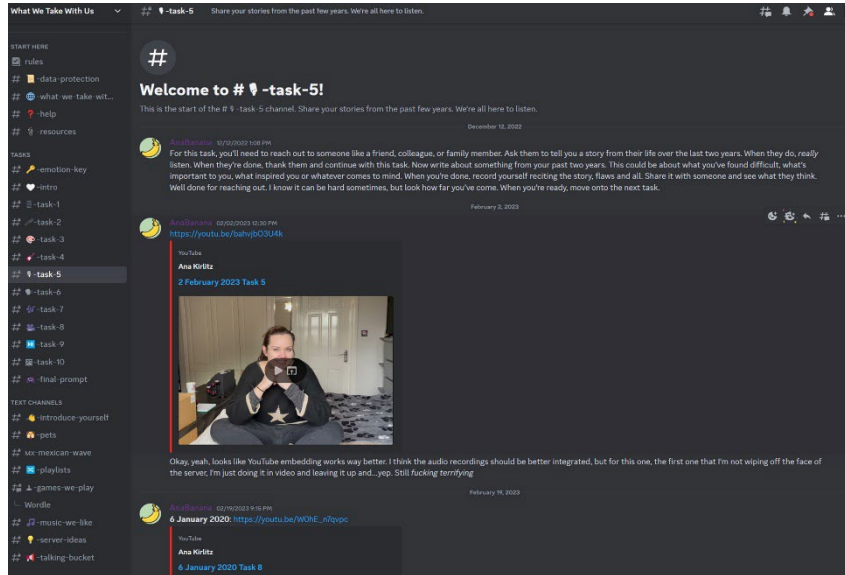
*WWTWU* tells the story of Ana Kirlitz, who relocates to Portsmouth in early 2020 after a breakup. The new environment allows her career and wellbeing to thrive, aided by her play of the standalone *WWTWU* tasks. However, local lockdowns in the wake of the COVID-19 pandemic plunge her back into depression, which she continues to struggle with throughout the pandemic. In late 2021, her mother dies after contracting COVID-19, leading Ana to return to her childhood home to handle family matters and mourn her loss, abandoning her Portsmouth office.

**Fig. 3.** Ana's abandoned office, where the room-based game is played.



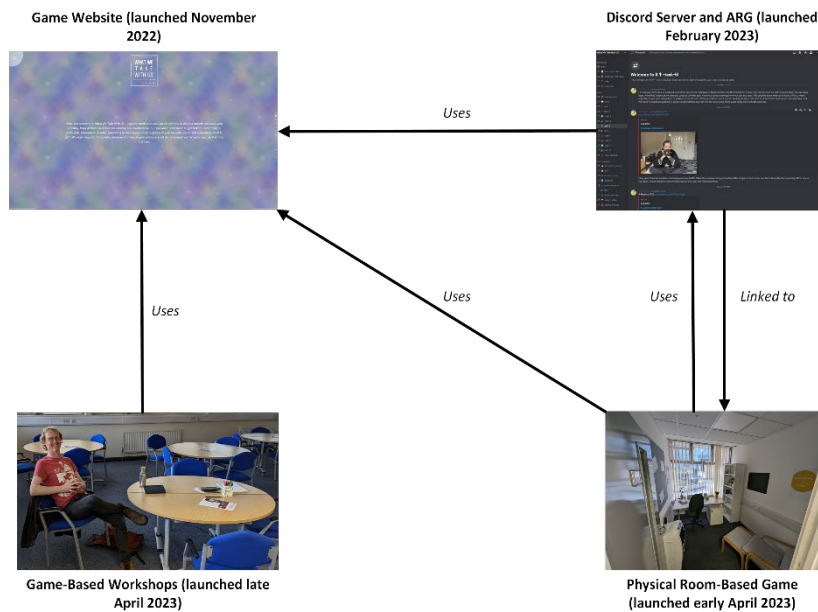
While home, Ana continues playing *WWTWU*, charting her experiences on a private Discord server she uses as a journal. Later, she makes the Discord public, hoping to use the community's game interactions in her PhD research. The ARG begins as players join the server through her invitation. Players learn about Ana's life during the pandemic and accompany her on a journey of personal growth by completing and discussing their tasks on the server.

