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Mr. Greco

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### Hazy Truth

Before I even turned my head to see that Lucius\* had opened the door of my car, I knew it was him. He smelled peculiarly of blueberries—the scent was sweet but overwhelming. Lucius agreed to talk to me after school on a gloomy afternoon. My car was an ideal spot to meet, so our conversation about his nicotine addiction wouldn't be eavesdropped on. Lucius hadn't even taken a hit of his vape—an electronic device that delivers vaporized nicotine—but the smell radiated and smelled delicious.

Lucius, now a junior, was introduced to vaping in his freshman year. It was a mundane school day, his English teacher was droning on about the daily lesson, and so Lucius left class to go to the bathroom. Upon entering, Lucius saw an upperclassman taking a smoke break in the corner. Curious, he asked to try his vape. After that first hit, he felt an instant adrenaline rush. It tasted delicious and minty, just “like a candy cane,” Lucius says. Lucius felt elated as he walked back to English class, the adrenaline heightened. As his teacher droned on, visions of candy cane smoke danced in his mind.

Today, Lucius is addicted to nicotine- one of the four million kids currently addicted to nicotine in the United States as of 2018 (Cullen et al.).

Dubbed “vapes” in a rising vape culture but formally known as electronic cigarettes, these devices were created to give former nicotine addicts a healthier alternative to smoking

traditional cigarettes. Unlike traditional cigarettes, e-cigarettes do not include the lung-tarring substance of tobacco. Rather, vape devices hold a “juice,” a flavorful liquid that is vaporized and inhaled. Among the endless options for juice, the favorites among users seem to be mango and mint. The fruity flavors have helped promote the image of vapes as healthier; However, the appeal of these flavors have also attracted youth interest. Vape “influencers” such as Austin Lawrence (@vaustinl on Instagram) have amassed millions of views and sponsors for showing off smoke tricks. But despite its original intent to be a harm-reduction product for cigarette smokers, FDA Commissioner Scott Gottlieb has declared e-cigarette use to be an epidemic among a group who it was not intended for – teenagers. In an FDA statement, Gottlieb explains, “I use the word epidemic with great care. E-cigs have become an almost ubiquitous—and dangerous—trend among teens” (Commissioner, Office of the). Sure, these products may have fallen into the hands of the wrong group, but why consider them “dangerous” when it hasn’t been proven that e-cigarettes cause cancer? The major concern regarding nicotine is that it is addictive and that the potential harms associated with e-cigarettes are still unknown. Gottlieb paints the youth nicotine epidemic as a “disturbing and accelerating trajectory of [e-cigarette] use,” and a “resulting path to addiction” (Commissioner, Office of the). Additionally, the U.S. Department of Health & Human Services states, “the percent of high school seniors who had used an e-cigarette in the past 30 days increased from 1.5 percent in 2010 to 13 percent in 2017” (Office of Adolescent Health).

The answer to how this epidemic arose so rapidly may lie in the progression of the smoking industry and the attitude regarding the tobacco industry. Dr. Karla Jurvetson, a psychiatrist who researched at Stanford and holds a private practice in Silicon Valley, states that

traditional cigarette use reached its height in the '40s and '50s. Smoking was a fundamental part of American culture, arguably an emblem of the '50s consumer culture that signified the solidification of American capitalism. Cigarettes were smoked everywhere—in the house, on the TV. No one knew the dangers of traditional smoke. In fact, “up until the 1950s, doctors were frequently shown in ads promoting smoking” (“E-Cigarettes: A Dangerous Trend”). But as extensive research revealed the harm of tobacco, campaigns begin to rise in opposition of traditional smoke, creating a stigma surrounding cigarettes. “Now we know that tobacco smoke contains thousands of chemicals, including at least 70 known to cause cancer” (“E-Cigarettes: A Dangerous Trend”). Campaigns like The Truth are influential towards youth with their online advertisements plastered with their well-known slogan: “Be the Generation.” However, before youth nicotine addiction became an epidemic, the stigma failed to emphasize the danger of having a nicotine addiction. Yet, former cigarette users needed a new product to fulfill their nicotine addiction which allowed the smoking industry to open a new market: e-cigarettes. The appeal for former users was that e-cigarettes were “healthier,” and unfortunately, that misconception was enough to encourage teenagers to try it too.

