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JOHANN HARI

CHASING THE SCREAM

THE FIRST AND LAST DAYS OF THE WAR ON DRUGS

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Introduction

Almost one hundred years after the start of the war on drugs, I found myself stuck on one of its more minor battlefields. In the suburbs of North London, one of my closest relatives had been rock-bottoming on cocaine again, while my ex-boyfriend was ending his long East London romance with heroin and picking up a crack pipe instead. I was watching all this with some distance, in part because I had been swallowing fistfuls of fat white narcolepsy pills for years. I am not narcoleptic. Many years before, I had read that if you take them, you can write in long manic weeks without pause and without rest, and it worked—I was wired.

All this felt like home to me. One of my earliest memories is of trying to wake one of my relatives from a drugged slump, and not being able to. Ever since, I have been oddly drawn to addicts and recovering addicts—they feel like my tribe, my group, my people. But now, for the first time, I was beginning to wonder if I had become an addict myself. My long drugged writing binges would stop only when I collapsed with exhaustion, and I wouldn't be able to wake for days. I realized one morning that I must have been starting to look a little like the relative I had been trying to wake up, all those years before.

I had been taught how to respond—by my government, and by my culture—when you find yourself in this situation. It is with a war. We all know the script: it is etched onto your subconscious, like the correct direction to look when you cross the street. Treat drug users and addicts

CHAPTER 13

Batman's Bad Call

Bruce Alexander received his first lesson about addiction from Batman. As a small kid, he grew up on a series of military bases of the United States, where his father was a training officer. One day, he was reading a comic in which a group of crooks beat up a junkie while Batman hid behind a building, watching, impassive.

"Dad," Bruce asked, "why would Batman just stand there while they're beating this junkie to a pulp? Isn't it Batman's job to stop criminals?"

"Well, really, no one cares if they beat a junkie to a pulp," his dad replied, "because they're worthless human beings."

Bruce believed it. Yet as an adult, on the streets of the Downtown Eastside, he was going to make two of the most important breakthroughs about addiction in the twentieth century—ones that would overturn everything we have been taught.

I first heard about Bruce years ago when I was studying psychology at Cambridge University, and I read about an experiment he had conducted on rats. At first, it sounded quirky and intriguing, nothing more—but I found that his experiment kept coming into my mind at unexpected moments for years and years. It was only when I decided to begin this journey into the drug war that I resolved to dig deeper.

I met Bruce in the café on the first floor of the library in Downtown Eastside. It is a Spartan place with hard chairs and track lighting, and almost everybody there that fall day seemed to be homeless addicts.

warming themselves with weak coffee. Bruce looked a little incongruous there at first: he is a genial gray-haired man in his sixties who looks like both the professor he is, and the Canadian he has become. He wore a smart sweater and a friendly smile. Soon, it became clear to me that my first-glance impression was wrong: he does belong here. Not long after we started talking, we were interrupted by an addict who has known him for years—and knew about his work and what it meant for her. After she had gone, he began—then, and over several subsequent interviews—to tell me the story of his experiment. It was going to change how I thought—about addiction, about some of the people closest to me, and about the world.

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In the early 1970s, Bruce was a young professor of psychology at Simon Fraser University in British Columbia, Canada. He was told by the faculty to teach a course called Social Issues that nobody else wanted to bother with. He knew the biggest social issues of the day were the Vietnam War and heroin addiction, and he couldn't go to Saigon, so he went to the Downtown Eastside. He headed there wearily, to learn just enough to explain it to his students, and no more. The same parade of addicts that Gabor would see years later passed before him on the streets, and he thought of them just as Batman taught him to—as zombies whose minds have contracted to the single drooling dimension of their drug.

Since Bruce was trained in family therapy, he figured that the best way to bring himself up to speed would be to provide counseling to addicts at a local treatment agency.

One of his first patients was Santa Claus. Every Christmas, this man was employed at the local shopping mall, where he would arrive in a helicopter, climb down a rope ladder, ho-ho-ho at the local children, use some smack backstage, and then promise to grant their wishes. Bruce persuaded Santa Claus to invite his parents in for family therapy, since behind the beard and the reindeer, he was only twenty-three. The parents were terrified their son would die; the son felt he couldn't stop. And one day, they were discussing his work as a smacked-out Santa, and they all began to laugh helplessly.

