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STS.062

## Our Other Drug Problem

Society has long moved in cycles with regard to acceptance of drugs. Not a hundred years ago, in the United States, cocaine and heroin were wonder drugs that were available over the counter at your neighborhood pharmacy. Mere possession of these substances today would likely land you in jail for a not insignificant period of time. In countries such as Taliban-controlled Afghanistan, alcohol was expressly forbidden and carried more severe penalties than cocaine or heroin does here, yet opium was openly allowed to be sold. These lines deciding what is acceptable to society have long been drawn arbitrarily. Today, in the U.S., stimulants are being prescribed to treat a variety of behavioral and performance problems, primarily attention-deficit/hyperactivity disorder. As a society, we must ask ourselves where this line must be drawn and how much we're willing to deal with.

Ritalin, as we know it today, was synthesized in Europe in 1944 in an attempt to create a stimulant without addiction or tolerance. The compound synthesized, methylphenidate hydrochloride, failed to achieve these goals. In 1955, the FDA approved the compound to treat drug-induced lethargy, mild depression, and narcolepsy. It wasn't until the 1961 that it became available under the brand Ritalin after being approved by the FDA for geriatric patients to improve their memory as well as to young children to improve behavior. As of 1971, Ritalin was classified as a Schedule II drug. (Diller 21-27).

The Controlled Substances Act, which consisted of Title II and Title III of the Comprehensive Drug Abuse Prevention and Control Act of 1970 established the scheduling system and gave Ritalin and Adderall the Schedule II designation. To be classified a schedule II drug by the Drug Enforcement Agency, a substance must have a high potential for abuse, a currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions, and severe psychological or physical dependence when abused. Morphine, phencyclidine (PCP), cocaine, methadone, and methamphetamine are all Schedule II drugs <

csa.htm>.

Adderall is similar to Ritalin. It is also commonly prescribed for Attention-Deficit/Hyperactivity Disorder. Instead of methylphenidate hydrochloride, it is amphetamine and dextroamphetamine. Both are classified as central nervous system stimulants. They are both prescribed for ADHD and narcolepsy. Another use for Adderall is obesity, and Ritalin for depression and cancer induced fatigue. Warning labels reflect schedule II classifications as well as cardiovascular risks (Mosby's Drug Consult). They will be considered the same from here on.

Amphetamines' effects on behavior in children was first observed by Charles Bradley in 1937. He discovered that it had a calming effect on children who had recently undergone a spinal tap. It was thought that by giving it to children, it would help them deal with the headaches associated with such a procedure. In practice, it did little to prevent headaches, Bradley observed that children who would previously play with toys for a very short period of time before moving on were spending more time with each. He described the effect as, "decreasing [a child's] activity level while increasing their compliance and academic performance 'in a spectacular fashion.'" The idea didn't catch on until after studies of Ritalin and a close relative, Dexedrine, were published in 1961 (Diller 24-25). Here's where the debate began.

A natural comparison of an academic performance enhancing drug is an athletic performance enhancing drug. The 1996 Summer Olympics were considered the cleanest ever, with only two positive drug tests out of 2000. Pressure on athletes to use substances such as steroids or EPO (a drug that increases red blood cell count, significantly improving endurance) is immense. A survey conducted in 1995 of 198 U.S. Olympic level athletes asking whether they would take a drug that would guarantee victory and be undetectable in a drug test produced two "no" responses. A follow up question added a five year guarantee of victory with the side effect of death within five years after. More than half still answered yes (Haugen 67).

The implications of such ideas are broad. Diller refers to a slippery slope of performance

enhancement. Once one athlete is using performance enhancing drugs, others feel they must just to keep up (Diller 324). Kramer quotes Thomas Murray in terming this “free choice under pressure” (272). Since steroids harm both body and mind with such use, they are banned. If one disregards the logical step of banning them on their physical effects alone, there is still the coercion of other athletes that must be taken into consideration, along with the relegation of competition to the chemistry labs, as well as the loss of achievement on the part of athletes.

A slightly less relevant argument which Kramer raises is the prevalence of breast implants in the modeling industry. First a few models had them, then large breasts on a small frame became that standard that all models aspired to, and it became almost a requirement to stay competitive in, or even enter, the industry (Kramer 273).