The second time Lucius and I meet is the first time I hear that one pod is equivalent to one pack of cigarettes. A pod is the detachable compartment that holds the vape juice and is roughly the size of the top of your thumb. Lucius says a pod used to last him around a week. Now, he goes through one pod every two to three days. Despite the large amounts of nicotine inhaled, teenagers are able to smoke daily without drastic, short term effects. This is because addicted teenagers have built a tolerance for the drug, similar to how they do with alcohol. Maia Szalavitz-author of *Unbroken Brain*, and advocate of a radical new way of classifying addiction

as a disorder rather than a disease--notes that drugs are classified into two categories: depressants and stimulants. A user can not build complete tolerance for a stimulant, and thus, it can be difficult to become addicted to the drug. For example, among the notorious drugs for adolescents--nicotine, alcohol, and cocaine--cocaine is often labeled as the “party drug.” This is because cocaine is a stimulant, a drug used out of occasion rather than necessity. On the other hand, drugs like alcohol and nicotine are depressants. A user can slowly build a tolerance for the drug, which allows them to consume greater amounts at a time. Users will also go through withdrawal, which makes the body physically ill. When Lucius hits his vape first thing in the morning, he enjoys the thrill of a headrush. But if he goes a day without his vape, he battles with a headache.

Although adolescents are not ignorant of what is in the smoke, their eagerness to willingly dump high doses of chemicals into their bodies is questionable. Their motivation to do so can be pointed to the marketing strategies of vape companies. “The scariest part of the vaping trend is that teens don’t *perceive* e-cigarettes to be hazardous to their health. This could be because e-cigarettes produce vapor instead of harsh smoke like traditional cigarettes do” (“E-Cigarettes: A Dangerous Trend”). These vape companies claim to make a product to help ex-cigarette smokers, but the various appeals of an e-cigarette do not align with their publicized intent. After all, vapes do taste as great as they smell: the smell of Lucius’ blueberry vape was delicious. The flavored pods of melon and mango tempt one just to taste.

Jurvetson points directly to Juul to explain the deceptive marketing strategies of the e-cigarette industry. Juul is a well-known brand of e-cigarettes; They have created a device that is sleek, easy to use, and addictive. Based in tech hub San Francisco, Juul has an “Our Mission”

web page that claims their goal to be “improving the lives of the world’s one billion adult smokers.” Ironically, this device created to help adult smokers fight an addiction has only gotten a new generation addicted. Juul’s real market is teenagers. Juuls are made to “look like a USB stick, so an appeal to look cool, and then [they] have different flavor packs that are more oriented towards kids” (Jurvetson). For example, their mango pod is notoriously popular with the youth; Other youth favorites include mint and creme. Juul claims, “we believe that vaping can have a positive impact when used by smokers, and can have a negative impact when used by nonsmokers” (“Our Mission”). However, their product has been created with the intent to get users hooked: “Other than Juul, all other closed system e-cigarettes do not have high-addiction potential because they are actually quite poor at delivering nicotine” (Siegel). Juul pods use a “specially formulated nicotine salt” that reaches the bloodstream rapidly, creating a large uptick in nicotine concentration in the blood. Contrary, when e-cigarettes were first introduced in 2003 (“Historical Timeline”), they were considered the healthier alternative to deliver a lower dosage of nicotine. The purpose of these devices was to wean nicotine addicts off nicotine and help them achieve sobriety. But is that really the purpose of these devices now?

