8-14-2022

Exploring the Meaningful Qualities of Transactions in Virtual Environments for Massively Multiplayer Online Role-playing Gamers

Karen McCarthy
Dominican University of California, karen.mccarthy@dominican.edu

Shasta Rice
Dominican University of California, shasta.rice@students.dominican.edu

Amanda Flores
Dominican University of California

John Miklos
Dominican University of California, john.miklos@students.dominican.edu

Alexander Nold
Dominican University of California, alexander.nold@students.dominican.edu

https://doi.org/10.1080/14427591.2022.2108884

Exploring the meaningful qualities of transactions in virtual environments for massively multiplayer online role-playing gamers

Karen McCarthy*, Shasta Rice, Amanda Flores, John Miklos, & Alexander Nold

Dominican University of California, Coast Miwok land, (Awani-Wi), San Rafael

Contact Karen McCarthy karen.mccarthy@dominican.edu

ORCID

Karen McCarthy: 0000-0002-5965-8013

Shasta Rice: 0000-0002-2723-0303

Amanda Flores: 0000-0003-4004-6778

John Miklos: 0000-0002-3793-6270

Alexander Nold: 0000-0002-7994-9299

ABSTRACT

To date, most research on massively multiplayer online role-playing games (MMORPGs) has focused on the effects playing MMORPGs have on players' health and wellness. The virtual environment of MMORPGs has yet to be explored as a space where meaningful occupations occur. This qualitative descriptive study examined the virtual environment using a transactional perspective to describe the qualities of gaming to which MMORPG players ascribe meaning. Participants included six MMORPG players with experience playing World of Warcraft, Runescape, or Guild Wars 2. Data were gathered using interviews, participant observation, and a focus group. Data were analyzed using thematic analysis and resulted in three themes: creating collective occupational experiences, facilitating personally transformative occupational experiences, and unlocking immersive virtual environments. Participants described collective occupational experiences of gaming as creating a sense of community and belonging. Transactions in the virtual environment facilitated a transformative occupational experience to foster identity development and personal growth. The virtual environment was described as meaningful by unlocking an immersive experience through the aesthetics of the environment and engagement with in-game occupations. These findings provide occupational scientists with an increased understanding of the qualities of transactions within games that are meaningful for MMORPG players.

Keywords: Occupational science, virtual environment, video gaming, MMORPG, transaction, meaning

This study focuses on the virtual worlds within massively multiplayer online role-playing games (MMORPGs). MMORPGs are online video games in which millions of users immerse themselves simultaneously in a virtual environment and interact with other players through avatars- digital representations players create of themselves (Cole & Griffiths, 2007). In these games, players participate in social communities, complete quests, earn in-game currency through jobs or quests, and interact with the game environment. MMORPGs house enticing virtual environments for players as evidenced by high active player counts. The consistent popularity of MMORPGs from their inception in 1973 (Evans-Thirlwell, 2017) has incentivized influential developers, such as Riot Games, with nearly 200-million active players (Liang, 2021), to begin developing their own MMORPGs (MMO recruiting, 2020). The COVID-19 pandemic in 2020 led to an increase in multiplayer video gaming with around 60 percent of survey respondents stating they were playing more multiplayer games during the pandemic (Clement, 2021). MMORPGs differ from other technology-dependent occupations in the affordance they provide for players to participate in real-time with socially dynamic virtual environments through the enactment of roles they assign to their avatar.

While there is no consensus on the definition of virtual worlds, Girvan (2018) provided the following definition:

> Shared, simulated spaces which are inhabited and shaped by their inhabitants who are represented as avatars. These avatars mediate our experience of this space as we move, interact with objects, and interact with others, with whom we construct a shared understanding of the world at that time. (p. 1099)

While these virtual worlds often mimic physical world settings, researchers have outlined the value of such worlds for players through the "promise of an alternative reality in which one isn't constrained by one's real-life identity" (McIntosh, 2008, p. 203). Players report that being in a virtual world can take on internal sensations that mimic those in the physical world, with virtual worlds described as "[allowing] or [compelling] the user to have a sense of being present in an environment other than the one they are actually in, and to interact with that environment" (Schroeder, 1996, p. 25).

The experiences and interactions in the virtual world of MMORPGs are complex and deserving of further exploration from an occupational perspective.