Fig. 4. The *WWTWU* ARG's Discord server, which remains active post-game.



### 3.3 Game Structure

Fig. 5. *WWTWU*'s game structure across its various formats.



*WWTWU* comprises three components: a game website, a Discord-based ARG, and a physical room game. Both the ARG and room game highlight Ana's story. However, as the website focused on *WWTWU*'s mechanics, it allowed for standalone workshops. This allowed data to be gathered beyond Ana's narrative while also offering additional research opportunities. **Fig. 5** illustrates the connections between these components.

### 3.4 Deployment

*WWTWU*'s game website was launched in November 2022, but was not active until the launch of the ARG in February 2023. During the ARG's run, only a handful of its 50+ players engaged regularly. However, the addition of two new active players towards the game's conclusion highlighted its potential as a wellbeing and community-building tool. The ARG concluded in May 2023.

The room-based game was advertised to potential participants outside the ARG community midway through the ARG's run in early April 2023, and concluded shortly before the ARG in May. As the room was advertised after the ARG had begun, some players (such as Oscar, discussed later) were aware of the ability to participate in either format. The room allowed players to reflect on Ana's narrative while also facilitating players' own wellbeing reflection. Notably, room players were often hesitant to share reflections on the Discord server, despite it being a central component within the room.

Lastly, from April to June 2023, game-based workshops targeted academic environments (e.g., universities, conferences) for additional data collection. Participants in these workshops, like room players, often chose private communication with the researcher over group sharing.

## 4 Research Methodology

The research focused on understanding the individual experiences of various stakeholders participating in *WWTWU*. Narrative inquiry was chosen as the research methodology due to its emphasis on understanding experience through storytelling. This data is used to understand individual and collective meaning-making processes [12]. Ethnography was considered, due to its prevalence in similar game studies contexts [3, 7], but discarded due to its focus on communal interactions, which contrasted against *WWTWU*'s solitary, introspective player experience. Narrative inquiry instead allowed for a holistic understanding of player experience across stakeholder levels, which resulted in the following research question:

- What are the play experiences of various stakeholders (i.e., designer, developer, players) when playing a serious pervasive game in differing contexts (i.e., an online ARG, room-based game, and game-based workshops)?

Player narratives were constructed using the survey research method, employing questionnaires and interviews as research instruments for each game format [38]. The use of open-ended questions and a semi-structured interview schedule provided richer, nuanced data for analysis [39]. 18 interviews were conducted, covering each



stakeholder group: one designer, one developer, six ARG players, seven room participants, and six participants of three game-based workshops. It is important to note that the interviewed designer is also the researcher, who was self-interviewed [23]. The self-interview used the same interview schedule as other participants to standardise data collection across stakeholders.

The study aimed to reach roughly 1000 individuals via Discord, email, and Reddit, hoping to recruit 30-45 players. This is similar to the 2-3% conversion rate typical of ARGs [29]. Ultimately, 28 participated: 26 players across different formats and 2 designer/developers. Of 18 interviewees, most were unfamiliar with their chosen game format, barring the designer, one ARG player (a former ARG designer) and one room player (who played escape rooms). Workshop participants, in particular, lauded *WWTWU* as a unique wellbeing approach not previously experienced.

One narrative is presented per stakeholder group (designer, developer, ARG player, room player, workshop participant) to showcase a characteristic play experience. The selected player narratives come from participants with no pre-existing knowledge about the game or researcher, ensuring unbiased perspectives. One primary theme per stakeholder group was identified using reflexive thematic analysis [6] and explored in the Discussion section. Additional interviewee experiences are discussed within these themes to highlight its presence across the entire dataset. All participants in the research, including the designer, are referred to by pseudonyms for anonymity.

