

The New Cultural Form: Perfection versus Mortality in Games and Simulation at Rensselaer

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Willy Nilly's Surf Shack offers a cure for the idealized virtual world of Second Life. The online shop, a project of Rensselaer Polytechnic Institute Associate Professor of Arts Ben Chang and collaborators, endows otherwise flawless avatars with real-world foils like clumsiness. A project allowing avatars to visibly age over time is in the works.

The shop is one of several projects Chang uses to explore humanity in technology. Chang, an electronic artist and recently appointed codirector of the Games and Simulation Arts and Sciences program at Rensselaer, sees the dialogue between perfection and mortality as an important influence in the growing world of games and simulation.

"There's this transcendence that technology promises us. At its extreme is the notion of immortality that – with artificial intelligence, robotics, and virtual reality – you could download your consciousness and take yourself out of the limitations of the physical body," said Chang. "But at the same time, that's what makes us human: our frailty and our mortality."

In other words, while the "sell" behind technology is often about achieving perfection (with a smart phone all the answers are at hand, with GPS we never lose our way, in Second Life we are beautiful), the risk is a loss of humanity.



That dialogue and tension leads Chang to believe that the nascent world of gaming and simulation could become "a new cultural form" as great as literature, art, music, and theater.

"This is just the beginning; we don't really know what this is going to be, and 'games and simulation' is just the best term we have to describe a much larger form," said Chang. "Twenty years ago nobody knew what the Web was going to be. There was this huge form on the horizon that we were sort of fumbling toward with different technological experiments, artistic experiments; I think this is what's going on with games and simulation right now.

"There are many things that are very difficult to do hands-on – it's very difficult to simulate a disaster, it's very difficult to manipulate atoms and molecules at the atomic level – and this is where simulation comes in handy," said Chang. "That kind of learning experience, that way of gaining knowledge that's intuitive, that comes through experience and involvement, can be expanded to many other realms."

As an electronic artist, Chang's own work is at the intersection of virtual environments, experimental gaming, and contemporary media art.

"I'm interested in what you could call evocative and poetic experiences within technological systems – creating that powerful experience that you can get from great music, theater, books, and paintings through immersive and interactive simulations as well," Chang said. "But I'm also interested in the experiences of being human within technological systems."

Other recent projects include "Becoming," a computer-driven video installation in which the attributes of two animated figures – each inhabiting their own space – are interchanged. "Over time, this causes each figure to take on the attributes of the other, distorted by the



structure of their digital information."

In "Insecurity Camera," an installation shown at art exhibits around the country, a "shy" security camera turns away at the approach of subjects.

"What I'm interested in is getting at those human qualities that are still there," Chang said. "Some of this has to do with frailty, with fumbling, weakness, and failure. These are things that can get disguised, they can get swept under the rug when we think about technology."

Chang earned a bachelor of arts in computer science from Amherst College, and a master of fine arts in art and technology studies from the Art Institute of Chicago. His installations, performances, and immersive virtual reality environments have been exhibited in numerous venues and festivals worldwide, including Boston CyberArts, SIGGRAPH, the FILE International Electronic Language Festival in Sao Paulo, the Athens MediaTerra Festival, the Wired NextFest, and the Vancouver New Forms Festival, among others. He has designed interactive exhibits for museums such as the Museum of Contemporary Art in Chicago and the Field Museum of Natural History.

Chang teaches a two-semester game development course that joins students with backgrounds in all aspects of games – computer programming, computer science, design, art, and writing – in the process of creating games. The students start with a design, and proceed through all the steps of planning, creating art work, writing code, and refining their game.

"Think of it as a foundation into developing games that you can take into experimental game design and stretch beyond it," Chang said.

As the "new cultural form" evolves, Chang sees ample room for exploration.



For example, said Chang, virtual reality, in which experiences are staged in a wholly digital world, leads to different implications than augmented reality, in which digital elements overlay the physical world. One implication of virtual reality – in which, as in Second Life, users can experiment with their identity – lies in research which suggests that personal growth gains made within the virtual world transfer to the real world. One implication of augmented reality – in which users may add digital elements that only they can access – is the possibility of several people sharing the same physical world while experiencing divergent realities.

In the near term, the most immediate implications for the emerging form are, as might be expected, in entertainment and education.

"What's already happening is this enrichment of the notion of what entertainment is through games," Chang said. "When you talk about games, you often have ideas of simple first-person shooter or action games. But within the realm of entertainment is an immense diversity of possibilities – from complex emotional dramatic story-based games to casual games on your cell phone. There's this range of ways of playing from competitive, multiplayer, social to creative. This is just within the entertainment realm."

Provided by Rensselaer Polytechnic Institute

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