

# JUUL Advertising Over its First Three Years on the Market

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## ABSTRACT:

**Background:** JUUL e-cigarette now dominates the American vapor market and has achieved a cult level of popularity among school aged adolescents.

**Objectives:** JUUL's promotional efforts have yet to be systematically studied.

**Methods:** JUUL's advertising (June 2015 - November 2018) derived from its website, social media (Instagram, Facebook, and Twitter), hashtags, and customer directed emails were analyzed.

**Results:** As of November 2018, 2691 Twitter, 248 Facebook and 187 Instagram posts, and 171 customer directed marketing emails from JUUL controlled accounts were available for study. JUUL's Instagram account had 77,600 followers and #juul had 260,866 postings. JUUL's Vaporized launch campaign featured models in their 20s appearing in trendy clothes engaged in poses and movements more evocative of underage teens than mature adults. Subsequently, JUUL's principal advertising themes have been closely aligned with that of traditional tobacco advertising

(pleasure/relaxation, socialization/romance, flavors, cost savings and discounts, holidays/seasons, style/identity, and satisfaction). Advertising prominently featured sweet and fruity flavors, especially mango. The company employed social media influencers as brand ambassadors. They also sought individuals who were popular on the internet, enrolled them in JUUL's affiliate program, and compensated them for posting positive reviews while insisting that they not reveal this relationship.

**Conclusions:** JUUL's advertising imagery in its first 6 months on the market was patently youth oriented. For the next 2 ½ years it was more muted, but the company's advertising was widely distributed on social media channels frequented by youth, was amplified by hashtag extensions, and catalyzed by compensated influencers and affiliates. JUUL's mission statement to "Improve the lives of the world's one billion adult smokers" and their repeated assertion that their product is meant for "adult smokers only" has not been congruent with its marketing practices over its first 3 years.

## INTRODUCTION

JUUL is an electronic vaping device which resembles a USB memory stick. The company explained the name as connoting a “*jewel*” (something precious) and “*joule*” (a unit of energy). Many media articles refer to JUUL as the “*iPhone of e-cigarettes*” and the package of both products bear a close resemblance.<sup>1</sup> Both co-founders James Monsees and Adam Bowen are graduates of Stanford’s Design School, the alma mater of many Apple designers. JUUL’s vapor delivers an exceptionally high nicotine concentration (59mg/ml) making it highly addictive for nicotine naïve individuals.

Since its introduction in June 2015, JUUL has had a meteoric rise in sales and in November 2018 represented 76.1% of the US e-cigarette market according to Nielsen data.<sup>2</sup> JUUL’s dollar sales increased by 783% in the 52 week for the period ending June 2018.<sup>3</sup> Largely driven by the immense rise in JUUL sales, the entire e-cigarette marketplace grew by 97%, to nearly \$2 billion, over the same period.<sup>3</sup> A mere 3 years since its product launch the company has achieved a valuation of \$15 billion.<sup>4</sup> JUUL is now recognized to be the fastest startup to reach \$10 billion valuation, achieving this measure 4 times faster than Facebook.<sup>5</sup> Over the 12 month period ending August 2018, JUUL has sold \$1.29 billion in devices and e-juice containing pods.<sup>6</sup>

The JUUL founders have portrayed their company as wholly focused upon rescuing millions of adult smokers. The company’s 2018 mission statement specifies its goal is to: “*Improve the lives of the world’s one billion adult smokers*” and “*dedicated to eliminating cigarettes by offering existing adult smokers with a better alternative to combustible cigarettes.*”<sup>7</sup> Despite this stated intention, a principal driver of JUUL’s explosive growth in sales has been its adoption by youth. In November 2018, the Center for Disease Control and Prevention reported current e-cigarette use among American high school students reached 20.8% (3.05 million users) representing a 78% increase from the prior year.<sup>8</sup> A 2018 survey of 14,379 teens and young adults between the ages of 15 and 34 years, showed that teens ages 15-17 years were 16 times more likely to be current JUUL users than the

25-34 year old group.<sup>9</sup> Ever use of JUUL was 9.5% for ages 15-17, 11.2% for 18-21, and 3.2% for 25-34. While not evaluated in this study, the remaining group of adult smokers, age ≥35 may well be infrequent JUUL users. The appeal of JUUL to teenagers includes its stealthiness (that parents and teachers may not recognize it for what it is), its youth appealing flavors (e.g., mango, crème brûlée, mint, fruit medley), and its positioning as the latest technology.<sup>10</sup>