Theoretical Framework

Within occupational science, relationships between people, environment, and occupation are commonly addressed, although at times have been critiqued for being dualistic in their perspective of person and environment as separate entities (Cutchin & Dickie, 2012). The transactional perspective of occupation purports there is a continuous relationship between person and environment (Cutchin & Dickie, 2012). The current study was inspired by the transactional view of occupation presented by Dickie et al. (2006) who utilized Dewey's concept of transaction to conceptualize occupation as a "transaction that joins person and situation" in a co-constitutive relationship (p. 90). The purpose of transaction involves a pursuit of functional coordination among relations between person and context.

The contexts of action or the "situation" where transactions take place are not limited to physical forces but can include social, cultural, and political influences (Dickie et al., 2006). This context is part and generative of action. The authors acknowledge that the interpretations of transactionalism within Dickie et al. (2006) is not a comprehensive theoretical review while also being cognizant of critical discussions about whether any model can fully capture transactionalism as a theoretical perspective (Aldrich, 2008). Taking this into consideration, the authors found the representation of a transactional web created by Dickie et al. to be an effective framework to illustrate the transactional whole of virtual worlds. As such, Dickie et al.'s view of transactionalism informed the authors' understanding of the transactional whole of MMORPGs as having the potential to include influences outside of the game's virtual environment itself.

Occupational scientists have been called to go beyond current categorizations of occupation to explore the ways in which people experience occupation and the meaning of occupation this experience provides (Doble & Santha, 2008; Hammel, 2009). Meaning emerges through taking action, doing, and engaging in occupation (Crabtree, 1998; Reed et al., 2011; Spitzer, 2003). Reed et al. (2010) explore how meanings of occupation are interconnected and are always contextualized. Meaning can be the aim or intention of engaging in occupation and also the outcome of engagement (Nelson, 1988). Meaning is not a static trait but is constructed through engagement in occupation

and is influenced by individuals and culture (Beagan & D'Sylva, 2011). The transactional perspective of occupation is one way to view how meaning is constructed. Occupational transactions contain meaning, where meaning is derived from the qualities of the transactions and situation (Dickie et al., 2006). According to this view, MMORPGs cannot be fully understood as solely leisure or virtual occupations and the meaning of the game lies within the qualities of its transactions. This study aims to describe the qualities of the transactions to which MMORPG players ascribe meaning. A transactional perspective informs the methodology and analysis of the study which sought to describe the qualities of transactions that players ascribe meaning to within MMORPGs.

Literature Review

Current literature addresses the effects that participation in MMORPG gaming can have on players related to social interactions and identity construction (Cole & Griffiths, 2007), the use of digital technologies as facilitators of engagement in meaningful occupations (Barlott & Turpin, 2021; Fischl et al., 2017; Kottorp et al., 2016), and the construction of and immersion in meaningful virtual spaces (McIntosh, 2008). The following literature review outlines current research on virtual worlds and highlights the need to further explore the aspects of the virtual context that players find meaningful.

Social aspects of MMORPGs

Literature reveals that MMORPGs have the potential to provide a sense of belonging, self-expression, and emotional support through the social aspects of the game. Playing MMORPGs has been described as promoting a sense of community and building greater social engagement and friendships through meeting new people (Cole & Griffiths, 2007; O'Connor et al., 2015). The virtual world appears predisposed to offer safe spaces for players to "express themselves in ways they may not feel comfortable doing in real life because of their appearance, gender, sexuality, age, or other factors" (Cole & Griffiths, 2007, p. 583). Players' ability to receive emotional support is also facilitated by their comfort in a virtual environment where interactions can be anonymous (O'Connor et al., 2015). This study explores the social interactions within gaming and how the social characteristics of transactions within this virtual environment may influence players' experience of meaning.

Technology and occupation

Within occupational science, researchers have considered the use of digital technologies with older adults (Fischl et al., 2017) and adults with learning disabilities (Barlott & Turpin, 2021). Kottorp et al. (2016) argued that access to these technologies is an occupational justice concern as it facilitates meaningful engagement in occupation. Existing occupational science literature largely focuses on the use of digital technology objects but is limited in the exploration of the transactions amongst players and the virtual environment. Barlott and Turpin (2021) utilized a transactional perspective on the use of technology and found that digital technologies presented opportunities for "conjoint action of human and nonhuman bodies" within a virtual space (p. 1). Madsen et al. (2020) used a situation-oriented approach to Dewey's theory of transaction to explore how digital technology was used by underprivileged adults to assist in their health-related occupations. Madsen et al. acknowledged that technology needs to be understood as situated in context. To better understand the technology of MMORPGs as situated in the virtual context, the unique virtual communities and occupations of MMORPGs can be explored as part of a transactional whole, wherein the actions of players, the use of digital technology, and the virtual worlds are not viewed as separate from this whole.

