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FROM TOY AND TOOL TO PARTNER AND PERSON: PHENOMENAL CONVERGENCE/DIVERGENCE AMONG GAME AVATAR METAPHORS

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An avatar is "an interactive, social representation of a user" (Meadows, 2008, p. 23) in a digital environment. Although avatars broadly include textual screen names or social network profiles, we specifically discuss here the two- or three-dimensional graphic bodies representing players in online games. These bodies are at least partially controlled by players as they engage a game – in movement, gesturing, communicating, and acting in/on the world – and these interactions constitute a multimodal gaming literacy that is central to play (Gee, 2004).

In scholarly literature, avatars are characterized in myriad ways, often through metaphors that encapsulate the characteristics, functions, and player perceptions of avatars. From one perspective, for example, avatars are *costumes* that players wear to assume new identities as they play a game (Merola & Peña, 2010). From another, avatars are *bundles of resources* (Castronova, 2005) leveraged to achieve player- or game-defined goals. Despite their utility in describing the nuances of player-avatar relations, a proliferation of metaphors is problematic because it works against situating new knowledge within existing theoretical frameworks, resulting in cumulative and static developments rather than evolving understandings of avatar engagement and effects. Many of these framings also present unaddressed confounds in that many metaphors are analytical artifacts – constructions of researchers as they work to explain findings – rather than phenomenologically valid representations of player experience.

Emerging perspectives on player-avatar relations, however, suggest that avatar metaphors may be integrated into a comprehensive framework to foster synthesis of avatar characterizations (Authors, 2014). In particular, the notion of player-avatar sociality (Authors, 2015a) suggests that players variably relate to their avatars along a continuum, from a) non-social relations (avatars are mere objects) to b) parasocial relationships (avatars are player extensions; see Authors, 2008), to c) fully social

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relationships (avatars are autonomous partners in play). The notion of sociality – the degree to which players relate to avatars as they would relate to other people – ostensibly subsumes a range of more discrete avatar metaphors. As such, we ask:

> RQ1: Can avatar metaphors be meaningfully situated within the sociality continuum?

and, if so:

> RQ2: Can avatar metaphors be collapsed into a parsimonious model for metaphorically characterizing player-avatar sociality?

Method and Measures

An international sample of massively multiplayer online game (MMO) players recruited via MMO-related online forums (N = 501, 31.5% female, average age of 30.26 years, ranging from 18 to 69) was asked to complete an online survey with a $25 raffle compensation to a chosen games retailer. The survey asked participants to think about and list their favorite MMO (39 total games named), think about their favorite avatar in that MMO, and respond to a one-item measure of player-avatar sociality: "I connect with that avatar as I connect with other humans." (M = 3.81, SD = 2.89; cf. Authors, 2015b.) The survey then presented 26 avatar metaphors culled from a review of literature addressing players' perception of and engagement with digital game avatars (see Appendix A), and players were asked to rate (on seven-point Likert scales) the degree to which each metaphor reflected how they see their avatars. These questions were part of a larger survey project on player-avatar relationships.

