E-Cigarettes: Smoking Cessation Device or Big Tobacco’s New Frontier? Vapers Tell Their Stories in the Face of Pending Regulation by the United States Food and Drug Administration

By
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A Thesis

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Abstract

Electronic cigarettes provide an alternative to combustible tobacco. While clinical data about the health risks of e-cigarettes is limited, many vapers report improved wellbeing since switching from tobacco to these electronic devices. This thesis is a qualitative study that explores knowledge sharing and the use of e-cigarettes as a cessation device or harm reduction strategy. It also reveals the dynamics between power structures and individuals’ attitudes and behaviors that shape the production of knowledge required to make proactive, personal-health-related decisions. Examination of this issue contributes to the field of Critical Medical Anthropology by exploring e-cigarettes in historical context of tobacco use, the way e-cigarette users obtain and evaluate health risk information, tobacco corporations’ abuse of power, and distrust vapers feel for Big Tobacco and government.

*Keywords*: electronic cigarettes, e-cigarettes, vaping, vapes, harm reduction
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**Introduction**

In the 2010 film *The Tourist*, Johnny Depp’s character, Frank, is introduced through the eyes of Elise, played by Angelina Jolie. Boarding a train for Venice, she observes him reading a spy novel while puffing on an e-cigarette. Depp asks, “Do you mind me smoking? It’s not a real cigarette, look! It delivers the same amount of nicotine, but the smoke is water vapor” (Henchel von Donnersmarck, 2010). For many people, *The Tourist* was their first glimpse into the practice of vaping.

E-cigarettes have grown exponentially in popularity and controversy in five short years; because of a lack of public health data regarding their long-term safety, they are also subject of public, media and regulatory debate. Discussion includes the topic of nicotine initiation among non-smokers, particularly youth, and potential benefits for smokers. The critical questions being asked are whether e-cigarettes encourage or discourage smoking and if they should be banned, regulated the same as tobacco products, or “medicalized” (defining behavior as a medical problem or illness and mandating that the medical profession provide some kind of intervention) as a cessation device. Currently, Europe and the United States are taking different approaches to vaping regulation. The European Union (EU) regulates e-cigarettes as tobacco products (European Commission Public Health, 2015), while the United Kingdom incorporates e-cigarettes into its comprehensive program of tobacco harm reduction (Britton & Bogdanovica, 2014).
A dominant theme that emerged from this research is the long-term impact of the misleading distinction between “light” and regular tobacco made by the Federal Trade Commission (FTC) in the second half of the twentieth century (Weiss, 2008). This eroded the public’s confidence in government guidance and the validity of data related to smoking; tobacco companies used this misleading distinction to promote “light” and “low tar” products as “safer” than regular brands. This suggests a past abuse of power by tobacco producers in combination with quasi-scientific studies performed by the FTC (United States Department of Health and Human Services, 2001), and substantiates the use of Critical Medical Anthropology to evaluate current e-cigarette use. Through this theoretical lens, this thesis demonstrates that while vapers are reporting smoking cessation success and feeling better, many of them believe that vaping receives negative press because small vaping companies will not, according to one informant, “jump into bed” with government the way Big Tobacco has in the past. Throughout this thesis, the pejorative term “Big Tobacco” is used, implying a critical understanding of the problematic power of the tobacco-producing corporations. Such an understanding reflects common views among vapers. Vapers in this study do not refer to tobacco companies by name, but instead lump them together as one entity under this title.

Deciding whether or not to vape is a difficult health decision, particularly for the age group that is the focus of this thesis (21 to 30 years of age), because public health entities and the average consumer lack information about vaping’s long-term health implications. Data collected for this thesis, while conducted on a small number of participants, does indicate that those who vape found their health improved when they moved from tobacco to e-cigarettes. Such perceptions among vapers may be one of the
most accurate and reliable forms of current information about vaping since prospective cohort studies will take years to produce reliable and valid results about the long-term health impact of e-cigarettes.
Tobacco Use, the Power of Corporations, and Ill Health

In order to contextualize health-related aspects of e-cigarettes, one must place Big Tobacco’s abuse of power in historical perspective. Critical Medical Anthropology provides a suitable lens to do so.

Lorillard, Phillip Morris, J. E. Liggett and Brother, and R. J. Reynolds initially established themselves as the leading tobacco producers in the United States in the late 1700s. As the popularity of cigarettes grew, a small anti-tobacco campaign also gained momentum; scientific and medical journals suggested that lung cancer was related to smoking (Adler, 1912). By 1944, the American Cancer Society warned about negative effects of smoking but admitted, “no definite evidence exists” linking smoking and lung cancer (American Cancer Society in Boyle, 2010). From the 1930s through the early 1950s, as public concern about the health risks of cigarettes grew, tobacco advertisers incorporated images of physicians into advertising to imply that clinical judgment should negate accumulating health research findings (Gardner & Brandt, 2006).

In 1952, Reader’s Digest published “Cancer by the Carton,” detailing the dangers of smoking (Norr & Herrald, 1952). Starting in the early 1950s, epidemiologists Richard Doll and Austin Bradford Hill conducted a long-term prospective study of more than 30,000 British doctors, demonstrating the correlation between smoking and lung cancer (Doll & Hill, 1956). This study, which ran from 1951 to 2001, provided statistical proof in 1956 that tobacco smoking increases the risk of lung cancer.

As information about the dangers of smoking grew, consumers became increasingly concerned about the way their smoking habits could transform them into lung cancer patients (Brandt, 1990; Kluger, 1996). After the Reader’s Digest article,
cigarette sales declined for the first time in two decades (Cummings et al., 2002). Tobacco companies, responding to this threat to their sales, formed the Tobacco Industry Research Council in 1954 to counter growing health concerns (Cummings et al., 2002). Although the tobacco industry denied the link to health hazards, it developed and sold products termed “safer” than regular cigarettes (Cummings et al., 2002) that included filtered and low tar formations the public considered healthier and felt more comfortable purchasing (Cummings et al., 2002).

The addition of filters to cigarettes was one of the industry’s first design modifications and became essential to the later development of “light” and “low tar” products (Harris, 2011). Tobacco companies promoted “relative product safety” of filtered cigarettes, claiming that these cigarettes “filtered out” harmful tar and carcinogens (Harris, 2011). As a result, millions of addicted smokers switched to filtered cigarettes instead of quitting altogether (Benson, 2010). By the 1960s, filtered cigarettes dominated the tobacco market.

At the same time, the first medicinal product to facilitate smoking cessation emerged. Nicorette, a nicotine chewing gum, was produced for the treatment of nicotine dependence (Arenbo, 2006). Nicorette gum led not only to the acceptance of other forms of smoking cessation devices but also to the recognition of tobacco dependence as a disease, or addiction (United States Department of Health and Human Services, 2010).

In the 1960s, the Surgeon General’s Advisory Committee on Smoking and Health released a 387-page report stating that cigarette smoking is positively related to lung cancer in men and women (United States Surgeon General’s Advisory Committee on Smoking and Health, 1964). The report noted that the average smoker is nine to ten
times more likely to get lung cancer than the average non-smoker (United States Surgeon General's Advisory Committee on Smoking and Health, 1964).

To counteract growing concerns about the dangers of smoking, during the 1970s the tobacco industry poured resources into developing a cigarette that, when tested by the Federal Trade Commission, produced falsely low machine-measured tar and nicotine yields (United States Department of Health and Human Services, 2001). The newly designed “light” cigarettes used a special filter, perforated with small holes, which theoretically offset the concentration of inhaled harmful smoke with clean air and purported to have lower levels of nicotine and tar than traditional cigarettes (United States Department of Health and Human Services, 2001). Many smokers switched brands and continued to smoke, believing that “light” cigarettes were less of a health risk. According to Backinger (2007), testimony before the United States Senate stated that in 1967, “low tar” cigarettes accounted for 2 percent of the market. In contrast, by 2005, these products garnered 83.5 percent of market share.

According to the FTC (2008), “The Cambridge Filter Method was a machine-based test that ‘smoked’ cigarettes according to a standard protocol. At the time the FTC issued its guidance, most public health officials believed that reducing the amount of tar produced by a cigarette could reduce a smoker’s risk of lung cancer” (p. 1). The FTC also believed that it was important to standardize tobacco products, and offered this method to provide information to the smoking public about tar and nicotine yields (United States Federal Trade Commission, 2008).

Tobacco companies recognized the promotional value of the Federal Trade Commission data because these claims lent credibility to safety assertions and allowed
tobacco giants to advertise their products as health conscious. According to Pollay and Dewhirst (2002), “inherent limitations of the FTC cigarette testing program, and borderline ‘low tar’ advertising practices resulting from the way the test results were reported contributed to substantial consumer confusion and misunderstanding” (p.1).

Statements made by the FTC served only as “a smokescreen for tobacco companies” to get away with “shameful marketing practices” (United States Federal Trade Commission, 2008, p. 1) because, as it turned out, “light” cigarettes were just as dangerous as regular brands. Smokers, often heavily addicted to nicotine in cigarettes, compensated for the reduction by increasing their consumption of “light” tobacco to absorb the amounts of nicotine required to satisfy their cravings (United States National Cancer Institute, 2004).

By the 1980s, scientific studies emerged demonstrating that “light” and “low tar” products provided no health benefit to smokers (United States National Cancer Institute, 2004). Instead, smokers adjusted their smoking techniques by smoking more intensively, inhaling more deeply, smoking more cigarettes per day, reflexively blocking the cigarette’s filter, and taking larger, more rapid and more frequent puffs (United States National Cancer Institute, 2004). Due to these compensatory smoking behaviors, smokers inhaled significantly more nicotine and tar than they realized and purchased more “light” cigarettes than they did their regular brands. It was not until 2010 that the FDA banned the use of the terms "light," "mild" and "low tar" in the marketing and sale of cigarettes.

In 2009, President Obama signed the Family Smoking Prevention and Tobacco Control Act, creating the FDA Center for Tobacco Products that provides tools to protect
the public’s health through oversight of the manufacture, distribution, and marketing of tobacco products. Under this bill, the FDA gained control of tobacco regulation, including cigarettes. It also gave the FDA the ability to regulate additional tobacco products, commonly referred to as “deeming” (United States Food and Drug Administration, 2015).

The proposal includes e-cigarettes (United States Food and Drug Administration, 2015). Under this rule, makers of newly “deemed” tobacco products will be required to register with the FDA, report ingredient lists and market new tobacco products only after FDA review. The FDA would also prohibit the use of “light” and “low tar” claims until there is scientific evidence to support them (United States Food and Drug Administration, 2015).

In the past, Big Tobacco provided false statements upon which consumers made personal choices to continue smoking (Cummings et al., 2002). This new agency strives to prevent deception from occurring again. From the perspective of Critical Medical Anthropology, however, establishing FDA authority and “deeming” e-cigarettes does something else. It gives Big Tobacco a power advantage over smaller manufacturers because small companies have neither the financial resources nor expertise to compete in a regulated market.