Space and place

The context of MMORPG playing includes the physical space where players' bodies are situated, the digital technology used in gaming, and the virtual worlds where transactions occur. While separation may exist between the physical and virtual contexts of gaming, Fok et al. (2009) argued there is a false dichotomy between "real" and "virtual" worlds. This separation of online and offline spaces appears unnecessary as the "realities of gamers are not clearly distinguishable between their offline and online realities" (Chee et al., 2006, p. 169). Concepts of place and meaning are worthy of exploration for virtual worlds, where players interact over time and create shared experiences and memories. A space becomes a place when it holds meaning from a person's experiences (Rowles, 1991). Place can be considered as a "container of memories of experiences" anchored in the experiences of engaging in occupation (Hasselkus, 2011, p. 41). Reid (2005) presented a model of occupational presence, or consciousness of being in place, examining older adults engaged in virtual reality occupations. Reid highlighted interacting components of presence, including how an

individual feels like they are part of a virtual world (personal presence), how much other beings (human or nonhuman) feel part of the world and react to the individual (social presence), and how much the environment responds to the individual. Virtual worlds and players' experiences within them are described as contributing to immersion and "real world resonance" (McIntosh, 2008, p. 201).

The study purpose

Occupational scientists have identified a need to more clearly understand participation in digital technology-mediated occupations in social and technological environments (Fischl et al., 2017) and explore the value of a transactional perspective applied to the use of digital technologies for engagement in occupation that is always situated in context (Madsen, 2020). In review of the literature and these identified needs, researchers have acknowledged that occupations utilizing digital technology within a virtual context exist and are worthy of study. The purpose of this study is to describe the qualities of the transactions in these virtual contexts that players find meaningful. This study is guided by the following research question: what are the qualities of the transactions that MMORPG players ascribe meaning to?

Methodology

Design

This study utilized a qualitative descriptive approach, as this methodology provides an avenue to explore how people engage in their contexts and make sense of their world (Stanley, 2014). While the approach is descriptive in nature and the intention was to remain close to the data, all description incorporates interpretation as the researchers are engaged in a co-construction of meaning with the participant (Sandelowski, 2000; Stanley, 2014). The researchers followed a qualitative descriptive approach utilizing flexibility with the research question format, purposive sampling methods, data collection methods, and the data analysis methods (Stanley & Nayar, 2014). This design was chosen to generate a descriptive analysis in an inductive manner that may describe the qualities of transactions within MMORPGs.

The study was conducted remotely. Each phase of the study was completed via Zoom video conferencing or in-game observation via screen sharing features on the participant's preferred online platform. A reason for choosing this setting was for the convenience and safety of participants and researchers during a global pandemic to limit

in-person interactions. Three of the most popular MMORPGs with long-standing, influential histories in the MMORPG communities were selected for this study: World of Warcraft (Figure 1), Runescape (Figure 2), and Guild Wars 2 (Figure 3).

Figure 1

World of Warcraft

Note. World of Warcraft (WoW) is a MMORPG based in the fantasy world of Azorath where players complete quests, raids, and various other missions to increase player experience level and skills. Players can take on multiple roles and avatars of different races and genders that best suit their identity and playstyle. WoW currently has 117.40 million players (Top MMOS in 2022, n.d.).

Figure 2

Guild Wars 2

Note: Guild Wars 2 (GW2) is a fantasy MMORPG based in the world of Tyria where players create avatars to complete quests, join raids with other players, and interact with the virtual world. Players customize their character through skill, character classes, and physical adornments such as armor and other clothing. There are currently 15.9 million players in Guild Wars 2 (Top MMOS in 2022, n.d.).

Figure 3

Runescape

Note. Runescape is a MMORPG based in the world of Gielinor where players play as human characters that they customize to their unique identity and playstyle to improve the skills of their avatar, navigate dungeons, and complete quests. There are currently 16.11million players playing Runescape (Top MMOS in 2022, n.d.).

Before commencing research, the study was reviewed and approved by the Dominican University of California Institutional Review Board for the Protection of Human Participants (IRBPHP IRB Application #[10917]). All participants were informed of the study via an introductory letter that informed them of their right to withdraw from the study at any point. Participants' written consent was obtained. Pseudonyms were used to keep participant identity separate from participant data, and participant contact information was securely stored on a master list only seen by researchers.

