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## **The Adderall Age: How BigPharma Perfected the Art of Addiction**

### *The Absurd History of Amphetamines*

Although mental health issues like Attention Deficit Disorder (ADD) and Attention Deficit Hyperactive Disorder (ADHD) have been known about for a fairly long period of time around the world (discovered in 1798 by a Scottish physician by the name of Sir Alexander Crichton), medication (such as amphetamines) used to treat these diseases are much newer and did not even begin getting prescribed till nearly 150 years later.<sup>1</sup> Oddly enough, amphetamines were synthesized accidentally at the University of Berlin in 1887 by a chemist named Lazar Edeleanu in an attempt to create more effective asthma medication. Not realizing the energy boosting and focus effects of the drug, he simply placed it to the side and continued his other research. As a result, it did not resurface until decades later in 1927 when UCLA researcher Gordon Alles began tinkering with it while he also searched for another means of relieving people of asthma and nasal congestion.<sup>2</sup> After this, the popularity of the drug began to take off in the Depression era and into the 1930s in the form of an over the counter inhaler called Benzedrine, hitting the American and French markets where people soon realized the “buzz” it gave them. Interestingly enough, across the world, the Japanese had created methamphetamine, amphetamines’ stronger cousin, just a few years after Edeleanu’s discovery. Despite this, and

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<sup>1</sup> Lange, K. W., Reichl, S., Lange, K. M., Tucha, L., & Tucha, O. (2010, December). The history of attention deficit hyperactivity disorder. Retrieved October 7, 2018, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3000907/>.

<sup>2</sup> Methamphetamine Overview : Origin and History | Methoide. (n.d.). Retrieved October 7, 2018, from <https://methoide.fcm.arizona.edu/infocenter/index.cfm?stid=164>.

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similar to the Western world, the widespread use of the drug in Japanese society did not begin until the outbreak of World War II, when militaries on both fronts used the alertness and energy to boost the capabilities of their soldiers.<sup>3</sup>

Before the rise of neoliberalism that followed WWII, a majority of the demand for powerful stimulants like methamphetamines was driven by the military of a given state. Looking to gain an edge over their enemies on the battlefield and in the manufacturing sphere, the Americans, English, Germans and Japanese all domestically produced large quantities of different variants of the drug to be sold both over the counter and as a prescription. In effect, not only were soldiers capable of improved performance but laborers had the ability to work longer hours, thus increasing the productive power and domestic output of the warring nations vitally needing the resources. While the short-run results which arose out of this strategy paid numerous dividends economically and in terms of gaining influence in the global order, there were long-term downsides that would be felt for generations after. Unfortunately, as the next few decades came, the main issue which arose was an addiction epidemic to methamphetamines that started in Japan and slowly made its rounds through much of the civilized world, even eventually the United States (although beginning later on because of controlled substance laws requiring a prescription). In response, the United States tightly regulated not only the drug but the “precursor chemicals — ephedrine and pseudoephedrine” (University of Arizona, 2018).<sup>4</sup> Similar fashion to how the British cornered the market of opium

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<sup>3</sup> Methamphetamine Overview : Origin and History | Methoide. (n.d.). Retrieved October 7, 2018, from <https://methoide.fcm.arizona.edu/infocenter/index.cfm?stid=164>.

<sup>4</sup> Methamphetamine Overview : Origin and History | Methoide. (n.d.). Retrieved October 7, 2018, from <https://methoide.fcm.arizona.edu/infocenter/index.cfm?stid=164>.