Something about this pricked at Bruce. He had been taught to believe addicts were incapable of self-reflection—yet this young man could see the absurdity of his situation clearly. There was a humanity in this laughter that Bruce had not expected to hear.

He continued to interview addicts in depth. Like Gabor, he could see that childhood trauma was a crucial factor. But he was also discovering facts that were deeply confusing to him and, at first glance, to everyone.

There were big chunks of time in the 1970s in which the Canadian police managed to blockade the port of Vancouver so successfully that no heroin was getting into the city at all. We know this because the police tested the "heroin" being sold on the streets and found it actually contained zero percent of the drug: it was all filler and contaminants. So the war on drugs was, for some significant stretches, being won here.

It is obvious what should have happened during these heroin droughts. The heroin addicts should all have been plunged into physical withdrawal, writhing in agony, and then, weeks later, they should have woken up to find they were freed from their physical dependency.

But Bruce was seeing something really weird instead. There was no heroin in the city—but all the heroin addicts were carrying on almost exactly as before. They were still scrambling desperately to raise the money—robbing or prostituting—to buy this empty cocktail. They weren't in agonizing withdrawal. They weren't getting gut-wrenchingly sick. They thought the "heroin" they were buying was weak, to be sure, and they were topping it up with heavier drinking or more Valium. But the core of their addiction didn't seem to be affected. Nothing had changed.

This wasn't some freak event: a similar effect was being seen in other North American cities where heroin was successfully blockaded for a while, either by police action or by strikes on the docks that prevented anything being unloaded.

This is perplexing. You can get rid of the drug—yet the drug addiction continues in pretty much the same way. What could possibly be happening here?

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Bruce went back and taught his students that drug addiction must have much less to do with the actual chemicals than we commonly assume. They had—like all of us—been told that one of the worst aspects of heroin addiction is the fierce and unbearable sickness of physical withdrawal. Henry Smith Williams believed this process was so harrowing it could kill you. But Bruce saw addicts in withdrawal all the time—and their symptoms were often minor: at worst, like a bad flu. This is so contrary to what we are told that it seems impossible, but doctors now very broadly agree it is the case. *The real pain of withdrawal is the return of all the*

psychological pain that you were trying to put to sleep with heroin in the first place.

Bruce often invited addicts from the Downtown Eastside to come to address his students, and one day an addict explained his life story and then took questions from them.

"Our professor," one of the class members asked, "has said withdrawal symptoms are not really bad at all. They're really not like the way they're depicted in the media and in films. Is that true?"

"Well, he says they're not very serious, eh?" the addict replied. "Says they don't make you crawl on the wall and climb up by your fingernails? . . . Well, I wonder if you've noticed that I'm in withdrawal right now."

He was. He was a little bit sniffly and sweaty. That's all.

The medical researchers John Ball and Carl Chambers studied the medical literature between 1875 and 1968 and found that nobody had died of heroin withdrawal alone in that time. The only people who can be killed by withdrawal, it turns out, are people who are already very weak: withdrawal helped to kill Billie Holiday when she was terribly sick with liver disease, for example, in the same way that ordinary flu can kill a ninety-five-year-old.

In another class, when Bruce was making his point that chemicals can't be the primary cause of addiction, a student raised his hand.

"This is bullshit," he said, "because we know why people take heroin. They take heroin because it captures their brain once they've taken it . . . and the proof is these rat studies which show that's true."

As I said earlier, the strongest evidence for the pharmaceutical theory of addiction had, for years, been a series of experiments on rats. A famous advertisement that ran on U.S. TV in the 1980s, paid for by the Partnership for a Drug-Free America, explained it best. It shows a rat in close-up licking at a water bottle, as the narrator says: "Only one drug is so addictive, nine out of ten laboratory rats will use it. And use it. And use it. Until dead. It's called cocaine. And it can do the same thing to you." The rat runs about manically, then—as promised by the scary music—drops dead. Similar rat experiments had been run to prove the addictiveness of heroin and other drugs.

