

The “substances” in addiction: socially constructed or scientifically determined?¹

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Let me start by telling you about a recent experience. It was a weeknight and I was having dinner with a friend at a relatively new restaurant in an up-and-coming neighborhood. We share an interdisciplinary interest in addiction. If an outsider had listened in on our conversation that night, we may have appeared obsessed with addiction. As we walked in, I commented on the small crowd of people who were standing and sitting outside smoking a cigarette, far enough away from the restaurant entrance to allow their smoke to drift skyward. Seeing how smokers were relegated to a public display of their habit turned our conversation to the increased labeling of cigarette smoking as deviant, if not criminal; and, how smokers were stigmatized for a behavior that a few decades ago was acceptable, sometimes even serving as a status symbol. We conjectured why people continued smoking, in spite of the risks they were taking and the disparaging remarks they overheard, coupled with the condescending glances of passer-bys. Once inside the restaurant, no smokers were to be found. No ashtrays were on any of the tables. There were not even any "no smoking" signs," probably because everybody was supposed to know that smoking is not allowed. In this setting, there was no risk of exposure to second-hand smoke.

Before deciding on our food selection, we ordered water and wine. The wine arrived first. The foursome at the table next to us was enjoying some exotic cocktail. By the time we had finished dinner, they had ordered their third bottle of wine. Upon paying, three of the four people at the adjacent table, pulled out a parking ticket to be validated. They seemed oblivious to the fact that their blood-alcohol level might exceed legal limits. Not only did this place them at-risk for being charged with driving-under-the-influence, it also created risks for themselves as well as others who crossed their path. Soon my friend and I were engaged in an animated dialogue about society's inconsistencies regarding various substances. In this case, the two substances were alcohol and tobacco. Whereas the use of both remains legal, tobacco smoking has become much more socially unacceptable than has alcohol consumption. However, the reasons for this appear to be more socially constructed than scientifically determined.

Use and Addiction

By sharing this experience, I propose to show how, in our society, we view the use of two legal substances in contradictory ways. The use of each has been

associated with negative social and health consequences, but the social sanctions on smoking tobacco exceed those on drinking alcohol. Whereas smoking one cigarette is considered too much, unhealthy, and unacceptable, the limits on the extent of alcohol consumption appear more ambiguous. Interestingly, the consequences of drinking are more immediate than those of smoking. For instance, a person who drinks too much may show signs of reduced cognitive functioning, including slurred speech and an unstable gait. No such immediately visible reactions occur from smoking. When it comes to smoking, society sets rigid standards; when it comes to drinking, society's standards are more blurred.

Thinking back to the restaurant and the people at the adjacent table, their level of alcohol consumption never may have been discussed as long as they did not "act drunk" and got home safely. However, problems may have arisen if one of them had an accident, abused somebody while drunk, or missed work the next day due to a hangover. It appears that it is not the substance nor the amount used, but the perceived and actual consequences of use that form our moral judgments—in this case regarding two substances both of which are legal.

As a society, our failure to consider the frequency of the use of drugs that are legal but stigmatized or that are illegal, results in a lack of nuance. When focusing on illegal drugs, social scientists often focus on the user's drug career, whereas society lumps all users together independent of specific drug use patterns. The drug career model recognizes the developmental progression of drug use and distinguishes between stages of use depending on the extent of drug involvement, recognizing that shifts between stages may not be linear (Faupel, 1991; Sterk, 1999; Waldorf, 1973).

Often, no distinction is made between use, abuse and addiction and use is viewed as negatively as are abuse and addiction. This becomes most obvious when illicit substances are involved; for instance, the use of marijuana, methamphetamine, heroin, cocaine, or ecstasy. Using any amount of an illegal drug is socially unacceptable, partly because the assumed potential to lead to addiction and all of its negative consequences. Whereas scientific evidence does not support the notion that one-time use of any drug causes addiction, societal norms support prevention messages that emphasize that one-time use or experimentation lead to addiction.

