**The Persistent, Dangerous Myth of Heroin Overdose**

Stanton Peele

People rarely die from heroin overdoses — meaning pure concentrations of the drug which simply overwhelm the body's responses. What, then, are we to make of frequent reports of heroin overdoses from Plano, Texas and Strathclyde, Scotland? People do die while consuming heroin — but the overdose myth may actually make such deaths more, rather than less, likely.

The first popular source to tell us about the myth of heroin overdose was the classic 1972 Consumer Union Report, *Licit & Illicit Drugs*, written by Edward M. Brecher. Brecher pointed out that, when street doses of heroin were far purer than they are today (China Cat and black-tar heroin scares notwithstanding), drug overdoses were practically unknown.

Brecher noted that heroin overdoses began to be reported in New York City after World War II, and accelerated into the 1970s. Yet the average purity of a street dosage prior to the War was 40 times the concentration of a 1960s dose.

Research at the Jefferson Medical Center in Philadelphia in the 1920s showed that addicts could tolerate up to a ninefold increase in the concentration of their standard, already large, dose. These researchers estimated that a toxic dose of heroin would be at least 500 milligrams for nonusers and 1800 milligrams for addicts.

In the 1960s, New York City Medical Examiners Drs. Milton Helpern and Michael Baden studied heroin addict deaths. Heroin found near dead addicts was not unusually pure and their body tissues did not show especially high concentrations of the drug. Although the addicts typically shot up in groups, only one addict at a time died. Furthermore, the dead addicts were experienced rather than novice users and therefore should have built up tolerance to large doses of heroin.

The best guess as to what was killing these addicts (aside from general infection, illness, and malnutrition) were the impurities in the drug, such as quinine, which produced adverse reactions in some injectors. A related likelihood which is more evident today is the mixture of drugs, or of drugs and alcohol.

Street lore among heroin addicts typically eschewed drinking alcohol with heroin as a potentially deadly combination. Today, drug cocktails as well as drinking while shooting up are common. The majority of drug deaths in an Australian study, conducted by the National Alcohol and Drug Research Centre, involved heroin in combination with either alcohol (40 percent) or tranquilizers (30 percent).

If it is not pure drugs that kill, but impure drugs and the mixture of drugs, then the myth of the heroin overdose can be dangerous. If users had a guaranteed pure supply of heroin which they relied on, there would be little more likelihood of toxic doses than occur with narcotics administered in a hospital.

But when people take whatever they can off the street, they have no way of knowing how the drug is adulterated. And when they decide to augment heroin's effects, possibly because they do not want to take too much heroin, they may place themselves in the greatest danger.

Plano, Texas is a well-heeled Dallas suburb. For some time, we have been reading about dramatic heroin overdose statistics in Plano — 20 overdoses (17 deadly) since September 1994. In July 1998, twenty-nine people were charged with smuggling and selling heroin and cocaine that led to four fatal overdoses.

But the deaths should not be labeled overdose. Milan Malina, 20, died of pneumonia and inhaling his own vomit. Wesley Scott, 19, died at a party after inhaling his own vomit. Rob Hill, 19, was found dead in his own vomit by his parents after a party. Death by asphyxiation in one's vomit is common among people who mix alcohol with drugs, which often occurs at parties. Alcohol is more likely to cause people to puke, while additional drugs make the intoxicated individuals less able to stir themselves awake.

Strathclyde, Scotland is at the opposite end of the socioeconomic spectrum from Plano. By the end of July 1998, 54 overdose deaths had been reported in Strathclyde. As in Plano, the availability of high-purity heroin had been blamed for the epidemic. But, according to Dr. Laurence Gruer, addictions coordinator for the Greater Glasgow Health Board, "It is actually rare to find someone has died taking heroin alone — it has almost inevitably been taken as part of a cocktail with [tranquilizers] Temazepam or Valium."

