

## UC San Diego Researcher Explores Gender, Humanity and (Virtual) Reality

November 26, 2008

Tiffany Fox

In an age when biotechnology has made it possible to alter the fundamentals of our food supply, our energy sources and even our genetic makeup, one graduate student at the University of California, San Diego, is pushing the limits of what it means to be human by exploring the intersections of biotechnology, art and virtual-reality in an immersive, durational performance titled "Becoming Dragon."

To fulfill the final project requirement for her MFA in visual arts, graduate student Micha Cardenas will spend 365 consecutive hours immersed in Second Life, an online, 3-D virtual world where users create avatars and interact with one another in a non-competitive way. Wearing a head-mounted device with a stereoscopic display that blocks all but the virtual world from her view, Cardenas will spend the entire duration of the performance in a laboratory at UCSD's Center for Research and Computing in the Arts (CRCA) at the California Institute for Telecommunications and Information Technology (Calit2).

The performance will begin with a two-hour session on Monday, Dec. 1 from 7 to 9 p.m. in the CRCA Visiting Artist Lab 1613 in Atkinson Hall. It will continue until Dec. 17, and special guests, including artists Sandy Stone, Brian Holmes and Stelarc, will be attending the performance throughout its duration.

Cardenas' avatar is a winged dragon named "Azdel Slade" - a nod to the history of dragons as magical creatures able to shape-shift and teleport through space and time. Cardenas will exist in Second Life as her avatar and interact with other Second Life characters in a to-scale virtual model of the actual performance space (complete with the black leather couch that will serve as Cardenas' bed).

In what is believed to be a first in Second Life history, Cardenas' movements will be mimed by way of a Vicon motion-capture system, which allows her avatar's movements to correspond with her own in real-time. In essence, Cardenas will "become" the dragon, moving and even speaking as her avatar by way of a Pure Data patch called "Lila" that modulates her voice.

The project is also a means of questioning the one-year requirement for "real-life experience" that transgender people must fulfill in order to receive gender confirmation surgery (also known as sexual reassignment surgery). While researching the project, Cardenas began hormone replacement therapy and is composing poetry about the experience. The poems, titled "Notes on Psycho-Neuro-Endocrinology" and "Notes on Becoming," will be included in the opening night performance.

"The general theme for my project is to explore the possibilities for transformation, to ask the question, 'Is change really possible, or do you get what you're given, and that's it?'" Cardenas explains. "I'm asking if it's possible to replace this real-life experience requirement with Second Life experience, but I'm also asking a question that is somewhat rhetorical or fantastical: Could you really become your second-life avatar?"

"Dragons are also part of the large community of non-anthropomorphic avatars in Second Life, which are not easily limited to either male or female binary gender categories. I chose a non-human avatar to explore the limitations of being male vs. female, but also to ask if one day this type of experience might fulfill the requirement

to have 'species reassignment surgery.' Or in other words, how can new biotechnologies enable the real-life construction of new identities beyond male and female?"

After the Dec. 1 opening, the lab will be open to the public from 11 a.m. to 7 p.m. weekdays throughout the 365-hour duration of the performance. Visitors will be able to see and interact with an HD stereo projection of Cardenas' world in Second Life, and avatars in Second Life will be able to see a live-video feed of the audience members. In addition, Cardenas and her colleagues will create 3-D print-outs of objects in her performance space, which will be used to create tangible paper models (of, for example, the leather couch). Cardenas will be live-blogging in Second Life during the performance, but will otherwise refrain from using her computer ("It's like a two-week vacation from e-mail!" she jokes).

Inspired by like-minded performance artists such as Orlan and Stelarc, Cardenas' project grew out of previous work exploring the body and identity in online public space. For the project, Cardenas worked with a team of developers and programmers including UCSD's Kael Greco, Chris Head, Anna Storelli and Ben Lotan. Cardenas, who is also a computer programmer, has a Computer Science degree from Florida International University and a Masters degree in Media and Communication from the European Graduate School in Switzerland. She has exhibited and performed her work widely, and was included in the 2008 Whitney Biennale.

