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Games and Culture 2006 1: 97
DOI: 10.1177/1555412005281911

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Why Game (Culture) Studies Now?

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Games are an extremely valuable context for the study of cognition as inter(action) in the social and material world. They provide a representational trace of both individual and collective activity and how it changes over time, enabling the researcher to unpack the bidirectional influence of self and society. As both designed object and emergent culture, *g/Games* (a) consist of overlapping well-defined problems enveloped in ill-defined problems that render their solutions meaningful; (b) function as naturally occurring, self-sustaining, indigenous versions of online learning communities; and (c) simultaneously function as both culture and cultural object—as microcosms for studying the emergence, maintenance, transformation, and even collapse of online affinity groups and as talk-about-able objects that function as tokens in public conversations of broader societal issues within contemporary offline society. In this article, the author unpacks each of these claims in the context of the massively multiplayer online games.

Keywords: *massively multiplayer online games; cognition; learning; literacy; problem solving*

Early academic discussions about what games are and how they ought to be studied tend to fall back at times on a tired dichotomy drawn between *ludology* (characterized as the study of games as formal rule systems) and *narratology* (characterized as the study of games as texts), even when core scholars on both sides acknowledge that the debate is an unfortunate red herring (cf. Aarseth & Jenkins, 2005). Games are *designed experiences* (Squire, 2005), and as such, their study requires an understanding of the full range of human practices through which players actively inhabit those worlds of rules and texts and render them meaningful. Games are a “mangle” (Pickering, 1995) of production and consumption—of human intentions (with designers and players in conversation with one another; Robison, in press), material constraints and affordances, evolving sociocultural practices, and brute chance. Whereas rules and stories partially constitute the designed object or little *g game* at the center of a given individual’s play experience with it, it is the emergent culture or big *G Game* around them that renders them meaningful and consequential (Games and Profes-

Author’s Note: I’d like to thank Kurt Squire for helpful insights into the framing of this argument and James Paul Gee for urging me to take games seriously in the first place.

sional Practice Simulations Research Group, 2005; Gee, 1999; Shaffer, in press; Squire, 2002; Steinkuehler, 2005).

Such big *G* Games provide a highly visible medium for the study of cognition as inter(action) in the social and material world. Accounts of thinking, learning, and understanding based solely on a symbolic processing model, which treats the mind as a wet-wired symbol processing system analogous to the computer (e.g., Anderson & Lebiere, 1998; Simon, 1989), cannot easily account for the range of everyday human activity or its meaning—how it is distributed across tools, representations, and other people; how it is situated in the material, social, spatial, and temporal context in which it occurs; how it ontologically changes who and what the person is (rather than just the epistemic contents in the head; Packer & Goicoechea, 2000); or how it is tied to larger sociocultural (and therefore political) “forms of life” (Wittgenstein, 1958) enacted out in the world. To construct such accounts, we must attend to intact systems of activity that include social relationships, physical and temporal contexts, symbolic and material resources (e.g., tools), and historical change. Here, accounts of how an individual interacts with his or her material and social contexts and how these interactions change over time replace accounts of individual knowledge construction occurring solely “in the head,” with learning defined as progress along “trajectories of participation” (Greeno, 1997) and growth of identity within a given community of practice (Gee, 1999) rather than the reorganization of mental symbol systems alone.

Games are an extremely valuable context for the study of cognition within this paradigm. They provide a representational trace of both individual and collective activity and how it changes over time, enabling the researcher to unpack the bidirectional influence of self and society—how a given sociocultural context shapes and influences individual activity and meaning making through socialization and enculturation (Nasir, 2005) and how the individual shapes and influences the culture in which he or she participates in return. As both designed object and emergent culture, *g*/Games (a) consist of overlapping well-defined problems enveloped in ill-defined problems that render their solutions meaningful; (b) function as naturally occurring, self-sustaining, indigenous versions of the online learning communities produced by various groups in fields such as distance education and eLearning (with somewhat lackluster success); and (c) simultaneously function as both culture and cultural object—as microcosms for studying the emergence, maintenance, transformation, and even collapse of online affinity groups and as talk-about-able objects that function as tokens in public conversations of broader societal issues within contemporary offline society. I will unpack each of these claims in the context of the massively multiplayer online games (MMOGs).