Public officials can generally say any bad thing they want about illegal drugs. And they feel no doubt that labeling deaths as overdoses should scare most young people away from drugs. But this message may not have the desired effect. And its unintended consequences can be deadly. As the Australian National Research Centre made clear: "Both heroin users and service providers need to be disabused of the myth that heroin overdoses are solely, or even mainly, attributable to fluctuations in heroin purity."

# A classic holds its ground: A review of Stanton Peele's [*The Meaning of Addiction*](http://www.peele.net/lib/moa.html)[\*](http://www.peele.net/lib/classic.html#note)

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When Stanton Peele's *The Meaning of Addiction* was first published in 1985, it was reviewed in *The New England Journal of Medicine* by Margaret Bean-Bayog, then a prominent addiction specialist on the faculty of Harvard Medical School. The language of the review was not what readers of the staid Journal would expect to read: "[T]his book worried me. Dr. Peele is widely read outside the scientific community. The distortions are subtle, the writing is slick, and to a person unfamiliar with the literature, the arguments are very seductive" (Bean-Bayog, 1986, p. 189). "[I]f a book pretends to scientific neutrality when it is actually a polemic. . ., what then?" Dr. Bean-Bayog asked, adding, "Is there any court of appeal from slur and innuendo?" (p. 190)

What prompted this odd outburst, directed toward a book published for professionals in which the author proposed a comprehensive framework for understanding addictive experience? The answer lies in the cultural background of the dispute. Disagreement about the nature and treatment of addiction exists worldwide. However only in America has the controversy taken on a ferocity comparable to political upheavals that occur when a nation experiences a threat to its psyche. The "culture war" over addiction was at its height in the mid-1980s. Those who deviated from the disease model, with its insistence on abstinence as the only treatment goal and the 12 steps of Alcoholics Anonymous as the only way to get there, were viewed as heretics (much as alleged communists had been viewed 30 years earlier).

Never shy of controversy, Peele stepped in with a reasoned challenge to received wisdom. The original subtitle, "Compulsive Experience and Its Interpretation" (simplified in the 1998 Jossey-Bass reprint to "An Unconventional View") nicely summarized what the book is about. Addiction is an experience, Peele asserts, not an invariant biochemical reaction. In his first chapter he sets forth evidence that conventional notions of addiction do not adequately explain the highly variegated reality they purport to address, including striking cultural differences in susceptibility to addiction to drugs and other experiences, nonaddictive use of the substances considered most addictive (e.g., controlled narcotic users, hospital patients given morphine), surprisingly common examples of natural remission (e.g. Vietnam veterans), and large fluctuations in individuals' usage patterns across the life span, even among heavy users.

To recognize that addiction is akin to other complex human experiences is to bring to bear an individual's whole cultural background and social and psychological universe to understand the individual's reaction to a substance, sensation, or other compelling involvement. According to Peele, the experience of craving or of withdrawal, as well as of tolerance for a drug "engages a person's expectations, values, and self-concept, as well as the person's sense of alternative opportunities for gratification" (p. 2). This is the radical insight (developed both theoretically and empirically) that he has contributed to the field—namely, that the observed physical and emotional manifestations of addiction (its defining attributes) are fundamentally influenced by psychological, environmental, and existential variables.

Thus the word "interpretation" in the book's subtitle refers, in its narrower sense, to the way people interpret potentially seductive experiences (i.e., experiences on which some people, at some times and places, get "hooked") in the light of both their immediate circumstances and life histories. "Interpretation" has a broader application as well, which gives the chapter on "Theories of Addiction" an importance beyond its demonstration of the inadequacy of theories that pass as scientific, including both genetic and exposure (biological or conditioning) theories. Ideas do not exist on a sterile field: forged in cultural history, they reflect and shape individual experience. What we think has a lot to do with how we feel and act. Specifically, explaining and theorizing about addiction are not just scholarly pastimes. Rather, interpretations of addiction—collective as well as individual—are part of the causal nexus that surrounds the behavior. Researchers, clinicians, the legal system, the media, and the schools all contribute to causing or preventing addiction, to making it worse or alleviating it, by what they believe and say about it.