But when Bruce looked at these experiments, he noticed something. These rats had been put in an empty cage. They were all alone, with no toys, and no activities, and no friends. There was nothing for them to do but to take the drug.

What, he wondered, if the experiment was run differently? With a few of his colleagues, he built two sets of homes for laboratory rats. In the first home, they lived as they had in the original experiments, in solitary confinement, isolated except for their fix. But then he built a second home: a paradise for rats. Within its plywood walls, it contained everything a rat could want—there were wheels and colored balls and the best food, and other rats to hang out with and have sex with.

He called it Rat Park. In these experiments, both sets of rats had access to a pair of drinking bottles. The first bottle contained only water. The other bottle contained morphine—an opiate that rats process in a similar way to humans and that behaves just like heroin when it enters their brains. At the end of each day, Bruce or a member of his team would weigh the bottles to see how much the rats had chosen to take opiates, and how much they had chosen to stay sober.

What they discovered was startling. It turned out that the rats in isolated cages used up to 25 milligrams of morphine a day, as in the earlier experiments. But the rats in the happy cages used hardly any morphine at all—less than 5 milligrams. "These guys [in Rat Park] have a complete total twenty-four-hour supply" of morphine, Bruce said, "and they don't use it." They don't kill themselves. They choose to spend their lives doing other things.

So the old experiments were, it seemed, wrong. It isn't the drug that causes the harmful behavior—it's the environment. An isolated rat will almost always become a junkie. A rat with a good life almost never will, no matter how many drugs you make available to him. As Bruce put it: he was realizing that addiction isn't a disease. Addiction is an adaptation. It's not you—it's the cage you live in.

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Bruce and his colleagues kept tweaking the experiment, to see just how much your environment shapes your chemical compulsions.

He took a set of rats and made them drink the morphine solution for fifty-seven days, in their cage, alone. If drugs can hijack your brain, that will definitely do it. Then he put these junkies into Rat Park. Would they carry on using compulsively, even when their environment improved? Had the drug taken them over?

In Rat Park, the junkie rats seemed to have some twitches of withdrawal—but quite quickly, they stopped drinking the morphine. A happy social environment, it seemed, freed them of their addiction. In Rat Park,

Bruce writes, "nothing that we tried instilled a strong appetite for morphine or produced anything that looked to us like addiction."

~

Bruce naturally wanted to know if this applied to humans. Oddly enough, a large-scale human experiment along similar lines was being carried out shortly before. It was called the Vietnam War.

Out in Southeast Asia, using heroin was "as common as chewing gum" among U.S. soldiers, as *Time* magazine reported at the time. This wasn't just journalistic hyperbole: some 20 percent of U.S. soldiers had become addicted to heroin there, according to a study published in the *Archives of General Psychiatry* later cited by many writers. This meant there were more heroin addicts serving in the U.S. Army than there were back home in the United States. The American military had cracked down hard on marijuana smoking among its troops, sending in pot-sniffing dogs and staging mass arrests, and so huge numbers of men—unable to face that level of pressure without a relaxant—had transferred to smack, which sniffer dogs can't snuffle out. Senator Robert Steele of Connecticut came home from the jungles ashen-faced to explain: "The soldier going to South Vietnam today runs a far greater risk of becoming a heroin addict than a combat casualty."

Many people in the United States were understandably terrified. The war was going to end sooner or later, and at that point the streets of America were going to swell with an unprecedented number of junkies. They believed the pharmaceutical theory of addiction—so this was the only outcome that made any sense. Their brains and bodies were being hijacked by the drug, so, as Senator Harold Hughes of Iowa warned: "Within a matter of months in our large cities, the Capone era of the '20s may look like a Sunday school picnic by comparison."

The war ended. The addicts came home. And something nobody expected took place. The study in the *Archives of General Psychiatry*—and the experiences people could see all across the country—show that 95 percent of them, within a year, simply stopped. The addicts who received drug treatment and rehab were no more likely to stop than those who received no treatment at all. A tiny number of vets did carry on shooting up. They turned out either to have had unstable childhoods, or to have been addicts before they went.

