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## GAME GENRE DIFFERENCES IN PLAYER-AVATAR RELATIONSHIPS

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In many videogames, avatars serve as a critical contact point between the embodied player and the digital gameworld. Although initially designed to be more of a functional relationship — on-screen pixels representing player agency - the evolution of games from puzzle dynamics to elaborate narrative experiences engendered a similar shift in the player-avatar dynamic: from largely ludic to variably ludic/narrative. Although the player-avatar relation is traditionally examined in terms of parasocial identification (Van Looy, Courtois, De Vocht, & De Marez, 2012) and psychological merging (Lewis, Weber, & Bowman, 2008), recent scholarship suggests a more comprehensive model wherein the player-avatar relationship (PAR; Banks, 2015) is situated along a sociality continuum non-social/functional, to parasocial, to fully social. This variable sociality is understood to emerge from four discrete player-avatar interaction (PAX; Banks & Bowman, 2016) factors: emotional investment (EI; experiencing deep attachment), anthropomorphic autonomy (AA; seeing the avatar in a human-like fashion), suspension of disbelief (SoD; taking the avatar and its world as real), and an inverse association with sense of control (SoC; agency over the avatar's actions).

Notably, PAR/PAX have been examined extensively in massively multiplayer online games (MMOs) — primarily *World of Warcraft (WoW)* — with little attention to potential differences among game genres. This research gap limits understandings of how genre-specific game affordances and constraints may influence subjective player-avatar

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relations. This potential for genre-based PAR/PAX variations is especially important given distinct differences in MMOs play compared to “non-massive” environments, including more complex social systems (Ducheneaut & Moore, 2004) with persistent spaces, characters, and events (Ross, Castronova, & Knowles, 2015). For example, a first-person shooter (FPS) might prompt greater character identification than third-person MMO views, or a linear platformer might prompt greater senses of control than more open MMO gameplay. Conversely, PAR/PAX might be more characteristic of players’ orientations toward games and avatars broadly, given that these relations (a) persist through drastic game changes character models and environments (Banks, in press) and (b) given demographics have little impact on PAR/PAX variance (Banks & Bowman, 2016). The current study asks (**RQ1**) Do PARs differ as a function of game genre? and (**RQ2**) Do different game genres impact PAX dynamics?

## Method

Data from two large-scale surveys on game characters (Banks, in press; Banks & Bowman, 2016) were combined to consider potential variance in PAR and PAX as a function of videogame genre. From a total sample  $N = 1,302$ , all listed videogames were coded into their representative genres (using available data from Wikipedia and IGN.com), and genres mentioned a minimum  $n = 30$  times were included in final analysis, along with  $n = 30$  randomly selected *WoW* cases as an anchor for comparison with extant literature on PAR/PAX. The final sample represented a randomized quota sample of  $N = 180$  individuals reporting on experiences playing action-adventure, action role-playing games (aRPGs), first-person shooters (FPS), MMOs, turn-based RPGs (tRPGs), or *WoW*, (30 responses for each). In this subsample, ~66% identified as male, with a mean age of 25.68 ( $SD = 7.69$ ).

In both surveys, participants were asked to consider their favorite game avatar. Among other survey items, participants all (a) classified their avatar into one of four heuristic PAR types (avatar-as-object suggesting a functional relationship, avatar-as-Me suggesting self-extension, avatar-as symbiote suggesting interdependence, and avatar-as-other suggesting interpersonal sociality) and (b) completed the 15-item PAX questionnaire. Both scales and their validation data are available at <http://http://comm.wvu.edu/lab/pax>, and descriptives in Table 1 and 2, respectively.

## Results

To address RQ1, a chi-square analysis compared the distribution of the four PAR types across five popular videogame genres, using *WoW* as a comparison group (using data from Banks & Bowman, 2015, as an anchor).

Sample-wide, PAR type distributions were non-random,  $\chi^2(15)=25.3, p=.047$  (replicating past work). However, post-hoc comparisons found no variance in the distribution of PAR types among genres (Table 1) — the frequency of PARs from one genre to the next is the same.