## 5 Results

### 5.1 Designer: Alex

Alex, a 31-year-old white British male, was the sole designer of *WWTWU*. Despite his dual role as creator and player, he found himself deeply immersed in the game's systems and narrative when playing its different formats. While *WWTWU* began as a coping mechanism for pandemic-induced distress, it inadvertently became a therapeutic journey for Alex, despite his reservations about therapy.

Though buoyed by stories shared during the ARG, he was often disappointed by the game's low participation, given his personal connection to it. He nevertheless took pride in creating spaces for people to share their personal experiences. The physical spaces where he played the game also influenced his experience, his new house offering a sense of peace and lightness he hadn't experienced elsewhere.

Music played a significant role in Alex's experience. He was amazed at how engaging with music in the game rekindled his passion for creating and listening to music outside of it – an interest he thought lost. Additionally, the theme of family within the game resonated with him after a familial visit reminded him of the value he placed on such relationships.

The COVID-19 pandemic also had a significant impact on Alex's life and his game experience. *WWTWU* helped him process his pandemic-related emotions, proving to be transformative, albeit challenging. Interacting with the character of Ana, who felt like a separate entity despite being his creation, allowed him to confront emotions he might

have otherwise evaded. The emotional impact of the game on other aspects of his life, however, remained to be seen.

One of his most significant takeaways was that personal games, despite their inherent intimacy, should never be made alone. Collaborating with Emily, the actor who physically portrayed Ana, provided much-needed support throughout his experience – one that was incredibly hard but ultimately cathartic. Finally, Alex notes that game development and play are “about what we take with us and what we leave behind”. Lessons can always be learned from games, but it’s difficult to anticipate what these may be beforehand.

## 5.2 Developer: Emily

Emily, a 30-year-old white British female and professional actor, was intrigued by *WWTWU* for its focus on mental health and the COVID-19 pandemic's impact. Her involvement in the game, portraying the character Ana, classifies her as a developer within this research.

Emily's play experiences mostly occurred during development, where she immersed herself in the game and its tasks to deeply understand Ana. She experienced multiple emergent benefits, such as adopting new coping strategies like keeping a diary to process her emotions and experiences where she wrote to her past and future selves. This method of self-reflection was revolutionary for her, given her self-reported potential presence on the autism spectrum and previous struggles understanding her feelings. Ana's resilience also affected Emma's own personal habits, leading to her keeping a more organised environment during her performance of the role. Exploring Ana allowed Emily to understand different facets of her personality, emotions, and gain new perspectives on her life.

Her connection to Ana was so profound it resulted in notable transformative experiences during play. Reflecting on Ana's relationship with her father, Emily was inspired to reflect on her own relationship with her beloved deceased grandfather. Memories of her grandfather teaching her practical skills inspired Emily to get her plastering qualifications and start her own business by *WWTWU*'s conclusion.

The game prompted Emily to introspect about her mental health, personal growth, and emotional wellbeing. She discovered her resilience and the ability to evolve in challenging situations. Despite development's often consuming nature, Emily managed to balance her real-life commitments and her dedication to the project, learning valuable lessons about perseverance and the human spirit. This is summarised by her key takeaway from the game: "No matter how much shit you throw at the fan, it will always clear itself – the shit won't stick". Through work and play, *WWTWU* provided Emily insights that significantly affected her which will continue to shape her personal development in the future.

## 5.3 ARG Player: Chris

Chris, a 19-year-old white South African male computer programmer, discovered the *WWTWU* ARG through a recommendation from an unrelated Discord server. His

interest in self-improvement and mental health drew him into the game, despite his late arrival.

Chris viewed the game as therapeutic, engaging mainly with the initial tasks that helped him understand and express his emotions – something he'd always struggled with. His cyclical play experience often involved completing the first four tasks before restarting – a pattern that satisfactorily soothed him. He found tasks involving voicing feelings and giving self-advice particularly beneficial.

