Your Brain (and How it is Educated) on Drugs

“This is your brain,” says a man holding up an egg. “This is drugs,” the man points to a frying pan on a hot stove. He cracks the egg, allowing the insides to pour into the center of the pan. An unnerving sizzle is audible. The man lifts the pan and holds it towards the camera so that the frying egg is fully visible. “This is your brain on drugs,” he pauses, “any questions?” (This Is Your Brain On Drugs.) This advertisement, sponsored by the Partnership for a Drug-Free America, is a common example of propaganda used to encourage a “just say no” attitude among adolescents towards drugs. Students are primarily taught avoidance of illegal substances so that they may similarly avoid the negative impacts these substances may have on their lives, their education, and most importantly, their health.

School-based drug education originated in the 1880s during the pre-prohibition era with the focus of abstinence (Beck 16), but that focus has shifted several times between the teaching of avoidance and the teaching of decision making safety, generally as a reflection of the prevailing political attitudes towards drugs. The primary focus of present drug education in the United States is to promote total abstinence from drug use in adolescents (“D.A.R.E. America”), mimicking the present prohibition context. Although the archaic “just say no” teaching strategies used in today’s educative
programs would thrive in an idealistic world, realistically they fail to recognize the reality of widespread drug use among teenagers and in turn create an environment in which the danger potential is much greater due to the lack of harm-reduction efforts in school-based drug education.

A Brief History of Drug Education Strategies

As previously stated, the first school-based drug education programs, established in the 1880s, focused on teaching students to abstain from alcohol and other narcotics. These programs were dominantly driven by the Women’s Christian Temperance Union, or the WCTU (Beck 16), whose mission is to practice total abstinence from alcoholic beverages and drugs (“Home”). Even when drug education was first appearing predating the 18th Amendment and prohibition of alcohol in the 1920s (“NebraskaStudies.Org.”), there were two major objections to educating the youth of dangerous substances. Some critics argued that the negative effects which came from use of the substances were being over-exaggerated as a tactic intended to scare the nation’s youth. Others argued that informing students of drugs and alcohol would simply create a new temptation to experiment with “forbidden fruit” (Beck 16).

After the 18th amendment failed and was repealed, the Women’s Christian Temperance Union remained the dominant driving force behind the drug education effort in schools, but rather than continuing to focus their resources towards anti-alcohol campaigns, they instead shifted their intentions to deterring the use of other drugs such as opiates, marijuana, and cocaine, which were generalized into one large category and
referred to as “narcotics.” Retaining the traditional “just say no” attitude, these new intentions of demonizing “narcotics” began to pick up political steam in the 1920s and 30s, drawing the attention many politicians and government officials. Richard P. Hobson, founder of the International Narcotic Education Association, began holding Narcotic Education Weeks for students across America, preaching drug safety through abstinence by giving students averse and exaggerated perceptions of the consequences of heroin, cocaine, and marijuana use (Beck 16-25).

“Narcotics are soluble in fat, so they penetrate the fatty sheathing that protects the brain from most harmful substances in the blood current, and in this way the poison comes quickly in contact with the delicate highly organized gray matter. Similarly these poisons attack the delicate, carefully protected organs of reproduction, impairing the sexuil power of the male, causing the female addict to become sterile, and undermining the germ plasm, by virtue of which the species renews its life from generation to generation.

In the case of cocaine and heroin the degeneration of the upper brain is so swift that the elements of character crumble in a few months. Complete demoralization follows, and often the life of crime joins with physical ills and the spur of torture of the drug, to hasten the end.