If you believe the theory that drugs hijack your brain and turn you into a chemical slave—the theory on which the war on drugs has been based since Anslinger—then this makes no sense. But there is another

explanation. As the writer Dan Baum puts it: "Take a man out of a pestilential jungle where people he can't see are trying to kill him for reasons he doesn't understand, and—surprise!—his need to shoot smack goes away."

After learning all this, Bruce was beginning to develop a theory—one that radically contradicted our earlier understanding of addiction but seemed to him the only way to explain all this evidence. If your environment is like Rat Park—a safe, happy community with lots of healthy bonds and pleasurable things to do—you will not be especially vulnerable to addiction. If your environment is like the rat cages—where you feel alone, powerless and purposeless—you will be.

As Bruce explains this to me, I find myself picturing the Hole back in Tent City in the Arizona desert. In order to punish addicts, the drug warriors have in fact built the very conditions that will be most likely to produce and deepen addiction.

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So, Bruce believes, the gap between the 90 percent who use drugs without its causing a problem and the 10 percent who can't isn't set in concrete. It's the product of social circumstances—and it can change as social circumstances change.

The rats in solitary confinement and the soldiers in Vietnam weren't being "hijacked" by the chemicals at hand. They were trying to cope with being dislocated from everything that gave their lives meaning and pleasure. The world around them had become an unbearable place to be—so when they couldn't get out of it physically, they decided to get out of it mentally. Later, when they could get back to a meaningful life, they felt no more need for the drugs, and they left them behind with surprising ease.

The key to understanding this hidden cause of addiction, Bruce came to believe, was found in one idea above all others—dislocation. Being cut off from meaning. He began to set out his ideas in an extraordinary book called *The Globalization of Addiction*.

He began to piece together why this would be. Human beings evolved in small bands of hunter-gatherers on the savannahs of Africa. The tribe was your only way to survive. If you feel that you have been stripped of a tribe and its rituals you will become deeply unhappy: a human on the savannah who was alone against the world would almost certainly have died. Humans seem to have evolved with a deep need to bond, because it was absolutely essential to staying alive.

Bruce began to look over the history of when addiction has suddenly soared among human beings—and he found it has, time and again, been when these bonds were taken away from people. The native peoples of North America were stripped of their land and their culture—and collapsed into mass alcoholism. The English poor were driven from the land into scary, scattered cities in the eighteenth century—and glugged their way into the Gin Craze. The American inner cities were stripped of their factory jobs and the communities surrounding them in the 1970s and 1980s—and a crack pipe was waiting at the end of the shut-down assembly line. The American rural heartlands saw their markets and subsidies wither in the 1980s and 1990s—and embarked on a meth binge.

So Bruce came to believe, as he put it, that "today's flood of addiction is occurring because our hyperindividualistic, frantic, crisis-ridden society makes most people feel social[ly] or culturally isolated. Chronic isolation causes people to look for relief. They find temporary relief in addiction . . . because [it] allows them to escape their feelings, to deaden their senses—and to experience an addictive lifestyle as a substitute for a full life."

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This isn't an argument against Gabor's discoveries. It's a deepening of them. A kid who is neglected or beaten or raped—like Chino's mother, or Billie Holiday—finds it hard to trust people and to form healthy bonds with them, so they often become isolated, like the rats in solitary confinement, and with the same effects.

Professor Peter Cohen, a friend of Bruce's, writes that we should stop using the word "addiction" altogether and shift to a new word: "bonding." Human beings need to bond. It is one of our most primal urges. So if we can't bond with other people, we will find a behavior to bond with, whether it's watching pornography or smoking crack or gambling. If the only bond you can find that gives you relief or meaning is with splayed women on a computer screen or bags of crystal or a roulette wheel, you will return to that bond obsessively.

One recovering heroin and crack addict on the Downtown Eastside, Dean Wilson, put it to me simply. "Addiction," he said, "is a disease of loneliness."

~

Rat Park seems to fill some of the holes in our understanding of addiction, but at first glance, it still leaves at least one. What about the heroin famines?

Miserable people will seek altered mental states to numb the pain. That much makes sense. But the heroin addicts Bruce was working with on the Downtown Eastside weren't actually taking heroin during the period when the port of Vancouver was successfully blockaded. They weren't altering their mental states in any physical sense—but they carried on with the junkie behavior, injecting empty powders into their arms. Why?

