The New York Times
nytimes.com

The Rational Choices of Crack Addicts

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SEPT. 16, 2013

The Science of Drug Addiction

Carl Hart, an associate professor at Columbia University, is the author of the book "High Price," a mix of memoir and scientific research about drug addiction.

Long before he brought people into his laboratory at Columbia University to smoke crack cocaine, Carl Hart saw its effects firsthand. Growing up in poverty, he watched relatives become crack addicts, living in squalor and stealing from their mothers. Childhood friends ended up in prisons and morgues.

Those addicts seemed enslaved by crack, like the laboratory rats that couldn't stop pressing the lever for cocaine even as they were starving to death. The cocaine was providing such powerful dopamine stimulation to the brain's reward center that the addicts couldn't resist taking another hit.

At least, that was how it looked to Dr. Hart when he started his research career in the 1990s. Like other scientists, he hoped to find a neurological cure to addiction, some mechanism for blocking that dopamine activity in the brain so that people wouldn't succumb to the otherwise irresistible craving for cocaine, heroin and other powerfully addictive drugs.

But then, when he began studying addicts, he saw that drugs weren't so irresistible after all.

"Eighty to 90 percent of people who use crack and methamphetamine don't get addicted," said Dr. Hart, an associate professor of psychology. "And the small number who do become addicted are nothing like the popular caricatures."

Dr. Hart recruited addicts by advertising in The Village Voice, offering them a chance to make $950 while smoking crack made from pharmaceutical-grade cocaine. Most of the respondents, like the addicts he knew growing up in Miami, were black men from low-income neighborhoods. To participate, they had to live in a hospital ward for several weeks during the experiment.

At the start of each day, as researchers watched behind a one-way mirror, a nurse would place a certain amount of crack in a pipe — the dose varied daily — and light it. While smoking, the participant was blindfolded so he couldn't see the size of that day's dose.

Then, after that sample of crack to start the day, each participant would be offered more opportunities during the day to smoke the same dose of crack. But each time the offer was made, the participants could also opt for a different reward that they could collect when they eventually left the hospital. Sometimes the reward was $5 in cash, and sometimes it was a $5 voucher for merchandise at a store.

When the dose of crack was fairly high, the subject would typically choose to keep smoking crack during the day. But when the dose was smaller, he was more likely to pass it up for the $5 in cash or voucher.

"They didn't fit the caricature of the drug addict who can't stop once he gets a taste," Dr. Hart said. "When they were given an alternative to crack, they made rational economic decisions."

Carl Hart, an associate professor of psychology at Columbia, arranged experiments in which drug addicts were offered a choice between a dose of the drug or cash or vouchers. When the dose was smaller, addicts often chose cash or vouchers instead. Credit Béatrice de Géa for The New York Times

When methamphetamine replaced crack as the great drug scourge in the United States, Dr. Hart brought meth addicts into his laboratory for similar experiments — and the results showed similarly rational decisions. He also found that when he raised the alternative reward to $20, every single addict, of meth and crack alike, chose the cash. They knew they wouldn't receive it until the experiment ended weeks later, but they were still willing to pass up an immediate high.

These findings made Dr. Hart rethink what he'd seen growing up, as he relates in his new book, "High Price." It's a fascinating combination of memoir and social science: wrenching scenes of deprivation and violence accompanied by calm analysis of historical data and laboratory results. He tells horrifying stories — his mother attacked with a hammer, his father doused with a potful of boiling syrup — but then he looks for the statistically significant trend.

Yes, he notes, some children were abandoned by crack-addicted parents, but many families in his neighborhood were torn apart before crack — including his own. (He was raised largely by his grandmother.) Yes, his cousins became destitute crack addicts living in a shed, but they'd dropped out of school and had been unemployed long before crack came along.

"There seemed to be at least as many — if not more — cases in which illicit drugs played little or no role than were there situations in which their pharmacological effects seemed to matter," writes Dr. Hart, now 46. Crack and meth may be especially troublesome in some poor neighborhoods and rural areas, but not because the drugs themselves are so potent.

"If you're living in a poor neighborhood deprived of options, there's a certain rationality to keep taking a drug that will give you some temporary pleasure," Dr. Hart said in an interview, arguing that the caricature of enslaved crack addicts comes from a misinterpretation of the famous rat experiments.

"The key factor is the environment, whether you're talking about humans or rats," Dr. Hart said. "The rats that keep pressing the lever for cocaine are the ones who are stressed out because they've been raised in solitary conditions and have no other options. But when you enrich their environment, and give them access to sweets and let them play with other rats, they stop pressing the lever."

Drug warriors may be skeptical of his work, but some other scientists are impressed. "Carl's overall argument is persuasive and driven by the data," said Craig R. Rush, a psychologist at the University of Kentucky who studies stimulant abuse. "He's not saying that drug abuse isn't harmful, but he's showing that drugs don't turn people into lunatics. They can stop using drugs when provided with alternative reinforcers."

A similar assessment comes from Dr. David Nutt, a British expert on drug abuse. "I have a great deal of sympathy with Carl's views," said Dr. Nutt, a professor of neuropsychopharmacology at Imperial College London. "Addiction always has a social element, and this is magnified in societies with little in the way of work or other ways to find fulfillment."

So why do we keep focusing so much on specific drugs? One reason is convenience: It's much simpler for politicians and journalists to focus on the evils of a drug than to grapple with the underlying social problems. But Dr. Hart also puts some of the blame on scientists.

"Eighty to 90 percent of people are not negatively affected by drugs, but in the scientific literature nearly 100 percent of the reports are negative," Dr. Hart said. "There's a skewed focus on pathology. We scientists know that we get more money if we keep telling Congress that we're solving this terrible problem. We've played a less than honorable role in the war on drugs."

A version of this article appears in print on September 17, 2013, on page D3 of the New York edition with the headline: Tracing Addiction Outside the Brain.

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