Concern over JUUL’s rapid rise among American youth led the US Food and Drug Administration (FDA) in April 2018 to announce that it was considering enforcement actions to counter underage sales and requested documents from the company to evaluate the drivers of underage use.<sup>11</sup> In October 2018, as part of its ongoing investigation, the FDA seized thousands of documents from JUUL headquarters.<sup>12</sup> In November 2018, the FDA announced a series of measures intended to constrain youth access to JUUL and other e-cigarettes.<sup>13</sup> The attorneys general of Iowa, Massachusetts, and North Carolina have launched investigation into underage use of JUUL.<sup>14-16</sup> Lawsuits have begun to appear, both by individual litigants and class actions, based upon JUUL leading to nicotine addiction among youth.<sup>17</sup>

JUUL’s marketing efforts over its period of phenomenal growth have yet to be comprehensively analyzed in the academic literature. It is important to study the way the advertising evolved, both its messaging and channel use, to evaluate its intended targets and what it reveals about the company’s awareness that its product was increasingly becoming popular among adolescents. The goal of this study is to analyze JUUL’s promotional efforts over its first 3 years on the market including its hosted events as well as its advertising in print, web, e-mail, and social media channels (Instagram, Facebook, Twitter).

## METHODS:

### Assembling a Collection of JUUL Advertising:

A multifaceted approach was employed to gather and analyze JUUL advertisements from the time of their market launch in June 2015 through November 2018. Using the Internet Archive Wayback Machine the JUUL company website (juul.com,

juulvapor.com) was obtained in its iterations including versions pre-dating the product launch.<sup>18</sup> Brand postings on Instagram, Facebook, and Twitter were collected as were customer directed emails. It is important to note that JUUL removed much of its early advertising from 2015 to 2017 from its social media channels. Many early JUUL advertisements were collected during 2015 and 2016 by our team at Stanford Research Into The Impact of Tobacco Advertising (SRITA).<sup>19</sup> These were supplemented by the JUUL e-mail collection from Rutgers University's Trinkets and Trash collection.<sup>20</sup>

Much of the early "Vaporized" campaign was reconstructed from alternative sources including the campaign's creative agencies. Quotes relevant to the company's advertising strategy by JUUL's founders and senior leadership were gleaned from their web and social media sites as well as news media reports. Additional sources included reports concerning JUUL from a wide variety of media outlets including the Wall Street Journal, Wired, New Yorker, CNBC, Bloomberg, Axios, AdAge, and others. The investigators also interviewed JUUL leadership, including one of the co-founders (James Monsees), in August 2018 during which the evolution of JUUL marketing was discussed.

A collection of over 1500 JUUL advertisements have been made available on the SRITA website ([tobacco.stanford.edu/juul](http://tobacco.stanford.edu/juul)) along with 30 JUUL promotional videos ([tobacco.stanford.edu/videos/juul](http://tobacco.stanford.edu/videos/juul)) and 82 comparisons between JUUL and traditional tobacco advertising ([tobacco.stanford.edu/juultobaccocomparison](http://tobacco.stanford.edu/juultobaccocomparison)).

#### **Hashtag Marketing:**

JUUL employed a hashtag marketing strategy on Instagram, effectively mingling its advertisements with postings from a wide variety of users. User generated JUUL-related images along with their captions were downloaded from Instagram using a

third party open source module Instaloader.<sup>21</sup> The study specifically focused on #juul because of its repeated use by Juul's official Instagram account (@juulvapor) and also its popularity among Instagram users.

Because of the enormous number of posts appearing on JUUL's primary hashtags, a sampling mechanism was necessary. Inclusion criteria were: 1. posts needed to be related to JUUL; 2. were from the community rather than the company, and 3. included the image of a person or a meme. Tagged images on JUUL's official Instagram page (@juulvapor) were also included if they met these criteria. All images on #juul and tagged at @juulvapor were collected over two one week intervals in mid-2018 (6/28 - 7/4, 7/18-7/24). A total of 9246 posts for the hashtag #juul and 239 tagged @juulvapor posts were downloaded. A majority of the #juul posts (8720) and tagged @juulvapor (123) and were excluded from analysis as they were either not related to JUUL or did not involve the image of a person or meme. The method described above yielded a set of 526 #juul posts and 116 tagged @juulvapor for analysis.

#### **Content Analysis:**

Our goal was to evaluate for possible youth orientation in community posts appearing in the same stream as JUUL marketing. A codebook measured the following themes: youth appeal, humor, pop culture, use of memes, cartoon imagery, covert use of the product, JUUL tricks, and JUUL as an alternative to smoking. (**Supplemental Table 1**) Information on post origin (consumer, vendor/store, meme account) as well as the number of likes and comments for each post was also recorded. Three independent coders all aged 19 (2 males, 1 female) coded the posts. Inter-coder reliability was established on a sample of images of similar hashtag sites (#juulnation, #juullife, #di4j). Inter-coder reliability was high with Krippendorff alpha values ranging from 0.781 to 1.0.