Bruce realizes that in all his months and years interviewing addicts about their lives, they had been telling him the answer all along. "People explained over and over before I got it," Bruce tells me.

Before they became junkies, these young people were sitting in a room alone, cut off from meaning. Most of them could hope at best for a McJob with a shrinking minimum wage—a lifelong burger-flip punctuated by watching TV and scrimping for minor consumer objects. "My job was basically to say—why don't you stop taking drugs?" Bruce says. "And one guy explained to me very beautifully. He said, 'Well, think about that for a minute. What would I do if I stopped taking drugs? Maybe I could get myself a job as a janitor or something like that.'" Compare that, he said, to "what I'm doing right now, which is really exciting. Because I've got friends down here and we do exciting things like rob stores and hang around with hookers." Suddenly you are part of a world where, together with other addicts, you are embarked on a crusade—a constant frenetic crusade to steal enough to buy the drugs, dodge the police, keep out of jail, and stay alive.

If your problem is being chronically starved of social bonds, then part of the solution is to bond with the heroin itself and the relief it gives you. But a bigger part is to bond with the subculture that comes with taking heroin—the tribe of fellow users all embarked on the same mission and facing the same threats and risking death every day with you. It gives you an identity. It gives you a life of highs and lows, instead of relentless monotony. The world stops being indifferent to you, and starts being hostile—which is at least proof that you exist, that you aren't dead already.

The heroin helps users deal with the pain of being unable to form normal bonds with other humans. The heroin subculture *gives* them bonds with other human beings.

This seemed odd and jarring when I first heard it. The life of a street

addict is horrific. You can be culled at any moment by a bad batch, hypothermia, rape, the police. Like Bruce, I had to keep turning this theory over and over in my mind, and applying it to the addicts I knew, until I saw it.

Remember: when the actual heroin was gone, they carried on acting as heroin addicts. The horrifying fact is that, as Bruce puts it, "it's a lot better to be a junkie than to be nothing at all, and that's the alternative these guys face—being nothing at all." So when the heroin was cut off, "They maintained the essence of their heroin addiction—which is a subculture addiction." When you have been told you are a piece of shit all your life, embracing the identity of being a piece of shit, embracing the other pieces of shit, living openly as a piece of shit—it seems better than being alone.

As one addict told Bruce: "This is a life. It's better than no life."

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As I listened to Gabor and Bruce, I wanted to be persuaded—but part of me was skeptical. What is the opposite side of the argument here? This isn't what I was taught at school. It is not what most of us believe. No matter how persuasive they seemed, there was still part of me that kept thinking—*obviously* it is the chemicals that cause addiction. It's *common sense.*

The best man to provide a rebuttal, it seemed to me, was Robert DuPont. He is the founder of the National Institute on Drug Abuse (NIDA), which funds 90 percent of all the research into illegal drugs in the world. He is a highly distinguished scientist, and the man who created many of the metaphors that help us to understand drugs today. I tracked him down at the World Federation Against Drugs conference in Stockholm, Sweden. Over two days, I milled among antidrug activists from across the world. DuPont is a tall, thin, genial man from Ohio, and he delivered the knockout speech of the conference—an eloquent rallying call for the drug war, summing up a conference that warned that chemicals can hijack your brain and cause chemical slavery.

He agreed to let me put to him some of the possible holes in the theory, and as we spoke, he listened intently. I started by asking how many of the negative effects of drugs he believed are driven by their pharmacological component. He looked at me blankly. "As opposed to . . . ?" And there was a silence.

I mentioned childhood trauma, and isolation. He continued to look blank. "I think the environment is really important," he said—and then

named only one environmental factor: whether drugs are legal or not. Drug use must be kept as a crime, or it will explode. I tried to press him on other factors, but this was the only one he would acknowledge.

I was a little thrown by this, and so I asked him a different question. The institute you set up says drugs make the addict into a chemical slave—that the chemicals take you over—but I am trying to figure out how that fits with the studies suggesting that most addicts simply stop. How is that slavery? Frederick Douglass didn't just walk off the plantation one day. DuPont looked quizzical, and thought about this. "Your point is well taken—I've never thought about it quite this way. There's an absolute quality to the slavery of two centuries ago. This," he said, "is more of a nuanced slavery."

