
From Slot Machines to Personal Health Tracking Tools

A Profile of Natasha Schüll, PhD, MA, Health & Society Scholar, 2003–06

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The cavernous slot machine halls of Las Vegas are not the places one generally expects to find a Robert Wood Johnson Foundation Health & Society Scholar. But they have fascinated Natasha Schüll, PhD, MA, since she first passed through the city's airport, en route to her freshman classes at the University of California, Berkeley, and saw people transfixed by the machines. She has been coming back ever since.

It is not because she is an inveterate gambler, but because she is a cultural anthropologist—and fascinated by other worlds and how people behave in them. “I kept being drawn back to Las Vegas as a rich site for examining troublesome consumer behaviors,” says Schüll. “Consumer behavior and the consumption landscape, even in domains such as leisure, should be part of the conversation around health. Lifestyle diseases, which are such a concern these days, are linked to the consumer choices we make.”

An anthropologist's unique perspective. In 2003, armed with a newly minted doctoral degree in sociocultural anthropology from University of California, Berkeley, Schüll joined the first class of [*RWJF Health & Society Scholars*](#). She was based at Columbia University, one of six universities participating in the interdisciplinary fellowship program. (To learn more about the program, read the [Program Results Report](#).)

Schüll was something of an “outlier” in a program that tends to draw people with more quantitative methodological backgrounds. “That was always a tension I felt in the RWJF program,” she admits. “How do I situate myself in relation to those new colleagues of mine, many of whom are doing rigorous statistical studies? I don't work that way. My work is looser, more open—like investigative journalism but conducted in-depth over a long period of time.”

She was convinced that “anthropology had something to lend to the conversation. The richness of the stories, and sometimes the counterintuitive things you can learn are complementary to the more study-based, scientific approach.”

Designing for impact. Long before becoming a professional scholar, Schüll was interested in how design influences behavior. She chose casino architecture and design in Las Vegas as the subject of her undergraduate senior honor's thesis. She wanted answers to questions like, “Who were the kind of consumers that designers of casinos were imagining when they choose where to place mirrors and carpets?”

Later, she focused in on the design logic of slot machines—from the seats to the light and sound to the mathematical algorithms that drive the jackpot—and interviewed casino staff and designers. Always in search of multiple perspectives, she also interviewed gamblers to learn how they viewed their own responses to those design features.

“The big assumption around problem gambling is that people think they will win and don't understand probability,” she explains. Her startling discovery was that in many cases, the chance of winning was not driving behavior at all. “The people I spoke to were in no way dupes. Many were quite savvy. They had a good grasp of math and probability.”

While the thrill of risk and the possibility of a big win were the initial draws, people who became addicted to the games “developed a relationship with the machine and learn that it can do this other thing, which is to erase everything. It erases time, space, even a sense of your own body... They learn that it can provide an escape,” says Schüll.

And the machines have this effect across class, ethnic, and gender lines. Of those she interviewed, Schüll says, “Whether someone was a rich banker living in an expensive mansion or a single mother literally gambling her kids' lunch money—if I put their transcripts side by side, I couldn't tell the difference.”

Storytelling through video. Schüll also grew curious about the buffets that are a ubiquitous part of the Las Vegas scene—and for some as intoxicating as the slot machines. Her funding as a RWJF Health & Society Scholar allowed her to direct and produce “Buffet: All You Can Eat Las Vegas,” a 30-minute documentary video featuring “a kaleidoscope of characters” who make the celebration of gluttony possible.

Among the characters in her video: “tireless chefs preparing gargantuan bowls of ambrosia... servers who bus endless plates... hungry diners in search of a culinary jackpot and a portion of the American dream.”—Movie synopsis, www.buffermovie.com

She again paid close attention to design. “It’s important to understand the logic that goes into setting up the physical space of the buffet, how you present the food to people, where you put the meat or the dessert,” she emphasizes. Just as important is the view from the other side of the counter, where the eager eaters choose and consume their food but “don’t always feel in control of the choices they make” and often leave feeling “full, but not satisfied.”

Buffet has been screened on Public Broadcasting System stations and in film festivals around the country, and won the Society for Visual Anthropology’s award for best short film in 2006.

Mixing consumer choice and neuroscience. In her final year as a scholar, Schüll wrote a grant, with Caitlin Zaloom, PhD, that was funded by the National Science Foundation to probe the emerging field of “neuroeconomics,” which brings together behavioral economists who study consumer choice and neuroscientists who attempt to map the decision-making process in the brain.

One outcome was the journal article “The Shortsighted Brain: Neuroeconomics and the Governance of Choice in Time,” co-authored with Zaloom (*Social Studies of Science* 2011;41: 4; 515–38; abstract available [online](#)).

The article shows how critical brain science has become to policy-makers grappling with the fact that “we overvalue the present and undervalue the future,” explains Schüll.

The article shows, for example, how the public policy philosophy of the “Nudge” draws on neuroscience to justify its method of steering behavior in healthier directions by altering what is called “choice architecture.” An example is the “opt-out” requirement that forces employees to set aside money for retirement, unless they specify otherwise.

Schüll conducted this research at the Massachusetts Institute of Technology (MIT), where she has been since completing her fellowship. She is currently an associate professor in MIT’s Program in Science, Technology, and Society.

New directions. In 2012, Schüll published her first book, *Addiction by Design: Machine Gambling in Las Vegas* (Princeton University Press), which won awards from the American Ethnological Society, The Society for Cultural Anthropology, and *The Atlantic*, which profiled it as one of the best books of 2013. The book draws on extended research among compulsive gamblers and slot machine designers, exploring the relationship between technology design and addiction.

Eager for new intellectual terrain, Schüll has since turned to the area of “self-tracking.” While there has been much public discussion of how government and corporations use big data to track people, Schüll is more interested in how individuals use data from smart-phone apps and other devices to track themselves (e.g., the number of hours they sleep or how many steps they walk in a day).

Users might be “pinged” at regular intervals so they can note what they are doing, with whom, and how they feel. The idea is to “uncover patterns you might not be aware of and see how those tiny little decisions can add up to larger consequences for your well-being,” explains Schüll.

In the era of “lifestyle diseases,” self-tracking is gaining traction among health reformers. “The burden of health care management is moving out to individuals,” she points out. “Individuals are increasingly expected to monitor and manage their own habits through these devices. It’s fascinating—and important, I think—to explore the emerging landscape of personal health tracking.”

“These devices are designed to produce meaningful insights and data you can act on. The idea is to motivate you to change your eating or sleeping habits.”

It is a fresh angle on a theme that has long fascinated Schüll—the relationship between humans and machines, and the often-unseen drivers of behavior.