FDA filing costs can range from a low of $300,000 to a high in excess of several million dollars per product (Neal, 2014). Further, tobacco corporations have lobbying power and industry alliances, helping to steer regulators in the direction that benefits them most. This means that regulations may favor the products Big Tobacco primarily produces, closed-systems called “cigalikes,” over vaping products they do not.
Many vapers in this study, whose opinions corroborate anecdotal evidence, indicate that smoking cessation does not typically occur with “cigalikes” but instead with Personal Vaporizers (PVs) commonly produced by smaller manufacturers. In other words, if small manufacturers do not have the financial resources to enter the regulatory environment, and “cigalikes” dominate the market not for health reasons but because tobacco producers and large independents like NJoy have the financial and political clout to safeguard their influence, public health and the individual consumer will suffer. For this reason, it is crucial that the voices of vapers be included in the regulatory process. Vapers must have a means to counteract the hegemonic discourse of Big Tobacco.

In the following section the theory of Critical Medical Anthropology is explored as it pertains to vaping, and the context of the e-cigarette debate. Based on readings from academic journals, personal knowledge, interviews and surveys, Critical Medical Anthropology is a suitable structure for conceptualizing the abuse of power exercised by Big Tobacco.
**Critical Medical Anthropology**

Critical Medical Anthropology is a subfield of cultural anthropology that focuses on medicine and medical practices and examines the philosophical, cultural and moral systems embedded in health practices (Carroll, 2013). When conducting health and illness research, anthropologists are apt to focus on the qualitative rather than quantitative aspects of health and illness (Carroll, 2013, p. 40).

One method of uncovering qualitative aspects of health and illness is ethnographic research. According to Carroll (2013), “ethnography offers ways to think about why individuals act as they do, do what they do, and how those behaviors shape patterns of individual and population health” (p. 43). While ethnography is often used in Critical Medical Anthropology, this study utilizes open-ended interviews and survey questions.

Qualitative analysis allows for highly descriptive research data. As Silverman (2011) points out, this type of research allows hypotheses to emerge from analysis of the data. It also lends itself to environments where “researchers can explore health and illness as they are perceived by the people themselves, rather than from the researcher’s perspective” (Morse, 2012, p. 21).

This thesis focuses on two aspects of Critical Medical Anthropology. The first is the anthropology of harm reduction and addiction because e-cigarettes have the potential to be used as a harm reduction strategy. Harm reduction is an approach widely used in health policy to reduce harm to an individual or society by modifying hazardous behaviors that are difficult, or impossible, to prevent. Other examples of harm reduction in public health are requiring drivers to wear seatbelts, promoting safer sexual practices,
providing methadone to opiate addicts, and encouraging needle exchange in intravenous drug users (Britton & Bogdanovica, 2014). The options for harm reduction in tobacco control include reducing smoking, and using modified cigarettes, smokeless tobacco products, nicotine replacement therapies, and e-cigarettes (Britton & Bogdanovica, 2014).

The second application of Critical Medical Anthropology examines the abuse of power of tobacco companies. As communicated by informants, lack of trust in Big Tobacco and government will have an impact on the believability of current and future public health data about e-cigarettes, especially the way trust pertains to the population of this study.

**Critical Medical Anthropology and Harm Reduction**

Anthropologist Merrill Singer significantly contributed to the anthropology of addiction (Lynam & Crowley, 2007). His core argument that social marginalization is directly related to negative health outcomes was expanded in Bourgois’s (1995) *In Search of Respect: Selling Crack in El Barrio*, Garcia’s (2010) *The Pastoral Clinic: Addiction and Dispossession along the Rio Grande* and Singer et al.’s (1992), *Why Does Juan Garcia Have a Drinking Problem? The Perspective of Critical Medical Anthropology*. Through the lens of Critical Medical Anthropology, all three works explain addiction in terms of the historical, political and economic circumstances that have led to marginalization of the addicted individual.

Harm reduction has been implemented in many facets of addiction (Singer, 2012). Since vapes are considered a nicotine delivery device, and nicotine is considered an addictive substance (Tolchin, 1988), it is important to examine harm reduction strategies
that have been utilized to control addiction and substance misuse/abuse (Carlson, 2006). In the IV drug community, addiction is managed through methadone clinics and needle exchange; those in a methadone step-down program go to a clinic several times a week to obtain methadone to manage their addiction (Maher, 2002; Shaw, 2006). In contrast, the public health harm reduction strategy for tobacco has emphasized abstinence from tobacco in any form (Berridge, 1999). In terms of e-cigarettes and harm reduction, many smokers welcome the availability of choice in nicotine substitution products, and if provided with products that are affordable and readily available, will use them either in conjunction with or instead of tobacco cigarettes (Britton & Bogdanovica, 2014).

Not all people in the medical community agree with tobacco abstinence over nicotine substitution products. While many health care professionals and government agencies have come out against e-cigarettes in entirety, other professionals believe tobacco abstinence is difficult to achieve. Fairchild and his colleagues state, “While the public health community presses for harm reduction for injection-drug users in the face of relentless political opposition, some harm-reduction advocates find it stunning that their allies have embraced an abstinence-only position on smoking” (2014, p. 3). Proponents look at e-cigarettes not as a cessation device but as a low-risk replacement for traditional cigarettes.

Fairchild and his colleagues (2014) argue that although abstinence-only and strict de-normalization strategies may be incompatible with e-cigarette use, the goal of eliminating smoking-related risks is not. Given the magnitude of tobacco-related deaths, disproportionately among those socially marginalized and at the lower end of the socioeconomic spectrum, an unwillingness to consider e-cigarette use until all risks or
uncertainties are eliminated is too rigid an approach. Fairchild and his colleagues (2014) contend that the FDA should move swiftly to regulate e-cigarettes so that their potential harms are better understood, and so they can contribute to the goal of harm reduction.

Hughes (2014) suggests that although e-cigarettes are currently unregulated, future legislation restricting or banning their use will come as a result of “social dangers, more than physical dangers, to health” (p. 1). Hughes (2014) asserts that social dangers involving harm to others, re-normalization of smoking, e-cigarettes as a gateway product, and the “moral sentiment that it is wrong for anyone to be addicted to anything, no matter whether there are physical dangers or not” (p. 1) are framing legislation. He argues that legislation sends consumers mixed messages about the devices simultaneously being “healthy alternatives” that can be used for smoking cessation, and as new forms of “smoking.” It is at this juncture that confusing, mixed messages evolve. He further argues that legislation that positions e-cigarettes as “therapies” will require tight regulation and may drastically diminish their appeal. As a result, Hughes predicts smokers who would have otherwise switched to e-cigarettes will continue to smoke combustible tobacco and shun e-cigarettes as they have done with nicotine patches, gum, and sprays (Hughes, 2014).

From a Critical Medical Anthropology perspective, questions to evaluate are, as the FDA restricts vaping, is actual harm being done to consumers in the name of harm reduction? And, if public health research eventually proves there are long-term health benefits to vaping over tobacco consumption, has the government actually fueled the public health problem?
Critical Medical Anthropology and Corporate Power Abuse

Looking at past guidance about smoking safety provided by government agencies, it is important to identify key events that cause smokers to question the truth about vaping studies today. According to informants, tobacco corporations perpetuated a culture of illness and death by failing to communicate health dangers to the general public. The practices of these corporate giants, who manipulated FTC-testing results while advertising relative product safety through deceptive tactics (United States Federal Trade Commission, 2008), is also explored. Using overstated nicotine and tar data, Big Tobacco deceived the public and encouraged smokers to find comfort in its “safer” low tar and low nicotine products (United States Federal Trade Commission, 2008).

Historical mistakes about “light” and “low tar” levels and the unreliability of the smoking machine method contribute to informants’ mistrust of tobacco corporations. Many participants in this study expressed a general mistrust of government and the way those in positions of power have the ability to slant results of e-cigarette studies (United States Federal Trade Commission, 2008). For example, research released in *The New England Journal of Medicine* that has been widely re-circulated in many popular publications, provides data about formaldehyde levels in e-cigarettes. In the formaldehyde study, data were obtained by the smoking machine method, which according to government documents offers inaccurate results that are unrelated to human consumption behavior. The study’s authors, Jensen et al. (2015), state, “researchers have found excessive levels of formaldehyde, an established carcinogen in the vapor produced by e-cigarettes when the devices are used at high voltage” (p. 292).
One problem with this study is that e-cigarettes were being tested under unrealistic conditions, and the study fails to consider the way humans actually operate the product. Prior use of smoking machine results led to misunderstandings about cigarette comparisons and their relationship to human health. As a result, smoking machine data are regarded as poor indicators of health risk (United States Federal Trade Commission, 2008). Nevertheless, findings from the formaldehyde study are circulating throughout the general public and causing fear that has the potential to steer vapers back toward tobacco.

The results of this study, which suggest e-cigarettes are more dangerous than tobacco, are ironic in light of past smoking machine mistakes. Starting in the 1960s, the dangers of tobacco were under reported, endorsed by the FTC, and used in tobacco marketing campaigns (Backinger, 2007). The average smoker took comfort in this data, believing that “light” cigarettes were a healthier alternative to traditional brands. In 2015, this machine appears to be over-reporting the negative effects of e-cigarettes; critics of this study such as Dr. Konstantinos Farsalinos, a Greek cardiovascular specialist with a high profile in the e-cigarette community, strongly insist that vapes are never used at the high levels of heat testing recently employed to analyze formaldehyde. This raises questions about how confident one can be in these current studies. And, since prospective cohort studies take years to conduct, would it not be in the best interest of policymakers to call upon vapers to provide health information as part of the FDA’s overall nicotine harm reduction strategy currently being evaluated at the national level?

It appears that vapers are socially marginalized at the FDA. This is highly problematic since inclusion of vapers’ reported health experiences would give
government agencies a contextualized understanding of this new device and its significance in the vaping community. While prospective cohort studies carry scientific weight, there is also value in qualitative data. Data like these give all stakeholders in policy-related decision-making insight into the successes these individuals are having as they work toward tobacco abstinence, a high priority in public health circles.

Developing validated methods for assessing tobacco products and e-cigarettes is vital for oversight designed to protect the public’s health (Marian et al., 2009). In the past, Big Tobacco used its power to exploit the average tobacco consumer (Backinger, 2007). It is understandable, therefore, that in today’s uncertain e-cigarette environment, many vapers rely more heavily on information gained from fellow e-cigarette users and Internet forums than they do from recent public health reports or medical journals.

The next section of this thesis summarizes the anthropological literature on tobacco use.
Anthropological Literature on Tobacco Use

Anthropological writings on tobacco originally focused on where and how tobacco was used, rather than its purpose in historical and cultural contexts, especially pertaining to power and harm (Levi-Strauss, 1973). A small portion of literature addressed its medical and ritual significance, while another portion compared tobacco use across indigenous groups (Kroeber, 1941; Linton, 1924; Lowie, 1919). Missing from the literature was the acknowledgement of its harmful effects (Brady, 2008). Quantitative studies of tobacco use explored topics such as social class (Stellman & Resnicow, 1997), genetics (Swan et al., 2003), and diverse cross-cultural forms of dependency.