We smiled at each other, a little awkwardly. What, I asked, about the other key metaphor promoted by the organization he founded—of a hijacking? Most hijackings don't end with the hostages choosing to walk away from their captors. "Oh, yes," he says. "It's a question of partial hijacking. That's a good point too."

I felt a little baffled. These are the central metaphors on which the standard theory of addiction is built, and this was the most distinguished expert on the matter, speaking at a conference with these ideas at its very heart. But when I asked him the most basic questions about how this relates to the wider environment, he said—in a friendly way—that he's never really thought about them. This is the man who set up the main center for drug research in the world, and it was plain he hadn't actually heard of these alternative theories. He didn't seem to know who Gabor or Bruce were, or what people like them have shown in their studies.

To be fair, later, when I read through the scientific literature, I realized this is not a failing of DuPont's. It seems to be standard for scientists in this field, even the very best. They overwhelmingly focus on biochemistry and the brain. The questions Bruce and Gabor look at—how people use drugs out here on the streets—are ignored. Nobody, I kept being told, wants to fund studies into that.

Why would this be? Professor Carl Hart at Columbia University is one of the leading experts in the world on how drugs affect the brain. He tells me that when you explain these facts to the scientists who have built their careers on the simplistic old ideas about drugs, they effectively say to you: "Look, man—this is my position. Leave me alone." This is what they know. This is what they have built their careers on. If you offer ideas that threaten to eclipse theirs—they just ignore you. I ask Professor Hart: Can

our central idea about drugs really be as hollow as that? "Can it be as hollow? I think you have discovered—it is as hollow as that . . . Look at the evidence. It's hollow . . . It's smoke and mirrors."

But why, then, do these ideas persist? Why haven't the scientists with the better and more accurate ideas eclipsed these old theories? Hart tells me bluntly: Almost all the funding for research into illegal drugs is provided by governments waging the drug war—and they only commission research that reinforces the ideas we already have about drugs. All these different theories, with their radical implications—why would governments want to fund those?

Eric Sterling is the lawyer who wrote the drug laws for the United States between 1979 and 1989. When every major drug law was being drafted, he was at the table shaping it into words. When I met him in his Maryland office, he told me that if any government-funded scientist ever produced research suggesting anything beyond the conventional drugs-hijack-brains theory, he knows exactly what would happen. The head of NIDA would be called before a congressional committee and asked if she had gone mad. She might be fired. She would certainly be stopped. All the people conducting the science for NIDA—and remember, that's 90 percent of research on the globe into illegal drugs—know this.

So they steer away from all this evidence and look only at the chemical effects of the drugs themselves. That's not fake—but it's only a small part of the picture. There is a powerful political brake on exploring these deeper truths.

And that, it turns out, is what happened to Bruce. Once the nature of their findings became clear, the money for the Rat Park experiment provided by his university was abruptly cut off, before the team had a chance to investigate many of the questions it raised. Years later, Bruce was told by a senior figure at the University that that was because they found it embarrassing. Something so far outside the conventional understanding of addiction seemed crazy.

To a sober-minded military brat raised in a conservative family, the experience of Rat Park and the heroin famines was startling, and it changed how Bruce saw the world. "It's amazing to discover that something which is so centrally believed is false. It's just false," he said to me.

At first he expected that his findings would blast open the field of addiction science and start a whole slew of investigations into how it really works. He was ready for "a ticker tape parade," he says. Instead, all his findings were disregarded, as if they had never happened. "That

evidence like this can be so completely disregarded—it's amazing," he says. "I suppose you could say it's poisoned my entire outlook on life."

Nobody has ever received funding to replicate the Rat Park experiment.

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As I walked the streets of Vancouver trying to digest all this, I began to think again about the very beginning of this story, and I saw something I had not seen before.

There were three questions I had never understood. Why did the drug war begin when it did, in the early twentieth century? Why were people so receptive to Harry Anslinger's message? And once it was clear that it was having the opposite effect to the one that was intended—that it was increasing addiction and supercharging crime—why was it intensified, rather than abandoned?