Participants

The following inclusion criteria were used when selecting participants: must be 18 years of age or older, play one or more of the three MMORPGs identified, understand and speak conversational English, and have access to Zoom. These inclusion criteria ensured participants had experience with the occupation and could participate in all forms of data collection. Purposive and snowball sampling were utilized to recruit two players from each game, totaling six participants. Recruitment within game spaces was not possible due to restrictions from game developers that ban in-game advertising. Thus, recruiting was conducted via word of mouth to personal connections and forum posts using Reddit, a discussion forum commonly used by MMORPG players. Discord, a group-chatting platform originally built for online gamers, was used to communicate with participants after recruitment and to recruit personal connections on that platform. Two Runescape participants withdrew after the participant observation. Data from one of their initial interviews were retained for analysis with permission. In total, four participants (mean age=26.3) completed all interviews and the focus group and had an average play experience of 9.5 years.

Table 1

Participant Demographics

Participants	Gender	Age	Game	Experience
BearHunter	Male (he/him)	22	World of Warcraft	7 years
Zebbie	Male (he/him)	23	World of Warcraft	8 years
Brady	Male (he/him)	27	Guild Wars 2	11 years
Xushin	Male (he/him)	33	Guild Wars 2	12 years
Mars	Nonbinary (she/they)	22	Runescape	10 years

Data collection

According to Stanley (2014), the main data source used in a qualitative descriptive study includes in-depth interviews but can consist of other methods such as observation. Data were collected through semi-structured interviews, participant observation, and a focus group.

Semi-structured interview

Specific authors were paired with participants for all semi-structured interviews and participant observations. Guild Wars 2 participants were paired with author four, World of Warcraft participants were paired with author two and the Runescape participant was paired with the researcher mentioned in the acknowledgments. In the first research stage, participants engaged in three semi-structured interviews ranging between 60 and 90 minutes. Interview questions were open-ended to elicit participants' descriptions of their experience playing MMORPGs, with questions aimed at "discovering the who, what, and where of events or experiences" (Sandelowski, 2000, p. 338). Interview questions were influenced by the description of the transactional perspective of occupation proposed by Dickie et al. (2006), which includes aspects of social and community interaction, temporal, and spatial dimensions, meaning, and the functional relationship between the person and their context (Table 2).

Table 2

Selected interview questions derived from Dickie et al. (2006)

Interview Question	Theory derived from Dickie et al. (2006)
Tell me about the community here when you first started playing this game? What did social interactions look like when you first started?	"Occupations are functionally integrated with social relationships, cultural contexts, and community actions." (p. 87)
What makes you return to this particular game? Can you describe a situation experienced within the game that invoked certain emotions?	"Occupational meaning derives from the values and aesthetics of the transaction and situation." (p. 90)
Were there any areas you would go to often or avoid when you first started? Tell me about locations on the map that hold particularly impactful memories for you when you first started? What do you do there? Tell me about your first experience with that location. Who do you meet there?	"Environment/place/world with which persons transact is not limited to physical forms; it includes, for instance, social, cultural, and political aspects as well." (p. 88)
What emotional responses come up for you in that particular location? How do the rules or policies influence the way you play the game?	"Emotional modes of the transaction." (p. 90)
How have specific skills gained while playing MMORPGs and/or your in-game experiences influenced the way you play? How have those accomplishments had an effect on your participation in in-game society?	"Meaning stemming from outcome of transaction." (p. 90)
How has playing MMORPGs influenced habits you have developed in your life and how would these habits be changed if you no longer played? How does the game's environment influence habits you have formed in the game?	"Habits are often used in occupational transactions as a means of coordinating relatively stable relations in a situation." (Dickie p. 90)

The three interviews differed in their temporal focus. The first interview collected data on participants' previous experience with the game. The second interview was conducted directly after the participant observation and described their occupational experience during the observation session. The third interview, completed within 72 hours of the participant observation, asked about the participant's conceptions of the gaming community and their ideas about the community's future. Interviews were transcribed using Otter transcription services and stored using encrypted qualitative data storage software (Dedoose Version 9.0.46, 2021).