When the drug begins to subside, a condition of torture sets in. Pains often succeed each other as though a sword were being thrust through the body. In advanced cases this suffering (called “withdrawal pains”) is considered the most acute torture ever endured by man. The drug of addiction will quickly relieve this torture. Naturally, the addict comes to consider getting his supply of the drug as a matter life and death. “ ("Broadcast Speeches: World Narcotic Defense Association")
The excerpt above comes from a 1929 radio broadcast in Los Angeles in which Hobson discusses the work done by his organization ("Broadcast Speeches: World Narcotic Defense Association"). The quotation perfectly exemplifies Hobson’s use extreme exaggeration as a scare tactic in preventing drug abuse in the nation’s youth as very little of the material stated can be proven factual. One of the biggest opponents of the advancement towards fear-based drug education in schools made by Hobson and the International Narcotic Education Association was Harry Anslinger, who was the commissioner of the Federal Bureau of Narcotics from 1930 to 1962. He felt that allowing drug education to be taught in public schools would tempt the impressionable adolescents as well as threaten the wellbeing of his own organization. Anslinger’s strategies of combating these fears were rivaling any attempt to enstate school-based drug education policies and issuing several press releases about marijuana in 1935 which ironically were similar to Hobson’s statements in that they relied heavily on spurious scare tactics (Beck 25-27).

Because of the political power held by Anslinger, his strategies were utilized for a long period of time. However in 1963, after Anslinger had resigned from his position as commissioner of the Federal Bureau of Narcotics (Beck 27), President Kennedy released a statement outlining the preventative intent of the new drug education tactics to be used by public schools in the United States. The goal was for the American teenager to “be made conscious of the full range of harmful effects, physical and psychological, that narcotics and dangerous drugs can produce” and the potential for “these drugs [to] destroy him and all he aspires to” (“President’s Advisory Commission
on Narcotic and Drug Abuse” 17-18). The objective of this shift in focus was to inform students of the dangers of drug use and to incite fear based off of the information taught.

As the United States entered the 1970s, yet another shift occurred when the National Institute on Drug Abuse adopted more realistic ways of combatting the prevalence of drug use. Rather than ignorantly expecting the students to abide by the principal of total abstinence, the target of substance-related education transitioned to preventing misuse and abuse of drugs as well as encouraging safe decision-making about drug usage (Beck 29-30). Although subversive, the idea of giving adolescents the freedom to make responsible decisions did not withstand turn of the decade.

Because of the “Parent Power” zero-tolerance movement in the 1980s in which the collective attitude of older generations was that the key to prevention of drug abuse in adolescents was through parenting (Dupont), the substance-education system regressed back to no-use policies (Beck 31-32). The retrogression in the 1980s is still evident in today’s most prevalent anti-substance abuse programs. D.A.R.E., or Drug Abuse Resistance Education (“D.A.R.E. America”) was established in 1983 by the Los Angeles Police Department and the Los Angeles Unified School District (Rosenbaum 383). The Partnership for a Drug-Free America, an organization established in the 1980s which broadcasts anti-drug use messages through ads in magazines, newspapers, and on television, primarily utilizes scare tactics in order to inspire a no-use attitude in their audience (Beck 32). The advertisement previously described in which the effects of drugs on one’s brain are compared to an egg in a frying pan
thoroughly demonstrates the unfounded strategies intended to intimidate America’s youth used by The Partnership for a Drug-Free America.

Political Catalysts in Shifts in Drug Education

The United States government has attempted to control and eliminate drug use among citizens by passing legislations and creating programs designed to eradicate the manufacturing, misuse, possession, and distribution of illegal and dangerous substances and to provide legal grounds for the government to take action against violators (“Controlled Substances Act”). This is primarily done through the scheduling, or categorization, of drugs into five groups determined by the following factors:

“the drug’s actual potential for abuse, scientific evidence of the drug’s pharmacological effects, the state of current scientific knowledge regarding the substance, its history and current patterns of abuse, the scope, duration, and significance of abuse, what, if any, risk there is to public health, the drug’s psychic or physiological dependence liability, whether the substance is an immediate precursor of a substance already controlled” (Coleman 13).
The following table has been created using the Controlled Substances Act in order to illustrate the variations between drug schedules.