Results

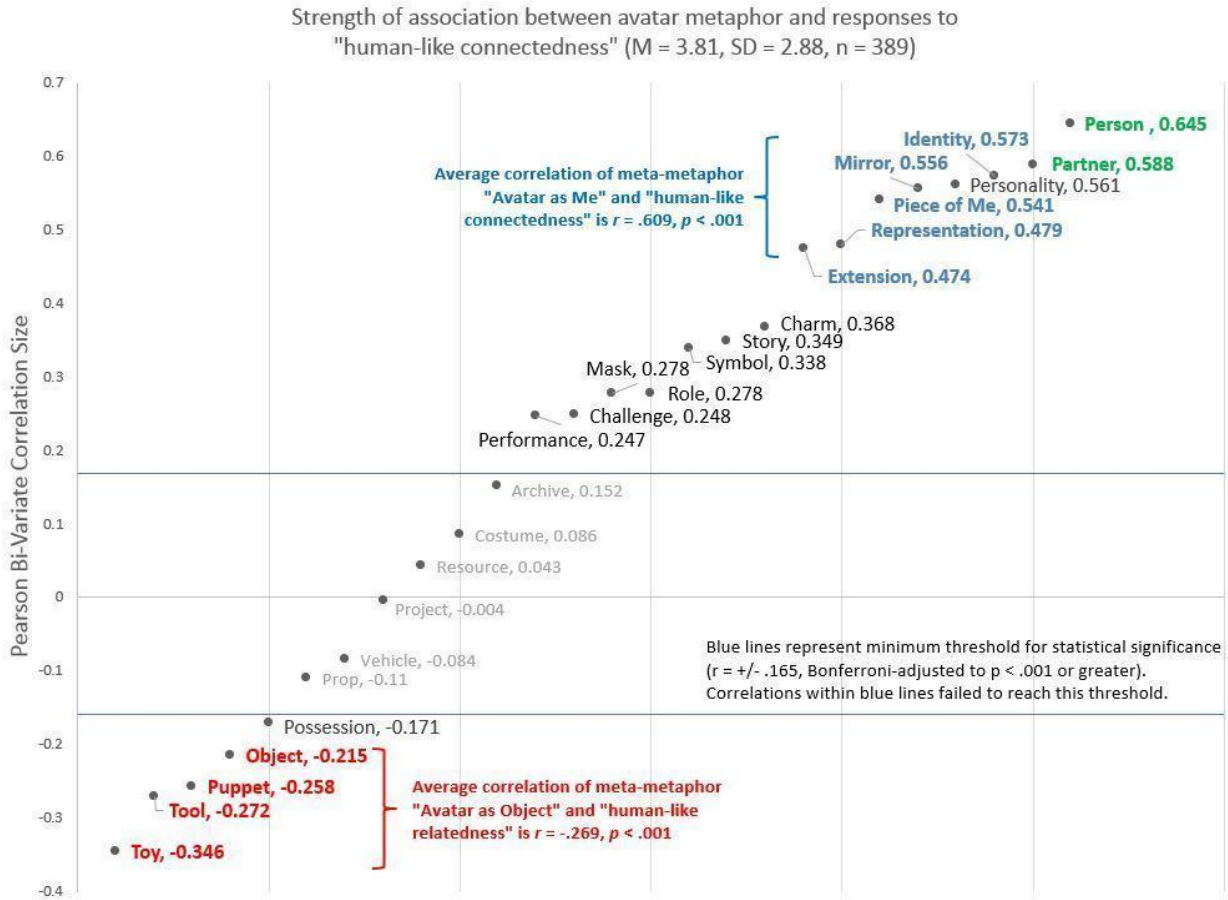
Addressing RQ1, the correlations (Bonferroni-corrected to $p < .002$ significance threshold) between each of the 26 individual "avatar as" metaphors (see Table 1) and the single-item "human-like connectedness" item were plotted in order of their correlation size and direction (see Figure 1).

Metaphors representative of avatar-as-object orientations (cf. Authors, 2014a,b) clustered to the bottom-left of the continuum, suggesting a strong negative association. Conversely, metaphors related *prima facie* to more representative or avatar-as-"Me" orientations (*ibid.*) clustered strongly at the top-left of the continuum, and metaphors related to an avatar-as-social other (*ibid*.) clustered at the highest point of the top-left corner - both suggesting strong positive associations between the listed metaphors and perceptions of an increasingly strong human-like connectedness with one's favorite avatar. Six metaphors did not significantly correlate with human-like connectedness; notably, it is not that these are not meaningful, simply that they are not associated with player-avatar sociality.