The reality is, companies like Juul do not want to admit their real market is teenagers. They do not want to admit they created their products to appeal to these teenagers. Juul headquarters is located in the heart of Silicon Valley. By coincidence, Jurvetson ran into one of the founders of Juul at a Christmas Party in the Bay Area. She recounts:

At a holiday party in about December 2013, I was talking with Jim Monsees, who was a co-founder of Ploom (which later changed its name to Pax Labs and then to Juul in 2017). He was talking about starting a new company that allowed people

to smoke without regular cigarettes, so less chemicals, yet still get the nicotine hit (which is what makes smoking addictive.) He was bragging about how much profit he could make from it. I became really mad at him and challenged him that he was planning to profit off getting people addicted, especially since smoking cigarettes puts people at [a] much higher risk of lung cancer, stroke, and heart disease... As I pointed out to him, this rationale for starting an e-cigarette company was disingenuous in my opinion... and this actually introduced [teens] to smoking and made it look cool... I was really mad, which wasn't really the norm at a seated holiday dinner... Makes me sick that now he's a billionaire, and the Surgeon General has declared juuling is a public health epidemic among youth. (Jurvetson)

This intimate moment with one of the founders highlights Juul's defensive, yet neglectful attitude. Their devices have become the entry-level device that gets many vapers started in vape culture. The marketing strategies of Juul have portrayed their device as harmless. From those who have never tried a Juul to those who use a Juul regularly, all teenagers are knowledgeable of the culture. They laugh at how it looks like a USB stick [especially when it charges in the USB port of a computer] and share memes about the ever so popular mango pods. Lucius says, "I had already been kinda interested in it. I'd seen people with Juuls, [and] I thought it was kinda interesting, and I wanted to try it out. It looked cool, it was like a cool lil device." Ella\*, another high school junior, recounts getting her own vape: "I was so excited about it." Ella and Lucius' eagerness to try e-cigarettes highlight how the culture and appeal of vaping have propelled

teenagers to be careless in their drug experimentation. They aren't worried about the health effects with a mentality of "everyone else is doing it so it can't hurt me that much."

So kids are addicted, and these companies succeeded in their deceptive tactics. Juul today is "a staggering \$38 billion" (Belluz). The smoking industry as a whole continues to reap the benefits of nicotine addiction: "35 percent of the vape company [Juul] had been purchased by the cigarette maker Altria" (Belluz). As a matter of fact, Juul distributes "a whopping \$2 billion in bonuses" (Belluz). With 1500 employees, that is "an average bonus of *\$1.3 million per employee*" (Belluz). Jurvetson remarks, "I think that's really unethical." The price of nicotine addiction for these kids does not come cheap. Lucius spends around \$70 to \$100 a month to smoke. He spends most of his money on fresh pods and juice, rarely needing to buy a new device. If Lucius began smoking at 15 years old, and is now 17 years of age, his total spendings for his nicotine addiction, or "hobby," as he jokes to me, total to be at least \$1000 on drugs.

As the debate of cigarettes versus e-cigarettes persists, yes, it is true that e-cigarettes are beneficial because it does not include tobacco. Smoking is rooted in many cultures-a fundamental part of socializing and personal pleasure-that may never disappear. It is beneficial that a better option exists since the "harm reduction" is significant. A majority of 58.8% of youth cigarette smokers are also turning to e-cigarettes (Surgeon General). Trends in smoking suggest that e-cigarettes are replacing cigarettes. But the notion that e-cigarettes are safer is a misconception overemphasized. Public Health England claims vaping is 95% healthier than tobacco (Embury-Dennis) The UK's government perspective embodies the argument that e-cigarettes are "healthy." And it's true, e-cigarettes are healthier, but are they to such magnitude? There is a major discrepancy between the stigma and the truth. Yet, the stigma

against traditional smoke pushes users and those curious to smoke a “healthier” cigarette.