One may wonder why our adolescents and young adults harbor doubts about our health education, especially if they know someone who has used drugs or if they themselves have tried an illegal substance, without immediately becoming an addict. It appears that more nuanced prevention messages that are grounded in real experience may prove more effective in warning people of the risks associated with use. Such an approach also would prompt us to raise scientific questions about what it is we aim to prevent. Do we want to prevent any exposure to drugs? Do we want to prevent any use? Are we willing to accept

temporary experimental use? Or, are we worried about escalated use and addiction and its consequences?

Society's response also reveals ambiguity when the non-medical use of drugs is involved. This includes the use for non-medical purposes of a drug that has been identified as having medical utility; for example, the use of codeine to achieve a "high" as opposed to its use as an analgesic. In addition, non-medical use may refer to use of a drug with medical utility without supervision by a health care professional. When society fears the potential of addiction, regulations are put in place. For instance, the Food and Drug Administration (FDA) was given the authority to approve drugs as safe and effective for medical use and commercial marketing under the Federal Food, Drug and Cosmetic Act of 1962. However, this act does not restrict a physician's prescribing either the labeled indications or the recommended dose. Concerns about inappropriate prescription practices or the use of doses higher than recommended has prompted several states to implement regulations about the dosage units that can be dispensed (Joranson and Gilson, 1994). Consequently, patients with severe chronic pain sometimes are required to request a new prescription for pain medication every two or three days.

A recent example that has received substantial media and legal attention involved the synthetic opiate pain medication Oxycotin. Oxycotin safely provides a powerful relief from chronic pain through a time-released dose. However, its reputation as a powerful pain suppressor also triggered illegal use. By crushing the pill, which defeats its time-release safeguard, Oxycotin creates psycho-pharmacological effects similar to those of a heroin high. As cases of the non-medical use of the drug were identified, the pharmaceutical company which developed the drug was pressured to remove the pill from the market. Physicians prescribing the drug were investigated to assess the appropriateness of their prescriptions, while patients using the drug were categorized as "addicts." The story is complex, but it exposes society's fear of addiction. From a public health perspective, it is important to recognize the dual effect of controlled substances with their potential to yield addiction. On the one hand we wish to obtain the broadest medical benefit, while, on the other, to reduce the risks of diversion and abuse.

Addiction, a label once only part of the vocabulary of professionals, now has become an integral part of everyday lay language. In the Merriam-Webster Dictionary addiction is defined as "the quality or state of being addicted." It defines addict (verb) as "to devote or surrender (oneself) to something habitually or obsessively," and an addict (noun) as "one who is addicted to a substance." More recently, the addiction concept also has been expanded that do not necessarily depend on the use of a substance. Society is said to "produce" addictive patterns of behavior and, in the contemporary US it seems that any behavior may become "pathologized" as an addiction (Sedgwick, 1993). Individuals, for instance, may become addicted to work, exercise, overeating or

dieting, sex, surfing the internet, shopping, or gambling. With the exception of the "eating disorders," none of these new addictions involve taking a substance. Howard Schaffer (1997) refers to the "addiction field" as being in a conceptual stage of chaos due to a lack of conceptual clarity. He urges the development of scientific definitions that acknowledge that the use of drugs or psychoactive substances is not a sufficient or necessary cause for addiction.

A social psychologist who specializes in addiction, Stanton Peele (1975), has written that "addiction is our way of life," "a primary and universal form of motivation." In *Infinite Jest* (1996), David Foster Wallace describes America's addiction to addiction. He stresses that addiction has become something normal as well as pathological. Behaviors that once symbolized individual autonomy increasingly have been labeled as addictions. Compulsion to certain behaviors may be as much a normal human strategies as they are a disease. The first part of the title of this talk, "the many substances in addiction" refers to the ongoing debate about which specific substances and behaviors are included under addiction.

As the number of behaviors that are placed under the label of addiction increases, so does the characterization that these behaviors involve something negative. Nevertheless, certain addictions, such as being a "workaholic", are valued in our society. Claims about small, managed doses of addiction hint at the possibility of a "controlled addiction" for the use of some substances and the engagement in certain behaviors. Such claims illustrate that a certain degree of addiction might be harmless, serve a positive purpose, and yield positive outcomes. However, in a discourse assuming all or nothing, gradations of addiction and the acceptance of moderate levels of addiction challenge cultural norms and values.