In the 1990s, critical medical anthropology evaluated structures that shape health conditions and examined them in view of capitalist systems (Baer et al., 2003), including links between the multinational tobacco industry, international financial and trade institutions, and the spread of cigarettes as commodities associated with being global and modern. Tobacco use was no longer just tied to local customs but instead to political and economic globalization. Singer and Bear (2008) identified tobacco as one of several “killer commodities” that depended on harming populations and undermining public health (Benson et al., 2010).

Anthropological literature has also looked at the tobacco industry as a vector of harm, which involved corporate strategies and public relations, exposing a range of health and social problems directly attributable to the tobacco industry. Benson (2008b, 2010b) explored corporate social responsibility and the way that public health education benefitted tobacco companies because it limited corporate liability and gave the false impression of improved tobacco safety. Tobacco companies focused on educating
consumers about health risks in order to frame smoking as a matter of informed adult decision and neglected a broader approach to controlling harm and health problems. Thrasher (2004) identified that public vilification of Big Tobacco has lead to increased critical awareness among existing and potential smokers, less industry loyalty, more accurate beliefs about tobacco risks and significant reductions in tobacco prevalence (Hammond et al., 2006).

In the next portion of this thesis, information about e-cigarettes is provided so that readers have a basic understanding of the products that are at the center of this controversy.
E-Cigarettes: The Product

Chinese pharmacist Hon Lik started a smoking revolution in 2003 when he invented the product we know today as the e-cigarette, launched by the Chinese electronics company Ruyan Technology three years later (Bell & Keane, 2012). According to Charney (2014), in 2014 Americans spent $2.2 billion on e-cigarettes, a small fraction of the $85 billion annual sales of tobacco products, yet a substantial amount for a relatively new device. According to Fairchild et al. (2014), some industry analysts predict e-cigarette sales may eventually eclipse tobacco sales.

Vaping has become its own subculture with specific language and a set of rules for behavior. This group favors Personal Vaporizers (PVs) or MODs and “e-juice” as opposed to the mass-produced and marketed brands like Blu e-cigs, considered “cigalikes” (i.e., e-cigarettes that emulate the look and feel of real cigarettes). This subculture does not consider e-cigarettes a tobacco cigarette replacement. E-cigarettes are about a whole new, “digitally cool” solution to feeding nicotine cravings that, prior to a little over a decade ago, did not exist.

E-cigarettes, which deliver nicotine via an inhaled mist, are controversial in public health circles. These battery-powered vaporizers emulate tobacco smoking but do not produce cigarette smoke. Instead they produce a vapor by means of a heating element that atomizes (i.e., converts a substance into very fine particles or droplets) “e-liquid” or “e-juice” to the point of vaporization. It is this vapor that gives vapes its name.

E-cigarettes have four basic components: a battery, which makes up the bulk of the device; a heating mechanism called an atomizer; a container, known by a variety of names depending on the design (e.g., “cartomizer,” “clearomizer,” or “tank”), which
houses the atomizer and holds what is known as “e-juice” or simply juice, fluid or liquid; and the “e-juice” itself – the liquid that makes the vapor – which contains propylene glycol, vegetable glycerin, food flavoring and, most times, nicotine.

**The Disposable E-Cigarette or “Cigalikes”**

When most people think of an e-cigarette, they think of those sold in gas stations and convenience stores. They resemble regular “analog” cigarettes and, in the case of Blu and Vuse, are manufactured by Big Tobacco. Informants in this study state that the vast majority of those who permanently quit smoking in favor of vaping do not use them. These individually wrapped e-cigarettes, called “cigalikes,” are designed to look like tobacco cigarettes. They are disposable, meaning the battery cannot be recharged, and the cartridges come pre-filled with liquid. “Cigalikes” have limited flavor selections. Users are typically introduced to vaping through these mass-marketed products, but vapers eventually settle on customizable units, as they provide more flavors and less nicotine.

**Rechargeable E-Cigarette Kits**

Starter kits have more options than the disposable e-cigarettes. These kits consist of a rechargeable battery and a nicotine liquid cartridge. This product ranges from the size of a cigarette to that of a compact flashlight. Many smokers indicate that those who use this e-cigarette tend to take deeper and longer inhalations at first because the vapor is not as dense as tobacco cigarettes. In addition, this e-cigarette does not create the burning sensation in the lungs that tobacco cigarettes create.

**Personal Vaporizers**

Personal Vaporizers are probably the most popular e-cigarette devices on the
market. The best feature of these e-cigarettes is the user’s ability to customize his/her own device. The three most common types of Personal Vaporizers are Basic Personal Vaporizers (eGOs), Advanced Personal Vaporizers (AVPs or MODs), and Rebuildables (Mechanical MODs).

**Basic Personal Vaporizers (eGOs)**

The eGO, also called a basic Personal Vaporizer, is a step up from the standard rechargeable e-cigarette style and preferred by many users who need a little more vapor and a bigger battery. eGO e-cigarettes also produce more “throat-hit” (i.e., the feeling that nicotine creates in the throat and lungs when inhaled) than any disposable and most rechargeable styles. Batteries can last all day, and tanks can hold enough e-liquid to match the battery’s longevity. The eGO is designed for medium to heavy smokers.

**Advanced Personal Vaporizers (AVPs or MODs)**

MOD stands for “modified” or “modification.” AVPs or MODs function essentially the same way as traditional e-cigarettes, but with two primary differences: they have a larger battery capacity and replaceable internal batteries. The output of the battery can be adjusted to provide the optimum temperature for any flavor. “Cartomizers” are also regularly replaced with “tanks,” which are much bigger and designed to withstand the stresses of demanding use. Recent variations now include advanced operations, such as the ability to digitally adjust the voltage and wattage and connect the device to a computer for graphic visualization of a user’s vaping history.

**Mechanical MODs**

Unlike traditional AVPs or MODs, which have onboard circuitry, wiring, chips, and screens, mechanical MODs do not contain electronics or circuitry of any kind. A
mechanical MOD is simply a casing that holds the battery, and a manual button that connects to an atomizer. The button does not send a signal to the battery releasing power to the atomizer. Rather, the battery simply completes the connection between the battery and the atomizer, thereby vaporizing the liquid. The advantages of mechanical MODs are the ability of the device to get wet and the reduced likelihood of malfunction due to its lack of circuitry.

The next portion of this thesis explains data collection methods and the way they were implemented in interviews and surveys. Qualitative methods were selected to provide an in-depth, description-dense focus on vapers’ perspectives, decision-making strategies, health-change information, and levels of mistrust of Big Tobacco and government.
Methodology

Vapers share several characteristics, and it is justified to say that they represent a distinct culture, including their own set of rules, language, and practices. For purposes of this study, a portion of this culture was selected, a population of vapers aged 21-30, including one twenty-nine-year-old vape storeowner and distributor.

A qualitative approach to this study was chosen for several reasons. The first is that when research was initiated, it was important to get a bird’s eye view of the study population in order to formulate research questions. Second, vapers in this age group are suspicious of those not involved in the vaping community, and it was important to garner their trust to participate. The third reason was to identify major themes, which came out of rich description. For these reasons, forty-minute, open-ended interviews were conducted in conjunction with open-ended survey questions. This provided the opportunity to dig deeply into the informants’ culture to understand their health behaviors. It also provided two ways to analyze data.

Thirty interviews and a survey with thirty-three participants produced data about perceptions of the health consequences of vaping and how these perceptions influence use of e-cigarettes. Other data related to whether participants have used e-cigarettes as a smoking cessation device. A finding not originally anticipated when this study began resulted from questions about health care beliefs. Vapers expressed distrust and skepticism of government and the relationship between the government and Big Tobacco. These comments led to the theoretical framework of Critical Medical Anthropology when interpreting the data.
Interviews

Interview respondents were recruited from vape shops in Southern California, Saddleback College in Mission Viejo, California, and Facebook.

After receiving Creighton University’s Institutional Review Board approval, interviews were conducted over Skype (voice only) for twelve weeks. Individuals’ age and gender were recorded. Each interviewee was provided Creighton University’s IRB Bill of Rights for Research Participants. Interviews were kept confidential. To ensure uniformity in research, the interviewer, research technique and setting remained consistent throughout all interviews.

All interviewees were from Southern California, and, therefore, were not representative of a nationwide sample. Those who took part in surveys, however, were from a group of vapers outside Southern California. In order to determine whether or not responses were unique to those living in Southern California, interview responses were compared from two geographic areas. Results demonstrated that differences in answers were not distinguishable. For that reason, it appears that the responses of those in Southern California, while geographically isolated, were comparable to those nationwide in similar age groups.

Various methods were used to recruit study participants in order to tap into diverse populations. Though a literature review, several different areas of research that were not currently being addressed were identified. For example, the literature did not distinguish between vapers who use a closed-system, as opposed to an open-system vape. In the future, a research distinction such as this has the potential to further illuminate vaping subcultures.
The purpose of making the distinction between open-system and closed-system users is that tobacco producers primarily manufacture and distribute the “cigalike” or closed-system products and are lobbying at the FDA to outlaw open-systems. This distinction is important because many informants in this study report that smoking cessation occurs with open-systems, not closed-systems, and outlawing open-systems may turn vapers back toward tobacco. In other words, tobacco producers are attempting to exert power over smaller manufacturers of e-cigarettes, which seems counterproductive to health improvements.

At local vape shops, participants were recruited with a flyer titled, *Medical Anthropology Study*. The flyer provided information to participants about methodology, use of personal information, and how to arrange an interview. The flyer detailed the study’s objective and informed prospective participants that interviews would provide data to evaluate mixed messages about e-cigarettes as a cessation device or a new form of “smoking.” It also noted that after the study was concluded, recommendations would be made to policymakers. Only five participants chose to participate via this time-consuming recruitment method.

At Saddleback College, vapers were contacted on campus. During 2014, vaping was not banned on this college campus. Thus, it was easy to identify potential participants. In what is considered the “quad,” where students wait before class, vapers were approached and asked if they would like to participate in this study. If a vaper expressed interest, a contact email address was provided to arrange a time to speak by Skype. An electronically posted Recruitment Advertisement asking for volunteer
through Creighton University’s Institutional Review Board website was also made available, although this yielded no participants.

Having face-to-face contact and answering preliminary questions from potential participants was the most successful way to recruit for this study. This method allowed for immediate responses to questions about participation, which was time efficient. Had the number of responses been fewer at Saddleback College, recruitment would have continued on other Southern California campuses. It is doubtful if recruitment would have been successful in this manner, however, since vaping was prohibited on all University of California campuses effective January 2, 2014.

The third way vapers were recruited was via Facebook. Since the target population was vapers in the 21-30-age bracket, a woman aged twenty-five helped with recruiting. She posted the study information on her Facebook page and provided email contact information for potential participants. Over thirty responses were received via this method, and fifteen Skype interviews were conducted. This was the most successful way to recruit study participants, followed by direct contact at Saddleback College, which resulted in ten interviews, and finally by leaving flyers in local vape shops, where five vapers were recruited.

