

According to P3, to play with teammates in a survival battle game, having an unified outfit was not simply to mimic what others do but an effective means to connect them together and build confidence, which was crucial to win. In order to achieve this goal, all team members would have to purchase own the same certain outfits in advance. Another sense of community identity emerges in the idol-fan culture from other media. For example, P2 (male, 19) purchased items based on his idol's avatar's outfits:

"For me, I'm a fan of Shroud, he uses cool cosmetics. [...] if you are a fan of something, you will want to get one. Not because to stand myself out in the big part."

For him, his purchase was not driven by any of the motivations that we have described above but simply a need for belongingness in the idol-fan community. Building, demonstrating, and expressing his identity and connection in that community, therefore, was important for his self-presentation in Fortnite through in-game purchases.

5 DISCUSSION

To answer RQ1 (*what factors are associated with the dynamics between self-presentation and spending in Fortnite?*), Study 1 has shown that being unique (i.e., identifiability) was positively associated with the amount of money that players spent in Fortnite and more self-disclosure to strangers was negatively associated with spending. However, self-presence was not a significant factor. In addition, those who played alone were more likely to spend more. To answer RQ2 (*why is self-presentation associated with motivations to spend in Fortnite?*), Study 2 has highlighted five aspects of self-presentation that could affect in-game-spending behaviors in Fortnite, namely, a high demand for uniqueness, a desire to establish self-presence, a pursuit for aesthetics, indicating status as a gameplay strategy, and a highlight of community identity. In this section, we use these findings to discuss the implications of this work for existing literature on self-presentation, spending motivations, and digital consumption in gaming.

5.1 The Complex Dynamics between Self-Presentation and Spending in Fortnite

Collectively, results from Study 1 and 2 highlight the complex dynamics between self-presentation and spending in gaming. As important dimensions to understand self-presentation in games, identifiability and self-disclosure were both significantly associated with the amount of spending in Study 1. In other words, being unique and distinguishable from others was a significant desire for players to spend more in the game (e.g., to customize themselves). This finding is consistent with what previous research on avatar customization: studies have shown that customizing one's avatar to virtually unique from others had a strong impact on players' purchase intention [6, 16].

Participants' accounts reported in Study 2 not only further empirically supported this findings but also highlighted other contexts of identifiability. For example, some players spent in the game to customized their avatars so as to reinforce their team identity or idol-fan community identity. In this sense, they endeavored to be unique and distinguishable from others not only as an individual but also as a team/community. Though Study 1 shows that players

who teamed up with strangers were likely to spend less money, Study 2 acknowledges players' motivations to purchase outfits to match their teammates. It should be also noted that playing with friends as a team was not associated with how much players would spend. One plausible reason may be that effective and positive relationships and communication had already been established between team members before forming the team. Therefore, the need for building team identity by customizing avatars may become less urgent.

In addition, self-presence itself was not significantly associated with spending in Study 1. Yet, self-presence is closely related to self-disclosure that shows significant relationship with spending in Study 1. Participants in Study 2 also reported an increased self-presence through their avatars as they continued to establish emotional attachment with their avatars by customization. Drawing on the fact, avatar-based games can market and release various game-related items based on virtual items in the game - e.g., 3D physical figurines of avatars with popular weapons and skins in the game. Furthermore, findings of Study 2 show that the motivation to be unique from others (i.e., identifiability) either as an individual or as a team/community often leads to more in-game purchase. In this sense, the increased in-game purchase appears to contribute to stronger self-presence through customized avatars, then encouraging more self-disclosure, which is consistent with previous literature [26].

5.2 The Interplay between Cosmetic and Functional In-Game Purchase

Another interesting implication of this work is for better understanding the interplay between cosmetic and functional in-game purchase. In our study, some participants did buy purely cosmetic items merely for the purpose of aesthetics. This is consistent with findings in previous literature that players intended to improve the avatar appearance by spending on aesthetic items [32]. However, our findings further highlight that such a pursuit was beyond "looking visually pleasant." Rather, it was closely tied to different aspects of players' self-identity and their strong demand for individuality and uniqueness [15]. Therefore, we suggest that game companies can release limited edition skins or weapons to attract players. Game designers can also benefit from understanding game skin contests winners' work to design more aesthetically pleasing and special skins.

More importantly, our findings highlight that the way players use these cosmetic items could even be strategic and tactical. Due to the special sales methods in Fortnite (e.g., certain skins were only sold when the game was launched), to some extent purely cosmetic skins can still signal the length of gameplay experience and the level of game skills. Therefore, how to use one's skin and perceive others' skins became a gameplay strategy. For example, some experienced tended to wear their legendary skins to correctly signal their skills to others. Though their skins did not employ any functional power in their gameplay, they still "show power" to intimidate other players. In contrast, some others used skins to misrepresent their real skills on purpose. In doing this, their strategy was to confuse enemies and conduct surprise attacks in order to benefit their gameplay and win.