I think Bruce Alexander's breakthrough may hold the answer.

"Human beings only become addicted when they cannot find anything better to live for and when they desperately need to fill the emptiness that threatens to destroy them," Bruce explained in a lecture in London in 2011. "The need to fill an inner void is not limited to people who become drug addicts, but afflicts the vast majority of people of the late modern era, to a greater or lesser degree."

A sense of dislocation has been spreading through our societies like a bone cancer throughout the twentieth century. We all feel it: we have become richer, but less connected to one another. Countless studies prove this is more than a hunch, but here's just one: the average number of close friends a person has has been steadily falling. We are increasingly alone, so we are increasingly addicted. "We're talking about learning to deal with the modern age," Bruce believes. The modern world has many incredible benefits, but it also brings with it a source of deep stress that is unique: dislocation. "Being atomized and fragmented and all on [your] own—that's no part of human evolution and it's no part of the evolution of any society," he told me.

And then there is another kicker. At the same time that our bonds with one another have been withering, we are told—incessantly, all day, every day, by a vast advertising-shopping machine—to invest our hopes and dreams in a very different direction: buying and consuming objects. Gabor tells me: "The whole economy is based around appealing to and heightening every false need and desire, for the purpose of selling

products. So people are always trying to find satisfaction and fulfillment in products." *This is a key reason why, he says, "we live in a highly addicted society." We have separated from one another and turned instead to* things for happiness—but things can only ever offer us the thinnest of satisfactions.

This is where the drug war comes in. These processes began in the early twentieth century—and the drug war followed soon after. The drug war wasn't just driven, then, by a race panic. It was driven by an addiction panic—and it had a real cause. But the cause wasn't a growth in drugs. It was a growth in dislocation.

The drug war began when it did because we were afraid of our own addictive impulses, rising all around us because we were so alone. So, like an evangelical preacher who rages against gays because he is afraid of his own desire to have sex with men, are we raging against addicts because we are afraid of our own growing vulnerability to addiction?

~

After I met Bruce for the last time, I sat on a bench in Pigeon Park, a small concrete sprawl on the Downtown Eastside where addicts drink and talk and buy drugs, and tried to understand: How does all this change the way we should think about the drug war now?

Bruce says that at the moment, when we think about recovery from addiction, we see it through only one lens—the individual. We believe the problem is in the addict and she has to sort it out for herself, or in a circle of her fellow addicts.

But this is, he believes, like looking at the rats in the isolated cages and seeing them as morally flawed: it misses the point. He argues we need to refocus our eyes, as if staring at a Magic Eye picture, to see that the problem isn't in them, it's in the culture. Stop thinking only about individual recovery, he argues, and start thinking about "social recovery."

If we think like this, the question we need to answer with our drug policy shifts. It is no longer: How do we stop addiction through threats and force, and scare people away from drugs in the first place? It becomes: How do we start to rebuild a society where we don't feel so alone and afraid, and where we can form healthier bonds? How do we build a society where we look for happiness in one another rather than in consumption?

These are radical questions, with implications far beyond the drug war, and bigger than this book. But they have to be asked. We haven't

been able to reduce addiction, it occurs to me, because we have been asking the wrong questions.

Bruce says this dynamic is producing something even darker than the drug war. Cut off from one another, isolated, we are all becoming addicts—and our biggest addiction, as a culture, is buying and consuming stuff we don't need and don't even really want.

We all know deep down it doesn't make us happy, to be endlessly working to buy shiny consumer objects we have seen in advertisements. But we keep doing it, day after day. It in fact occupies most of our time on earth. We could slow down. We could work less and buy less. It would prevent the environment—our habitat—from being systematically destroyed. But we don't do it, because we are isolated in our individual cages. In that environment, the idea of consuming less, in fact, fills us with panic. All this stuff, Bruce believes, is filling the hole where normal human connection should be.

Unless we learn the lesson of Rat Park, Bruce says we will face a worse problem than the drug war. We will find ourselves on a planet trashed by the manic consumption that is, today, our deepest and most destructive addiction.