During the interviews, thirty participants were asked the open-ended question, “Do you believe vaping is a ‘healthier’ alternative to tobacco cigarettes, and how do you form these beliefs?” From this initial research question, sub-questions were explored during a single forty-minute interview with each study participant. In addition to uncovering beliefs about the health benefits and risks of e-cigarettes, and views about the
use of e-cigarettes as a cessation device, this study also sought to uncover the sources of vaping health knowledge. A list of survey questions is contained in Appendix I.

After each interview, the conversation was transcribed and hand-coded for emerging themes. Answers were placed into groups according to perceptions of benefit and risk, use of e-cigarettes as a cessation device, and positive and negative personal health changes. These themes were eventually categorized into paradigms that identified six categories. Four categories were in favor of vaping, which included the use of vapes as a smoking cessation device, improved health, reduced dependence on nicotine, and trust in the local vaping community. Two categories that identified concerns about vaping were fear of the unknown and the risks of “e-juice” ingredients.

All copies of interviews were stored in a locked file cabinet. On multiple occasions, participants asked about the health risks of vaping; however, information about research data was not discussed so as not to influence the interview process. This demonstrated that many vapers prefer this method of personal information exchange as opposed to that provided by government agencies.

**Surveys**

After completing fifteen interviews, a hyperlinked survey was posed on Reddit.com’s Electronic Cigarette Forum through eSurv, a tool for designing online surveys. Reddit.com was chosen because its Electronic Cigarette Forum is a popular place to exchange vaping information. On Reddit.com, information about the study was provided, including that this survey was for a graduate school thesis. Within hours, several critical responses from Reddit.com users were posted, suggesting that Big
Tobacco or a government spy, not a graduate student, was initiating the survey. This was the first clue about vapers’ mistrust of both.

Posting on Reddit.com proved fruitless. Although several participants answered the survey questions, it became apparent that many on Reddit.com’s Electronic Cigarette Forum are suspicious of government interference in the e-cigarette industry and do not trust outsiders. Negative responses ranged from “I think this person has something to do with a tobacco cessation product because questions got oddly specific about other cessation devices” to saying the questions and survey were “dodgy.” This seemed like an inappropriate place to ask for participation and, after a few frustrating days exchanging posts with Reddit.com users, the survey was re-posted to E-Cigarette Forum. E-Cigarette Forum is the “largest e-cigarette website in the world,” protecting vapers’ rights and serving as an information resource.

One of the conditions for posting on E-Cigarette Forum was verification of a valid email address with the “edu” extension. After multiple email exchanges with the Forum Manager, permission was granted to post the survey hyperlink in the New Members section. The survey included demographic questions, followed by additional ones pertaining to the main topic question: Is vaping a “healthier” alternative to smoking and what sources do you trust to evaluate this? In response to this survey, thirty-three replies were received. Twenty-five of the respondents were men, and eight were women.

When conducting a survey, it is important to address unintentional bias. Since many of the participants were former smokers, and smoking can have social stigmatization, it was important to avoid this bias. According to Utts (2014), “sometimes survey respondents have a desire to please the person who is asking the question. They
tend to understate their responses about undesirable social habits and opinions” (p. 43). For example, in recent years, estimates of the prevalence of cigarette smoking based on surveys do not match those based on cigarette sales (Utts, 2014). For this reason, questions were designed so that respondents did not feel judged or stigmatized.

It was also important to avoid question complexity. In hindsight, several questions were quite similar, and the order of questions should have been rearranged to enhance question comprehension. Also, the survey question about smoking dangers seemed absurd to some, with several respondents saying, “Are you kidding?” Based on the survey feedback that was received halfway through the interview process, later interviews included additional questions about cessation products.

Finally, Utts (2014) has demonstrated that many survey respondents usually have a deep positive or negative feeling toward a subject, which colors responses. Since all participants were from E-Cigarette Forum, the assumption can be made that they were passionate about the topic of vaping; E-Cigarette Forum is a vaping advocacy website. Had participants been randomly selected from a different environment (which was attempted through Reddit.com), feedback may have been different; participants may have been less invested in the outcomes of vaping policy and/or less educated on the subject. This could have resulted in different themes emerging from the interviews and surveys.

The following section provides differing perspectives on the e-cigarette debate. There is a short literature review, followed by specific identification of the pros and cons of vaping as they pertain to this controversy and the application of Critical Medical Anthropology theory.
The E-Cigarette Debate: Literature Review

The entrance of e-cigarettes into society posed challenges to the longstanding messages about tobacco abstinence. E-cigarettes introduced a new choice in the either-or model of tobacco use, offering a harm reduction strategy in the form of nicotine substitution. It is, therefore, difficult for lawmakers to understand how to position electronic devices in tobacco control.

The Pros

Supporters of e-cigarettes report that this product helps smokers “kick the habit” because e-cigarette design replicates the look and feel of conventional cigarettes, satisfying the repetitive, hand-to-mouth motion that is integral to smoking tobacco (Polosa et al., 2013). According to Dearing (n.d.) and Sugerman (2014) vapes are able to provide the emotional satisfaction of smoking, but without the carcinogens and side effects that come with burning tobacco. Barbeau et al. (2013) argue that anecdotal evidence strongly suggests e-cigarettes may be effective in helping smokers quit tobacco cigarettes and preventing relapse.

Bell and Keane (2012) argue that e-cigarettes have the potential to challenge the dual “either-or” perception of nicotine in which the drug is either purely medicinal or inextricably linked to the image of tobacco consumption. Wagener et al. (2012) advise that more research is needed on the cost-benefit equation of e-cigarettes, including the appropriate level and type of regulation. They believe the harmful effects have thus far been overstated relative to e-cigarettes’ potential benefits. Adding to this, Hajek (2012) urges policymakers to support the development of e-cigarettes.
In an article published May 24, 2014, top scientists warned the World Health Organization (WHO) to be cautious in curbing the use of e-cigarettes in the general population, and not to classify e-cigarettes as tobacco products, “arguing that doing so would jeopardize a major opportunity to slash disease and deaths caused by smoking” (Hirschler, 2014). These top scientists perceive e-cigarettes to be part of the solution in the fight against smoking, not part of the problem. In fact, this group of fifty-three scientists believes that e-cigarettes could be the most significant health innovation of this century.

**The Cons**

Conversely, others, such as the WHO, question whether vapes are a gateway to nicotine, especially for adolescents, and fear that those who would never have considered smoking tobacco will now become addicted to it. The WHO has expressed concerns about whether youth and non-smokers have initiated nicotine use “at a rate greater than expected,” and will do so because of e-cigarettes (2014, p. 6). The second area of concern is whether adolescents who become addicted to nicotine through the use of these devices will replace vapes with tobacco cigarettes and perpetuate the smoking epidemic.

The normalization effect, which refers to “the possibility that everything that makes e-cigarettes attractive to smokers may enhance the attractiveness of smoking,” is troubling (World Health Organization, 2014, p. 6). E-cigarettes “mimic the personal experience and public performance of smoking and their market growth requires marketing that is challenging commercial communication barriers erected to prevent the promotion of tobacco products” (World Health Organization, 2014, p. 6). Since current
regulation is nonexistent, advertisers are able to market directly to the consumer, a practice that has long been banned on traditional tobacco in the United States.

Survey data gathered in countries such as Korea and Poland (Grana et al., 2014; Goniewicz & Zielinska-Danch, 2012), demonstrate that experimentation with e-cigarettes is increasing among adolescents, which is of concern, even if those youth are replacing traditional cigarettes with electronic ones. It is unclear from these data whether youth smokers are switching from tobacco to e-cigarettes, establishing patterns of dual use, or using e-cigarettes for experimentation. Therefore, it is hard to know whether these devices have the potential to increase nicotine use among youth, or if they lead to smoking.

In the following data collected from thirty interviews and thirty-three surveys, vapers discuss their beliefs about e-cigarettes, cessation devices, regulations, and trust in their community vape shops. Of the sixty-three informants who participated in this research, many believe e-cigarettes should be used as a cessation device. Informants also trust what others in the vaping community tell them about e-cigarette risks over information communicated by the FDA.
The E-Cigarette Debate: Vapers’ Responses in Favor of Vaping

E-Cigarettes Work as a Cessation Device

Both the interview and survey data from this thesis strongly support anecdotal evidence that vapes are one of the most effective cessation devices many prior tobacco smokers have used to wean off cigarettes. One vaper thought it was because of “the physical hand to mouth habit, which allows you to continue ‘smoking’ while weaning yourself off nicotine.” Another expressed, “vaping makes me feel like I’m smoking and also helps with my oral fixation.”

One woman was surprised by the ritual satisfaction her e-cigarette offered, saying, “The act of holding something in your hand is a ritual that you can’t satisfy with the patch or gum. You can’t quit without replacing that aspect of smoking.” Another explained, “Vaping made quitting easy because I could see the vapor so I got the visual cue that I was smoking. I also needed that ‘thump’ in the back of my throat, which I only got when I switched to rebuildables.” Further, “the ‘drawing’ or ‘sucking’ action is reminiscent of a cigarette, and really does a good job tricking my brain into thinking it’s smoking.”

One vaper, who started for social and lifestyle reasons, said that cigarettes were often inconvenient, whereas e-cigarettes are not. “I would go out late at night to get a pack if I found myself without cigarettes,” he explained. “Cigarettes cut into my wallet, my health and my time stopping to get them.” A twenty-three-year-old man, who also started for lifestyle reasons, commented, “I wanted to be able to smoke inside without the smell or ash stinking up my apartment. But I quickly realized that smoking an e-cig
would be a lot cheaper than buying a pack or two of cigarettes every day. E-cigs weren’t intended to be a cessation device, but that’s what they became.”

Another informant added to the discussion by exploring the social acceptance of vaping. She believes that non-smokers are prejudiced against people who smoke tobacco but much less so against those who use e-cigarettes. Vaping does not carry the same social stigma as cigarettes, and in fact, because it is somewhat trendy at this time, comes with a level of intrigue. Those who vape are less likely to receive criticism from others, even if they vape in smoke-free areas. Still, “on occasion, people wave their hands in front of their faces and cough whether or not the vapor is having any effect on them at all.”

Finally, a business traveler who had been a two-pack-a-day smoker said he “picked up a starter kit because he couldn’t smoke in a plane, car or hotel room.” He explained that he forced himself to use his vape kit for the one week he was traveling. He recalled, “By the time I got back, I had no cravings for ‘analogs.’ Actually, I lit one up by mistake a week later and almost gagged. I still have three packs of cigarettes left over in a carton that I’ll never touch.”

Emergent themes suggest that the repetitive hand-to-mouth motion of vaping is the single most important reason why people were able to stop smoking. For this reason, vapes are perceived as an effective cessation device. Many vapers believe that smoking is a ritual that needs to be satisfied, and using vapes decreases the possibility of a smoking relapse. In the future, it may prove fruitful to pursue research about the relationship between smoking cessation and ritual replacement from an anthropological perspective.
The survey data corroborates themes identified during interviews, specifically that vapes work as a cessation device. Of the thirty-three individuals who were surveyed on E-Cigarette Forum, twenty-eight respondents stated that they view e-cigarettes as such. One participant commented, “switching to vaping has been the only effective alternative I’ve found to quit smoking. For me, it has eliminated a cycle of addiction.” And, a twenty-seven-year-old woman, who had tried numerous ways to stop smoking, said, “I smoked cigarettes for almost ten years, quit for a year and a half with the help of Chantix, then started smoking again for a month. I finally switched to vaping and haven’t had the desire to smoke cigarettes since.”