“Recent studies have revealed that some e-cigarette vapor contains cancer-causing substances...

release other toxic materials, such as cadmium, a metal that can cause breathing problems”

(“E-Cigarettes: A Dangerous Trend”). However, since e-cigarettes are relatively new to the

market, research is still quite inconclusive and not taken as concrete evidence. Even though

e-cigarettes seem to be a great replacement, the opposing viewpoint in the debate is that these

products are essentially the same-- they’re both extremely harmful. But as Dr. Lynn Kozlowski,

founding member of the Society for Nicotine and Tobacco Research, points out, “Lumping all

tobacco and nicotine products in the same standard ignores the considerable differences in harm

to users or bystanders caused by different products.” Cigarettes and e-cigarettes are destructive

for the same reason: they contain nicotine. Though destructive, they are ingrained into the

American lifestyle. As traditional cigarettes are experiencing a decline, electronic ones are rising

in use. This is because cigarettes have existed in mainstream culture for long enough that the

health effects of its ingredients being burned--the notorious one being tobacco-- have been

thoroughly researched, giving people enough time to form a stigma against traditional smoke.

Ultimately, the stigma of cigarettes detracts one’s perception of how harmful a vape truly is.

Because the reality is, the nicotine content is much stronger, and thus much addictive. Even

worse, vape companies were given a loophole to avoid showing their true colors to the public--

these companies products were initially released without being checked by the FDA.

Ella, another high school junior, describes her the first time she used her own vape: “The day after I got my Juul...I used like three-quarters of a pod in probably four hours. And a pod is a pack of cigarettes, so that’s like twenty cigarettes. I didn’t have the tolerance for it. So I got



really, really sick, threw up for two days, couldn't eat, and didn't go to school." Yet, Ella admits she knew a pod was equivalent to about 20 cigarettes. As Szalavitz emphasizes, this disorder is learned and influenced during one's youth. "Addiction doesn't just happen... It is learned and has a history rooted in their individual, social, and cultural development" (Szalavitz 6). Drug experimentation, no matter how terrible the known consequences, emerges from youthful rebellion and pure curiosity. This is nothing to be ashamed of. But what truly is shameful is the unethical business of these companies which resulted from the laissez-faire attitude of the FDA.

By 2016, e-cigarettes were beginning to gain popularity. The same year the FDA released a report stating e-cigarette manufacturers are required to meet public health standards and "receive market authorization from the FDA, unless the product was on the market as of Feb. 15, 2007" ("FDA takes significant steps"). Juul Labs was created in 2007, so it *should* be subjected to these guidelines. However, under a staggered timeline, "the FDA expects that manufacturers will continue selling their products for up to two years while they submit -- and an additional year while the FDA reviews" ("FDA takes significant steps"). The ample time to submit review grants companies, like Juul, the leisure to build a large market and profit from unregulated, unethical products. As result, in the year 2017, "Juul Labs generated \$224 million in retail sales, according to Nielsen data provided by Juul Labs. The brand saw sales explode 621% year-over-year and captured 32% market share of the total e-cigarette category in the four weeks that ended November 4 [, 2017]" (Business Insider). Despite Juul's skyrocketing profits, CNBC reports that "Gottlieb in 2017 extended the application deadline from 2017 to 2022." Ultimately, the FDA's lack of taking action in the midst of the youth vaping epidemic has stirred an outcry from local governments and anti-smoking campaigns.

On March 19, 2019, in San Francisco, California, Supervisor Shamann Walton proposed legislation that would ban the sale of e-cigarettes in the city. San Francisco also happens to be where Juul Labs headquarters are located. If this legislation were to be passed, KCBS Radio of the San Francisco and the Bay Area notes that “if the measure is approved, it would be the first such prohibition in the country.” If this legislation were to be passed, it would set the precedent to the government addressing youth nicotine addiction in a modern, technological era. Last year, a collective of associations, a few notable ones to name being American Cancer Society Cancer Action Network and American Lung Association, came together to sue the FDA for their decision of delaying regulation to 2022 (LaVito).

As the crackdown on youth vaping commences, young addicts are wary of putting an end to their addiction. Lucius says with uncertainty in his voice, “I would consider quitting, maybe, at some point, but I don’t really- I still think the benefits outweigh the negatives.” Ella remarks, “it’s always that feeling of like, ‘oh I should stop,’ but I never get around to it.”

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