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule I</td>
<td>high potential for abuse, no currently accepted medical use in treatment in the United States, lack of accepted safety for use under medical supervision</td>
<td>MDMA, LSD, DMT, marijuana, heroin, psilocybin</td>
</tr>
<tr>
<td>Schedule II</td>
<td>high potential for abuse, has a currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions, abuse may lead to severe psychological or physical dependence</td>
<td>cocaine, methamphetamine, codeine, oxycodone</td>
</tr>
<tr>
<td>Schedule III</td>
<td>potential for abuse less than that of schedules I and II, has a currently accepted medical use in treatment in the United States, abuse may lead to moderate or low physical dependence or high psychological dependence</td>
<td>ketamine, anabolic steroids, hydrocodone, amphetamine</td>
</tr>
<tr>
<td>Schedule IV</td>
<td>low potential for abuse relative to that of schedule III, has a currently accepted medical use in treatment in the United States, abuse may lead to limited physical dependence or psychological dependence relative to that of schedule III</td>
<td>barbital, phenobarbital</td>
</tr>
<tr>
<td>Schedule V</td>
<td>low potential for abuse relative to that of schedule IV, has a currently accepted medical use in treatment in the United States, abuse may lead to limited physical dependence or psychological dependence relative to that of schedule IV</td>
<td>pyrovalerone, pregabalin</td>
</tr>
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In the documentary *Neurons to Nirvana*, directed by Oliver Hockenhull, the claim is made that “In order to ban a drug, you had to paint it as having extreme dangers linked to it.” This statement serves as the principal explanation as to why drug education has been fundamentally based off of abstinence and fear throughout history. The inaccuracies found in drug-abuse prevention campaigns intentionally hyperbolize the dangers and consequences of drug use in order to instill a negative attitude of the general public towards these substances so that the substances may be successfully outlawed by policy.

Logically, the abstinence approach against drugs taught in public schools mimics legal policies of prohibition as any discrepancies between education and policy would deteriorate the integrity of the law. This is evident in the analysis of historical shifts in drug education strategies as the protocols used in educating America’s youth are the product of the legal policies of that specific time (*Neurons to Nirvana*). Richard P. Hobson’s Narcotic Education Weeks in the 1930s are a prime example of the parallel between policy and educative techniques. The focus of Hobson’s program was teaching abstinence from heroin, cocaine, and marijuana, the newly illicit substances which were originally outlawed in 1924 ("Heroin Timeline Info"), 1914 ("The Surprising History of Why Cocaine Is Illegal"), and 1931 ("Marijuana Timeline"), respectively.

As discussed previously, the dominant education method used historically is fear-based resistance (Beck). Despite this tradition, the methods practiced in the 1950s, 60s, and early 70s leaned towards a decision-based and safety-oriented technique which reflected the open-minded research being conducted in psychiatry involving new
psychedelic chemicals (*DMT: The Spirit Molecule*). Timothy Leary, a psychologist known for his research involving psychedelic drugs such as psilocybin, or “magic mushrooms,” and lysergic acid diethylamide, also known as “LSD” and “acid,” began to experiment with the drugs himself (“Timothy Leary’s Trip Thru Time”), advocating the use of the chemicals in a counterproductive way which ultimately resulted in adverse cultural and political reactions. Leary’s radical strategies in studying psychedelics combined with the widespread experimentation with these drugs among civilians led to the outlawing of psychedelics as well as a cease in funding for any studies involving psychedelic chemicals post-1970 and the discrediting of any scientists interested in studying them (*DMT: The Spirit Molecule*). Additionally, Leary’s research was a catalyst in the enactment of the Controlled Substances Act of 1970 which created drug scheduling (Coleman 9). These events were the undertones guiding the transitional period during the turn of the decade as the public’s attitude and the government’s drug policy retrogressed to zero-tolerance (Beck).