*Table 1. Distribution of PAR types as a function of video game genre.*

PAR Type	Action-Adventure	Action RPG	FPS	MMORPG	Turn-base RPG	WoW (comparo)	Total
Object	16a	8a	9a	17a	12a	11a	73
Me	3a	3a	2a	4a	7a	6a	25
Symbiote	1a	7a	7a	3a	5a	9a	32
Other	10a	12a	12a	6a	6a	4a	50

*NOTE: Overall  $\chi^2(15)=25.3, p<.047$ ; means with different subscripts across rows differ significantly using Bonferroni post-hoc method; n=30 random cases from the full data set were sampled for each genre*

Attending to RQ2, variance in PAX dimensions within each genre was examined, again using *WoW* as a comparison anchor. Separate ANOVAs were calculated for the four PAX dimensions (Table 2). For EI, participants playing aRPGs reported the highest scores (equal to *WoW*). Regarding AA, the lowest scores were found for those playing MMOs (equal to *WoW*). Concerning SoC, the lowest scores were reported in FPS and action-adventure games.

Table 2. Univariate ANOVAs comparing PAX dimensions between popular video game genres.

	social dimensions		ludic dimensions	
	Emotional investment	Anthropomorphic Autonomy	Suspension of Disbelief	Sense of Control
Sample-Wide	5.22 (1.35) $\alpha = .868$	3.19 (1.68) $\alpha = .852$	4.16 (1.72) $\alpha = .841$	5.80 (1.26) $\alpha = .750$
Action-Adventure	5.02a (1.02)	3.43a (1.55)	4.28a (1.82)	5.47a (1.41)
Action RPGs	5.76b (1.25)	3.77a (1.51)	3.67a (1.68)	5.55a,b (1.37)
FPS	4.88a (1.31)	3.73a (1.65)	4.18a (1.69)	5.33a (1.20)
MMORPG	4.86a (1.78)	2.06b (1.65)	3.97a (1.97)	6.43a,b (1.09)
Turn-base RPGs	5.11a (1.32)	3.38a (1.62)	4.48a (1.45)	5.80a,b (1.24)
WoW (comparison)	5.75b (1.08)	2.79a,b (1.53)	4.41a (1.69)	6.23a,b (.92)
	$F(5,174)=3.03$ $p=.012$ $\eta^2=.080$	$F(5,174)=5.07$ $p < .001$ $\eta^2=.127$	$F(5,174)=.930$ $p=.463$ $\eta^2=.026$	$F(5,174)=3.98$ $p=.002$ $\eta^2=.103$

NOTE: Means with different subscripts within columns differ significantly using Bonferroni post-hoc method;  $n = 30$  random cases from the full data set were sampled for each genre

## Discussion

Different videogame genres did not have different PAR distributions — counterintuitive, given that game genres represent critical variance in gaming experiences that should impact PARs. However, our data suggest that broader PAR categories are less associated with these game design features, in line with Banks (in press) and Rogers et al. (under review). Players recalled their “favorite avatars” so they might have recalled based on meaningful experiences rather than on ludic influences, but that PAR types appeared in the same ratio across five popular genres suggests the player-avatar connection to be less about the game-systems or gameworld that avatars might exist in, and more about the experiences one has with their avatar. As suggested by Banks (2013), they may also be a function of players’ orientations toward games, broadly.

Shifting to PAX, several patterns did emerge. High EI in turn-based RPGs may emerge from the central role of narrative in such games - increased narrative prompts emotional reactions and considerations of one’s role in the gameworld (Banks, 2013; Oliver et al., 2015). AA was lowest in MMOs, in line with assertions that such genres usually require players to co-author the avatar’s narrative (Bowman, 2016), which over time can shift

play orientation from social to mundane-functional (cf. Chen, 2012). Decreased SoC for action-adventure and FPS was surprising, but may derive from these games' comparatively limited player agency — the player is more responsible for guiding the avatar through a predetermined progression rather than an open-ended gaming experience.

In sum, our data suggests that videogame genre does not influence heuristic perceptions of player-avatar relations as broad types. However, genre differences may influence how players perceive more discrete qualities of player-avatar interaction. For designers and researchers alike, this data suggests that while genre characteristics can impact the relative importance of discrete relationship dimensions, PARs are not inherent to or typical of any given genre. As such, in investigations of online game avatars and their influences — within and across genres — it may be important to consider variations in the social *and* technological, as they intersect.

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