More directly, Ritalin itself is an athletic performance enhancing drug. As an amphetamine, it gives a person more energy to compete. A 1962 study by Weiss and Laties, titled, “The enhancement of Human Performance by Caffeine & the Amphetamines,” found that amphetamines can give an athlete a 3-4% increase in speed. (Diller 22) This may not sound like much, but let's examine one quick case. The mile in Olympic level swimming is a 1500m race swum in a 50m pool. It takes almost exactly fifteen minutes for the fastest men in the world to complete it (the world record is currently 14:34). If we shave 3% of of this time, we're looking at fourteen minutes and thirty-three seconds. The swimmer taking Ritalin would be finishing just as the rest of the field would be coming of the turn for the last lap, a huge gap that is rarely seen among the top eight swimmers who make an Olympic final heat.

Curiously, the U.S. and International Olympic Committees forbid Ritalin specifically, while the NCAA allows it (Diller 14). Here we have an interesting conflict of interest. In colleges we have people taking the drug for ADHD and reaping the benefits in athletic competition. These same athletes, should they be able to go on to higher levels of competition, must discontinue their use of the drug before doing so. One can imagine the athlete who depended on the drug to get himself to that

level and the ensuing fall from grace once he quits taking the drug that helped him get there.

We accept that steroids are bad for a person. They are banned because of these health effects despite their known performance advantages and their ability to allow a person to arguably improve himself or herself. On the academic side of things, the line gets a little blurred. In Diller's words, we are “medicating for performance.” “And our children, whether we realize it or not, have been serving as a proving ground for the premise of medicating to enhance performance.” (17) There are no clear adverse physical effects from a stimulant such as Ritalin. As such, it is not quite clear where the line of acceptable use should be drawn.

Ritalin works. Among those with attention, behavioral, or social problems, more than 90% show improvement when taking Ritalin (Diller 25). The benefits are seen not just in those with ADHD. A 1978 study on the effects of Dexedrine, and amphetamine very closely related to Ritalin and Adderall, showed equal improvement in normal and “hyperactive” children. It was given to both groups and then observed that all exhibited diminished physical activity and increased academic performance (Diller 32). Studies done by Swanson indicate that in the short term, for everyone, Ritalin improves concentration and effort, decreases motor activity and impulsivity, though there is no long term improvement in terms of school dropout rates, arrest rates, job success, etc. (Diller 313-314). Clearly, it does wonders in the short term, “And Ritalin can improve academic performance as measured by grades.” (Diller 324) So far, we have a wonder drug, one useful for helping so called ADHD children to sit still, concentrate, and function in school, as well as one that can increase the performance of normal people in both the athletic and academic worlds.

While Ritalin has dramatic advantages, there are a few downsides, the first of which being physical. It is well known that it can cause insomnia and decreased appetite. While bothersome, these are by no means serious side effects when weighed against the benefits (Diller 23). Orr's point that “Ritalin is so new that we have no idea what long-term effects it may have,” (15) may be a little off given that it has a fifty year safety record, but when we're giving it to ever younger children in ever

increasing doses, it attains a distinct relevance.

More recently, new side effects have been observed. Starting on February 9, 2006, the FDA placed a black box on stimulant containers, warning of cardiovascular risks, specifically in adults. Ritalin can aggravate preexisting heart conditions, resulting in death. Twenty five people to date have died in this manner from taking the drug. It seems apparent that a stimulant would have this property, but apparently the drug lobbyists have succeeded in keeping the warning labels off of the packaging for this long (Harris A19).

Another interesting recent side effect is hallucinations. Some children have reported seeing things while on the drug. They usually complain of insects, snakes, or worms crawling on or around them. The symptoms have been linked to Ritalin by stopping treatment and observing a cessation of symptoms and their reappearance upon taking the drug again (Harris A19). It is entertaining that these effects are just now being observed fifty years.

Tolerance and addiction are drawbacks to amphetamine use that have been known since they became widespread. In young children, this is not normally a problem. Children often object to taking it and don't readily associate its use with academic performance enhancement. Additionally, there is very little chance for abuse because caretakers are dispensing the drug to them. Adults, on the other hand, are another matter entirely. Adult ADHD is a shift from a behavior problem to a performance problem. Adults seek out the diagnosis to get drugs that will help them complete their required tasks. With this comes potential for abuse. While the child is medicated constantly by a caretaker to improve behavior all the time, an adult self administers the medication and may find that he only needs it when he is expected to perform, and realizes that higher doses improve his ability to perform. At higher doses, the drug causes tolerance and withdrawal (Diller 263-279).

Following this argument that adults are more likely to abuse the substance, it has the potential to be a gateway drug. "Ritalin has the potential to be the entry-level pharmaceutical-grade drug – the inoculum, as it were, for a much larger stimulant abuse epidemic." (Diller 42) Though studies have not

supported its function as a gateway drug, that may well be changing in recent years (Diller 42-44).