Despite scheduling efforts made by the Drug Enforcement Agency and Food and Drug Administration, drug prevalence and availability has remained unhindered (*Neurons to Nirvana*). In some situations, like that of methylenedioxymethamphetamine, or MDMA, in the 1980s and 90s, the scheduling of a substance may even increase its popularity, bringing it to the attention of the public and into mainstream use (“TheDEA.org: The History of MDMA”). Similarly, prohibition of marijuana has made little to no impact on availability of the drug considering 60% of all of the drug cartel profits in Mexico come from marijuana trafficking in the United States (*Neurons to Nirvana*).
Unfortunately, the decisions of how to combat drug abuse and teach drug safety in the United States have not always been made with the best interest of the population in mind. “More people die each year from using prescription pain relievers than all illegal drugs combined” (*Neurons to Nirvana*). Although tobacco and alcohol fit the description of schedule I substances, with no accepted medicinal use and high potential for abuse and dependence (“Controlled Substances Act”), they are legal for public use and consumption. Why were pharmaceuticals, tobacco products, and alcohol not demonized with the rest of the scheduled substances? The Partnership for a Drug-Free America, a widely recognized national campaign and a source of anti-drug propaganda, falls short of discussing the negative effects of alcohol, tobacco, and pharmaceutical drugs. This biased and purposeful lack of disclosure of information can be attributed to the major benefactors of the ad campaign, Anheuser-Busch, Philip Moris, RJR Reynolds, Hoffman-LaRoche, and Smithkline Beecham, all large beer, tobacco, and pharmaceutical corporations (Beck 31-32).

The bias in drug education and legality is also the product of political fear. During the Nixon administration, drugs were declared “public enemy number one” (*Neurons to Nirvana*). President Richard Nixon speaks to a council member about the war on drugs:

“Now, this is one thing I want. I want a Goddamn strong statement on marihuana. Can I get that out of this sonofabitching, uh, Domestic Council? I mean one on marihuana that just tears the ass out of them. I see another thing in the news summary this morning about it. You know it’s a funny thing, every one of the bastards that are out for legalizing marihuana is Jewish. What the Christ is the matter with the Jews, Bob, what is the matter
with them? I suppose it’s because most of them are psychiatrists, you know, there’s so many, all the greatest psychiatrists are Jewish. By God we are going to hit the marihuana thing, and I want to hit it square in the puss, I want to find a way of putting more on that. More [unintelligible] work with somebody else with this…. Now I want to hit it, against legalizing and all that sort of thing.” (Neurons to Nirvana)

Nixon’s quotation encompasses his determination and gives the impression of his willingness to use whatever means necessary to eliminate marijuana use. However, Nixon was not the only president with these intentions. During the Reagan Administration, Nancy Reagan was conducting the “Just Say No Campaign.” Ron Reagan, son of Ronald and Nancy, once stated about his mother’s campaign and the war on drugs, “It’s not on marijuana, the mind altering substance; it’s on marijuana, the antithesis of the state” (Neurons to Nirvana). Reagan’s statement may have been one of unpopular opinion in his family, but it was widely supported by young people across the United States. Marijuana and LSD were commonly associated with attitudes of peace and love as well as anti-Vietnam war efforts (Neurons to Nirvana). David E. Nichols, Ph.D argues specifically that LSD was a cause of decreased war incentive, therefore threatening the power of the State and stimulating the drive of politicians to outlaw the chemical (Neurons to Nirvana).

A defensive tactic used by many politicians when debating potential medical advancements involving illegal substances such as cannabis is pointing out the lack of studies showing beneficial medicinal uses for these substances. The lack of sufficient evidence, however is the product of the government’s refusal to sanction and fund any
studies with the intent of investigating the benefits of marijuana or other schedule I substances (Neurons to Nirvana). In Rick Strassman’s experiment “Dose-Response Study of N-Dimethyltryptamine in Humans,” he is conducting one of the first sanctioned psychedelic-related studies since the 1970s (DMT: The Spirit Molecule). The documentary DMT: The Spirit Molecule, directed by Mitch Schultz, analyzes the difficulties faced by Strassman, specifically describing the multi-year process through which he went to gain permission to carry out the experimentation and the complications involved in obtaining the desired subject of the test, DMT, due to legal prohibition of it. The documentary provides evidence for the claim that government regulatory agencies prevent experimentation designed to show benefits of illegal substances, therefore it is impossible for studies confirming the hypothesized medicinal and therapeutic benefits of the substances to exist.

