

How does the world change when you have five arms?

Episode 9: Manipulating Society through Technology

That's the sort of question that Jeremy Bailenson, Director of the Virtual Human Interaction Laboratory at

Stanford University, thinks about all the time. He, and the researchers he works with, are building immersive virtual realities to discover the connection between our "online" personas — especially avatars — and the way that people interact in the real world.

Bailenson, whom DevSource interviews in its Great Minds in Development video series, says that researchers have learned that, when we build digital versions of one another, people tend to behave the same in virtual reality (VR) as they do in physical space, at least on a gestural level. His team has studied online communities and avatar-based games, analyzing patterns of interaction and comparing how they relate to the social world. With avatars, he says, the norms of conversation and nonverbal behavior are modeled on how people behave in physical space. But there's one interesting exception: "In games, taller and more beautiful avatars actually perform better."

We aren't ready for avatars to represent us online in most online communication, complete with gestures and other nonverbal computing. The technology isn't there. Yet. But he believes it isn't more than a decade away, however. Not yet, he says. "The rate of acceleration of people using this stuff outside the laboratory is stunning," Bailenson says.

Avatars aren't all about games. They're about modeling reality. And, as Bailenson describes using a political example, a relatively small visual change can have subtle — and not so subtle — social influences in the real world. Avatars can have the potential for social manipulation... and in the future it can be automated.

Can you see sounds or taste motion? Another part of Stanford's VR research is to examine how we remap parts of the brain to handle "unreal" perceptions. How can you control behaviors that you wouldn't have in physical space, such as an avatar that has six arms?

Bailenson offers one bit of practical advice for software developers who build "social" user interfaces. Anytime you have a UI that guides a person, especially with a human fact, people tend to make the agent look more realistic than it behaves. And that, he says, causes problems in user expectations.