While physical symptoms are arguably not terribly severe, psychological symptoms deserve an additional look. Diller raises the situation where a child is given the medication only for events such as family gatherings. Over the years, the medication gains association with such behavior at these events. Is the child then able to behave at these events later in life without the medication he has come to associate with the events? How about the college student who associates his good grades with Ritalin use? Can he then continue to do as well without the drug despite expectations? Is there an unshakable idea that such performance is not possible without chemical assistance? The answer is not clear. There may very well be a strong psychological dependence on a drug to continue performance later in life (Diller 256-257).

Another concern being brought up by parents is what it does to a person's personality. An article by Orr mentions parent's observations that their children become "personality-free zombies." They come to miss the deviant streak in their children that made them who they were. Orr also notes the general sentiment that that, "There is something repellent about children's moods being manipulated by drugs." This is something we see in addicts. They are specifically seeking to change their moods chemically. The thought that giving children Ritalin against their informed consent is not terribly different or even worse is difficult to shake (Orr 15).

After examining many of the preceding points, Diller says, "The question I find myself asking most often is not who should get Ritalin, but who shouldn't." (319) Ritalin has side effects that don't seem all that destructive when set beside its benefits. The line society draws for Ritalin clearly cannot be drawn based on harmful physical side effects the way it is in the athletic world. This forces us to take a closer look at the moral aspects of taking such a drug than we do with the "free choice under pressure" argument on the athletic side. The precedent for beginning to take a drug such as Ritalin was fluoxetine, better known as Prozac (Diller 108). The moral aspects have been examined briefly in the context of athletic performance enhancing drugs, but they are perhaps better addressed in the long-

running debate about Prozac.

Peter Kramer's Listening to Prozac spends a decent amount of time debating this very question. He begins by quoting Robert Aranow's term, "mood brightener," and proceeds with Aranow's analysis of the subject. Prozac has a distinct effect on the mood of a person without serious side effects. It seems to violate the so-called "conservation of mood" that is apparent with other drugs. By this, he means the accompanying crash after the high of a stimulant wears off, or the withdrawal symptoms of some narcotics. With Prozac, one can achieve the same pseudo-euphoria, a simply elevated mood, without an inevitable crash later on. It permanently brightens mood, rather than just temporarily. This shifts the debate over to the moral arena. There is something that just seems wrong about doing this, but identifying it proves to be tough (Kramer 251).

The first of which is something we can directly relate to Ritalin. The fact that there is a drug that treats a collection of symptoms collectively known as ADHD or depression encourages renaming these symptoms as an illness, when in fact, they may be caused by something else entirely. ADHD could be problems with parenting, a natural streak in a person's personality, or a mere overabundance of energy. If we treat the symptoms of depression or Obsessive Compulsive Disorder, as in the case of Lauren Slater, we may miss the root cause of the illness to begin with (Kramer 255).

Prozac obviates the need to feel emotional pain in patients who take it. One way to rectify this feeling that there is actually something wrong with taking a drug which enhances mood with no apparent side effects is to consider that it takes away the ability to feel pain. As pain is a natural human emotion, with distinct purpose, it seems wrong to take it away. Kramer classifies this as a loss of autonomy. Pain is there to tell a person something is wrong and needs to be fixed. Without this, important things may go unnoticed (Kramer 256).

Another possibility, which both Kramer and Slater bring up is that by taking away pain, Prozac will "rob us of what is distinctly human," (Kramer 299). Slater corroborates this, mentioning her previous comfort in the writings of Frankl about pain and suffering, saying that the dignity of pain is

what makes us human. She feels lost without these feelings. What used to drive her has now been replaced by an emptiness (Slater 28-29). In the academic world, with Ritalin, a similar argument applies. “According to psychoanalysts, to lose pain without quest or struggle is to lose self.” (Kramer 277) Can this not also be applied to a math test? Has a student who took Ritalin to study for such a test robbed himself of what is distinctly human about toiling over the books in conflict with his undrugged, distractable self to try to pass the test? The student has arguably lost pain (having to force himself to study for the test) without struggle with himself.

