# Meaningful Play

Carrie Heeter and Brian Winn
Serious Game Design
Michigan State University
Department of Telecommunication, Information Studies, and Media
(Introduction to the forthcoming Meaningful Play special issue of the *International Journal* of Gaming and Computer-Mediated *Simulation* (IJGCMS), draft January 5, 2009)

ABSTRACT

Heeter and Winn explore the concept of meaningful play, describe highlights of the Meaningful Play: Designing and studying games that matter conference, and introduce the articles in this issue.

KEYWORDS

Meaningful Play, Serious Games, Game Design, Player Experience, Persuasive Games, Motivation, Art Games

## INTRODUCTION

This special issue of the International Journal of Games and Computer-Mediated Simulations includes the top peer-reviewed academic papers and one of the industry keynotes presented at the first international, academic conference on Meaningful Play, held at Michigan State University in October 9-11, 2008. The conference was organized by Brian Winn, Ethan Watrall, and Carrie Heeter, each of whom teaches courses in Michigan State University's Serious Game Design Masters of Arts graduate program (Serious Game Design, 2008). The 220 attendees, coming from 10 countries and 20 U.S. states, were a combination of academic researchers, industry game designers and developers, and students.

Meaningful Play 2008 explored the potential of games to entertain, inform, educate, and persuade in meaningful ways. "Designing and Studying Games That Matter" was the slogan for the inaugural bi-annual conference, which encompasses both the practical and theoretic exploration of game design and research.

## WHAT IS MEANINGFUL PLAY?

What is the meaning of "meaningful play?" Many of the keynote speakers began their talks by refuting or otherwise commenting on the term "serious games," then noting that the conference title, "meaningful play," was a more inclusive and palatable construct. Linking the word serious with games raises more hackles than the genre itself. A simple definition of serious games is "games with a purpose beyond entertainment." Common domains of serious games include military games, government and NGO games, corporate and training games, games for learning, games for health, persuasive games, and art games.

Ben Sawyer launched and has nurtured recognition and growth of the "serious game movement." This movement was initially met with dismissive reactions on the part of entertainment game industry professionals. However, as games not intended purely for entertainment expand the market for and role of games in society, professional and public acceptance of serious games (though not necessarily the moniker) continues to grow. In his Meaningful Play keynote speech, EA Chief Creative Officer Richard Hillman announced that one of the ways EA would be making charitable contributions would be allocating staff expertise to creating issue games. The Entertainment Software Association, the main industry association for electronic games, now devotes one of seven main sections of their web site to "games in daily life" (ESA, 2008a). There they write about Games and Art, Games and the Economy, Games and Education, Games and Family, Games and Health, Games and Social Issues, and Games and the Workplace. Clearly, electronic games are expanding into realms beyond entertainment.

Is playing a serious game meaningful play? Brian Winn's Design-Play-Experience model for serious games differentiates between the designers' intentions and the players' experience (Winn, 2008). The designer designs the game; the player plays the game; which results in the player's experience. The designer only has direct control over the design itself. Thus, the D-P-E model helps to illuminate the traditional definition of serious games' focus on designer's intentions. Serious games are meaningful in the eyes of their creators. However, playing even a perfectly crafted serious game may or may not be a meaningful experience for a particular individual player. Although the serious goals matter to the makers of a serious game, the game's goals, fun factors or both may not be important to the player.

Meaningful play is a mysterious term. At the current stage of development of the digital game medium, many game designers might agree that meaningful play is the holy grail of game design. The reason for that agreement is probably because the term is appealing and ambiguous. In their seminal book, Rules of Play, Katie Salen and Eric Zimmerman state that "the goal of successful game design is creation of meaningful play" (Salen and Zimmerman, 2003, p. 33). Meaningful play is a central construct in the book. They define meaningful play as occurring "when the relationship between actions and outcomes in a game are both discernable and integrated into the larger context of a game (p. 316)." The implication is a properly designed game affords meaningful play, irrespective of other game or player characteristics. The Salen-Zimmerman definition is distinctly important to the design of a great game, but it is also a comparatively modest goal, one we would expect all or most successful games to achieve.