Chris's workplace environment, where he played, precluded him from openly doing some tasks. Instead, Chris compensated by heavily engaging with the game's community, often sharing personal details about his life, such as his sexual orientation. He was notably active in the hobbies channel, arranging to obtain craft project materials from another member and regularly posting *Wordle* [52] scores on the server's dedicated thread. These experiences stood out as memorable for him.

Chris also regularly engaged with other players' posts about their emotions. Witnessing other members going through their journeys had a comforting effect, reinforcing that he was not alone. He also frequently interacted with Ana, who he believed to be a Though his late arrival meant limited exposure to her story, he found the revelation that the game was part of an ARG both shocking and exciting.

Chris felt the game would be more challenging without the Discord server. It eased any potential pressure of "bothering" someone when tasks prompted players to reach out to others. The server provided an already receptive audience for such sharing. Chris's key takeaway from the game was "things get better, and there will always be people to support you". The game and its community had a positive influence on him, highlighting the power of games in providing supportive spaces for emotional engagement, personal growth, and community connection.

#### 5.4 Room Player: Oscar

Oscar, a 25-year-old white British male, was intrigued to partake in the room-based game thanks to a fellow student's (Ana's) endorsement. As a Masters student studying games, he appreciates narratives beyond typical gaming norms and aspires to translate such novel experiences into his own games. Upon entering the room, Oscar felt a sense of pleasantness, admiring the neat organisation (aside from an intentionally placed disarray of pens), variety of books, and ambient aesthetics. The environment's calmness, with its minimalistic decor and the comforting presence of plants, he noted, felt conducive to the game's tasks. Oscar was aware of these tasks, having previously lurked on the Discord server, but the room gave Oscar the chance to approach them linearly, which he preferred.

As he played, music was a pivotal part of Oscar's experience. As an ardent music lover, the act of choosing a song and simply listening to it through high-quality headphones was therapeutic. He immersed himself in the experience, culminating in a later game task, where he removed his shoes and sat cross-legged in the provided lounge chair, fully grounding himself within the game.

Oscar's interactions on the Discord server, however, were reserved, despite his admiration for Ana's vulnerability. He found the shared experiences valuable but

acknowledged that some, like himself, may simply not be comfortable sharing. Instead, Oscar engaged with the tasks directly within the room. Immersed, he found himself talking aloud, which provided a new perspective and prevented him from falling into negative thought spirals. The story recital task, in which players narrate a story from their past two years, was particularly memorable, as it gave him the freedom to express himself without time constraints.

The reflection the game encouraged, he notes, had a positive effect on his mood. However, while the experience provided perspective, it didn't fundamentally change his mindset. He saw the value of the game in identifying areas to work on, but this didn't spur him into action – this he saw as the purview of therapy.

Finally, Oscar was surprised to learn of Ana's status as a game character, sparking discussion about the distinctions between game and reality in pervasive play. In doing so, *WWTWU* redefined “what defines a game” – Oscar's key takeaway.

### 5.5 Workshop Participant: Sally

Sally, a 57-year-old white British female, brought a unique perspective to *WWTWU*'s online workshops, fuelled by her deep involvement in early childhood education and wellbeing in both her PhD and role as a university lecturer. Despite joining the workshop to support young children and “the challenges these tiny humans face”, she embarked on a personal journey thanks to the game's structure and introspective tasks.

The game's integration of music and introspection was impactful for Sally, leading her to explore personal matters. She started with upbeat songs but was drawn to a Carole King song that resonated with her. Listening to this song “with new ears” in this new context revealed layers of meaning she hadn't noticed before. The workshop provided her time to reflect, helping her realise her propensity for privacy regarding personal matters and highlighting her resilience in dealing with personal disruptions over the past two years. Her privacy concerns were again highlighted in her hesitance initially sharing her workshop experience due to the presence of another unengaged participant, only openly reflecting when engaged privately.