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production and sale to China when the Chinese government outlawed domestic sources, many foreign companies thus jumped in to meet the American amphetamine demands, making new entry difficult for “home-grown” businesses, a consequence that persists to this day (Marks, p. 114-115).<sup>5</sup>

In conclusion, the increasingly globalized world emerging at the time of the onset of WWII facilitated the rapid spread of amphetamines and methamphetamines, as Earth’s most powerful countries vied for power in the global arena. After the conflict that was WWII subsided, the use of these stimulants became more widespread, as opposed to their distribution purely occurring in domestic markets. This process became more pronounced with the further interconnectedness of the global market arising from free trade deals such as NAFTA and institutions that foster them like the WTO (considering its goal of lowering trade barriers that prevent the ease of international exchanges). The two latter factors, consequently, created an economic incentive to increase production capacity to meet the demand for refined goods of recently decolonized states, a strategy many nations hope would lead their post-war economies out of the dump (especially war-ravaged Europe and Japan) through outsourcing and taking advantage of the much larger market of consumers (Ellwood, p. 29, 32-33).<sup>6</sup> Therefore, despite drugs such as amphetamines and methamphetamines to treat disorders like ADD and ADHD being fairly new onto the scene, they managed to quickly gain a foothold, especially among

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<sup>5</sup> Marks, R. B., & Marks, R. B. (2007). The Industrial Revolution and its Consequences, 1750-1850. In *The origins of the modern world: Fate and fortune in the rise of the West*. Retrieved November 12, 2018, from file:///Users/AustinHumphrey/Downloads/Marks(industrial) (4).pdf.

<sup>6</sup> Ellwood, W. (n.d.). Chapter 2/The Bretton Woods Trio. In *The No-Nonsense Guide to Globalization*(New ed., pp. 29-33).

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developed, post-industrialist capitalist economies (even causing addiction epidemics at certain points in history). In the end, while newer and more effective medications accomplishing the same goal will inevitably be synthesized down the road, one thing is certain: in the highly competitive world of today where everyone is trying to gain the upper-hand, drugs such as Adderall are likely here to stay for a long time.

*Adderall's & Mass-Production: BigPharma, Perception and the Power of Rebranding*

Although the history of amphetamines dates back to the Germans in 1887, who first synthesized it, and was even sold pharmaceutically as it hit U.S. markets in 1927 as a respiratory inhaler (also being produced by governments and given to soldiers during World War II), the drug did not truly take off in the private sector to treat ADD and ADHD until the 1990s. At this time, a company named Shire Pharmaceuticals changed this perception around the drug, putting it through an intense rebranding and developing Adderall.<sup>7</sup> Prior to this, a majority of individuals viewed the use of hard amphetamines as reserved for low-class junkies, not students and functional working-class adults who simply struggled with concentration. Through standardization not only could Shire Pharmaceuticals manufacture Adderall cheaply for sale, but was also able to rebrand the perception around it with high production quality (and therefore, a sense of safety) that drugs bought on the street cannot offer. All this, in combination with substance's addictive nature (similarly to Opium in Marks' article), all culminated in a global

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<sup>7</sup> Times, H. (2014, January 23). Adderall: America's Favorite Amphetamine. Retrieved November 11, 2018, from [https://www.huffingtonpost.com/high-times/adderall-amphetamine\\_b\\_4174297.html](https://www.huffingtonpost.com/high-times/adderall-amphetamine_b_4174297.html).

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amphetamine movement that began in the U.S., and slowly entrenching itself in rich and poor nations alike.<sup>8</sup>

Considering its growing demand in the global market since its conception and normalization in ADHD treatment (from 1993-2000 global usage skyrocketed 16.8% per year), production of amphetamine-based medication has shifted to numerous nations and firms such as Shire Pharmaceuticals has faced increased competition from other producers.<sup>9</sup> A big reason for the latter is the insignificant cost of making these substances, which can be turned around and sold for massive profits (as a majority of the cost is distributed instead to researching improved formulas, not paying wages). All this encourages other established big pharma corporations to enter, who have followed suit of Shire by expanding production facilities of their overseas (typically having multiple in Europe, the Americas and throughout Asia).<sup>10</sup> By expanding this process, businesses have the ability to more easily distribute Adderall and other ADHD medication to their rapidly growing international consumer base (not to mention creating local jobs for those working in labs and transporting the finished product), also helping the company to better understand the cultural norms of a region. Similarly to Enloe's piece, "The Globe Trotting Sneaker," further socialization contributing to the normalcy of these drugs is spawned from this process, as a given country (especially those suffering from less-than-ideal