Those involved in the (entertainment) computer game industry in the 1980s and even the 1990s certainly did not anticipate that by 2008, 40% of players would be women, nor that 97% of teens and 26% of Americans over the age of 50 would play video games (ESA, 2008b, Lenhart et al., 2008). The surprising social and financial success of digital games is driven by and helps drive ongoing innovation in game design. The Game Developers Conference (GDC), an annual event attended in recent years by tens of thousands of game designers and developers, embodies a strong sense of excitement not just about what games are today but about what they can become. In recent years Eric Zimmerman has organized the "GDC Rant" at the conference. In 2008, five game designers were invited to rant (to "dramatically express opinions") about the state of the industry. Across the board, the ranters celebrated the creativity and power of games and at the same time expressed a yearning for games that impact players, the world, and themselves, more

deeply. For example, Clint Hockings ranted, “what we lack is not creativity, what we lack is the courage…” to create game experiences about “things real human beings give a sh*t about." Jane McGonigal exhorted that whereas games are great, reality is broken, and therefore “it's imperative that [game designers] create systems that make us happy, successful, and powerful in real life.” Hockings’, McGonigal’s, and the other 2008 game design ranters’ aspirations seem to go beyond the Salen-Zimmerman construct, reaching for new, as yet unachieved heights in meaningful play.

Leigh Anne Cappello, a VP and Futurist for Hasbro, argued in her Meaningful Play keynote that “all play is meaningful.” She presented a wide ranging explication of fun, including the experiences of anticipating, pretending, having friends, making friends, collecting, connecting, creating, getting messy, destroying, conquering, winning, escaping, imagining, remembering, constructing, and more. Hasbro is well aware of how what is fun varies by gender, age, life stage, personality, and species. Play ensues when a toy or game connects with what an individual finds to be fun. Meaningful play is individualistic, not universal, and depends upon the player.

Serious game design teams as well as game design class discussions wrestle with the questions of whether a serious game needs to be or even should be fun and how to balance the sometimes contradictory goals of fun and seriousness. As game designer and lecturer Nick Fortugno explains in his Meaningful Play keynote (included in this special issue), the idea that a game doesn’t have to be fun seems preposterous to entertainment game designers. A game that isn’t fun would never get made. Does meaningful play need to be fun? Maybe not.

Conversely, is a fun game always meaningful to the player? The question is reminiscent of Malone and others’ work on intrinsically motivating factors such as challenge, fantasy, curiosity, and control. For example, people are thought to be intrinsically motivated to learn a topic if they experience pleasure in mastering the content being learned, curiosity about the subject matter, or a sense of expertise as knowledge grows (Malone, 1981a, 1981b; Malone & Lepper, 1987). A learner can be highly intrinsically motivated, not at all intrinsically motivated, or anywhere in between on a particular topic and the way it is taught. Most likely how meaningful game play is to a player varies along a similar continuum from extremely meaningful to not meaningful at all.

An alternate measure of achieving meaningful play expressed by some designers is whether art critics will ever recognize a game as fine art, rather than merely pop culture. Fortugno asked, when will we have the first Citizen Kane of games? Academic and persuasive game designer Ian Bogost delivered his Meaningful Play keynote, “The Unknown Possibilities of Existence,” about the topic of art games. Bogost believes that art games share four characteristics: introspection, authorship (in contrast to the anonymity of large design teams at game studios), procedural rhetoric, and historicity (consciousness of their place in the flow of art and game design over time). Here meaningfulness emphasizes the creator, creative process and the critic.

Tracy Fullerton, a former game industry professional and founder of the USC Game Design programs, offered a related perspective in her keynote. She pointed to the artistry of Herman Melville’s Moby Dick, and talked about the need for game designers to “wander in the desert” seeking new means of expression to mold into the medium of games. Showing examples from

her own work with Bill Viola on the art game, The Night Journey, she talked about how player actions available in games today make use of a very limited number of verbs. The rest of the dictionary contains a potential treasure trove of unexplored verbs (which could be translated into game mechanics) with transformative potential to expand game design.