Participant observation

In the second stage of data collection, participants experienced gameplay as usual alongside participant observation by the researcher, which involves observation of a group of individuals in their natural environment (Spradley, 1980). Author four accompanied Guild Wars 2 participants individually and author two accompanied World of Warcraft participants while paired with players the participants routinely play with during a gaming session using Zoom, Discord, or audio sharing software. Participants were instructed to play the game as usual, with a researcher viewing their screen when available and engaging in natural conversation regarding what was occurring on-screen with the participant. Observations were audio transcribed using the software Otter and stored in Dedoose qualitative data storage software. While having the researcher observe or simultaneously play impacts the gaming experience, researchers chose to observe rather than be present in the virtual environment via an avatar to allow for more in-depth conversation and focus their attention on how the participant was playing.

During observation, the researcher took field notes and asked follow-up questions during the gaming session where appropriate. The field notes were guided by insights from Phillippi and Lauderdale (2017), who encourage qualitative researchers to include detailed notes to "contextualize the study and provide perspective on participants' lives that can be useful when looking at data" (p. 383). Field notes were utilized to prompt the researchers to closely observe interactions in the environment, encourage reflection, increase trustworthiness, and provide essential context to inform data analysis. Field notes prompts guided the researchers who accompanied players in the participant observations to generate descriptions of the environment, narrative, context of on-screen and off-screen events, and the affect and nonverbal responses of

participants. These field notes were not used in data analysis, but informed topics of interest discussed as part of the focus group and added to all researchers' understanding of gameplay.

Focus group

Focus groups can clarify observed interactions or behavior and can solicit a wide range of meanings and perspectives on a topic (Carpenter & Suto, 2008). From a transactional perspective, focus groups are a way to engage with the social and communal processing of the collective. The focus group included all four continuing participants and involved a semi-structured discussion regarding key themes found across collected data to enhance the confirmability and trustworthiness of the findings. The focus group served as a form of member checking where participants had the opportunity to contribute to renaming, recategorizing, and developing new themes to better reflect their experiences, thereby reducing the influence of researcher bias. The focus group, facilitated by authors two and four, enhanced credibility through method triangulation where information was gathered using more than one source to substantiate the data and emerging themes (Carpenter & Suto, 2008).

Data analysis

In accordance with a qualitative descriptive approach, thematic analysis must be "inductive, moving through a process of coding in layers of abstraction and interpretation" (Stanley, 2014, p. 28). Data analysis was broken into six phases guided by Braun and Clarke (2006). In phase one, all researchers familiarized themselves with the data to obtain a better grasp of the data collected. Phase two involved the generation of initial codes, wherein all researchers collaboratively coded alongside a discussion of code accuracy and objectivity. In phase three, all researchers searched for themes within the data. Phase four involved all researchers reviewing the themes for resonance with the data described by each theme. Phase five involved defining the themes that were identified and grouping them under a common data umbrella. The focus group was completed in phase five. During the focus group, the researchers presented and reviewed the code trees taken from Dedoose, which included a visual map of the initial three overarching themes of collective occupational experiences, individual occupational experiences, and experiences of the virtual environment with aligned codes. Excerpts were shared with the participants to describe how researchers went

from interview excerpts to codes to initial themes. Researchers discussed with participants how data analysis resonated with their experience with the games, and identified if codes were appropriately ordered, should be removed, or if additional codes were needed. Participants expressed consensus that the three themes and their code trees appropriately described both the data collected in interviews and their general experience playing the games of interest. Participants then suggested regrouping and reordering subthemes. These suggestions were discussed in detail to better understand participants' experiences playing the games of interest and code trees were adjusted to reflect participant suggestions. Finally, phase six involved conducting a report based on those themes.