Second Life was created in 1999 by Philip Rosedale, who earned a B.S. in physics from UCSD in 1992 and now serves as Chairman of the Board of Directors for Linden Lab, home of the Second Life metaverse. In 2006, Rosedale and Linden Lab received WIRED magazine's Rave Award for Innovation in Business, and in 2008 he was honored at the 59th Annual Technology & Engineering Emmy Awards. Now with more than million users, Second Life has become a vibrant space for users to act out fantasies of identity - to be whatever they want, live wherever they want, and interact with whomever they want, whenever they want.

Inspired by like-minded performance artists such as Orlan and Stelarc, Cardenas' project grew out of previous work exploring the body and identity in online public space. With more than one million users, Second Life has become a vibrant space for users to act out fantasies of identity - to be whatever they want, live wherever they want, and interact with whomever they want, whenever they want.

"There are so many reasons people use Second Life," Cardenas notes. "The element of fantasy is nice, and certainly there are subcultures that have more freedom in Second Life than they do in reality. People are engaging in sexual practices outside of male/female conceptions, choosing to have sex in the character of a dragon, a cat or a bunny. But there's also evidence that some of the same stereotypes we see in real life - sexism and racism - exist in Second Life, and often they're amplified there, because users are anonymous.

"What possibility lies beyond these restrictions when combined with radically new powerful technologies for body modification?" Cardenas asks. "How might virtual environments like Second Life be used to facilitate transformation and experimentation with these new identities? And what does this tell us about identity as a social process, as a series of interactions and feedback loops?"

Cardenas plans to explore some of those questions during her performance, which will also examine a common experience of many players of what are known as massively multiplayer online role-playing games: that they feel "more themselves" in the avatar persona than they do in real-life. Cardenas suspects that the experience is comparable to the feeling expressed by transgender people - that their "true selves" do not correspond to their bodies.

She notes: "I've never identified with being a man. When I was younger, I pretty much decided the whole idea of being 'a man' was stupid. Lots of times people feel they're not 'man enough' or 'woman enough,' and this is a way in which gender-based categories are really a problem. We're always changing, always growing and always becoming. Identity is a social process and an embodied process, and I will be exploring these processes in Second Life."

Following her durational performance, Cardenas plans to explore and experiment with biotechnologies - tissue cultures, implants and prosthetic devices - as well as "body hacking" or functional body modification.

For her own part, Cardenas is already undergoing a number of transformations as part of her hormone-replacement therapy (HRT), an experience that has led her to question the extent to which neurochemical processes determine our personal realities.

"The most striking experience with HRT is during the first few days," she says. "My senses felt different. I felt like my hearing felt much closer to me. I was more centered on myself and my immediate area. It continues to affect my thinking in terms of being more aware. Someone asked me, 'Is this just the estrogen talking?' and I wonder that myself at times."

Notably, being immersed in Second Life for such a long duration is also likely to affect Cardenas' senses in other ways - the stereoscopic display could cause nausea or dizziness, for example. And by being isolated in one place for so long (up to 15 days) Cardenas even risks what doctors refer to as "ICU psychosis," a temporary disorder in which patients in an intensive care unit (ICU) or a similar setting experience a cluster of serious psychiatric symptoms (Cardenas is working with a UCSD-affiliated psychiatrist to conduct the performance).

But for Cardenas, the benefits of the performance - a culmination of her years-long investigation of the relationship between gender, technology and art - far outweigh the risks.

"In general, people either say what I'm doing is crazy, or I'm going to go crazy," she laughs. "But I hope that by seeing this performance, my audience might be able to think about identity in a new way. My gender transformation is a personal decision based on my desires, my ideas and beliefs about gender as well as politics. I'm not on a trajectory toward being a real woman -- I don't think that's possible. I see myself as something else, as transgender as well as 'genderqueer.'"

"We're always, all of us, in transition, and with this performance, I hope to give people a more close, intimate experience with what being in transition feels like."

Media Contact: Tiffany Fox, 858-246-0353