It is Peele's conviction that the United States, as much as any country in the world, has adopted a set of beliefs that make becoming and remaining addicted a self-fulfilling prophecy. As a result, millions of people have come to think they have a "chronic, relapsing disease" rather than a learned and culturally and situationally reinforced behavior that they can outgrow. In this way, Peele has taken the beleaguered term "addiction"—a word so argued over and picked apart that many have discarded it—and shown that it can have relevant and useful meaning. But the "meaning" of his title is a complex one, encompassing both the meanings individuals and cultures assign to their compulsive behaviors and the meanings we, as scientific observers, can find in those behaviors.

Peele's background as a social psychologist informs his vision, as he made clear as far back as *Love and Addiction* (Peele and Brodsky, 1975). The interdisciplinary perspective of social psychology enables him to see how individual, institutional, and scientific conceptions of addiction are culturally conditioned. His ease in moving back and forth among the different sectors of society where the meaning of addiction is created, maintained, and changed—among them the addicted person, the family, the neighborhood, the church, the workplace, the clinic, the hospital, the laboratory, the courtroom, the newsroom, and the board room—risks leaving behind those whose expertise is limited to a particular discipline. This gift of making large connections and synthesizing disparate forms of evidence is increasingly rare in our specialized academic world.

Peele's propensity to leap over conceptual boundaries and find unlikely parallels is displayed most dramatically in *Diseasing of America* (Peele, 1989/1995), an expose of the unholy alliance between the addiction treatment industry and the "true believers" of the 12-step movement. Although the themes of *Diseasing* are previewed in the last chapter of *The Meaning of Addiction*, the latter presents primarily a scientific argument. Its science of addiction, however, is not the "magic bullet" science in which all that need be said about addiction is found within the realm of neurobiology. According to Peele, "our inability to conceive of addiction realistically is tied to our reluctance to formulate scientific concepts about behavior that include subjective perceptions, cultural and individual values, and notions of self-control and other personality-based differences" (p. 3). To remedy that deficiency, he reviews anthropological, sociological, historical, epidemiological, experimental, clinical, and developmental research to document and explain the enormous variations in the way people in different cultures or stages of the life span react to various drugs and other powerfully involving experiences.

The social psychologist acting as cultural historian is most evident in the chapter on "The American Image of Alcohol." Here Peele reviews this country's troubled history with alcohol through the nineteenth-century temperance movement, prohibition and its repeal, and the subsequent channeling of the temperance ideology into the "all or none" model of alcoholism popularized by Alcoholics Anonymous and the quasi-medical "disease theory." He traces America's alcohol problems to a culture uneasy about a substance that, although legal, is perceived as threatening widespread loss of control. This tale of the self-fulfilling prophecy continues with the clinical establishment's fury in the face of social scientists' challenges to the disease theory's oversimplifications.

Yet it is not simply a story of good guys versus bad guys. "More tellingly," Peele notes, "the psychologists who most actively contest the disease theory have begun to formulate the problem in terms very reminiscent of those with whom they are arguing. Even within sociology today, the dominant view is that alcohol problems are solely a function of consumption" (p. 45). Peele extends his analytical probing to the point where he undercuts his own allies—which is why, at a personal level, he hardly has any allies. The world of scholarship is filled with people who are hyperanalytical about everything except themselves and their fields: their habits, presuppositions, interpersonal relations, sacred cows, and protected turf. In contrast, in the article in *American Psychologist* from which "The American Image of Alcohol" was adapted (Peele, 1984), Peele turned the spotlight of psychology on psychologists themselves, showing how the field as a whole, in its dealings with alcohol, has been unable to free itself from the culture it serves. I cannot imagine anyone else carrying out such an analysis.