When questioned about whether or not they had tried other types of cessation devices prior to vaping, 70 percent of survey participants responded positively that they had tried other products, while 30 percent said they had not. Other devices tried were, in ranking order from most to least: Nicotine gum (12 uses), nicotine patches (11 uses), cold turkey (6 uses), hypnosis (3 uses), nicotine lozenges (2 uses), nicotine inhalers (2 uses), and one use each of acupuncture, medication, nasal sprays, nicotine toothpicks, and “all others.” It appears e-cigarettes are the first product that has allowed many smokers to effectively wean off traditional cigarettes.

Two responses were particularly poignant. One man explained, “The patch and gum did not even slow down my smoking. None of the other cessation devices like patches, gum, or hypnosis were successful. The most I went without smoking was forty-eight hours on methods other than vaping.” A second man stated, “Being able to see the vapor and feel the ‘thump’ in my throat from a long draw really sealed the deal for me. It was easy not to go back to cigarettes.”
Of those respondents currently vaping, 85 percent stated they had originally been smokers. The other 15 percent had started vaping without previously smoking “analog” cigarettes, a public health concern of those who oppose vaping. Smokers stated they had previously smoked from an occasional cigarette to over two packs a day.

The average length of time respondents had continuously vaped was nineteen months. In comparison to the other cessation methods tried such as the patch and gum, this is the longest time period most prior smokers had gone without returning to cigarettes. Ninety-one percent of survey respondents stated that they no longer smoke cigarettes.

Participants in both interviews and surveys who commented that they consider vapes a cessation device had exhibited a positive outcome when moving from tobacco to e-cigarettes. Vapes appear to provide the rituals and social reinforcement necessary for past smokers to cut their ties with “analog” cigarettes. For many, this has lead to health improvements, the next topic that will be addressed.

**Smoking Cessation, Vaping and Improved Health**

Since many participants believe that e-cigarettes are a cessation device, it is important to discuss vapers’ perceptions of their physical changes since ceasing to smoke tobacco. Almost all vapers in this study enthusiastically discussed the personal health changes they experienced, the majority of which were positive.

Answers to whether vapers had experienced health improvements clustered around several significant changes including better lung function, reduced cough, fewer lung infections, a heightened sense of smell and taste, improved sleep, better energy, and increased endurance. One respondent stated, “I used to get pneumonia or bronchitis once
a year. I have not been sick since I quit, don’t cough at all, and my doctor says my lungs are crystal clear.” A man hypothesized that his ability “to moderate nicotine consumption through lower dose and sustained delivery throughout the day” is one reason for his improved health.

Several respondents reported they no longer need asthma medication and have improved pulmonary function, measured through physician-based quantitative testing. In a small retrospective study, Polosa et al. (2013) found that when substituting e-cigarettes for smoking, subjects reported objective and subjective improvements in asthma outcomes. According to the study, e-cigarettes may be a valid option for asthmatics that are unable to stop smoking by other methods.

Similar responses came from other informants. A heavy smoker for ten years, a woman reported, “I was diagnosed [by a pulmonary function test] with moderate to severe lung damage. I had a chronic cough with copious phlegm production. I had bladder leakage from the chronic cough. ALL have stopped since I began vaping.” Two respondents experienced similar improvements; one stated, “I used to get bronchitis multiple times a year. I haven’t had it once since I quit.”

Increased senses of smell and taste were other frequently mentioned health improvements, which speak to a better quality of life. Another quality of life improvement was the ability to sleep without coughing, reported by several respondents, including a young woman who said that she no longer awoke with a hacking cough. One even mentioned “improved skin,” and several others mentioned that their allergies were either gone or “much better.”
Another primary benefit of vaping respondents reported is lowered dependence on nicotine. Although many believe that nicotine is not as dangerous as chemicals in cigarettes, several expressed concern about its harmful effects. Some think nicotine is similar to caffeine. In the following section, nicotine reduction and cessation is discussed.

**Smoking Cessation and Nicotine Reduction**

Nicotine is a highly addictive substance that is a naturally occurring liquid alkaloid, an organic compound similar to caffeine. According to a woman distributor informant, “when people switch from ‘analog’ cigarettes to e-cigs, those who have smoked about a half a pack-a-day usually start at eighteen milligrams of ‘e-juice.’” Several vapers had been told by their vape storeowners to start at twelve milligrams, but vapers report eighteen milligrams may be more appropriate for those who need to vape in a short window of time, such as on a work break. They say, however, that as vaping technique improves, vapers are able to reduce their level of “e-juice.” One additional consideration is that if vapers use too low a nicotine level, they may be increasing their vaping by up to one hundred percent, or doubling their vaping in order to get the nicotine level they need. However, once vapers settle into a comfortable routine, they are often able to stabilize and lower their “e-juice” requirement.

A twenty-two-year-old woman reported that she had reduced her nicotine intake from twenty-four milligrams when she started, to six milligrams in about five months. She reported, “I was at twelve for a long time. I thought six wasn’t going to work, but it actually feels the same as twelve.” Six milligrams is usually the last phase of “stepping
down” to vaping zero nicotine. At that point, vapers use the device primarily for the repetitive hand-to-mouth fixation it satisfies.

Vapers reported a substantial level of nicotine reduction, if not total elimination, with minimal withdrawal symptoms and side effects. One woman said, “I’m going to be off nicotine in another month or so. That means no tar and no nicotine.” Another informant explained, “I don’t even feel an addiction to nicotine anymore and can go without vaping for long periods of time.” A third participant agreed that vaping reduced his addiction to nicotine: “I still feel the urge to vape, but I am able to go several hours without getting totally antsy. While I’m dependent on nicotine now, I am no longer addicted to it.”

The majority of informants had stepped down from a high of twenty-four milligrams to a current intake of six. Two outliers had increased consumption from their original level, saying, “I was looking for a little bit more kick.” With the exception of these two individuals, though, all reported decreased nicotine consumption. Almost all intended to reduce nicotine levels in the future.

There are reasons why it is easy to reduce nicotine consumption through the use of vapes. Most users start off at high nicotine levels when they are weaning off “analog” cigarettes by using “cigalikes.” However, as they move to a Personal Vaporizer, they do not need as high a concentration of nicotine to be satisfied. Often, they “step down” (i.e., decrease the nicotine strength) once they find that high nicotine levels negatively impact the flavor of “e-liquid.” Simply put by one informant, “The less nicotine you use, the better your liquid tastes.”
This explains why many vapers report that they do not use “cigalikes” as a cessation device. Instead, they look to Personal Vaporizers to achieve cessation. Big Tobacco currently does not participate in the Personal Vaporizer market and has lobbied against it. Recent reports show that sales of closed-systems, or “cigalikes,” have stagnated as the open-system products and “e-juice” segments grow. For this reason, Big Tobacco has lobbied the FDA to ban open-system products like Personal Vaporizers, citing “health concerns” about them being manufactured overseas in facilities that would fall outside United States government regulatory oversight.

Vapers trust one another, their local vape storeowners, and the vaping community to provide advice about product selection, nicotine strength, and device modifications. Vape shops act as hubs for the local vape community; they are a source of information in the face of limited clinical data, a gathering spot, and, because vaping has become a hobby for many, a place to learn and share. In short, vapers trust their local vape shops and others who use e-cigarettes because they see one another as comrades fighting the battle against Big Tobacco and the “many erroneous reports about e-cigarette harm circulating on the Internet,” as one vaper said during an interview.

The next section explores the loyalty vapers feel toward their local vape shops, especially in light of Big Tobacco’s intrusion on what was once a cottage industry.

**Loyalty and Community**

Since 2009, cigarette consumption has declined more rapidly than expected by industry analysts; increased taxation and e-cigarettes have accounted for a significant portion of this reduction (Campaign for Tobacco-Free Kids, 2012). Sales of e-cigarettes are a way for tobacco companies to regain some of this lost revenue. According to Tozzi
and Bachman (2014), “While tobacco companies haven’t had to compete with new rivals for a long time, they may have an advantage over upstarts on the e-cigarette frontier.” (p. 1). Regulations proposed by the FDA would outlaw sales to minors, however, it would allow e-cigarette manufacturers to sell flavorings and advertise, something regulators stopped traditional cigarette brands from doing a long time ago. Further, Tozzi and Bachman (2014) state, “For tobacco companies that have been barred from the airwaves for years, e-cigarettes are a way back in” (p. 1).

This infiltration is on the mind of many vapers who are loyal to their local vape shops and brands, purchase from independent dealers, and shun brands manufactured by Big Tobacco. Vapers worry about Big Tobacco’s market penetration because, as one vaper commented, “this is a way to subtly promote their tobacco brands.”

A sense of loyalty and community has been created between shop owners and their customers. A man explained, “what I’ve experienced with the smaller stores is being part of a community.” He made a comparison between local vape storeowners and local grocers, like organic farmers, versus Big Tobacco and companies like Monsanto. According to vapers, small stores appreciate a vaper’s business, and vapers remain loyal to their favorite shop to help it thrive. This reciprocal exchange is in stark contrast to the adversarial relationship many vapers feel toward Big Tobacco. Vapers reported that local vape shops can be trusted to “do the right thing” and “pay attention to their customers’ health,” while Big Tobacco cannot “because it’s only interested in profits and turning everyone into smokers no matter how much they have to lie to make it happen.”

Local shops are building a network that supports one another’s business. According to one informant, “everyone works together.” A twenty-nine-year-old woman
said, “Right now is the ‘golden age’ of e-cig small business retail. There’s a bit of a Miracle on 34th Street vibe. If one of us doesn’t have something, we send our customers to other shops that do. Sounds counter-intuitive but it works like it did in the movie. Customers find this honesty refreshing.”

Not only do customers find this attitude refreshingly honest, they also believe “small vape shops and juice manufacturers do not have a power agenda,” which is “the opposite of Big Tobacco, the FDA and the NIH.” Many participants are suspicious of what is really motivating the FDA to take a rigid stance in favor of vaping regulation, the relationship between government and Big Tobacco, and whether research yet to be released will be motivated by consumer health, corporate profits or tobacco power. One made a statement that “U.S. bureaucracy, the FDA, and WHO promote negative press about e-cigs in an attempt to gain control.” Other participant comments ranged from “I have no trust of anything coming from our government agencies because they are all too worried about Big Tobacco dollars” to “the FDA-proposed regulations are a smoke screen to allow Big Tobacco to monopolize vaping” to “CDC and NIH have an agenda and I don’t trust them.”