Depending on a scientist's disciplinary background, the definition of addiction varies as well, thereby further confusing popular understandings of addiction. For example, neuroscientists primarily are interested in the brain and measure the effects of neurochemicals on the brain to determine if a person is addicted. Clinical psychologists and psychiatrists, on the other hand, mainly rely on standardized assessments, with the Diagnostic and Statistical Manual being the most commonly used. Others, for instance sociologists and anthropologists, emphasize the meaning of addiction from the perspective of the addict. The lay definition of "addiction" appears to be a compulsive, uncontrollable, generally all-consuming behavior that has negative consequences for the person and the society. In a 2001 consensus document developed by the American Association of Preventive Medicine and the American Society of Addiction Medicine, addiction is defined as: *a primary, chronic neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations*. Addiction remains difficult to define and this leads to the second element of my title: the extent to which addiction is socially constructed or scientifically determined. Related to this, is the confusion about the distinction

between being addicted and being physically dependent. Alfred Lindensmith (1968), one of the pioneers of physical dependence, wrote:

The critical experience in the fixation process is not the positive euphoria produced by the drug but rather the relief of the pain that invariably appears when a physically dependent person stops using the drug. This experience becomes critical, however, only when an additional indispensable element in the situation is taken into account, namely a cognitive one. The individual not only must experience withdrawal distress but must understand or conceptualize this experience in a particular way. He [or she] must realize that his [or her] distress is produced by the interruption of prior regular use of the drug.

A key feature of the current discourse on addiction is the extent to which the addict has free choice. In reality it appears that an addict's desire mitigates a free choice. It is "a choice whose voluntariness is insufficiently pure" (Sedgwick, 1993). Derrida (1995) wrote that addiction yields a "pleasure taken in an experience without truth." William Burroughs (1959) captures this in the introduction to his novel *The Naked Lunch*:

Junk is the ideal product . . . No sales talk necessary . . . The junk merchant does not sell his product to the consumer, he sells the consumer to his product . . . A dope fiend is a man in total need of dope. Beyond a certain frequency need knows absolutely no limit or control.

In some ways this reminds us of Marx's analysis of commodity fetishism in which capitalist production entails the reification of human consciousness and the personification of things (Brodie and Redfield, 2002). But, junk also moves from being a commodity to a parasitic organism. Burroughs presents junk, the drug, as the object of desire and he also points out how it reverses the relationship between the consumer and the product. What is interesting about Burroughs' observation is that junk is presented not only as part of the capitalist consumer society but also in the context of desire, in the sense of Freud or Lacan. Whereas Lacan makes a distinction between desire and need, Burroughs believes that the desire for junk constitutes a need, similar to a diabetic who requires insulin to survive.

Some conceptualize addiction in ways that a person can have the "disease" of addiction without engaging in the compulsive behavior. Think for instance about the alcoholic who has not had a drink for several years but who at an Alcoholics Anonymous meeting stands up and introduces herself as an alcoholic. Alcoholism has shifted from being a disease that involves certain behaviors to having become an identity.

When discussing addiction it is essential to recognize its cyclical nature. For example, heroin provides relief, but once its effects wane it causes pain, a pain

that can only be reduced by using more of the drug as a means to achieve relief, which in turn requires more use, etc. Or, excessive working provides an escape, but once the person takes a break and faces reality, the escape to the original obsessive behavior and experience becomes the route to relief. The sickness has become its own cure. Addiction has become a desire to escape desire. Or on the terms of Jacques Derrida, "the pharmakon is the antidote and the poison."