Fortugno posed yet another challenge for meaningful play, using the lens of persuasive games. He posited that games will have achieved a worthy milestone when a single game has the effect of transforming culture on a national or international scale, as Harriet Beecher Stowe's book, Uncle Tom's Cabin, did to attitudes towards the abolition of slavery in the 19th Century.

## ABOUT THIS ISSUE

The game industry professionals who attended and spoke at Meaningful Play 2008 tended be interested in research that might offer new insights into players and games. Similarly, those academics that submitted papers, attended, and spoke tended to be interested in reaching industry professionals with their work, to contribute to the realization of the potential of this evolving medium. On the academic side, topics included games for physical and brain health, military games, games for learning, tangential learning, public policy games, emergent game play, player involvement and motivations, virtual worlds, social play, and player-centered design and player research.

Five manuscripts based on the top academic papers from the Meaningful Play conference and one industry keynote speech are included in this special issue, as is a review of academic keynoter Ute Ritterfeld's new book on serious games (Ritterfeld, Code, and Borderer, 2009).

In "**Beyond Choices: A Typology of Ethical Computer Game Designs**" Miguel Sicart from IT University of Copenhagen offers an analytical framework for classifying a special form of meaningful play: ethical games. Sicart defines ethical games as games in which the players' moral values are of relevance for the game experience. His approach looks at games which allow (or force) the player to choose between good and evil, such as open ethical design. But his classification schema is thoughtful and broad, also incorporating games which rely more on "taunting the ethical agent that is playing the game," forcing the player to reflect about what is actually happening in the game without necessarily offering the option of alternative actions. The framework draws upon game design theory and postphenomenological philosophy.

In "**Rules of Engagement: Influence of Co-Player Presence on Player Involvement in Digital**," three scholars from Eindhoven University of Technology, known for their research on presence, report on an empirical study of competitive play in social settings. Brian Gajadhar, Yvonne de Kort & Wijnand Ijsselsteijn's experiment compares player involvement and enjoyment in three conditions: 1.) solitary play, 2.) play with another player co-located in the same room, and 3.) play with another player who is virtually but not physically co-present. They use the findings to explore whether the presence of others distracts from or enhances player enjoyment. Results show that playing in the presence of others, whether co-located or mediated, maintains or enhances player involvement. They conclude that co-players contribute to meaningful play, becoming part of the magic circle rather than distracting from it.

Matthew Sharritt and Daniel Suthers from the University of Hawaii also studied gaming in a social context, examining the relationships between designed features of games and the behavior of collaborating gamers. "**Video Game Representations as Cues for Collaboration and Learning**" reports on their inductive observational study of high school students interacting with a game for learning (RollerCoaster Tycoon 3) in the classroom. Whereas Gajadhar and colleagues were concerned with player involvement and enjoyment in a highly structured experiment, Sharritt and Suthers looked at learning and collaboration in the natural, school-based group context. They observed that particular interface cues served to focus learner attention on tasks within the game. Consistent, well-organized visualizations stimulated collaboration and learning and provided an easily accessible framework for talking about the learning content. On the other hand, inconsistent or poorly organized visualizations pulled focus away from the learning task and resulted in attention towards problem-solving the game interface instead of problem solving the learning task. These findings can help learning game designers understand how visualizations influence learning, particularly in a classroom situation. Epistemic forms, representational guidance, cognitive load, scaffolding, collaboration, dyadic communication, and technological affordances inform the research.