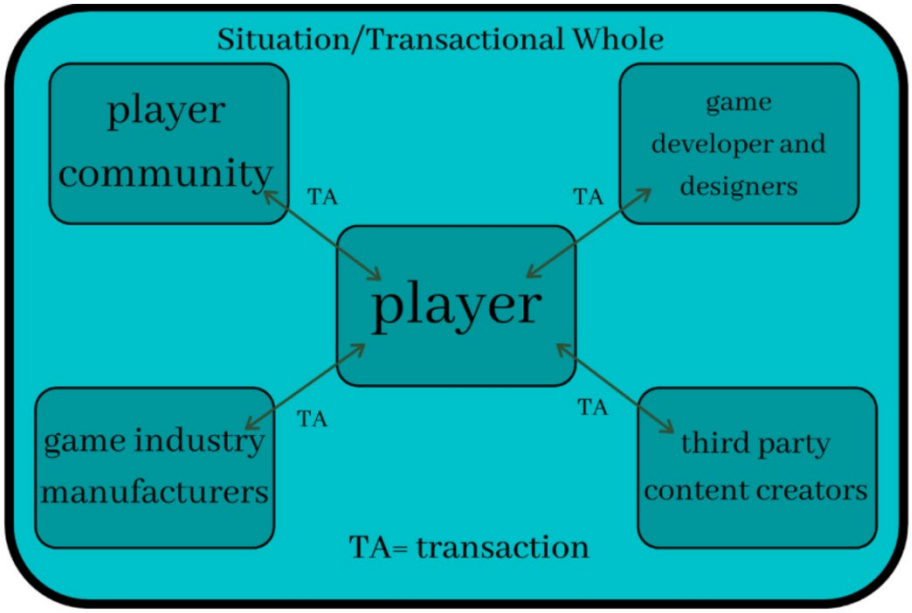
A range of strategies was used to enhance rigor, including journaling, member checking, peer debriefing, and consultation with experts, as recommended by Stanley and Nayar (2014). Researchers participated in reflexivity by journaling potential biases after participant interviews in their field notes and discussing them as a team. The field notes taken during the observation sessions enhanced trustworthiness by providing a record for other researchers to understand the thought process of the interviewer and help identify potential biases. Further, an audit trail was incorporated by researchers collaborating in forming code trees, in which descriptors for interview excerpts were re-read to ensure proper categorization of themes. This increased trustworthiness as it involved four researchers who analyzed the data to ensure appropriate code categorization. The authors consulted with two researchers in the field of video gaming and occupational science while designing the study to advise on and explore potential fallacies of rigor in the design. These consultants influenced the study by advising on recruitment methods and focus group facilitation, suggesting relevant occupational science concepts for consideration, and encouraging the addition of structured field note prompts to the participant observation guidelines.

Findings

Game developers, players, the player community, game industry manufacturers, and third-party content creators were noted as maintaining influential relationships with the transactional whole of MMORPGs. Three themes emerged that capture players' transactions that function to create a collective occupational experience, facilitate a personally transformative occupational experience, and unlock immersive virtual environments as meaningful throughout the data.

Figure 4

Transactional whole of MMORPGs' virtual environments



Creates a collective occupational experience

Transactions enacted through gaming created a collective occupational experience. These transactions were characterized by social interactions and doing tasks together. Participants identified that the ability to engage in social interactions during gaming was a strong motivator to play. "*That's a big thing for me, it's very social… perhaps the most important part of any MMO community is really what breathes life into the games, makes it what they are*" (Brady).

The multiplayer aspect of the game allowed for in-game social interactions alongside frequent concurrent use of third-party media. Players often mentioned the use of Discord. "*It's the platform itself, Discord has allowed us to be able to manage the game or our real life or our ability to hold a community outside of the game*" (Xushin). The game developers' provision of social mechanisms to interact in the game and players' use of game affordances created community. "*They're [game developers] only there to give us the tools, the community is the one that… have to build up the game because they take a non-interventionist role*" (Xushin).

The collective experience involved the player, the player community, third-party content creators, game industry manufacturers, and game designers. One participant shared about the game's growth due in part to community involvement:

> *Its own little family. So, the game has evolved beyond just... simply mobs [hostile computer-controlled entities], NPCs [nonplayer character] or rural systems …It's actually how you interact with the community, how the community works with each other. That's the true game*. (Xushin)

Collective experiences were enabled by opportunities to do in-game occupations together. "*You meet a lot of people by just doing things… if you have a dungeon that I want to do, I can't just be like, 'Yo, I'm 'a solo it*'" (Brady). Doing difficult in-game occupations together helped to build relationships.

> *I think what binds a lot of people to these games are the thrill, the challenge of having to do something difficult with one another and celebrating in those successes, right. So, when somebody goes and they form a team and they work together and they progress through all the, all these challenges a really does create some sort of bond right like we, we did it together*. (Brady)

Developers design MMORPGs with varied requirements for players to collaborate to achieve success in the game. You can play as a single player but advancing in the game may be dependent on teamwork. Players can enact being a team player through their profession, sharing of materials, or collaboration in an event such as a raid. "*This game forces cooperation, competition, in order to get ahead of the curve… So that's pretty much how I started the community aspect of the game*" (Xushin).

Through these social interactions and shared experiences, meaningful relationships and a sense of community are created.

> *We created a community, even just with, just by killing that, that dragon once a day... if you show up, and you're there, you're present with other people and you communicate a little bit, it's very easy to build communities around certain activities*. (Brady).

Participating, through social interaction and shared doing, creates meaning for players. "*Gaming is, in my opinion at least, something that creates meaning and belonging. And I guess for me that's invaluable*" (Brady).