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Over the months that I listened repeatedly to the recordings of Bruce and Gabor and tried to tease out what they were telling me, I kept circling back to an obvious question. They convinced me there are significant factors in addiction that have nothing to do with the chemicals themselves. But it would be absurd to say the chemicals play no role at all in, say, cigarette or crack addiction. So how much really is due to the chemicals, and how much is due to the social factors? What's the ratio?

As I read more, I stumbled across—in the work of an amazing scientist called Richard DeGrandpre—an experiment that gives us a quite precise answer, in percentage terms. You may well be taking part in it right now.

When nicotine patches where invented in the early 1990s, public health officials were thrilled. They believed in the theory of addiction that almost everyone believes in: addiction is caused by chemical hooks that are hidden in the drug. You use a drug for a while, and your body starts to crave and need the chemical in a physical way. This isn't hard to grasp. Anybody who has tried to quit caffeine knows that chemical hooks are real: I am trying it as I type this, and my hands are very slightly shaking, my head is aching, and I just snapped at the guy sitting opposite me in the library.

Everyone agrees that cigarette smoking is one of the strongest addictions: it is ranked on pharmaceutical addictiveness scales alongside heroin and cocaine. It is also the deadliest. Smoking tobacco kills 650 out of every hundred thousand people who use it, while using cocaine kills four. And we know for sure what the chemical hook in tobacco is—it's nicotine.

The wonder of nicotine patches, then, is that they can meet a smoker's physical need—the real in-your-gut craving—while bypassing some of the really dangerous effects of smoking tobacco. So if the idea of addiction we all have in our heads is right, nicotine patches will have a very high success rate. Your body is hooked on the chemical; it gets the chemical from the nicotine patch; therefore, you won't need to smoke anymore.

The pharmacology of nicotine patches works just fine—you really are giving smokers the drug they are addicted to. The level of nicotine in your bloodstream doesn't drop if you use them, so that chemical craving is gone. There is just one problem: even with a nicotine patch on, you *still want to smoke*. The Office of the Surgeon General has found that just 17.7 percent of nicotine patch wearers were able to stop smoking.

How can this be? There's only one explanation: something is going on that is more significant than the chemicals in the drug itself. If solving the craving for the chemical ends 17.7 percent of the addictions in smokers, the other 82.3 percent has to be explained some other way.

Now, 17.7 percent certainly isn't a trivial amount. That's a large number of people with improved lives. It would be foolish and wrong to say the drug has *no* effect. But it would be equally foolish to say what we have been saying for a century—that the chemicals themselves are the *main* cause of drug addiction. That assertion doesn't match the evidence.

This point is worth underscoring. With the most powerful and deadly drug in our culture, the actual chemicals account for only 17.7 percent of the compulsion to use. The rest can only be explained by the factors Gabor and Bruce have discovered.

To make sense of this conclusion I talked to many scientists, and they explained a distinction that really helped me—between physical dependence, and addiction. Physical dependence occurs when your body has become hooked on a chemical, and you will experience some withdrawal symptoms if you stop—I am physically dependent on caffeine, and boy, can I feel it this morning.

But addiction is different. Addiction is the psychological state of feeling you need the drug to give you the sensation of feeling calmer, or manic, or numbed, or whatever it does for you. My coffee withdrawal pains will have totally passed in two days—but two weeks from now, I might feel the urgent need to get my mind focused again, and I will convince myself I can't do it without caffeine. That's not dependence; that's not a chemical hook; that's an addiction. This is a crucial difference. And what goes for a mild and fairly harmless addiction like caffeine goes for a hard-core addiction like meth. That's why you can nurse addicts through their withdrawal pains for weeks and see the chemical hooks slowly pass, only for them to relapse months or years later, even though any chemical craving in the body has long since gone. They are no longer physically dependent—but they are addicted. As a culture, for one hundred years, we have convinced ourselves that a real but fairly small aspect of addiction—physical dependence—is the whole show.

"It's really like," Gabor told me one night, "we're still operating out of Newtonian physics in an age of quantum physics. Newtonian physics is very valuable, of course. It deals with a lot of things—but it doesn't deal with the heart of things."