The continuing relevance of *The Meaning of Addiction* is most pointedly seen in the chapter on "Adult, Infant, and Animal Addiction" (to which I made a minor contribution). Then and now, those who subscribe to an uncomplicated biological understanding of addiction have rested their case in part on the belief that certain drugs (narcotics, cocaine, alcohol) induce addiction automatically in caged animals as well as in infants born to drug-addicted mothers. That belief, however, does not stand up against either experimental or epidemiological evidence. The highlight of the chapter is the "Rat Park" experiments conducted by Bruce Alexander and his colleagues, which demonstrated that animals housed in a social environment with a semblance of normal stimulation and mobility self-administer significantly less morphine than caged animals, which are uncomfortably confined in isolation and have little else to do. Remarkably, in this research the rats housed in a simulated natural environment proved averse to morphine even when previously habituated to it.

Peele has subsequently shown that, over a range of settings and conditions, environmental characteristics and available alternative rewards motivate animals in the face of the most powerful drug stimuli (Peele and DeGrandpre, 1998). Likewise, many environmental factors (such as nutrition) enter into infants' reactions to drugs ingested in the womb, and virtually all deficits attributed to drugs (including withdrawal) are the complex results of the unhealthful conditions in which addicted mothers typically live (including pandrug abuse) and the difficulties they face in nurturing their infants. (Predictably, it is now generally conceded that the "crack baby" hysteria was greatly oversold.) Moreover, there is no equivalent to adult human addiction in organisms whose behavior is unaffected by complex cognitive processes and social environments.

In the years since, Stanton Peele has continued to oppose reductionistic thinking with the idea that "addiction is a response to socially and individually conditioned needs for specific psychophysiological, or experiential, states" (p. xi). Has he made any headway? The tired pseudo-clinical rubric of addiction as a "chronic, relapsing disease" persists, dressed up in the glamorous robes of neurobiology (Leshner, 1997). In the treatment field, the 12-step movement, with its manifest religious origins and content, still holds sway, supported by a massive coercive apparatus that flouts U.S. court rulings upholding a constitutional right to refuse such treatment (Peele et al., 2000). At the same time, a strong counter-movement has arisen, as shown by the growing adoption of harm reduction worldwide. In the United States, harm reduction has made more headway with illegal drugs than with alcohol, despite massive epidemiological confirmation that alcohol-dependent individuals often moderate their drinking with or without treatment (Dawson, 1996; Project MATCH Research Group, 1997).

There is still much need, then, for the moral fervor that, in 1985, burst through Peele's scholarly prose:

Our conventional view of addiction—aided and abetted by science—does nothing so much as convince people of their vulnerability. It is one more element in a pervasive sense of loss of control that is the major contributor to drug and alcohol abuse, along with a host of other maladies of our age. . . . [O]ur best hope is to convey these dangers realistically, by rationally pointing out the costs of excess and, more importantly, by convincing people of the benefits of health and of positive life experience. Otherwise, the idea of addiction can only become another burden to the psyche. Science cannot increase our understanding of ourselves and our world—nor can it show us the way to freedom—if it is held captive by our fears. (p. xii)

Stanton Peele's great gift to the addiction field, and to society, is his sense of the consequences of the ideas we hold — of folly and wisdom alike. I am pleased to have developed with him a model of self-help and treatment based on the idea that an individual's commitment to change, in the context of supportive social circumstances, can bring about a relapse-proof personal transformation, a one-way trip out of the addictive mind-set (Peele et al., 1991). An essential contributor to those supportive social circumstances is a concept of addiction that emphasizes the possibility—and necessity—of outgrowing self-destructive habits.

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\**[The Meaning of Addiction: An Unconventional View](http://www.peele.net/lib/moa.html)* by Stanton Peele. San Francisco, CA: Jossey-Bass, 1998 (orig. pub. 1985). ISBN 0-7879-4382-7 (pbk.).