Another corporate bias which has led to demonizing many substances, specifically psychedelics, is the inability to trademark the chemicals. Before 1970, there was an increase in research involving psychedelics as treatment for psychiatric disorders. LSD was shown to be a successful treatment for alcoholism, as was originally hypothesized by Bill Wilson, the founder of Alcoholics Anonymous, and later supported by Dr. Humphrey Osman’s experimentation yielding a revolutionary 45% success rate (Neurons to Nirvana). Despite any existing evidence of medicinal use, off-patent chemicals such as MDMA, LSD, psilocybin, DMT, and marijuana are portrayed as invaluable due to the pharmaceutical companies’s inability to corporatize and profit off of public domain chemicals as medical treatment (Neurons to Nirvana).
Analysis of the Issues Involved in Present Day Drug Education Tactics

It seems obvious that prohibition of drugs is ineffective and unrealistic for several reasons. Similar to the 1920s when prohibition of alcohol failed (Beck), a black market will continue to thrive due to the uninterrupted demand for the contraband substance (Neurons to Nirvana). Further, the scheduling and prohibition of substances, as previously discussed and exemplified with MDMA, may actually result in an increase in popularity of the now “forbidden fruits” (“TheDEA.org: The History of MDMA”). Finally, it is evident through examining the annual number of drug-related incarcerations that legality is not a sufficient preventative measure. “In the US alone, over 1.5 million people were arrested in 2014 on non-violent drug charges, 83 per cent of those solely for possession” (Branson).

As a parallel, preaching abstinence from drugs to adolescents is equally as ineffective and unrealistic. Presently, this education of resistance is taught most widely through a program entitled D.A.R.E., or Drug Abuse Resistance Education (“D.A.R.E. America”). D.A.R.E. is a commutative effort run by law enforcement officials, school teachers and administration, and local communities and in 1996, was adopted by 70 percent of schools in the United States, reaching 25 million students nationwide, as well as students in 44 foreign countries (“Law Enforcement News”). The primary focus of D.A.R.E. is to promote total abstinence from drug use in adolescents (“D.A.R.E. America”). Dennis Rosenbaum’s analysis of D.A.R.E.’s success provides evidence that the program has not been beneficial to participants as the results provided “no
long-term effects on a wide range of drug use measures, nor did it show a lasting impact on hypothesized mediating variables” (381).

Ignorance and failure to acknowledge the prevalence of drug use presents a dangerous situation in which undereducated and falsely-educated individuals are experimenting with substances with no real perception of the risks they are taking. There are several organizations which are actively working to decrease the dangers associated with this naivete about drug safety by educating the public through volunteers and social media. One of these organizations is Dancesafe, a group commonly found with information tents at music festivals. Dancesafe visionary and volunteer, Zane Bader describes an experience he had while volunteering at the 2015 Imagine Music Festival in Atlanta, Georgia. Bader was responsible for calming down a boy who was panicking because of the recent deaths of several of his friends caused by the use of drugs which they thought to be LSD. Because the boy’s friends did not test the drugs before taking them, they unknowingly consumed deadly testing chemicals instead of LSD, which has a low-toxicity (Neurons to Nirvana). Zane labels this incident as well as many other drug-related deaths as the product of miseducation and the failure of resistance-based programs to teach safety tactics, such as drug testing.

Existing biases in available literature on drugs caused by propaganda and political and corporate affairs, have subjected the credibility of the literature to questioning. Once an individual discovers the supposed dangers surrounding the use of a specific substance to be an exaggeration, nothing is to prevent him or her from dismissing the remainder of the information to be equally as exaggerated, regardless of
the legitimacy. On this, Beck states, “… moral certainties driving the current drug war continue to take precedence over objective niceties, ensuring that the truth is once again a casualty in drug “education” campaigns” (33). Through this statement, Beck is presenting that those who are responsible for education prioritize their own incentives, thereby creating a “credibility gap” in the literature and risking the well-being of those being educated (33).