In this sense, the decision-making process to assess which skin one should wear and how to react to others' skins in Fortnite can be highly tactic and subjective. In a regular war game, everyone can be in camouflage and there is no explicit or implicit visual cues that help players assess others' skills and articulate gameplay strategies. Yet in Fortnite, the interplay between cosmetic and functional in-game purchase not only makes the gameplay more fun, competitive, and engaging but also more enjoyable to watch. This perspective may also transform the traditional understanding of purchasing cosmetic items in games: it is not a useless behavior to purchase pixels but a necessary gameplay strategy, which may inform future research on designing effective game mechanisms and engaging gaming experiences. Inspired by this, we suggest that some skins or weapons can be designed to more clearly reveal players' skill level or abilities. For example, top ten players can be given certain skins that reflect their rankings.

5.3 A New Perspective of Social Influence on Digital Consumption

Lehdonvirta's work in 2009 already identified social attributes as some of the main spending motivations in virtual goods purchase [31]. Since then several studies have discussed that a number of social factors play significant roles in spending behavior in games, including social influence such as peer pressure [15], social values [42], social presence [1], and social interaction [17]. However, in the research we highlight social influence on digital consumption from a different identity lens: while players' self-presentation could affect their in-game spending behaviors in Fortnite, such self-presentation was intertwined with a community-identity perspective that differed from peer pressure or a pure motivation to imitate friends.

Our findings reveal that players expressed different clothing selection preferences in different game modes. There was no established consensus on how one should dress when playing alone: players often chose their outfits based on their personal preferences at the moment. In contrast, when playing in a team, players sometimes spontaneously put on a uniform outfit, which became a natural way for players to bond together as a team. Yet this choice was not out of social influence such as peer pressure or to imitate friends. Rather, players were encouraged to put on a uniform skin rather than a more unique personalized skin to develop self-confidence, better team cooperation, and deterrence to enemies – in other others, to win/conquer as a team.

In addition, some players also mentioned the idol-fan culture as a special case of community identity that affected their self-presentation and in-game purchase. Nowadays, the gaming culture is increasingly become a cross-media culture due to the popularity of live streaming: players play games simply because they are gamers, or they play games because they need to stream the gameplay for diverse audiences. Therefore, some popular live streamers become "idols" for the players who follow their streams. In this sense, buying the same in-game items and outfits as their idols become an effective way for some players to express their identities and emotional connection to a specific idol-fan community. Game companies can take advantage of such idol-fan culture in games to introduce famous idol players to game streaming and provide them

with branded skins, which will be watched by all viewers. This will become an opportunity for game companies to earn revenue by collaborating with clothing brands. It will also motivate general players to follow their idol players or famous streamers to buy the same items.

Again, this social influence is not from a friend or peer but from a subculture - the motivation to be attached to a gaming community surrounding a certain celebrity. In this sense, such cross-platform and community identity driven social influence further highlights new social phenomena and practices that affect digital consumption in gaming.

5.4 Limitations and Future Research

The study only focused on self-presentation and in-game purchase behaviors in one game (Fortnite) and did not investigate similar behaviors in other games that also sell cosmetic only items. Future work would include a cross-platform study to compare how different game genres and mechanics would play a role in players' self-presentation and in-game purchase behaviors. More efforts would be conducted to recruit more female interviewees to explore the gendered perspective regarding self-presentation and in-game purchase behaviors. In addition, our findings raise a thought-provoking question: would in-game purchase empower self-expression for players or act as a way for the game company to manipulate players' desires for self-expression to get them to spend more? We will incorporate the tensions between players motivations to better present themselves and the game company's desire to make profits into our future research.

6 CONCLUSIONS

In this paper we have explored how and why three important dimensions of self-presentation, namely, identifiability, self-disclosure, and self-presence, are associated with spending in Fortnite, a unique multiplayer online survival game where players can only purchase purely cosmetic in-game items (e.g., skins and outfit). Using an online survey and a follow-up interview study, our findings have shown that higher identifiability, less self-disclosure, and playing alone were positively associated with the amount of money that players spent. We have also highlighted that these dimensions of self-presentation can affect in-game spending due to players' demand for uniqueness, self-presence, aesthetics, indicating status as a tactic gameplay strategy, and building a community identity. We believe that these findings not only shed light on the complicated dynamics among self-presentation, gameplay, and spending in modern games, which contributes to the emerging research agenda on spending behaviors in gaming, but also inform future model of designing and publishing digital games.

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