Facilitates a personally transformative occupational experience

Transactions enacted through gaming facilitated a personally transformative occupational experience. Participants utilized the affordances in the game to build identity and challenge themselves through the selection of aesthetics, developing skills,

and trying new tasks that forced them to leave their comfort zone to experience personal growth. The ability to alter one's avatar afforded an evolving expression of identity for players.

> *You can change what your character looks like, as I have grown up and strayed away from a lot of like dark monotone moody colors …but I have grown up to be so colorful and so bright and loud and it's so much more fun for me to express myself like that - like as I have evolved like that, I have made my character more like that*. (Mars)

Participants shared how playing the game changed their sense of self by trying on new roles, taking risks, and stepping outside their comfort zone.

> *I've never been a risk-taker in real life because the way I was brought up…I get to do everything that I wanted to do in a video game and try out different ideas that may work or may not work, and I get to see the consequences of it without negatively hitting me very hard. That's how I looked at it, it brings a different sense of self … into this because you get to try things that you can't, you dare not to in the real world*. (Xushin)

Transactions enacted through gaming facilitated transformative experiences through the qualities of the affordances provided for self-expression and personal growth. Growth experiences were described as increasing confidence, taking on leadership roles, developing patience, practicing social and strategic skills, using teamwork, and building resilience. Through undertaking in-game tasks, participants faced challenging situations and described both the in-game rewards received and the growth experienced in overcoming them as meaningful.

Unlocks immersive virtual environments

Transactions enacted through gaming unlocked an immersive experience for players in the virtual environment. The virtual environment was described in the context of items and equipment that exist within it, the spaces where in-game occupations occur, and immersion in place. Participants described how the scope of the game content contributes to creating a meaningful environment:

> *I love...the vastness of the content you can do. Whether you want to do more casual things that are more relaxing or... high-level intense content, there's just this wide variety of things that keep me invested in the game... that RPG [role-*

playing game] open-world aspect that keeps me immersed into the game. (Zebbie)

The sensory aspects and qualities of the environment, including the music, art, storyline, ecosystems, and themes contributed to player immersion in the game. "*I like the stories, I like the environments, I like the music… Get lost in this world, get immersed*" (Zebbie). The aesthetics of the virtual environment motivated players to engage in activities in this space. "*The environment, I mean, if you take a liking to a specific city, town environment of some sort. I think that really makes people want to do the things that are in that area*" (Mars). Game design is constantly changing and evolving, with new content, challenges, and places to visit with each new game expansion. When expansions did not have congruence between factors such as the mechanics, aesthetics, and lore of the game, they were described by participants as less desirable to participate in.

Players also experienced meaning in returning to familiar places. Zebbie shared how "*the beginning zones are very nostalgic to me*". Some players would return to these spaces to reminisce: "*I recall, there was this one end map…There's just always people there… And sometimes people like to reminisce about the old days when people all hang out there, do all the events*" (Brady).

Participants ascribed meaning to the transactions in these virtual environments based on qualities that either contributed to or detracted from immersiveness. The qualities of the transaction included the ability of the virtual environment to provide meaningful spaces for players to engage in occupations, develop relationships, and form lasting memories. These qualities unlocked the ability to become immersed in the experience.

Discussion

These findings identify that meaning in MMORPG playing is ascribed based on the qualities of the transactions that create a collective occupational experience, facilitate a personally transformative occupational experience, and unlock an immersive virtual environment. Players described how their unique play style functions within MMORPG gaming as a collective occupation that constructs both self and community. Kantartzis and Molineaux (2017) discussed collective occupation as a multidimensional process that maintains the social fabric. Social fabric refers to the interpersonal relationships and a world created by people coming together in a public world outside

of home or work, to engage in collective occupation. Participants in this study attributed meaning to coming together in a shared endeavor in the often-public spaces of MMORPGs' virtual environments. Their meaning was shaped through their interactions as a gaming community. These findings are pertinent to the field of occupational science in that they describe the features of collective occupation in virtual environments that players find meaningful.