"Good" and "bad" drugs

The Drug Abuse Prevention and Control Act makes a distinction between five categories or schedules of drugs on the basis of their medical utility and abuse potential. In addition to the legal classification of drugs, categorization based on the drug's effect on the central nervous system also is common. The main classes of psychoactive drugs based on this scheme are narcotics, sedatives and tranquilizers, stimulants, hallucinogens, marijuana, and inhalants. Within each class, cross-tolerance and dependence develop. The effects of drugs are partly a matter of biochemistry. For instance, pharmacologists view drug effects in the context of identity, dose, potency and purity, route of administration, and habituation. In addition, however, we also need to consider effects due to the socio-cultural context in which use takes place. Zinberg (1984) refers to this as the set –the mental and emotional state of the individual taking the drug– and the setting –the social and physical environment where the drug use takes place. An influential study regarding the set and setting was conducted by Lee Robins among Vietnam veterans. Robins (1973; 1974) found that the consumption of heroin among Vietnam veterans did not always lead to addiction, and that many returning veterans coped with their physical dependence as well as addiction. Upon their return to the United States, many veterans stopped engaging in addictive behaviors –often due to the significant change in possible use set and settings.

In our society we often make a distinction between "good" and "bad" drugs, based on the perceived effects of the drug. The latter typically are as much socially constructed as scientifically determined (Goode and Ben-Yehuda, 1994). Society's labeling of a particular drug in either of these two categories does not necessarily reflect the actual social harm or individual damage caused by use; rather it symbolizes the drug's symbolic connotations. A good example is the way in which narcotic drugs are viewed. In the words of David Musto:

American concern with narcotics is more than a medical or legal problem –it is in the fullest sense a political problem. The energy that has given impetus to drug control and prohibition came from profound tensions among socioeconomic groups, ethnic minorities and generations . . . The occasion for the legal prohibition of drugs for non-medical purposes appears to come at a time of social crisis between the drug-linked group and the rest of American society (Musto, 1973).

Society creates drug epidemics that are socially constructed but that nevertheless guide policies. For instance, when some epidemiological indicators showed the rates of methamphetamine to be increasing in certain parts of the US, the media interpreted this as the start of an epidemic and compared it with the crack cocaine epidemic of the 1980s. However, no methamphetamine epidemic emerged across the nation, but excessive use was retained to those areas where the original reports came from. A scientific claim of a drug epidemic can only be made if adequate evidence is available, including the prevalence and incidence of use, the past use of any substances among users, and other past medical history, including psychopathology. Without such evidence any reference to an epidemic is misleading.

Parallel to the ambiguity about the concept of addiction, contemporary views on what are “good” or “bad” drugs are equivocal. There are numerous examples. For instance, Prozac –an antidepressant which alters mood by manipulating levels of neurotransmitter chemicals in the brain– has properties that are very similar to those of MDMA, more popularly known as ecstasy. Prozac is one of the most popular selective serotonin reuptake inhibitors and its availability introduced the larger public to the importance of neurochemistry. In *Listening to Prozac*, Peter Kramer (1993), points out that it is acceptable for people to self-medicate (in this case with Prozac) in order to feel their real self. Prozac is presented in the US as having inconsequential side effects. Others pointing to the possible negative side effects –especially the potential of sexual dysfunction and the uncertainty regarding long-term neurotoxicity– are less sanguine than Kramer. Some even argue that SSRIs are not only addictive, but also potentially neurotoxic. Whereas Prozac and other SSRIs represent a vast commercial success, MDMA or ecstasy users are treated as criminals.

Similarly, marijuana users are being prosecuted because of their use of an illegal substance, while the use of chemical THC as a prescription medication is tolerated. Dronabinol (trade name Marinol) is a legal, synthetic THC alternative to cannabis. Nevertheless, many patients claim they find minimal relief from it, particularly when compared to inhaled marijuana, due to the lack of several active compounds other than THC in dronabinol. In addition, patients prescribed dronabinol frequently complain of its high psychoactivity, which is caused by its oral route of ingestion. Oral administration also delays the drug from taking peak effect for two to four hours after dosing. A 1999 report by the Institute of Medicine concluded: "It is well recognized that Marinol's oral route of administration hampers its effectiveness because of slow absorption and patients' desire for more control over dosing. ... In contrast, inhaled marijuana is rapidly absorbed" (Joy, Watson and Benson, 1999). Thus, patients who may benefit from a therapy are caught between social policy and scientific evidence.

