



CNS Workshop Report

Gaming the Future



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In March of 2011, CNS-ASU convened a group of diverse academics to meet with renowned game designer Ken Eklund to discuss research and critical questions around virtual games. This small, generative dialogue asked participants to share their thoughts and work on:

- Serious gaming and mediated, collaborative problem solving
- Sustainability and approaches to complex systems
- Foresight practices and considerations of the long-term

The Anticipation and Deliberation program at CNS-ASU is investigating the variety of mediums through which the future is imagined, interrogated and represented. As part of this exploration of future-oriented deliberation, the rise of information technologies in foresight activities is noted as a trend that influences how scientific data is portrayed, the scale of foresight activities and the level of participation possible.

Massively Multiplayer Games are a genre of games that connect players dispersed over space in a collective pursuit, in effect knitting a teen in Mumbai with a marketing executive in Chicago in an effort that involves shared rules, discrete tasks, problem-solving and creative inspiration. Building on the immense energy poured into such games (3 billion hours per week across the globe), gaming designers are pairing with activists, NGOs and businesses to design and build 'serious games' in attempts to model real world problems that can be introduced to players, enticing them to collaboratively work through complex issues and rehearse potential solutions.

These developments are also tangentially linked to IT enabled 'citizen science' that asks individuals to observe, collect, and analyze natural phenomenon and contribute to centralized hubs that synthesize their efforts. Though less oriented towards 'play', scientist confounded by the intricacies of protein folding build the game 'FoldIt' to ask players to figure out different protein structures, which in turn provides insight into how to develop targeted drugs. Thus, there are new technological developments, new virtual practices, new modes of collaborative problem solving and different approaches to untangling complex systems that warrant further attention.

This workshop was a start towards collating the thinking at ASU on the role of new media tools, simulations, gaming platforms to leverage understanding of complex systems and to explore our capacities to transform them. This focusing event employed the expertise of Eklund who was responsible for the massively participative serious game called World Without Oil, a participatory 'pre-enactment' of an oil crisis.

Our discussions noted that games are employed for a variety of purposes from idea generation, problem solving, experimental planning to solution identification. It was agreed that games often work to accelerate tacit learning in a more decentralized fashion. Games are 'technologies of engagement' that can also be used in citizen deliberation and in political milieus for more intensive civic engagement. Games may provide more leverage and 'attention' in time where there is 'democratic surplus' and a need for increased transparency in political processes. Johnson in particular is looking at creative governance in online communities and is curious about how games may enable more civic involvement.

Games were viewed as a tool for capacity building, training individuals how to solve problems and work collectively towards robust solutions. As models, however, games run into the same trouble as other simulations, in that they need to be made useful in decision-making contexts. Questions remain around the quality of decision-making (in relation to knowledge support) and the relationship between information and action. Further, what happens when model building becomes more participatory?

Interesting investigations into gaming could be built that explore risk-taking, peer pressure, cooperative behavior, and group-induced pathologies, like polarization effects. Vinze was particularly interested in how self-organized groups behave and how a gaming interface might change the nature of the interaction.

We discussed issues around game design. Who plays? Policy makers, kids, professionals, citizens? The frame that a game uses is important and delineates the extent to which the game is an open inquiry or rather more closed system. How does the framing of a game impact game play? What is the role of narrative in the game frame? How is a balance between reality and fantasy negotiated in serious games? Basile inquired whether sustainability frameworks could be used as utilities for gamers. We also talked about the challenges with scaling up and scaling down a game.

In the course of our meeting, several participants proposed topics that could potentially resonate well with a gaming platform. Could we initiate a game around future discounting? Conz and Selin are developing a grant proposal that explores how games about sustainable manufacturing can be used as a research tool to access values and dilemmas related to technological change. Lant was curious about a game that explored emergency preparedness. Vinze was interested in investigating the impact of IT on decision-making in transition economies. Johnson suggested that challenge.gov might provide an opportunity for this team of ASU researchers to join forces.

PARTICIPANTS

George Basile

School of Sustainability

Basile is a senior sustainability scientist with research interests in: green business practices; sustainability science; biotechnology; strategic leadership; emerging technologies; strategic sustainability; entrepreneurship

Dave Conz

Consortium for Science Policy and Outcomes, BIS

Dave Conz is interested in how people create and respond to scientific knowledge and technological artifacts.

Ken Eklund

Ken is a game designer and a thought leader in the area of serious games and collaborative gameplay for the social good. He is the creator of World Without Oil, a landmark massively collaborative alternate reality game, and team lead on EVOKE, "a ten-week crash course on changing the world." Ken has long been interested in the positive social effects of games and open-ended, creative play.
<http://www.writerguy.com/>

Marco Janssen

Center for the Study of Institutional Diversity

Marco is interested how institutional arrangements related to common goods are crafted, adjusted and fit within social and ecological contexts.

Erik Johnston

School of Public Affairs

Research areas: Policy Informatics, collaborative process management focusing on implementing and sustaining collaborations in civic, business, and academic contexts, applying complex systems methodology and theory using agent based modeling as a complement to traditional quantitative and qualitative research methods.

Yushim Kim

School of Public Affairs

Dr. Kim works on finding new and different ways of using available information in making policy decisions. Research areas: Public Policy Analysis, Policy Informatics, Health/Welfare Policy, Complexity and Public Policy

Tim Lant

Decision Theater

Dr. Lant builds mathematical and system dynamics models for the Decision Theater for a variety of topical areas including public health, water and natural resource management, urban planning and innovation systems. He builds models for use as scenario analysis tools and for policy and planning exercises.

Tanya Musgrave, M.P.A.

Works at the Arizona State Library, Archives and Public Records and is currently completing her Masters in Public Policy at Arizona State University. Her interest is the dynamic relationship between government and citizens and how complex adaptive systems can lead to new insights in designing and streamlining effective policy.

Ajay Vinze

W.P. Carey School of Business

Dr. Vinze's research addresses both technological innovation and organizational relevance. More recently he has focused on issues of IT enablement for emergency preparedness and response, information supply chain, collaborative computing and security/privacy issues for e-health.

Cynthia Selin (organizer)

Consortium for Science, Policy and Outcomes

Dr. Selin runs the research program on Anticipation and Deliberation at ASU's Center for Nanotechnology in Society. Her interests include: the societal implications of emerging technologies, foresight methodologies, and organizational learning.