Problem Solving

Games typically consist of overlapping well-defined problems enveloped in ill-defined problems that render their solutions meaningful. Well-defined problems are problems that ostensibly have a clear initial state and goal state and with a tractable

problem space (the space of all possible moves toward a solution) between them, most commonly with one or more clearly optimal solution paths from start to finish. Ill-defined problems in contrast are problems that have no clear initial state and/or goal state, no tractable problem space, and rarely if ever any clear optimal path to the solution. Consider for example an MMOG in-game duel between a damage-dealer and a healer. Literally winning the duel means solving a basic rock-paper-scissors problem in which all other variables equal, damage-dealers always win over healers. The meaning of that win however is contingent on having successfully solved a whole host of other ill-defined problems, such as crafting a persuasive argument on the game-related discussion forums that warrants the claim that the duel winner demonstrated the most skill during the encounter or crafting an in-game narrative that displays the winner's alignment to community values such as honor, justice, or humor. How do you know when you've won? In the former case, you have the brute result of most PvP systems. In the latter case, it's hard to define what the problem to be solved is in the first place, let alone what the criteria are for having succeeded.

The study of cognition in both problem-solving contexts has a long tradition in the field of cognitive science (e.g., Anderson, 1995; Gagne, Yekovich, & Yekovich, 1993), although most studies of cognition in the context of games are of the former, puzzle-solving sort. In the context of MMOGs, a game having "deep play" is typically one that includes several overlapping well-defined problems as its core mechanics (that typically increase in difficulty over time), with a host of ill-defined problems enveloping them that render the continuous solutions of those well-defined problems meaningful in terms of one's membership and identity within the game's community of practice. Thus, MMOG game play includes all the traditional characteristics of problem solving—problem representation, conditions, goals, procedures, strategies, and metastrategies—as well as shared practices typically found in problem-solving contexts within formal and informal instructional contexts—debriefings, theorizing about the problem space, apprenticeship, and the valuing of seeking out challenges just beyond the current level of one's ability (cf. zone of proximal development; Vygotsky, 1978), whether you are Level 5 or 55.

Naturally Occurring Online Learning Environments

Such characteristics mark MMOGs as learning environments, albeit naturally occurring, self-sustaining, indigenous ones dedicated to play rather than work or school. They are rich settings for reciprocal forms of teaching and apprenticeship, as successful in-game problem solving often requires access to the collective intelligence (Levy, 1997/1999) of the communities attending them. Problem-solving means and goals are defined within the community and made available to the individual through mechanisms such as apprenticeship and enculturation (Nasir, 2005); in return, individuals define and shape that community and crucially contribute to its change and development over time. Production and consumption are characteristically blurred

(deCerteau, 1984) as social and material resources are appropriated yet continually and actively constructed and negotiated, making Games a valuable context for studying the “relations between sociocultural and individual cognitive structuring” (Nasir, 2005). Although the promise of eLearning has in some ways run out of steam as many early projects simply put more of the same (chalk and talk) online, the networked learning communities that emerge around game play exhibit many of the features originally sought after by research communities such as Computer Support for Collaborative Learning (CSCL). Game communities also exhibit characteristics and properties heretofore theoretically and practically underemphasized, such as interaction among community members with a wide range of skill, age, and maturity; reciprocal forms of teaching and learning that occur in all directions throughout the social network (in contrast to movement from “periphery” to “core;” Lave & Wenger, 1991); and interwoven forms of competition and collaboration that appear to foster the high levels of engagement (Seay, Jerome, Lee, & Kraut, 2004; Yee, 2005) that periodically concern the American nongaming public and press (a discussion typically framed in terms of “addiction”). Understanding such indigenous, voluntary, self-sustaining, naturally occurring learning environments may prove quite crucial to the future theorization and development of contexts for learning, both online and off, particularly as the “Nintendo Generation” grows up with expectations shaped by just such experiences.

Cultures and Cultural Artifacts

Finally, g/Games simultaneously function as both culture and cultural object (Nasir, 2005)—as microcosms for studying the emergence, maintenance, transformation, and even collapse of online affinity groups and as talk-about-able objects that function as tokens in public conversations about broader societal issues within contemporary offline society. MMOGs are social simulations. Through their development and study, we can better understand how different incentive structures shape individual and communal behavior online, the impact of varying political and economic systems (Castronova, 2003), and even how it is that cultures evolve and devolve. The ability to simulate entire worlds and cultures populated by actual individuals working in concert (or discord) with one another with which researchers can run trials of full-scale social change is veritably unprecedented. And too, games function in broader on- and offline contemporary society as talk-about-able cultural objects for discussion of issues and problems that span far beyond the purview of such games themselves. In public discussion of games, the game titles themselves often function as tokens for broader themes or issues that games simply instantiate, in some way, in our collective imagination. For example, concerned politicians, parents, and citizens tacitly use titles such as *Grand Theft Auto* or *Everquest* in emblematic ways to discuss genuine concerns about broader social issues such as violence and aggression, sexism, adolescent and adult obesity, freedom, liberty, and what ought to constitute the rightful pursuit of individual happiness (cf. Williams, 2003).