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<sup>8</sup> Marks, R. B., & Marks, R. B. (2007). The Industrial Revolution and its Consequences, 1750-1850. In *The origins of the modern world: Fate and fortune in the rise of the West*. Retrieved November 12, 2018, from file:///Users/AustinHumphrey/Downloads/Marks(industrial) (4).pdf.

<sup>9</sup> Scheffler, R. M., Hinshaw, S. P., Modrek, S., & Levine, P. (2007). The Global Market For ADHD Medications. *Health Affairs*, 26(2), 450-457. doi:10.1377/hlthaff.26.2.450.

<sup>10</sup> Shire. (n.d.). Retrieved November 12, 2018, from <https://www.shire.com/>.

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economic situations) see multinational corporations' decision to move operations there as a sign of progress.<sup>11</sup>

While global free trade has worked to make amphetamines-based drugs cheaper and more available, governments have fought back by enacting policies which play an extensive role in restricting the distribution and sale of controlled substances. Realizing the problem that the steady growth of these addictive prescription drugs represents, these institutions (i.e., the Food and Drug Administration (FDA) in the U.S.) have led the resistance. These efforts primarily come in the form educating the general public of health implications and using policies such as prior authorization and preferred drug lists.<sup>12</sup> Although the aim of these regulations centers around narrowing the range of alternatives to direct citizens towards safer or better-researched options, it can also stymie the innovation of newer, more effective drugs and prevent individuals from obtaining prescription medication they may need. Consequently, the debate over whether the pros of such policies outweigh the cons remains muddled and controversial.

Therefore, the history of amphetamine-based drugs and the path they have taken to become the world's most common treatment for attention deficit disorders is one laced with addiction, negative perception, and rebranding. Despite the substance finding its production-origins well over a century ago, its widespread medical usage still relatively new. As a result, its long-term side effects remain reasonably unknown, leaving health professionals and

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<sup>11</sup> Enloe, C. H., & Enloe, C. H. (2006). *The curious feminist: Searching for women in a new age of empire*. Retrieved November 12, 2018, from file:///Users/AustinHumphrey/Downloads/enloe(sneaker)edited (2).pdf.

<sup>12</sup> Crystal, S., Olsson, M., Huang, C., Pincus, H., & Gerhard, T. (2009). Broadened Use Of Atypical Antipsychotics: Safety, Effectiveness, And Policy Challenges. *Health Affairs*, 28(5). doi:10.1377/hlthaff.28.5.w770.

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policymakers alike with a reason for concern as Adderall and other amphetamines continue to spike in popularity not only in the developed world which synthesized them but also the developing one. In conclusion, as the global demand continues to steadily grow for ADD/ADHD medication, so too will the production of it, consequently making the debate over the efficacy of prescription amphetamine usage as relevant now as ever.

*Adderall & Addiction: How Commodity Fetishism and Clever Advertising Led to the 21<sup>st</sup> Century Consumption Craze*

The story of Adderall and the epidemics that have ensued over the years is one of clever psychological advertising, cheap pricing, the convenience of use, and changing conception around the use of amphetamines over the years. Ranging from \$100 to \$300 out of pocket, and plummeting as low as \$20 or less when purchased with insurance, it is far from surprising that the popularity of the drug has skyrocketed among nearly all classes, cultures, and races.<sup>13</sup> As if the dirt-cheap cost isn't enough, the corporation who originally coined the name Adderall and began distributing it for attention deficit treatment, Shire Pharmaceuticals, conceived the crafty marketing move of placing the acronym "ADD" itself in the name of the drug.<sup>14</sup> By doing this, in combination with distancing the medication from its unflattering stereotype as a drug for bikers, junkies, and other low-class members of society, Shire successfully penetrated the upper and middle-class markets that strayed from stimulant use prior (mirroring Japanese producers

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<sup>13</sup> Holland, K. (2014, June 23). Reduce ADHD Costs with Patient Assistance Programs (G. T. Krucik, Ed.). *Healthline*. Retrieved November 27, 2018, from <https://www.healthline.com/health/reduce-adhd-costs-patient-assistant-programs-adderall>.

