STANFORD UNIVERSITY | The **Dish** STANFORD PEOPLE ON THE MOVE AND IN THE SPOTLIGHT

Cameron's 'Avatar' and Stanford: Beyond Sigourney Weaver's tank top

James Cameron knew his blockbuster *Avatar*, about a fight for resources between humans and the blue, Navi race on planet Pandora, was entertaining and technologically groundbreaking. But did he know when he put scientist Grace's Navi avatar, played by **SIGOURNEY WEAVER**, '72, in a Stanford tank top, how much his movie's plotline synched with Stanford's research of virtual worlds and human behavior?

The movie tracks how as Jake Sully, a paraplegic Marine, spends more time in his Navi avatar, he loses sight of his physical self. "Everything's backwards now. Like out there is the true world and in here is the dream," the human Sully comments midway through the film.

At Stanford's Virtual Human Interaction Lab, researchers have demonstrated that the more time a person spends in an avatar in a virtual world like an online game, the more a person takes on the characteristics of his avatar. The "Proteus Effect," a concept coined by **NICK YEE,** a researcher at the Virtual Human Interaction Lab, shows when you have an avatar that's different from your physical self – like a 12-foot blue, Navi body – you come to behave more like your avatar.

Alum Sigourney Weaver as Grace and her Navi avatar. Photo: 20th Century Fox

Similarly, an engaging stretch of the film where Sully learns how to operate his Navi avatar – his tail and catlike balance – recalls research the lab has done of a concept called "homuncular flexibility."

Cameron, through unprecedented 3D, stereoscopic technology and the benefit of limitless imaginative storytelling afforded by film, takes the Proteus Effect to a conclusion that we can't yet experience. But given how fast technology is developing, how immersive virtual worlds are becoming and how much time people are spending in them, the line between one's avatar and one's real self can only get blurrier.

- **JEREMY BAILENSON**, director of Stanford's Virtual Human Interaction Lab, and **JANINE ZACHARIA** a 2008-09 Knight Fellow.