Many participants in this study believe Big Tobacco is entering the e-cigarette industry not to benefit consumers or innovate products, but to catch both ends of the market (i.e., the smokers and the vapers), thereby retaining or increasing corporate profits through the sale of “cigalikes” in the face of diminishing tobacco sales. Many informants spoke freely about their distrust of tobacco giants that, they believe, have caused illness and death through false advertising and company secrets, which kept the public addicted to tobacco products.
They also spoke about the relationship between Big Pharma and vapes. As one explained, “Big Pharma has no interest in seeing vaping succeed. They own the nicotine replacement category, and they will do whatever they need to do to keep vaping companies out. That includes Big Tobacco.” Another asked, “How sick is it that the two largest corporate entities in the United States are going at each other for customers? They both want the random person who is completely addicted to nicotine. The tobacco companies win if we start vaping their stupid “cigalikes” and pharmaceutical companies win if we chew their gum or take that drug, Chantix. Neither one will work.” In other words, informants believe that the open systems contribute to smoking cessation, while closed systems and pharmaceutical products do not.

As Big Tobacco gains prominence in this market it will put an end to the “golden age” of vaping. One vaper said, “There aren’t any vaping companies that I know of that can compete with the financial resources that the Big Tobacco companies have access to.” The WHO agrees. The e-cigarette market, initially dominated by companies with no links to the tobacco industry, is increasingly owned by it. According to the WHO (2014), “all main transnational tobacco companies sell electronic nicotine delivery systems (ENDS) and … are becoming increasingly aggressive in the battle for the fast-growing e-cigarette market” (p. 8). The increasing share of the e-cigarette market in the hands of Big Tobacco is of utmost concern in light of past deceptive ploys by tobacco industry giants.

According to Neal (2014), “everything hangs on the Food and Drug Administration’s newly proposed plan for how it will regulate the emerging industry. If the FDA rules stand, the restrictions could wind up choking small vape businesses and
clear the path for [B]ig [T]obacco firms poised to cash in on the trend” (p. 1). It is unclear yet what this means for the e-cigarette market. However, since tobacco corporations have a history of participating in the reduced-risk category to maintain the status quo in favor of cigarettes, they are creating a second source of income if “the cigarette model proves unsustainable” (Peeters & Gilmore, 2013, p. 8).

In addition, selling e-cigarettes may be intended to encourage a more favorable public relations image of these companies, as they can pretend to be part of the solution to the smoking epidemic (Peeters & Gilmore, 2014). E-cigarettes, especially the “cigalikes,” may follow the trend of smokeless tobacco where the industry’s historic interests were both because they could be used in smoke-free environments and promoted to young, non-tobacco users to create a new form of tobacco use (Mejia et al., 2010). The United States government also appears to have a vested interest in regulating and controlling the vaping industry, which would call for taxation not only on cigarettes, but on e-cigarettes as well. Currently, only Minnesota and North Carolina tax e-cigarettes. Last year, e-cigarette tax proposals were introduced and “killed” in twelve other states. An analyst for the National Conference of State Legislatures, Max Behlke noted, “With fewer people smoking traditional cigarettes, a revenue stream that states depend on is decreasing. Taxing electronic cigarettes is a way to recoup some of that money” (Povich, 2015, p. 1).

In some states, lawmakers are making the distinction between imposing new taxes and simply extending an existing tax, such as the tax on cigarettes to e-cigarettes. Others, however, worry that states such as Minnesota, which instituted a substantial tax on these new devices, have the potential to price vapes so high that it will discourage traditional
smokers from switching to a smoke-free alternative. And, if this product turns out to be less harmful than tobacco, doing so could be counterproductive to public health efforts.

Almost all vapers interviewed were concerned about this new legislation, especially one informant who purchases e-cigarettes in Long Beach, California. This man stated that Long Beach has been quick to impose regulations on e-cigarettes and that a friend had recently been fined four hundred dollars for vaping in public. He expressed that cigarette sales are being cannibalized by e-cigarettes, noting, “Cigarettes have competition from a product that provides a superior user experience, avoids negative health consequences of cigarettes, and costs a fraction of the price.” He also explained that the government depends on tax revenue from cigarettes, and that e-cigarettes will soon be taxed, stating, “Governments collect billions of dollars on cigarettes in the form of taxes, making them drug dealers with monopoly control. Do you think they’re going to pass up a chance to tax e-cigs, too?”

Interviews and surveys indicate that cigarette companies are becoming entrenched in the e-cigarette market and the WHO is worried about it. Throughout history, each time there has been a challenge to cigarette sales, Big Tobacco has wielded its power to confuse or mislead the general public.

This time is no different and Critical Medical Anthropology provides the suitable framework to interpret this trend. Recently, Reynolds devised a regulatory strategy to protect its cigarettes and “cigalikes” from thousands of smaller PV and “e-liquid” competitors in several states. To raise costs and limit the number of competitors in the market, Reynolds lobbied for all vapor products to be taxed and for the same regulatory and licensing rules that apply to cigarettes to be imposed on vapor products. Reynolds
also urged the FDA to ban all PV and “e-liquid” products, as well as most flavored vapor products, both preferred by consumers and proven to help people quit smoking. Perhaps this is because, for the first time in decades, Big Tobacco has new competition with virtually no barriers to market entry.

In the war against these PVs and “e-liquid” products, it is not just vapers who will suffer the consequences if Big Tobacco’s agenda goes unchecked. Most of the sales in the $1.5 billion vapor product market are taking place in more than five thousand vape shops across the country. These businesses serve to connect those in the vaping community, as illustrated earlier in this section.

Reynolds’s push for taxation, regulation, and even bans on its competitors’ products is understandable, since it does not want to see its consumers switch to products it does not sell. Unfortunately, if the FDA and state lawmakers accept the agenda being pushed by Reynolds and other large cigarette companies, public health might suffer.

The themes in this section, loyalty and trust, are dominant issues in the struggle to find a balance in the current vaping marketplace. On one hand are local vape shops, which are a cottage industry. They provide jobs, pay sales and income tax, and link the vaping community together in local areas. On the other hand is Big Tobacco, selling its “cigalike” products in gas stations and convenience stores, something that does little, if anything, to support and improve local communities. Future anthropological research on the role of neighborhood vape shops and reciprocal relationships within the vaping community would be an interesting area of study.

The problem, viewed through the lens of Critical Medical Anthropology, is of the extreme power differential between Big Tobacco and the small, local vape shops. Vapers
are witnessing this power struggle wherein Big Tobacco, in a financially dominant position, is exerting its influence on legislation and public policy in favor of its “cigalike” or closed-system products. In contrast, the small independent manufacturers, distributors and vape storeowners that promote open-system products and “e-juice” have relatively little influence on government, especially as policies and regulations are being discussed and formulated. They have limited financial resources to compete with Big Tobacco.

Big Tobacco has an arsenal of resources to lobby the FDA and is no stranger to submitting its products for FDA review. Further, it knows what it takes to get its products before each and every potential tobacco consumer. Informants in this study fear that there may ultimately be a shift back toward cigarettes if vaping becomes over-regulated and taxed as heavily as cigarettes. As one informant commented, “Regulation will allow Big Tobacco giants to play both sides of the fence. Big Tobacco will serve as an industry leader of illness and death by marketing traditional tobacco products, while simultaneously riding in on its white ‘cigalike’ horse to promote ‘healthy’ alternatives.”
The E-Cigarette Debate: Vapers’ Concerns about Vaping

The health risks of vaping are unknown at this time. As mentioned earlier, many vapers report success by using e-cigarettes as a cessation device. Others interviewed and surveyed worry about the risks of using a product that has no prospective cohort studies. While the sample population of this study was small, and follow-up research is needed to corroborate the findings, the results of this study are nonetheless important.

Health information about vaping is learned throughout the vaping community from fellow vapers, vape storeowners, community forums, Internet articles, You-Tube videos, and, on occasion, vaping supply distributors. Also, because there are no long-term scientific or public health prospective cohort studies about vaping’s lasting effects, much of what is communicated is derived from personal experiences. Many happily shared their success stories of health improvements since switching from tobacco to e-cigarettes. But, they were also eager to communicate their fears about the unknown health risks of vaping, especially anxieties pertaining to “e-juice” and nicotine use.

Fear of Unknown Health Risks

Fear of the unknown was communicated throughout many interviews. For example, one informant acknowledged, “I haven’t done enough research on the long-term effects of vaping. I think in the long run we’ll find out e-cigs are probably just as bad for you as cigarettes.” Another said, “I read every study or report that comes out about e-cigarettes. Some of the reports claim they have toxic substances. Obviously, e-cigarettes have not been in existence long enough for us to be completely sure of the long-term effects, but I know what the long-term effects of smoking two packs a day was going to be.” A third participant contributed, “I know risks exist with e-cigarettes, but studies on
long-term effects haven’t really been done.” Age and gender, originally considered demographic variables, were not important in identifying patterns of responses to interview or survey questions.

Many believe the risk of e-cigarettes is directly tied to nicotine. For example, one man commented, “on television and the Internet I’ve learned that e-cigarette and tobacco nicotine have the same health hazards.” Several informants were concerned about nicotine in general, believing “it can lead to cardiovascular disease.” Others were not concerned at all. They said that while addictive, nicotine “is not the main problem with cigarettes.” Most expressed that ill health effects come from the burning of the tobacco, not the nicotine itself.

Several replied, “there are no risks to smoking e-cigarettes, and nicotine is a stimulant similar to coffee.” Three others agreed, attributing risk to “an increased heart rate and some mild vasoconstriction.” The fact that caffeine is “not a carcinogen” alleviated some fears. Many others felt that they were “not aware of any serious health risks aside from the possibility of nicotine.” Six others believed that, “e-cigarettes are a safe way to use nicotine,” and “e-cigarettes have no cancer causing ingredients. This makes them better for you than regular cigarettes because there is no tar and fewer harmful chemicals.”

Several informants expressed concerns about the potential for long-term health ramifications that are not yet obvious to vapers. For example, one man explained, “I know the safety risks of high power battery cells. I get this information ALL over the place, both in semi-scientific studies, and just by word of mouth. That said, I wouldn’t be
surprised to find out in five or ten years that e-cigarettes carry some health implication that cigarettes did not.”

Others were also concerned about the device itself. A man explained, “The only dangers I know about come from the materials used in wires for rebuildable atomizers.” Another said, “I’m somewhat concerned about the heated Kanthal wires and manufacturing materials used in some devices.” One informant was adamant about the high quality research that has been done thus far on devices and “e-liquid.” He asserted that the health risks of vaping are comparable to breathing city air and explained that he gets information from peer-reviewed scientific literature. “As a health professional,” he continued, “I have the knowledge to distinguish conflicted and junk science peddled by tobacco control special interest groups from genuine research focused on public health.” This man was the only informant who acknowledged the importance and validity of peer-reviewed studies. Others relied primarily on the Internet and word of mouth.

This section focused on perceptions of e-cigarette health risks in contrast to the benefits discussed earlier. Perceptions of health risks tend to be centered on the devices themselves, the potential for the components to carry liabilities, and the dangers of nicotine. Because vapers feel they are guinea pigs for the industry, many fear they are unaware of the long-term associated risks. However, when comparing e-cigarettes to traditional ones, where the risks are known, many are willing to take the chance on e-cigarettes, and look to each other to sort out areas of concern.