A common occurrence is an uneasiness in the person taking such drugs as to the changes they observe in themselves. Kramer has a patient he refers to as Philip, who is discomforted in his ability to feel what he thinks is justifiable anger. His issues with other members at an elite private school he attended had not been resolved before he first started taking Prozac. This was not a disabling discomfort, but it was a side effect of the medicine (Kramer 291). Slater herself tells her doctor, “I’m worrying unobsessively about the medication.” (48) Does an ADHD conscious person, i.e. a person diagnosed with it past the age of fifteen or so, not question whether the medication is a good thing? Just as the parents of ADHD children miss their personality quirks that Ritalin dampens, Slater speaks of missing her counting and touching obsessions. She feels that she’s missing a significant part of her former self, and this disturbs her (44).

We then move to talk about an unfair advantage given to a person on such a drug. Slater seems competent to speak on such a subject as she holds a Harvard Masters and a BU PhD on the subject and took Prozac throughout her studies. She characterizes her internal struggle by saying, “I am also aware that on the days Prozac works for me, the days when I am free of obsessions and depression, I am powered beyond me, pushed into a realm where unfair advantage becomes mine.” She mentions a friend who tells her that she would like to be sick enough to need Prozac and says that she justifies it to herself by saying that she learned that because of the hardships she endured earlier in life (194). This unfair advantage is akin to the “free choice under pressure” mentioned with athletics.

Perhaps today's society has set this line so as to benefit itself. It has been said that today, society creates ADHD-like symptoms in each of us by loading us to the point where we're unable to maintain focus. In a way, we all have performance problems because society expects us to function at such a high level. Our pressure to perform drives us to medication to help. In school age children, this affects them in a different way. The American Dream is to have your children do better than you did. Today, a good entry level job requires at minimum a college degree and often graduate school. Getting here requires exemplary grades at ever decreasing ages (Diller 78-95). ADHD has perhaps become our diagnosis for not performing at a desired level. Practically, given such pressures on children, what parent would deny a child chemical assistance?

Society also expects conformity. On a basic level, a child is expected to fit in with his grade school or even kindergarden class. The outliers, on both ends, make teaching the class hard for a teacher, and as such, schools attempt to eliminate them. Ritalin has been shown to be capable of taking the most unruly child and making him into a zombie capable of sitting and paying attention at some dose (Diller 317). This accounts for teacher referrals to doctors for ADHD diagnoses. Diller also touches on Ritalin as a cost saving option between the medical and education industries in that it reduces the need for staff to deal with these children (Diller 171).

Kramer's thoughts on society's effects are close to this. When talking about women and Prozac, he says, "The success of Prozac says that today's high-tech capitalism values a very different temperament. Confidence, flexibility, quickness, and energy- the positive aspects of hyperthymia- are at a premium." (297) Society values, even expects, a temperament such as this from women. The effects of the drug have become society's expectation. While one may tenably argue that society has done this on its own, the more interesting question arises when we ask what continued use of Ritalin may do society-wide. Do we want to face an academic world that is chemically enhanced? It seems, that between the conformity society expects and the "American Dream," the "free choice under pressure" really becomes coercion. It is that much stronger in the academic realm.

Kramer's words, that Prozac “robs us of what is distinctly human,” (299) as well as Slater's thought, “I am sorry for my dependence, because I don't think it's right to ingest psychic steroids. I can blame our culture and say that, all in all, if we were less competitive, that steroids and strength would not be such an issue. That sits well cerebrally, but not in my gut. No one wants to be dependent, but more than that, no one wants to be a cheater. No one wants to be a fake,” (195) paint a bleak picture of such drugs. In my mind, these are the two most important ideas I came across. Slater's words encompass society's impact, which we cannot ignore, as well as her sense of guilt because of her “cheating.”

I can only imagine how much faster I could have written this had I had access to such drugs. Peers tell me of its ability to let you tune out all distractions and just get work done. If I could have ignored only instant messenger and winamp throughout this time, this would have been done days ago. Do I think taking such a drug is cheating? Yes. From the swimming world, I can attest to the pressure exerted by those on performance enhancing drugs on those who don't to be significant. I see it creeping up at MIT in the academic side of things. Ritalin imparts an unfair advantage on those who choose to pursue it. The thought of increasing society's expectations in the academic world frightens me, as this already seems stressful enough. We don't need chemical enhancers out there artificially causing expectations to increase faster. Finally, I have a deviant streak to me that I'm sure would have been chemically removed from my personality with Ritalin long ago had some people had their way. I value those times that were emotionally tough where Prozac could have helped. I get a real sense of accomplishment when I'm able to block out distractions and complete work on my own, without chemical assistance. They're not something I'd choose to give up, and I'll keep taking longer to finish papers such as this if that's what it takes to keep them. I don't ever want to have to convince myself I'm not a cheater.

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