Using virtual reality to make you more empathetic in real life

By **Marlene Cimons** November 12, 2016

I'm sitting at a conference table in a downtown D.C. office building. A few minutes later — after putting on headgear that covers my ears and eyes — I'm thrust into the world of the homeless.

It's one of my first experiences with virtual reality. The idea is to get a visceral sense of what it's like to be without a place to live and sleep.

For 12 minutes, I'm in the middle of a 3-D world with changing scenes. First, I'm in "my'" apartment while a voice through the earphones is telling me I'd better start selecting items to sell if I want to be able to pay my rent. But I am evicted. Then, I'm living in my cluttered car until flashing lights and the sound of sirens tell me that the police have found me. They have been cracking down on people living in their cars because the local residents don't like it.

"Wake up, hey! Do you have a permit to park here?" the officer says. "It doesn't look like it. It looks like you've been living in your car. You know you're not allowed to do that, okay? I'm sorry, but I'm going to have to cite you.'

Finally, I'm on a bus, surrounded by avatars representing other homeless people. They look sad, tired and desperate for a precious three hours of sleep before the bus reaches the end of the line. They do not seem threatening, except for the man in the rear of the bus who is eyeing my backpack. He makes me nervous. Every time I "look" his way, he backs off.

"Okay, wake up, everybody," the driver announces before taking his break. "Wake up, it's time to go." (The narrator describes how we all must get off for 10 minutes before we can climb back on again for the next three-hour ride-and-sleep cycle.)

The other passengers all have stories. I click on each avatar to find out more. Sandra spends her days begging for food and money, feeling "less than human" when people cross the street to avoid her. Ray, a debt-ridden widower, and his 10-year-old son Ethan are waiting for shelter beds to become available.

Natalie is a victim of domestic abuse who left home, and Chris is a jobless veteran with post-traumatic stress disorder. Finally, there is Jimmy, an addict trying to numb the pain of his daughter's death, who keeps a length of rope tied around his ankle for the day he decides he's had enough.

It's quite sad — which is exactly how the program's creators want me to feel.

"We are giving you the perspective of someone else, and hoping it forces you to feel sympathy for someone you might otherwise avoid," says Jeremy Bailenson, a professor of communication at Stanford University and director of its virtual human interaction lab, which designed this experiment.

He brought the homeless project — as well as another showing the effects of climate change on oceans — to Washington for demonstrations before Congress and interested organizations.

Elise Ogle, the manager of the homeless project, says she hopes that experiencing the virtual-reality environment will "change the way you think and act about the homeless."

The Stanford scientists are studying 1,000 volunteers from the San Francisco Bay area, assessing their reactions to homelessness by dividing them into four groups and exposing them to the issue using four types of media.

One group receives only statistics about the homeless. The second group reads a narrative about homelessness. The third group views images on a computer screen, while the final group goes through what I did — a virtual-reality tour of what it's like to be homeless. (I had come for the oceans experiment — because I frequently write about climate change — but I asked to enter the homeless world as well.)

The researchers are betting that the VR approach will evoke the most empathy. They expect to finish collecting their data in December and hope to have results in the spring.

The project is funded by the Robert Wood Johnson Foundation. "Empathy is at the center of our collective efforts to build a culture of health," says Lori Melichar, a director at the philanthropic foundation. "If we don't understand the perspectives of others, we can never help others pursue healthier lives."

Bailenson believes that virtual reality can play a significant role not only in prompting empathy but also in encouraging people to save more for retirement, exercise more and make them more environmentally friendly. The oceans experience provides an underwater VR field trip to demonstrate what will happen to the oceans if climate change continues unabated.

The aim of the oceans project is to show how personal human behavior contributes to a deteriorating ecosystem and to motivate people to get involved, whether in environmental activism or just in reducing their carbon footprint. "The idea is to spur action with knowledge," Bailenson says.

Earlier studies in his lab suggests his team in on to something. In one experiment, for example, some of the participants took a

virtual shower; then, avatars created from digital photographs of the participants were forced to eat coal to show how much energy had been used to heat the water. The floor vibrated slightly and the avatars madecrunching and coughing sounds while eating the coal.

Afterward, the researchers put sensors in real sinks and found that people whose avatars had eaten the coal used less hot water than those who were given written descriptions of how much coal they use during their showers.

Another study had some participants virtually cut down trees. With a joystick, participants controlled a chain saw and cut down the trees with a backward and forward sawing motion. Moreover, the experiment allowed them to feel resistance and vibrations as they were cutting. Afterward, researchers found that those people used 20 percent less paper than those who had either read about cutting down trees or watched a video showing the tree-cutting process. Moreover, the effects lasted for a week after the experiment.

"We found in these earlier studies that more immersion can change the way you think and act, more so than just looking at pictures or statistics," Ogle says. "It has a larger influence, although we don't know yet how long-lasting it is," a question she says will be the focus of a future study.

Just from my brief experience, I would agree that virtual reality is more powerful than reading dry statistics or stories, or looking at a computer screen. And it does get you thinking about an issue.

The researchers don't know whether or how this might translate into social action. Nevertheless, "we're excited to see what [this] pioneering work can tell us about whether empathy can be taught and sustained to address health challenges like homelessness,"Melichar says. "As we look at ways to foster empathy, we need to consider harnessing emerging approaches like virtual reality to tell each other our stories."