The next section focuses on “e-juice,” a frequent topic when talking about health risks associated with vaping.
Fear of “E-Liquid” or “E-Juice” Ingredients

There are various ways to obtain “e-juice.” Small companies manufacture it, some vape shops and individuals make it themselves, and, according to one informant, “Big Tobacco is expressing an interest in producing this product.” The ingredients are worrisome to many informants because they feel there is “a need for ingredient disclosure and product standardization.” Disclosure helps separate vaping company ethics from those of tobacco companies who kept their ingredient lists private until regulations changed in 2009.

A portion of this study involved an in-depth interview with a local vape storeowner. In addition to running a vape shop, this woman worked for both a distributor/wholesaler and manufacturer, and has been an e-cigarette user for seven years.

This twenty-nine-year-old woman discussed information about the sale and marketing of e-cigarettes, and explained that there is not a lot of valid information circulating in the e-cigarette community about the health risks of vaping. This especially pertains to what is contained in “e-liquid” or “e-juice.” The studies she has accessed either have misinformation about what actually goes into “e-liquid,” or they have been sponsored by entities with an interest in the success or failure of the e-cigarette industry. She explained that this causes bias in the findings of information that could otherwise lead to user awareness and help establish industry standards. She also stated it would be “helpful if the FDA got involved in what is and isn’t legal to put into ‘e-liquid.’” But, she sighed, “that’s government—slow on every level.”

She went on to explain that to evaluate health risks, one would need to look specifically at the components of “e-liquid.” She explained the basic components are
water, vegetable glycerin, and natural and artificial flavorings. Propylene glycol and nicotine are optional ingredients, and, she said, “I can think of at least two companies that add caffeine.” Another informant agreed, saying that “some ‘e-juice’ companies put extra chemicals in their products, but some only have four ingredients.” Seven informants said they “learned this information from other vapers, people who work at vape shops and on the Internet.” One informant explained that he had received a pamphlet from his vape store but did little to familiarize himself with the information. “Off the top of my head I honestly don’t know about the health risks of vaping and ‘e-juice,’” he said. “When I first started, a pamphlet came with my fluid talking about the health risks of nicotine, but I didn’t bother reading it and threw it away. I did read a story awhile back about kids who drank fluid in an attempt to get high and it made them all very sick. I thought they were idiots.”

The woman distributor informant went into detail when asked about the substance. She volunteered that “nicotine is addictive, a stimulant, and poisonous if the dosage is too high.” She also explained, “You have to be careful to wash your hands if you spill nicotine-containing ‘e-liquid.’” She said nicotine would soak through your skin if you don’t. Others in this study doubt its dangers, which highlights one of the aspects of contention in the e-cigarette debate.

Other ingredients, such as vegetable glycerin, have a low toxicity level, she explained, and reported that studies by Canada Health say that there are no effects on DNA, bacterial strains, or fertility. She provided data that verified it was considered “hypo-allergenic, non-carcinogenic, non-teratogenic and non-mutagenic.” Her conclusion is that this component of “e-juice” is “pretty benign.”
A third component of “e-juice” is propylene glycol, which has been used as an inhalant for a long time. She explained, “it’s in asthma inhalers and used in hospitals as an air disinfectant. It’s classified as non-toxic and non-carcinogenic, so I figure if it’s safe for someone with asthma, it’s probably safe for the rest of us.”

While this woman seemed more educated about vaping than most informants, her acceptance of propylene glycol was somewhat surprising. Many singled out this particular ingredient as “dangerous,” perhaps because it sounds more “toxic” than many of the others, and maybe because there is misinformation circulating in the vaping community about it. One person, in particular, worried, “it is used in antifreeze,” and “that’s scary.”

Natural and artificial flavors tended to cause controversy. Because “e-juice” manufacturers do not like to reveal their ingredients, the flavoring is, according to one informant, “where you’ve got to start worrying.” While there are a lot of reputable companies that sell “e-juice,” most of which use food grade flavorings, there are, according to one informant, “others who find something cheap and possibly dangerous to use and ruin it for the rest of us.” Another informant expressed, “you have to watch out for any company that adds artificial coloring to their ‘e-juice’ because there was a company that added a chemical to make their ‘e-juice’ white, and that chemical was super damaging when inhaled.” Eventually, the product was recalled, but, according to this participant, its effects “should have been Googled prior to considering its inclusion in an inhaled product.” Another voiced concern, saying, “I’m not sure, but I’ve heard there are metals in the juice, like nickel, but I don’t know if that’s true. I’ve also heard that what’s stated on the label, like the milligrams of nicotine, isn’t always accurate.”
According to a twenty-eight-year-old woman, “when it comes to other random things manufacturers are adding to their ‘e-liquid’ it would be helpful if they were required by law to list the ingredients on the package. Other countries are starting to do this, but the U.S. is behind. I don’t think that now is the time for that kind of company secret.”

Others expressed the same type of interest in regulation and “e-juice” ingredient disclosure, since they want this industry to be more transparent than the tobacco trade. The Family Smoking Prevention and Tobacco Control Act signed by President Obama in 2009 was the first time cigarette manufacturers were required to provide their ingredient lists to the public. Ingredient secrecy and the fact that even as late as 1994 tobacco executives refused to admit that their products were harmful, colors vapers’ perceptions of Big Tobacco and, in certain circumstances, the way they look at government as being in collusion with them. This will be discussed in a later section.

Many informants talked about the fear of putting a substance in their lungs when they do not know the ingredients contained in the juice. One informant stated, “Most bottles encourage keeping liquid away from kids and pets. What does that tell you?” Another young woman, age twenty-five, worried about pneumonia since “it’s like water in your lungs.” A man felt that “e-liquid” should be controlled the same as any other cessation device.

One man conveyed his perception that the unhealthy qualities of e-cigarettes come from “e-juice.” He said, “There are folks who use vegetable oil. I also know there are some mixes I can’t inhale because I have asthma and respond poorly to them.” He does believe, however, that “e-juice” companies listen to their customers and feels
confident that “e-juice” manufacturers are concerned about their customers’ wellbeing. He does not feel the same way about Big Tobacco, which he perceives as only interested in profit.

Even though many vapers agreed that “e-juice” formulations are inconsistent among manufacturers, because “e-juice” is made at the local level, vapers are willing to take a chance on their products. The perception is that local companies do not sacrifice health for the sake of money. The same cannot be said for Big Tobacco companies even though there appears to be more uniformity of product. Vapers interpret uniformity of product, or mass production, as a negative attribute. The perceived downside of Big Tobacco’s mass-produced “cigalikes” is the perception that they are manufactured in China, and informants worry about heavy metals because regulatory scrutiny is different in other countries.

Another possible health risk related to “e-juice” is material used as wicking for the atomizer within an “e-liquid” tank. According to one woman, there are several different materials being used: silica wick, organic cotton wick, and cotton or poly/cotton filling. And, she reports, people have had “shards” of the silica wick break off while they inhale. A participant commented, “I don’t actually know what kinds of carcinogens are released by burning wicks, but I think it’s safe to assume there are at least some.” This same informant said that her number-one rule regarding vaping is, “if you hit your e-cigarette and it tastes like burnt fiber, don’t keep hitting it!”

Participants expressed two areas of concern about e-cigarettes. First, they are unsure about the long-term health risks, since prospective cohort studies are in their infancy. The second worry is about the contents of “e-juice.” Many expressed the desire
for better regulation of this product. The following section pulls together the pros and cons of e-cigarettes that emerged from this study and gives an overall analysis of the qualitative data.
Tying It All Together: Perceptions of E-Cigarettes

At the center of this research data is the primary interview and survey question: Do you believe e-cigarettes are a “healthier” alternative to tobacco, and how do you form these beliefs? The way beliefs are formed is important because it stresses sources of information.

Twenty-seven of thirty vapers believed e-cigarettes are “healthier” than traditional cigarettes. The three that did not express a positive response to this question were not opposed to the product; they were just “not sure.” Of the thirty-three people surveyed, all thirty-three believed that the product is a “healthier” alternative to smoking tobacco. This is not to say that they believed it is “healthy”; it is just “healthier.” As one informant said, “if you smoke, try vaping. But if you’re not a smoker, don’t start, ” which seems to say it all. This sentiment is important because the majority of vapers in this study use this device for smoking cessation.

From the vantage point of Critical Medical Anthropology, it is important to evaluate e-cigarettes in terms of addiction and social marginalization. Many who struggle with addiction face structural violence, finding themselves in circumstances of poverty, ill health and despair. Merrill Singer, Philippe Bourgois, and Angela Garcia, among other anthropologists, have done exemplary work documenting the connection between cultures of poverty and alcoholism, IV drug use and heroin addiction.

The same dynamics play out in nicotine addiction. After years of tobacco use, many smokers find themselves suffering from lower socio-economic status and experiencing co-morbidity factors such as cancer, pulmonary and cardiovascular disease, and a stronger addiction to tobacco (Hiscock et al., 2012). As a result of poor and failing
health, tobacco smokers are marginalized. While the participants in this study are young, and few have yet to experience the long-term, damaging effects of tobacco use, one twenty-six year old in this study has already faced a cancer diagnosis related to smoking.

Smoking is strongly associated with socioeconomic disadvantage. As smoking rates have decreased in the general population, especially since 2009, those who continue to smoke are at an even greater health and social disadvantage to those who have stopped. This disadvantaged population is at risk of starting to smoke earlier in their lives, using excessive amounts of tobacco, and being more addicted to its use. For these reasons, smoking exacerbates social inequalities. Medical anthropology is in a unique position to call out social injustice. Its role is to raise critical awareness of social issues such as these, and to empower disadvantaged subcultures by interpreting their voices for a larger audience.

Many vapers in this study feel encouraged that e-cigarettes are helping extricate them from their nicotine and tobacco addictions and the hegemonic discourse of Big Tobacco. The reason for this is obvious to many of them, as a dollar spent on Big Tobacco is an implied endorsement of their lies and power agenda. Tobacco companies have caused tremendous human suffering as a result of false information supplied to the general public about nicotine addiction, harmful chemicals, and “light” and “low tar” products. Many of those affected were women (Backinger, 2007) who believed the lies tobacco companies told them about “light” and “low tar” cigarettes. Rather than quitting, many believed that by smoking “safer” cigarettes, they were reducing their intake of nicotine and tar. Reports by entities such as the United States Department of Health and
Human Services (2001) demonstrate that Big Tobacco knew that these products were equally harmful, but sold the public an illusion of risk reduction.

Because participants in this study indicate that they do not believe what government and tobacco companies tell them about the health risks of vaping, they have established sources of information that, while not perfect, give them comfort that they are learning the truth about this behavior. Data about vaping is based primarily on information communicated through the vaping community via personal stories, vape storeowners, Internet forums, Internet articles, You-Tube videos and on occasion, distributors of the products. One informant explained, “I have never run into a question about vaping devices, services or liquids that hasn’t been answered by the nice online communities. Big thumbs up for them.”