Conclusions

Why study g/Games now? In this brief article, I have tried to argue that games are a productive context for research not only in terms of what they reveal about cognition (i.e., problem solving and its meaning) and the characteristics and features of successful and sustainable online communities but also in terms of what they can tell us (as both culture and cultural artifact) about life in a world that is increasingly globalized and networked. Game studies is a nascent field, yet valuable research on games from a (necessarily diverse) range of perspectives is well under way. Academic forums for contribution such as the *Games and Culture* journal will play a pivotal role in the establishment of games as a coherent discipline in its own right. And future research on games might productively focus on the “mangle” of games as simultaneously both designed object and emergent culture, caught up in broader conversation with other big *G* Games such as politics, academics, parenting, and contemporary life offline.

References

- Aarseth, E., & Jenkins, H. (2005). *Aarseth-Jenkins debate on (computer) game studies*. Presented at the HUMlab, IT University of Copenhagen.
- Anderson, J. R. (1995). *Cognitive psychology and its implication*. New York: W. H. Freeman & Company.
- Anderson, J. R., & Lebiere, C. (1998). *The atomic components of thought*. Mahwah, NJ: Lawrence Erlbaum.
- Castronova, E. (2003). *A center for the study of synthetic worlds: Strategic plan*. Unpublished manuscript.
- deCerteau, M. (1984). *The practice of everyday life*. Berkeley: University of California Press.
- Gagne, E. D., Yekovich, C. W., & Yekovich, F. R. (1993). *The cognitive psychology of school learning* (2nd ed.). New York: HarperCollins.
- Games and Professional Practice Simulations Research Group. (2005). *Video games and the future of learning*. Unpublished manuscript.
- Gee, J. P. (1999). *An introduction to discourse analysis: Theory and method*. New York: Routledge.
- Greeno, J. G. (1997). On claims that answer the wrong questions. *Educational Researcher*, 26, 5-17.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Levy, P. (1999). *Collective intelligence: Mankind's emerging world in cyberspace* (R. Bononno, Trans.). Cambridge MA: Perseus Books. (Original work published 1997)
- Nasir, N. S. (2005). Individual cognitive structuring and the sociocultural context: Strategy shifts in the game of dominoes. *Journal of the Learning Sciences*, 14, 5-34.
- Packer, M. J., & Goicoechea, J. (2000). Sociocultural and constructivist theories of learning: Ontology, not just epistemology. *Educational Psychologist*, 35, 227-241.
- Pickering, A. (1995). *The mangle of practice: Time, agency, and science*. Chicago: University of Chicago Press.
- Robison, A. J. (in press). Videogame designers as literacy pedagogues. In Y. Ming-tu (Ed.), *Reformation: The teaching and learning of English in electronic environments*. Taipei, Taiwan: Tamkang University Press.
- Seay, A. F., Jerome, W. J., Lee, K. S., & Kraut, R. E. (2004, April). *Project Massive: A study of online gaming communities*. Paper presented at the CHI 2004, Vienna, Austria.
- Shaffer, D. W. (in press). Epistemic games. *Innovate*.
- Simon, H. A. (1989). *Models of thought* (Vol. 2). New Haven, CT: Yale University Press.
- Squire, K. D. (2002). Rethinking the role of games in education. *Game Studies*, 2(1). Retrieved May 11, 2005, from <http://www.gamestudies.org/0102/squire/>

- Squire, K. D. (2005). *From content to context: Videogames as designed experiences*. Manuscript submitted for publication.
- Steinkuehler, C. A. (in press). Massively multiplayer online videogaming as participation in a discourse. *Mind, Culture, and Activity*.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge MA: Harvard University Press.
- Williams, D. (2003). The video game lightning rod: Constructions of a new media technology, 1970-2000. *Information, Communication and Society*, 6, 523-550.
- Wittgenstein, L. (1958). *Philosophical investigations*. Oxford, UK: Basil Blackwell.
- Yee, N. (2005). *The Daedalus project: The psychology of MMORPGs*. Retrieved May 11, 2005, from <http://www.nickyee.com/daedalus/>

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