Another example is the widely prescribed drug Ritalin. It is a “regular stimulant” and extensively is used to treat children with attention deficit hyperactivity disorder (ADHD). Yet, the pharmacological profile of Ritalin is very similar to that

of nicotine, a legal drug, and methamphetamine, which are illegal. In fact, Ritalin has become a major profit item for the pharmaceutical company that holds its patent. Parents demand it for their children, not to cure a “disease” but to help them in behaving in socially acceptable ways at home and at school. Are we creating “addicts” who are “victims of the medico-pharmaceutical complex?”

We face the challenge of having drugs available in our society for which the effects on the users are similar, but the moral assessment varies. The tension between prescription and “street” drugs is not new and has been played out for many decades without any resolution. Not only are the boundaries between legal and illegal drugs often arbitrary, but also occur when focusing on only illegal drugs. Among those who use illicit drugs, distinctions are made, for example, based on the type of drug, the form in which a specific drug is used, the route of administration, and the perceived associated social and health consequences. For instance, the use of crack cocaine frequently is viewed as more serious and threatening to society than to the use of powdered cocaine. Nevertheless, in either case the drug used is cocaine. However, differences exist among its users with crack cocaine use being more aggressively marketed and commonly used among residents of poor innercity neighborhoods, and powdered cocaine use being associated with users who have a higher socio-economic status and more at stake, therefore, are less likely to let their use escalate (Sterk, 1996).

The example of alcohol: the impact of time and culture

Although addiction emerged as a medical and legal concept only in the early twentieth century, identification and classification of compulsive behaviors associated with it have a much longer history. Alcohol serves as a good example. Until the end of the 19th century individuals who consumed excessive amounts of alcohol typically were tolerated. A brief exploration of 19th century literature reveals that Victorian novels such as *Wuthering Heights* (1847) by Emily Bronte, *Mary Barton* (1848) by Elizabeth Gaskell, and *Hard Times* (1854) by Charles Dickens presented examples of excessive alcohol consumption. Typically, the narrative did not focus on the reasons for this excessive drinking, but it provides insights in the “identity” of alcoholics, even those who were able to function relatively well in everyday life. An example of the latter is Grace Pool in Charlotte’s Bronte’s *Jane Eyre* (1847).

Victorian novels also portrayed alcoholism as a form of self-medication. For instance, Esther, in *Mary Barton*, drinks to cope with the pain of being an alienated, penniless prostitute. These alcoholics were portrayed as weak-willed and sometimes “degenerate,” but rarely as hopelessly enslaved to alcohol. This perspective differs significantly from the current pathological descriptions of alcoholics. It shows us the importance of placing alcohol addiction in a broader historical context.

During the period following the American Revolution, alcohol consumption was socially accepted and the levels of alcohol consumption exceeded those ever registered again in modern times (Musto, 2002). As the public awareness regarding the negative consequences to alcoholics and society at large increased, the first temperance movement emerged. In his 1852 address to the national temperance organization of reformed drinkers, the Washingtonians, Abraham Lincoln recalled how alcohol was “good” prior to the emergence of the temperance movement, whereas it now was being perceived as “bad.” The Prohibition party, founded in 1880, was followed by the Anti-Saloon League in 1895. These ongoing movements against alcohol consumption resulted in prohibition in 1920. The Prohibition movement, however, reflected the tensions of late 19th century, early 20th century America. During this period, immigration to the United States increased and fear of these immigrants, mainly from Southern and Eastern Europe, fueled the prohibition movement (Courtwright, 2001).