**How Should We Approach Future Drug Education?**

Due to the failing of drug prevention and resistance education tactics, the goal of educators should be to work towards harm reduction education, instead. As a method which accepts the reality of drug use and proactively promotes public health, it is the most ideal way to combat the problems of drug-related death and injury. Watson provides the following definition in his journal on harm reduction and it’s advantages:

> “Harm reduction in relation to drug use is the philosophical and practical development of strategies so that the outcomes of drug use are as safe as is situationally possible. It involves the provision of actual information, resources, education, skills, and the development of attitude change, in order that the consequences of drug use for the users, the community and the culture have minimal negative impact.” (Watson 14)

This perspective promoting the benefits of harm-reduction based education is one which is already being applied by many forward-thinking non-profit drug education organizations such as MAPS ("Mission.") Erowid ("Erowid : About Us.") and Dancesafe
MAPS, or the Multidisciplinary Association for Psychedelic Studies, is an organization associated with the research and education of the cultural use, medicinal value, and legal context of marijuana and psychedelic drugs ("Mission."). Erowid is a database supported by its members with the goal of providing accessible information on various drugs, plants, and chemicals ("Erowid : About Us."). Dancesafe, as defined by Zane Bader, is “a nonprofit organization that deals with harm reduction within the music scene with the hopes of providing peer-based education in hopes of reducing the amount of harm that comes from drug use.” As previously discussed, Dancesafe primarily informs the public of drug safety through social media and by setting up information tents at music festivals so that volunteers can answer questions, hand out drug fact cards, and even provide drug testing materials (Bader).

Unfortunately, due to the historical correlation between drug education tactics and drug policy, it is difficult for a full transition to harm-reduction strategies to occur without a parallel shift in the criminalization of drug use. Until drug safety becomes unaffiliated politically, the methodology practiced by American public schools when educating adolescents about controlled substances will remain the instrument of intentional manipulation in favor of bureaucracy and corporate America. It is necessary to acknowledge the importance and value of organizations such as MAPS, Erowid, and Dancesafe, however their work faces a barrier of targeting a fairly limited audience of young adults with internet presence who are more inclined to use or research drugs. Because these organizations are unable to penetrate the school systems, the pivotal information being communicated often fails to reach youth before they are exposed to
drugs, allowing students to formulate their own impressions of what is safe and what is not, often through trial and error. If this system of drug education remains, despite efforts of harm-reduction organizations, younger generations will continue to play Russian Roulette with substance use as the product of their lack of perception of the tremendous health risk accompanying their ignorance. It is hereby imperative, ambitious as it may be, to eliminate the political and corporate ties to the drug war in America so that adolescents are no longer denied their right to proper drug safety education.

On October 19, 2015, the UN Office on Drugs and Crime, or the UNODC, proposed the decriminalization of drug “use and possession for personal consumption for all drugs” (Branson). Although the bill was not passed, it is a step in the right direction as the intention behind it was to make the war on drugs a health issue rather than a political one (Branson). Decriminalizing and even legalizing all drugs in the United States would create an equitable atmosphere with no political or corporate conflicts of interest where harm-reduction focused education is allowed to thrive. Ideologically, following the policy change, drug use will no longer classify someone as a criminal and scholastic programs resembling D.A.R.E. will be able to teach students about drugs and alcohol in a supportive environment that centers around safety in usage and recovery from abuse. The implementation of these school-based programs along with revolutionary revisions to policy will lead to a decrease in drug-related injuries and deaths in the United States. One can only hope that once the United States has instituted this transformation in public health, other countries would follow suit,
realizing the futility in the war on drugs, and implementing similar policy so that lives
might be saved, not only in America, but around the globe.
Works Cited


Bader, Zane. Personal Interview. 19 October 2015.


Branson, Richard. "Finally – a Change in Course on Drug Policy - Virgin.com."


King, Morgan. Personal Interview. 19 October 2015.