Interestingly, Sally did not perceive *WWTWU* as a game. She had a different concept of what constitutes a game – interactive experiences she would typically observe, rather than participate in. This affected her sharing practice, opting to share on a workshop specific Padlet, rather than Discord. Instead, *WWTWU* felt more like a therapeutic process – a toolset for self-exploration and understanding – due to the presence of activities like free writing and recording. In this regard, she appreciated the freedom the workshop provided. The task involving recording a video message to herself was most memorable – an unfamiliar but thought-provoking activity that led her to consider other areas of her life more deeply.

Sally's key takeaway emphasized the importance of openness to new experiences. Despite her initial scepticism about online gaming and its mental health impact, she recognised *WWTWU*'s potential to provide a sense of community and safety for those struggling with offline interactions. While not entirely within her comfort zone, her experience with *WWTWU* was enlightening and enjoyable.

## 6 Discussion

To highlight the findings from each individual player experience across the game’s various stakeholder levels, a notable theme from each reflexive thematic analysis (conducted on each narrative account) is now presented.

### 6.1 Designer: Pervasive Games’ Emergent Properties

A particular emergent property of Alex’s experience with *WWTWU*, given his proximity to the game experience, was his disappointment at the game’s engagement level across its three formats. His own play was nevertheless abundant with emergent benefits, corroborating previous findings on pervasive play [14]. His renewed appreciation for music, reinforced understanding of family values, the joy found in his physical play spaces, and the solace he found in his partnership with Emily were all unexpected yet delightful. This sentiment was echoed by other participants, with many highlighting unexpected takeaways. Room players Selma and Jack found joy in playing with stationery and drawing pictures, and ARG player Joe relished the ability to reconnect with old friends while playing.

However, not all emergent properties are beneficial: disengaged room player Zay took “nothing” from his experience – bored throughout – reinforcing the concept that games offer “different fun for different folks” [24]. During briefing, Zay expressed a macabre perspective on the purpose of his life (“my higher purpose is to die”), rooted in religious beliefs. This unexpected response may have affected his play experience negatively. Creators should therefore consider building adaptability into their pervasive game designs that can be altered for different player types to best prepare for a range of emergent player outcomes.

### 6.2 Developer: Games as Transformation Catalysts

Emily, despite being an actor and developer on the project, played the game repeatedly while embodying Ana, leading to numerous personal transformations. These transformations initially manifested in Emily keeping a personal diary to explore her emotions, which subsequently led to further understanding of her suspected neurodivergence. Most significantly, however, Emily’s reflections on her grandfather inspired her to re-discover forgotten practical skills, start her own business, and potentially make a significant career change. Occurring through both roleplay and systemic gameplay, this powerful outcome is consistent with theatrical and game-based understandings of transformative play as well as transformative bleed [2, 5, 41, 49]. Alex, too, experienced profound transformations through play relating to his understanding of the COVID-19 pandemic. Design, deployment, and play of *WWTWU* ultimately helped him overcome pandemic-related fears and start ‘returning to normal’ in a post-pandemic world.

Some players, like Santiago and Xander, experienced subtler transformations. Santiago used the game’s emotional explorations to address fears around emotionally manipulative behaviour. He also introspected on his nationality as a component of his identity which allowed him to embrace these elements and share various game tasks in

his native language of Spanish. Xander, in turn, inspired by the ambiance of the game's room setting, decided to create a similar peaceful workspace for himself at home.

To expect all players to undergo profound transformations like Emily or Alex is perhaps unrealistic. While games, pervasive or otherwise, have immense transformative potential, designing for subtle transformative experiences may be a more attainable, yet still highly valuable, goal.