<sup>14</sup> Times, H. (2014, January 23). Adderall: America's Favorite Amphetamine. Retrieved November 11, 2018, from [https://www.huffingtonpost.com/high-times/adderall-amphetamine\\_b\\_4174297.html](https://www.huffingtonpost.com/high-times/adderall-amphetamine_b_4174297.html).

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popularizing sushi in the West).<sup>15</sup> Supported by usage trends over recent decades, this strategy has worked well as kids (and oftentimes their parents) jump at the idea of improved academic performance and the promise of “maximizing their potential.”<sup>16</sup> As a result, and not unlike Edmond’s piece on cosmetic surgery, swaths of individuals from all demographics have begun using Adderall to “keep up” with the pack and help in realizing their full economic capabilities.<sup>17</sup>



As is the case with nearly all prescription drugs, Big Pharma companies profit hand-over-fist at the expense of the general public, and Adderall is no exception to the norm. In the United States specifically, a big reason for this for the bloated profit margins in pharmaceuticals (ranged from 10% to 42% in 2013) is that there are no restrictions on the market price that prescription medication can be sold at “as long as they don’t collude” with one another.<sup>18</sup> While the specific details on the profit margins are murky, the cost of creation is almost non-existent and can be done on a mass-scale, meaning executives running these large

<sup>15</sup> Bestor, T. 2000. “How sushi went global,” *Foreign Policy* 121: 54-63.

<sup>16</sup> Adderall XR Improves Academic Performance [Advertisement]. (2018, May 6). Retrieved November 27, 2018, from <https://www.policymed.com/wp-content/uploads/2014/09/6a00e5520572bb883401b7c6e81a15970b-800wi.png>.

<sup>17</sup> Edmonds, A. 2007. “The poor have the right to be beautiful’: cosmetic surgery in neoliberal Brazil” *Journal of the Royal Anthropological Institute* 13(2): 363-381.

<sup>18</sup> DeAngelis, C. D. (2016, January 13). Big Pharma Profits and the Public Loses [Scholarly project]. In National Bureau for Biotechnology Information. Retrieved November 27, 2018, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4941970/>.

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corporations take home a majority of the funds accrued. In fact, not even the price of development takes a significant chunk out of profits, as the only real cost when taking a closer look goes to marketing and lobbying against mudslinging opponents attempting slander the public perception on Adderall.<sup>19</sup> Therefore, with no legitimate rivals, a sturdy foothold in policymaking, and the ability to set prices at just about whatever is most advantageous, a small number of BigPharma companies virtually hold an oligopoly on the prescription drug industry.

In conclusion, the tale of Adderall and methamphetamine consumption in the West (specifically the U.S.) is one laced with ingenious, yet ethically questionable, circumstance. From its onset, perception and psychology have played indispensable roles in the medication's marketing as safe and socially acceptable. As demand for Adderall has steadily risen over the years, so too has the power of corporations distributing it to further facilitate its spread and, in effect, make it cheaply accessible to the general public. Hence, with the desire of individuals to improve upon their economic well-being and social status as prevalent as ever in the extremely competitive, cut-throat modern world we live, it's more-likely-than-not that Adderall will continue to be consumed at high, progressively increasing rates.

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<sup>19</sup> DeAngelis, C. D. (2016, January 13). Big Pharma Profits and the Public Loses [Scholarly project]. In National Bureau for Biotechnology Information. Retrieved November 27, 2018, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4941970/>.

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