During the subsequent depression, pressure to rescind Prohibition grew, due in large part to the widespread consumption of bootlegged alcohol and to the general resistance of Americans’ to abstain from consuming illegal alcohol. In 1933, President Franklin Roosevelt characterized Prohibition as a failure at promoting temperance. Instead, he favored the taxation of alcohol –a strategy which during the Depression might provide the government with needed revenue. Prior to Prohibition, people went to saloons to drink or buy alcohol beverages. The sales of alcohol in package stores and grocery stores emerged in the early 1930s as part of the liquor licensing system that was put in place. Increasingly a separation between places where people buy alcohol and consume it occurred. By the prewar years, attitudes toward alcohol consumption became increasingly more tolerant. After Prohibition, the “dry martini” became the classic American cocktail. The recent proliferation of martini bars indicate this cocktail is back in vogue.

In addition to history, one has to consider the cultural context. For instance, in the United States one finds many geographical areas where the sale of alcohol is illegal. One reads of a pregnant woman who is charged with “fetal” abuse if she drinks alcohol. Or, a person who drinks too much is told that this is a disease that requires treatment and once treated no alcohol should be consumed ever again. The topic of alcohol consumption during pregnancy can serve as an example of shifting cultural norms and values. Concerns about alcohol consumption during pregnancy were largely unknown until the 1970s. In *Alcohol Explored* (1942), Howard Haggard and E.M. Jellinek of the Yale Center of Alcohol Studies, wrote that if “drunken” parents were more likely to produce “damaged” children this could be attributed to “the bad influence of the alcoholic home.”

In the 1970s, the term “fetal alcohol syndrome” was coined. Research showed that not only heavy drinking but even the modest consumption of alcohol could be harmful to the fetus. Consequently during the 1980s, many cities required

displays of warning notices in bars and liquor stores indicating that drinking alcohol while pregnant was dangerous. In 1988, the Omnibus Drug Act was passed by Congress, requiring that all containers of alcoholic beverages carry a warning that “according to the surgeon general, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects.” We now face a situation in which no absolutely safe level of drinking has been established and the only way that a pregnant woman can be certain that she will cause no harm to her fetus is through abstinence (Barr, 1999). Barr raises the question that if women are not allowed to drink when pregnant, should they not also be warned against engaging in other activities for which no safe level has been established?

Despite centuries of debate, society remains conflicted about excessive alcohol consumption. The justification that a high status professional who regularly gets drunk at a martini bar may be job-related stress is more socially acceptable, hence less stigmatized, than the same level of alcohol consumption by a person who walks through a disadvantaged neighborhood with a bottle of liquor in a brown bag. This person immediately is labeled a drunk, stigmatized as a “bum,” and, if circumstances allow, locked up in jail. Whereas the professional may end up being chemically dependent, this label is unlikely to be used for his “peer” who drinks out of a brown bag and in public. If the professional’s habit begins to interfere with his work or personal life, a treatment option will be suggested.

Like addicts in general, alcoholics often don’t realize that they have developed a habit until it is “too late.” In *The Cybernetics of Self*, the anthropologist George Bateson refers to “the bankruptcy of the epistemology of self control” when he writes:

The panic of the alcoholic who has hit rock bottom is the panic of the man who thought he had control over a vehicle but suddenly finds that the vehicle can run away with him . . . Suddenly, pressure on what he knows is the brake seems to make the vehicle go faster. It is the panic of discovering that it –the self plus the vehicle– is bigger than he is.

Cigarette smoking: another legal drug, but challenged

Like alcohol, nicotine is a commonly used legal substance to which people are addicted. The most typical form of nicotine intake is cigarette smoking. The 1964 Surgeon General’s Report on Smoking and Health was a landmark document for many reasons, including its emphasis on the negative health consequences of smoking, especially the link between cigarette smoking and lung cancer. However, in that same report cigarette smoking was not labeled as addictive.

*In medical and scientific terminology the practice (smoking) should be labeled **habituation** to distinguish it clearly from **addiction**, since the biological effects of tobacco, like coffee and other caffeine-containing beverages, betel morsel chewing and the like, are not comparable to*

those produced by morphine, alcohol, barbiturates, and many other potent addicting drugs. (emphasis in original)

It became, however, increasingly clear that the intoxication requirement had its limitations. For example, one would be hard-pressed to claim that cigarette smoking results in intoxication. In the 1988 Surgeon General Report, intoxication was dropped, leaving compulsive use, psychoactive effects and drug-reinforced behavior as criteria for defining addiction or dependence, which were viewed as the same. As a result, cigarette smoking now was defined as addictive.