### 6.3 ARG Player: Community Support Can Transform Solitary Experiences

Chris' *WWTWU* experience was shaped by his participation with the game's Discord-based ARG community. Chris quickly integrated himself in the community, despite joining the game late. He made friends, comforted others, and shared in their triumphs and struggles. Interacting with the community transformed Chris' gameplay experience, allowing him to shape his experience by focusing on community rather than the game's systems or narrative. Were it not for his communal focus, he believed the game would be a lonely experience at odds with the wellbeing it hoped to inspire.

This sentiment was shared by other ARG players who also noted the significant role of the Discord server during play. Diamond mentioned "realising how you feel takes a community", while Shaun expressed excitement over a potential server-wide *Dungeons & Dragons* campaign – a popular topic among players. Shaquille appreciated how one is never alone with their feelings, noting there would always be people willing to help. Such reflections highlight the importance of community when confronting difficult emotions, aligning with *WWTWU*'s design, which drew inspiration from group therapy contexts [54]. As such, community fundamentally transformed many players' experiences with *WWTWU*'s mechanical and narrative contexts.

However, it is notable that many non-ARG players rarely engaged with *WWTWU*'s community, despite often identifying its theoretical value. This may be due to the introversion many players self-reported, which may predispose them towards solitary emotional experiences [9, 55]. Room players Oscar, Ezra, Jack, and Zay, alongside workshop participant Sally mentioned reluctance sharing emotional experiences and difficulties even outside of a game context. Such responses illustrate a potential tension for serious pervasive game experiences: while community is a fundamental aspect of the genre [15, 18], potential players may struggle to fully engage in such experiences due to their individual personality traits. Creators should therefore consider aligning their game communities with the personalities of their expected target audience, potentially with a greater emphasis on psychographics.

### 6.4 Room Player: The Transforming Role of the Fundamental Physical Spaces in Pervasive Play Experiences

Oscar's interaction with the room-based game greatly influenced him. He quickly noted the intentional design of the room's layout and correctly surmised that any disarray was part of the game. The room provided Oscar with a clearly demarcated space and structure for gameplay, reinforcing the concept of the "magic circle" [32]. Throughout play, physical elements of the game environment – high-quality headphones, the presence of

plants, and the room's minimalistic decor – facilitated Oscar's full immersion into the experience. A similar calming experience was evident with many room players. Xander noted a feeling of profound peace, while Ezra appreciated the room's quietness which minimised distractions.

Non-room players also reported that their physical spaces influenced gameplay. Alex noted that his gameplay varied depending on the different environments he played in. In the ARG, Chris felt restricted by playing in his office environment, while Joe desired a solitary physical space to truly engage with their emotions. Workshop participants Jane, Harry, and Anthony's physical spaces also affected their play. Jane's communal workspace took a long time to tidy as part of the game's tasks, making her feel accomplished but exhausted. Harry reflected on university-related topics, given his workshop's academic location. Finally, Anthony had a confronting experience during his workshop, where the messiness of his workspace cast an overwhelming shadow over the rest of his gameplay.

Interestingly, some room players reacted to playing a game located in Ana's abandoned office. Ezra and Jack were wary about being in "someone else's space," refraining from making many changes in case Ana returned. This feeling was intensified for Santiago and Tina when they discovered a letter condoling Ana on the loss of her mother. Their discovery made them feel like they had intruded on something private, making them approach the rest of the game more cautiously. Tina also had an adverse reaction to the room's pandemic-themed elements. As someone who wanted to move on from the pandemic, the game's COVID-19 references caused her discomfort.

The players' experiences align with "space and place" theory, which differentiates between "space" (a physical location that is abstract and foreign) and "place" (a space that has been given personal meaning) – a rarely explored concept in game studies [56]. Some room players felt they were playing in a "space", which significantly impacted their experiences. For others like Oscar and Xander, the unfamiliar "space" of Ana's office became their own "place" as they immersed themselves in the experience. Conversely, non-room players like Alex and Joe found that specific "places" facilitated positive experiences, while others like Jane, Anthony, and Chris found that these places made gameplay more challenging due to their existing personal significance. Consequently, creators are encouraged to consider how physical space is incorporated into their designs, particularly in relation to theories of space and place.