In contrast, the majority of participants do not trust what is communicated through government agencies such as the Centers for Disease Control (CDC), the FDA and NIH because the perception in the vaping community is that they are aligned with Big Tobacco. One advocate in the vaping movement expressed, “the vaping community is composed of active and knowledgeable members. Most are former smokers who see vaping as a life-saving technology. As such, we will literally fight for our lives against the prejudiced and conflicted interests who are trying to ban or restrict vaping.” Many expressed skepticism about the relationship between tobacco dollars and the government, since the federal government collects cigarette excise tax and states collect sales and excise taxes.

Those interviewed also expressed concern about reports being released by scientific researchers detailing vaping’s harmful effects. The majority said that their
health had improved greatly since they started vaping, and they base this belief on their own personal experiences. For example, one man said, “My main source of information about e-cigs is ‘self-experimentation.’ That is, how I felt when I smoked versus how I feel now.” Another explained, “I believe I am living proof that vaping is a ‘healthier’ alternative to smoking and despite warnings that have recently been released about formaldehyde, I am very willing to take the risk.” The majority of informants seemed willing to take the risk of the unknown over the known health dangers associated with “analog” cigarettes. A majority of participants concurred, “I don’t see the need for any scientific proof that e-cigarettes are a healthier alternative. I just simply feel better. The benefits outweigh the risks.”

Many expressed that they believe e-cigarettes are far less harmful because they contain fewer toxic chemicals. One informant communicated, “to all the nay-sayers who want to find any little thing ‘wrong’ with e-cigarettes, fine, but there is absolutely no disputing the fact that cigarettes have hundreds if not thousands of seriously harmful and addictive chemicals in them while e-cigarettes do NOT.” A woman informant agreed, “E-cigarettes are a ‘healthier’ alternative to smoking because while it is introducing chemicals into my respiratory tract and none would be best, it is by far better for me than smoking.”

Still, some are concerned that they do not have all the data they need to feel absolutely comfortable with their decision. One stated, “E-cigarettes are better for me since they don’t contain all of the carcinogens or tar of a traditional tobacco cigarette.” Another respondent, concerned with limited data, also explained, “I’m not a scientist and
can’t tell you they are super safe, but I’m not inhaling one hundred different chemicals with every puff anymore.”

This is not to say that those interviewed and surveyed believe that vaping is healthy. They are not saying that. What they are saying is, given the option of smoking or vaping, they perceive the risks of vaping are far fewer than those of using combustible tobacco. In addition, they believe the industry as a whole, excluding the “cigalike” market, is more forthcoming. According to one man, “the vaping market is transparent and does not have a hidden agenda.” He also echoed a sentiment many others expressed: “Vaping does not place a burden on our national health care system as a result of people getting terrible lung diseases or other illnesses, all for the sake of tobacco profits.” He believes that vaping is trying to change the negative financial impact on the health care economy. That same informant confided, “I have had cancer from smoking and I am only twenty-six years old.” Many said they wish they could quit smoking or vaping altogether, but are unable to do so.

When asked about sources of their information other than personal experiences, several informants said that they seek out professional advice. A man in his early twenties explained, “I get my information from my doctor and The Consumer Advocates for Smoke-Free Alternatives Association.” Another used this same resource and additional vaping advocacy websites to crosscheck information. He said, “I do not just believe what I read or hear.” Similarly, another said, “I did two months of research prior to vaping, reading medical findings and personal experiences on the web. I also feel like the vilification of e-cigarettes needs to stop, mostly by getting behind good research.”
Respondents did not believe that vaping is a healthy behavior, but a “healthier” alternative to smoking than cigarettes, given that many are unable to stop with other nicotine replacement therapies sanctioned by the FDA. These include items such as the patch and gum.

Some respondents believe that e-cigarettes are a risk to their health, but because of the fear of carcinogens in “analog” cigarettes, many felt this is a risk worth taking. Many vapers believe “e-cigarettes are healthier than cigarettes since they don’t contain nearly as many chemicals or tar as cigarettes do.” Carcinogens and tar were also a worry to respondents. One respondent suggested that the components in e-cigarettes are “pharmaceutical grade,” which seemed safer to him. Still, one man said, “I continue to watch the results as more information becomes available.” These findings suggest that this sentiment is shared among many in the vaping community.
Conclusions

After examining all the data about vapers’ perceptions of e-cigarettes, it appears that the “golden era of vaping,” as one informant called it, is about to come to a screeching halt. Twelve years ago, no one could have guessed that the e-cigarette industry would have evolved to the place it is today with vape stores lining the streets of every major city. But, wherever profits are at stake there is also competition over influence and power, and that seems to be what is happening in this booming industry as tobacco giants push their “cigalike” products and lobby for regulation in favor of these devices.

Big Tobacco has a lot at stake, and it is foolish to think that it will simply watch from the sidelines as profits move away from tobacco toward this new device. Big Tobacco is used to playing in a regulated environment and is wired into the distribution channels that take their products into any outlet that permits tobacco sales. Vapes are a value-added product—just one more moneymaker for Big Tobacco to put on its trucks to increase revenue and the bottom line. Tobacco corporations have at least three major advantages over other stakeholders as they integrate closed-system “cigalike” products into their brands: extensive distribution networks, existing customer relationships numbering in the millions, and deep pockets.

Smaller “cigalike” companies like NJoy, eager to get in on the vaping game, also have the potential to benefit. While NJoy states it is a truly independent brand and explains on its website that it will never sell its company to Big Tobacco, it is questionable how realistic this is given that Big Tobacco has competed in a similar marketplace since the 1700s. Most likely, NJoy will eventually be sold to Big Tobacco.
Acquisitions are not uncommon in this industry, as Blu was recently sold to Imperial Tobacco, along with other assorted cigarette brands.

The groups that stand to lose the most are the small device, “e-juice” manufacturers and vape store owners who will not be able to compete if regulations get so stiff that they are forced to spend hundreds of thousands to millions of dollars filing with the FDA, and eventually competing with Big Tobacco. No longer will this be a craft industry. Instead, because of regulation, these little players will dissolve as they struggle to keep their doors open. Either Big Tobacco will fill their niche, or these products will be sold only on the Internet where fixed costs are lower than the costs of keeping a storefront open. This leaves a big gap in communities where reciprocal relationships are being established between the customer and merchant. In these small shops, people build bonds within their communities and share information not only about vaping but also about their lives. Many informants said that they frequent the same shop because they want to see their favorite vape shop succeed. In turn, merchants treat their customers fairly and show a true interest in seeing them wean off nicotine and onto what many consider a healthier product.

Selling these products via the Internet will diminish the community ties prevalent in the local e-cigarette market. Further, because Big Tobacco sells a disposable product at local convenience stores and gas stations, it does not foster this community connection. A pack of Blu e-cigarettes is the same no matter where a customer buys it, so the relationship between merchant and customer rarely develops past one transaction.

There seem to be health benefits for those who have moved from tobacco cigarettes to vaping, but the risks are still unknown. In the face of limited information,
vapers have turned to each other for guidance since clinical data is unavailable and most likely will be for years to come. Vapers are caught in this tug of war between trying to do the right things for their bodies, and doing so at a cost they do not yet understand. Communication within the vaping community about health risks is crucial, since it will take years for prospective cohort studies to emerge.

Government was slow to rescind guidance on “light” and “low” tar cigarettes; it took until 2010 to rescind advertising and promotion of “light,” “low tar” and “mild” labels that began in 1967 with the approval of “the FTC Method” of testing. Those in the vaping community do not have forty years to wait to find out whether or not vaping carries risks they cannot yet see. Data need to be gathered now in a study similar to that of Doll and Hill in the 1950s that changed the cigarette knowledge landscape forever.

Websites such as E-Cigarette Forum play a vital role in communicating information about the health risks of vaping, and the FDA owes it to the vaping community to hear from them. By ignoring vapers and placing severe regulations and taxes on this new device before long-term studies are done, the FDA is giving control to Big Tobacco and Big Pharma (which manufactures nicotine replacement products) and putting vapers in a vulnerable position.

It is also extremely important to identify the internalized message vapers are rebelling against in their vaping subculture. Gramsci defined two types of intellectuals, the “traditional” and the “organic.” In terms of this study, vapers are the “organic” intellectuals in this new social movement. Vapers are challenging the internalized messages that have been prevalent in society, such as the need to reinforce and uphold material values, the quest for and abuse of power by corporate entities, and corporate
messages that create social injustice. Vapers are countering the hegemonic discourse about wealth and power and encouraging the need to alleviate human suffering by asking the less obvious, but oftentimes more difficult questions about power, influence, and money.

Government has a responsibility to its people to provide accurate, unbiased information so that e-cigarette users can know if they are actually helping or harming themselves. Because so many in the vaping community perceive government’s relationship with Big Tobacco to be mutually beneficial, it will be difficult for vapers to trust what they hear or see from government agencies that are charged with protecting the public’s health. Communication is the best way to combat this lack of trust, and one suggestion for stakeholders is to include vapers in the e-cigarette conversation. Vapers hold a lot of information for policymakers because they have first-hand knowledge about their personal health changes. While these changes are not scientific in the traditional sense and therefore cannot act as prospective cohort studies, they can, nevertheless, be tracked and communicated. Perhaps a national or worldwide database chronicling vapers’ health would provide a source of information so desperately lacking.

In the end, it is hard to know if information circulating in the vaping community is coming from an entity with a power agenda or from those who are being truthful about this new device and industry. Only time will tell as scientific studies are published, and the health of vapers who have switched from cigarettes to e-cigarettes either significantly improves or deteriorates. In either case, vapers have the right to have their health claims heard by those agencies that will ultimately make policy decisions. Without their voices, first-hand experiences will be missing from the e-cigarette conversation.
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Appendix I

Survey Questions

1. Are you between the ages of 21-30? Yes, No
2. Are you Male? Female?
3. Are you a vaper? If so, how long have you been vaping?
4. Were you previously a cigarette (tobacco) smoker?
5. If you were previously a smoker, do you still smoke tobacco cigarettes?
6. If you were previously a smoker and you still smoke, how many cigarettes a day do you currently smoke?
7. If you are not currently using tobacco, when did you stop smoking tobacco cigarettes?
8. Do you view e-cigarettes as a tobacco cessation device?
9. Have you tried other tobacco cessation devices?
10. What other tobacco cessation devices have you tried?
11. If you have tried other cessation devices, please explain which device(s) has been the most effective and why you think this is.
12. Do your e-cigarettes contain nicotine? If so, what strength do you use?
13. How has your health changed since vaping?
14. Do you think e-cigarettes are better or worse for you than traditional cigarettes? Why? Please be specific.
15. Please tell me what you know about the health risks of smoking e-cigarettes. Where do you get this information? Please be specific.
16. Please tell me what you know about the health risks of smoking traditional cigarettes. Where do you get this information? Please be specific.
17. Do you frequent the same vape shop or try different ones? Do you and these retailers exchange information about health risks/benefits of vaping?
18. Do you feel public health information about vaping (from CDC, NIH) is available? If so, do you think it is a reliable source of information?
19. Do you feel that e-cigarettes are a “healthy” alternative to smoking? Please explain.
20. Please feel free to comment about anything else you think is relevant to communication within the vaping community.