Seeking a parsimonious model of these metaphors (RQ2), exploratory factor analysis (Varimax rotation, .600 over/.400 cross factor loading threshold), a two-factor solution (with a weak third-factor) was found that represented two factors, or "meta-metaphors:" "Avatar as Object" (bolded in red, see Figure 1) and "Avatar as Me" (bolded in blue, see Figure 2). This solution converged in three rotations, and accounted for 63% of variance

in perceptions of the player-avatar relationship[1]. Notably, metaphors not retained in our EFA are not unrelated to "human-like connectedness" but, rather, simply unrelated to other metaphors. In fact, the two strongest correlation with connectedness were with the metaphors "avatar as partner" (r = .588, p < .001) and "avatar as person (r = .645, p < .001) - conceptually similar to the avatar-as-Other" orientation (*ibid.*).

Figure 1. **Pearson correlation between avatar metaphors and sociality (human-like connectedness) scores, plotted in order of correlation size and vector.**



Discussion and Conclusion

Data suggest that avatar metaphors can be meaningfully situated within a continuum of player-avatar sociality (RQ1), and some metaphors may be collapsed into phenomenologically convergent meta-metaphors (RQ2). These findings support the interpretation and synthesis of existing scholarship within meta-metaphors (that may have been held as theoretically distinct) and across the sociality spectrum to develop a clearer picture of the player-avatar relation as a function of sociality. Acknowledging a limitation of the present analysis – that the metaphor-sociality association was

[1] Notably, "Object" and "Me" orientations accounted for nearly 75% of nearly 1000 MMO players in past work (Authors, 2014a, 2014b, 2015b).

evaluated by a single-item measure – future research should examine the extent to which avatar characterizations may align with other relevant measures of player-avatar interactions (e.g., emotional attachment, anthropomorphism, suspension of disbelief, identification, sense of control). Perhaps most importantly, we argue that scholars should account for the tensions between interpreted variations among player-avatar relations and the potential for these variations to be phenomenologically equivalent. Although we fully recognize the utility of using metaphors to explain *in situ* observations, the proliferation of "one-off" metaphors might serve to fracture rather than synthesize our holistic understanding of how human players variably take up and engage avatars. Similarly, such a synthesis allows scholars to more accurately consider at least one underlying phenomenon central to these relationships: the degree to which a player experiences a social connection with an avatar.

References

[Authors, 2008, 2014a, 2014b, 2015a, 2015b][2]

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[2] References have been removed for blind review; these articles are published in peer-reviewed communication or new media journals.

Appendix A:

Metaphors common to the study of player-avatar relations, as measured in the current analysis, ranked-ordered by average score.

Avatar Metaphor	Illustrative Reference	Mean	Standard Deviation	# of responses
Charm	Apter (2008)	3.17	2.64	338
Partner	Banks (2015)	3.47	2.93	344
Person	Banks (2015)	3.51	3.09	349
Mirror	Rehak (2003)	3.72	2.87	356
Archive	Banks (2013)	4.33	2.91	402
Mask	Galanxhi & Nah (2007)	4.73	2.91	402
Prop	Linderoth (2005)	4.83	3.25	404
Vehicle	Carr (2002)	4.90	3.16	393
Personality	Schultze & Leahy (2009)	5.08	3.19	408
Costume	Merola & Peña (2010)	5.13	3.02	408
Symbol	Giddings & Kennedy (2008)	5.39	3.03	410
Piece of Self	Banks (2015)	5.39	3.10	415
Identity	Turkle (1995)	5.49	3.15	424
Performance	Sant (2009)	5.52	3.17	411
Resource	Castronova (2005)	5.55	3.04	411
Object	Liboriussen (2014)	5.64	3.33	402
Challenge	Banks (2013)	5.67	2.99	411
Representation	Meadows (2008)	5.78	3.08	432
Puppet	Koster (2000)	5.78	3.26	419
Possession	Nagy & Koles (2014)	5.81	3.29	427
Extension	Taylor (2002)	6.08	3.13	441
Project	Banks (2013)	6.38	2.93	430
Story	Webb (2001)	6.44	3.20	438
Role	Linderoth (2005)	6.45	2.96	444
Tool	Linderoth (2005)	6.76	3.06	435
Toy	Liboriussen (2014)	6.94	3.07	468

NOTE: Complete references are omitted for space considerations, but are available at [URL removed for blind review].