The effects of physical spaces in *WWTWU*'s play suggests an evolution and transformation in how physical spaces are understood within pervasive games. Alex's changing gameplay experience from place to place, or Santiago and Tina's changing relationship to their play space when stumbling upon Ana's private letter suggest that physical location design may be a pivotal design consideration within pervasive games. This differs from existing understandings within escape room design, where a room's visual design primarily supports a narrative theme rather than a specific player experience.

### 6.5 Workshop Participant: Transforming Conceptions of Game Experiences

Sally's experience with *WWTWU* offers an insightful exploration into how pervasive games can blur the lines between fiction and reality, challenging and transforming pre-existing ideas of what constitutes a game. Rather than seeing *WWTWU* as a game, Sally viewed it as a “tool”, possibly due to the tasks being based on existing wellness practices and other artistic interventions traditionally seen as tools or activities, not games [10, 17]. Her perspective could also be related to her self-identified role as an observer, rather than an active participant, in games culture, a notion consistent with discussions regarding self-identification as a “gamer” [42].

This understanding of *WWTWU* as (not) a game was less frequent among other participants but did occur. Notably, *WWTWU* transformed ARG Player Nina's understanding of games with its novel approach to addressing wellbeing. She expected traditional game mechanics like points and leaderboards, so when the game instead mirrored therapy-style questions, she questioned, “where's the game?”. Nina was also shocked to find out that Ana was a game character, not a real person, noting that she didn't realize the Discord server was part of an ARG. She attributes this to her use of Discord as a work tool, which meant she did not approach the game with a playful mindset. This suggests that Nina did not fully accept the “lusory attitude” during play, which impacted her understanding of the “magic circle” she was in [32, 48]. Because she did not understand that pervasive games extend the magic circle spatiotemporally, she merely saw the Discord community as a group of players playing a website game – not an ARG that expanded the magic circle onto the Discord server and into players' realities.

Oscar's experience in the room game also helped redefine his understanding of the games medium. These perspectives suggest that the pervasive game genre, though longstanding, is often misunderstood by players who lack genre experience, or have differing expectations about games and play. This presents a dichotomy for creators. While the genre can offer unique experiences that transform players' understanding of games, player unfamiliarity with pervasive games can lead to experiential obstacles. Therefore, creators should consider incorporating techniques such as briefing and debriefing into *all* pervasive game types to better align player expectations.

## 7 Conclusion and Implications

The study detailed myriad player perspectives on *What We Take With Us*, a hybrid pervasive game implemented across an ARG, a room-based game, and several workshops. The research is unique for incorporating perspectives from the designer and developer, alongside players from each format. This contributes to a holistic understanding of *WWTWU* across the game's multiple formats, combining the insider knowledge of game portmortems [53] with user experience research [40]

The findings reinforce existing perspectives on pervasive game design, emphasising emergent narratives [13], emergent benefits [14], transformative play [44], and effective community utilisation [15]. Yet they also present challenges for creators, such as how to most effectively adapt communities to accommodate diverse player types [55], the influence of concepts like “space and place” on design [56], and the need to resolve



tensions surrounding genre unfamiliarity and preconceived notions of game experiences [33].

While the study provides meaningful insights, it is not without limitations. Its modest participant count, specific focus on individual narratives, and the concentrated thematic analysis restrict the breadth of the findings. The specific geographical context (primarily the UK and South Africa), and lack of diversity in the represented narratives may also limit generalisability. Future research could address these limitations by reproducing the study in different cultural contexts, which may yield further insights. Additionally, an in-depth thematic analysis of each game format could provide additional nuances in understanding of pervasive game experiences.

In conclusion, while the study sought to examine the emergent and transformative potential of pervasive games across various formats and stakeholders, the findings reflect a broader truth: games are all about what we take with us and what we leave behind.

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