The final two articles address individual differences in player motivation and suggest ways game designers could make play more meaningful for individual players by better matching game play with individual player motivation. In "**Game Design and the Challenge-avoiding Self-validator Player Type,"** Carrie Heeter from Michigan State University, Brian Magerko and Ben Meder at Georgia Tech University and Joseph Fitzgerald at Michigan State University build upon the body of research on player types, motivation, and mindset. Achievers and Explorers are well known player types. Heeter and colleagues propose that Challenge-avoiders, also referred to as *Self-Validators*, are a heretofore ignored but commonly occurring player type with their own special needs and interests. Self-Validators are interested in performing well, earning high scores, and being told they are wonderful. However, they are devastated by failure and prefer to avoid hard challenges where the chance of failure is great. The research team analyzed whether and how eight very different modern games currently accommodate Explorers, Challenge-seekers, and Challenge-avoiders as well as what could be modified in each game to better appeal to each type. Sometimes features can be added for one player type without interfering with the other player motivations. Other times appealing to one of the player types within a game is incompatible with appealing to another. Player customization options or adaptive gaming solutions could enhance the fit between game mechanics and individual player motivations.

In **"Using Recommendation Systems to Adapt Gameplay,"** Ben Medler from Georgia Tech University proposes a sensible yet elegant approach to increasing the likelihood of meaningful play, whether the goal is more enjoyable entertainment or optimized learning. His solution is to do a better job of matching player predilections and interests with available games. Medler proposes that the game industry adopt a form of recommender system similar to the most successful ones used today on popular web sites such as Amazon, Netflix, or eHarmony. Recommender systems can be based on prior user or player behavior and ratings or on collaborative recommendations by similar players. Medler proposes that such systems could either be used to better match players with games that optimally fit their player profile, or data from recommender systems could be used to adapt a single game to better appeal to different

players. He point out that players who are familiar with personalized content delivered online, via recommendation systems, will come to expect games that mold, or adapt, to their preferences and tastes.

In addition to the five top papers, Nick Fortugno's keynote speech, **"The Play of Persuasion: Why 'Serious' Isn't the Opposite of Fun"** is included here to give readers some of the flavor, excitement, and inspiration embodied in this mixed academic and industry conference on meaningful play. As a gamer, serious and entertainment game designer, and game design instructor, Fortugno's perspectives are interesting, insightful, and accessible.

The full conference proceedings including abstracts for most sessions and videos of some of the keynotes are available at http://meaningfulplay.msu.edu/

REFERENCES

ESA (2008a). Games in Daily Life. Accessed December 31, 2008 at http://www.theesa.com/gamesindailylife/index.asp

ESA (2008b). Industry Facts. Accessed December 31, 2008 at http://www.theesa.com/facts/index.asp

Gamasutra (2008). GDC: Game Designers Rant On Making Games That Matter February 22, accessed on December 31,2008 at http://www.gamasutra.com/php-bin/news_index.php?story=17587

Lenhart, A.; Kahn, J., Middaugh, E., Macgill, A., Evans, C. and Vitak, J. (2008). "Teens, Video Games, and Civics: Teens' gaming experiences are diverse and include significant social interaction and civic engagement," Pew Internet & American Life Project: Washington D.C. Accessed December 31, 2008 at http://www.macfound.org/atf/cf/%7BB0386CE3-8B29-4162-8098-E466FB856794%7D/PEW_DML_REPORT_080916.PDF.

Malone, T. W. (1981a). Toward a theory of intrinsically motivating instruction. *Cognitive Science*, *5*(4), 333-369.

Malone, T. W. (1981b). What makes computer games fun? *BYTE*, *5*, 258-277.

Malone, T. W., & Lepper, M. R. (1987). Ming learning fun: A taxonomy of intrinsic motivations

for learning. In R. E. Snow & M. J. Farr (Eds.), *Aptitude, learning and instruction*. *Volume 3: Conative and affective process analysis* (pp. 223-253). Hillsdale, NJ: Erlbaum.
Ritterfeld, Ute, Cody, Michael , and Vorderer, Peter (2009). Serious Games: Mechanisms and Effects, New York, NY: Routledge, Taylor and Francis.

Salen, K. & Zimmerman, E. (2004). *Rules of Play: Game Design Fundamentals.* Cambridge, Massachusetts: The MIT Press.

Serious Game Design (2008). Michigan State University graduate program web site, accessed December 31, 2008 at http://seriousgames.msu.edu)

Winn, B. *The Design, Play, and Experience Framework.* Handbook of Research on Effective Electronic Gaming in Education. IGI Global Publication, Hershey, PA. July 2008.