These findings additionally support an understanding of transactions in virtual environments through the lens of "enacted togetherness", an emerging concept that describes a process of meaning-making, evolving from doing occupation, and "negotiating issues of meaning" (Nyman & Isaksson, 2021, p. 44) that participants referred to while sharing their game experience. Enacted togetherness describes community negotiation and belonging to a place as a source of meaning. Nyman and Isaksson (2021) described place as "an arena that creates opportunities to do things together or fails to do so" (p. 43). The affordances of the game created an opportunity for shared doing. These shared experiences helped to create a community for the participants, similar to what Nyman and Isaksson described as a "place to go to and a place to belong" (p. 43). Belonging in the game is created over time by acting together and creating relationships through collaborative doing. Enacted togetherness embraces a transactional perspective where "people and their environment co-constitute each other" (Nyman & Isaksson, 2021, p. 43).

These findings also speak to the purpose of transaction being to "functionally coordinate relations to keep the transactional unit whole and operational, for the benefit of the dimensions that constitute it" (Dickie & Cutchin, 2012, p. 90). Players who held community roles and had regular participation in gaming communities mentioned the personal responsibility they held to the community that bound them to continue their contribution to the game. Players' status as "participants in an unfinished universe" (Cutchin & Dickie, 2012, p. 34) remains integral to understanding the form and function of meaning construction within virtual environments as, through transactions among player, environment, community, developer, and third-party media, the gaming community constantly evolves and restructures in response to changing contexts.

MMORPGs were not just technology or objects to the players but meaningful places. Similar to Hasselkus' (2011) discussion of place and space, the space in a game was transformed into a place because of the engagement in game tasks, the relationships formed, and the memories created through doing together in place. The virtual world for

participants resonates with what Rowles (1991) would describe as a part of the lifeworld, which includes their physical current location and the meaningful and immersive location that they are transported to within the game context. Players' interactions with multiple relationships and gaming platforms transcended the real-world versus virtual world dichotomy that Fok et al. (2009) also critiqued. Players described an immersion in place which can be linked to experiences of strong occupational presence (Reid, 2005), where a person feels like part of the virtual world. Video gamers can feel a greater sense of belonging to their avatar creations and virtual environments than to their physical bodies and physical environment (Cole & Griffiths, 2007). The qualities of transactions within the virtual context contributed to a sense of belonging in the player community which was described as meaningful by participants.

Limitations and Recommendations

This study obtained limited data, both in terms of diversity of participant demographics and withdrawal of participants which may impact the proportional influence of underrepresented groups' experiences on resultant themes. The inclusion of MMORPGs with long-term histories in the gaming community and high active player counts, while not a limitation in describing the experience of our participants, may reduce the generalizability of these findings to the understanding of the virtual environments of less populous MMORPGs with potentially different cultures. Future research on the virtual context could recruit a more diverse sample of participants and games of interest.

Findings from this study revealed that the transactional whole of MMORPG gaming included game developers, the player community, game industry manufacturers, third party content creators, and the player. The study aim was to explore the meaningful qualities of transactions within the virtual environment focusing on the player experience. Future research could further develop an understanding of the transactional whole of MMORPG gaming in the virtual environment by exploring the qualities of transactions that were meaningful for each party in this transactional whole.

Conclusion

The findings reveal that the collective occupational experience of gaming could be meaningful for players by building a sense of community and belonging. The transformative qualities of transactions in the virtual environment that afforded players

the ability for personal growth and self-expression were also meaningful for participants. Players found the qualities of transactions that unlocked immersive virtual environments through skillful construction of context by developers to be meaningful. Relationships among players, their communities, third-party spaces, game industry manufacturers, and developers contributed to the transactional whole of gaming in the virtual context.

This research contributes to occupational science by adding to understandings of digital technology-mediated occupation (Fischl et al., 2017) and extending this understanding into the unique and complex virtual worlds of MMORPGs. The findings support the usefulness of applying a transactional perspective to diverse populations' use of technology for engagement with occupations in virtual spaces (Madsen, 2020). This research adds to the breadth of literature in occupational science by describing the qualities of transactions within virtual environments to which MMORPG players ascribe meaning. It has been debated if video gaming is located in the 'real world' or 'virtual world' or if these dichotomies even exist. For the participants, the construction of meaning within relationships among the transactional whole held nuanced significance which highlights the potential triviality of referring to the complex worlds of MMORPGs as simply "games" at all.

Acknowledgments

The authors would like to thank the participants for sharing their gaming experiences with them. The authors acknowledge Ryan Lavalley for consulting with the research team on the theoretical aspects of the research and Fiona Loudoun and Kyle Fitzstevens on the research design and sharing their research experience with virtual occupations. The authors recognize the contributions of Derian Ramos Lopez to the theoretical grounding of the paper, and assistance with data collection in Runescape interviews and participant observation. This study has been presented at various scholarly conferences.

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