As public health campaigns have highlighted the negative consequences of smoking, policies have resulted in increased taxes on cigarettes and decreased settings in which smoking is allowed. Nevertheless, as smoking has become a deviant behavior that challenges mainstream norms, approximately one in four Americans continues to smoke (CDC, 2002). The fact that 75% of the US population does not smoke is a public health success. Many smokers did not realize they were addicts until they faced a situation in which they were unable to smoke. Others sought to quit and realized that the effects of not smoking can seem worse than those of continued smoking. Ellen Walker (1990) described how this is true for cigarette smokers in *Smoker: Self Portrait of a Nicotine Addict*. She recalls not smoking and gaining forty pounds, having aching joints, being unable to concentrate, and becoming depressed. After eight months of "torture" she resumed smoking, her pain disappeared and she felt happy once again. While she knew that smoking was unhealthy, she also learned how abstinence was unhealthy for her. But raising this question is not politically correct in a society in which the emphasis is on healthy living; actually in which being healthy has become a civic duty and in which individuals who take "risks" are considered "deviants," if not yet criminals. In our society, the possible positive effects of smoking, including its potential as a form of self-medication, are dismissed as illusory and excluded from the calculation of risk.

Final remarks

How interesting it is to be a member of a society that detests the negative health consequences of smoking but is much more tolerant toward alcohol consumption. We live in a culture characterized by inconsistencies when it comes to addiction and risks. What does it tell us about our society if we are more "tolerant" of excessive drinking than of "excessive" smoking? Clearly norms and values influence our views and policies on addiction as much as science does.

Scientific controversies fuel the debate. Unfortunately, the scientific claims also contradict each other. Moreover, society is willing to ignore scientific claims that do not support mainstream norms and values. An example that covers drug use as well as health consequences is the access to syringes among injection drug users, a group among whom HIV infection is substantial. Whereas the scientific

evidence in support of syringe availability as a risk reduction strategy is undisputed, it is ignored because society is not willing to take an action –making syringes available to injection drug users-- that might be interpreted as endorsing drug use.

Thus it remains uncertain if we are dealing with a disease called addiction or a syndrome. Or, maybe we should refer to addiction as a behavioral disorder. Even if we agree about one addiction, we live in a society that continually develops new social and scientific categories of addiction. A quick review of various editions of the Diagnostic and Statistical Manual shows how new categories for addictions have been added. A person who abuses multiple substances or who is dependent on multiple substances may be classified as addicted to some, while using others. Thus, a person whose alcohol habit fits the criteria for alcohol dependence, who smoked four cigarettes over the past three months, and who uses cocaine infrequently when visiting certain friends may be defined as either an addict or a drug user.

The situation becomes even more challenging when a person engages in multiple addictive behaviors or shifts from one to another. Society may refer to them as people with an “addictive personality,” but what do we really mean by this and to what extent is this also a scientific category? Then there are people who suffer from co-morbid conditions; for example, a person who is dependent on drugs but who also suffers from clinical depression. Increasingly the notion of a dual diagnosis is being recognized. In much of the research conducted in field of public health, individuals for whom regular drug regimens fail, begin to self-medicate with illegal substances and are viewed only through the lens of this abuse. They are individuals who might end up in drug treatment as an alternative to incarceration, who are labeled as drug addicts while their mental health problems are ignored, and who know they have a problem but who lack access to care or adequate resources to seek care.

The number of definitions of addiction continues to increase, sometimes, it seems, so that all stakeholders can be placated. For example, doctors prescribe Ritalin to young people who have attention deficit disorder. However, there also are the parents who want their children to do well in school and who demand a prescription; or the school teachers who want a class room that is manageable; and the pharmaceutical industry which not only advertises the drug in professional journals but also in the popular media.

Clearly we have not resolved the many “substances in addiction” and as a society we are caught between scientifically determined categories and socially constructed labels. I leave you with the question I originally raised.

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