**RESULTS:**

**JUUL SAMPLING EVENTS**

Around the product launch and over JUUL’s first year on the market, the company sponsored a number of promotional events which were featured on the company’s social media sites and via e-mail invitation. (Figure 1,2) We were able to identify 25 JUUL sampling events the company sponsored between

June 4 and December 8, 2015. These we held in metro New York (8), metro Los Angeles (9), Las Vegas (5), Miami (1) and one each in Southampton, New York and Ventura, California. (Supplemental Table 1)

Figure 1. Invitations to JUUL Launch Party June 2015.

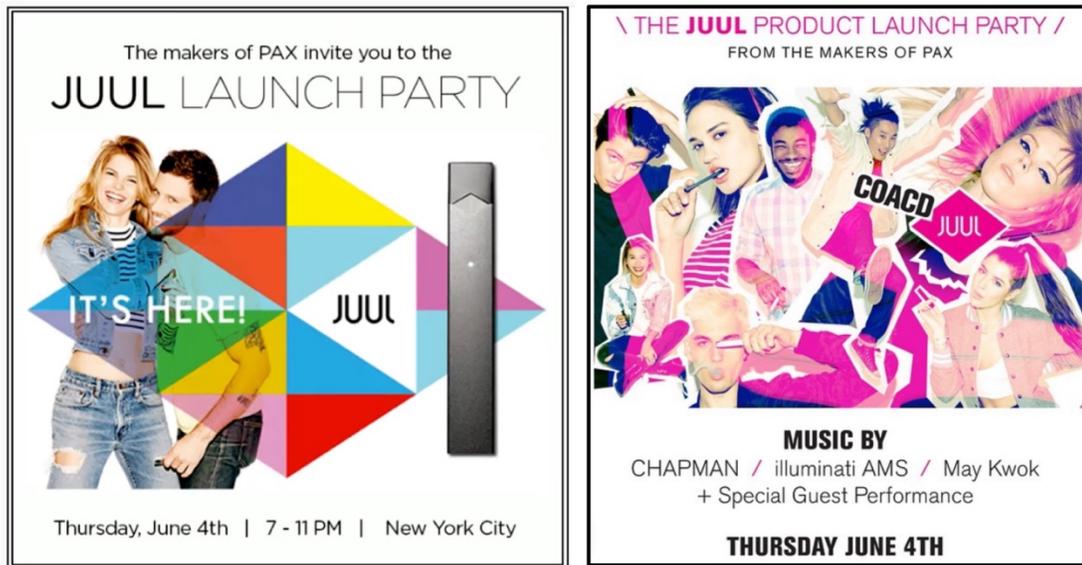


Figure 2. Photos from one of many JUUL Sampling events. This event was held September 4-6, 2015, in the San Bernardino, California at the Nocturnal Wonderland music festival. Note the numerous hashtags which distribute JUUL’s promotion to a wide community including non-tobacco hashtags such as #style, #design, #electronics, #technology, #smart, and #gadget.



These were youth-oriented entertainment events, usually either music or cinema themed, whose primary purpose was to distribute free samples of JUUL devices and their flavor pods to a youthful audience in order to help establish JUUL in the vapor marketplace. Photos from these events show sophisticated stagecraft stylized on the #vaporized theme with a definite youthful and rock music theme. We know a fair amount about events, not only from the company’s social media postings, but also from online descriptions by its event planners and designers as well as photographers who commemorated the activities.

For the JUUL Vapor Lounge, Boxman Studios (Charlotte, NC) modified a shipping container (a 20’ x 8’ steel box) into a: *“modern, inviting, and unique sampling experience for consumers.”*<sup>22</sup> The tableau designed by NKdsgn was dominated by vibrant bright colors which mimicked the brand’s promotional imagery with banners and videos adorned with the

JUUL brand name.<sup>23</sup> The product was displayed in a jewel case, an evident play on its name. According to Boxman Studios: *“As people entered the space they were greeted by JUUL team members where they got the chance to experience vapor with JUUL products. With four distinct flavors to try out, guests could relax in the lounge area, check out JUUL products in the illuminated display, or snap pictures in the Bosco Animated Gif Booth.”*<sup>22</sup> Images from the events show a youthful audience, with most attendees appearing to be in their 20s. Some attendees were photographed in poses reminiscent of teen behavior, such as wearing a hat on backwards, while holding a skateboard, or a girl with purple hair holding a JUUL. Photos show attractive young girls in colorful JUUL tee shirts serving as hosts and distributors of free samples. **(Figure 3)**

**Figure 3.** JUUL hired attractive young women to distribute its free products at sampling events such as this one in the Betsy Hotel, South Beach in Miami.



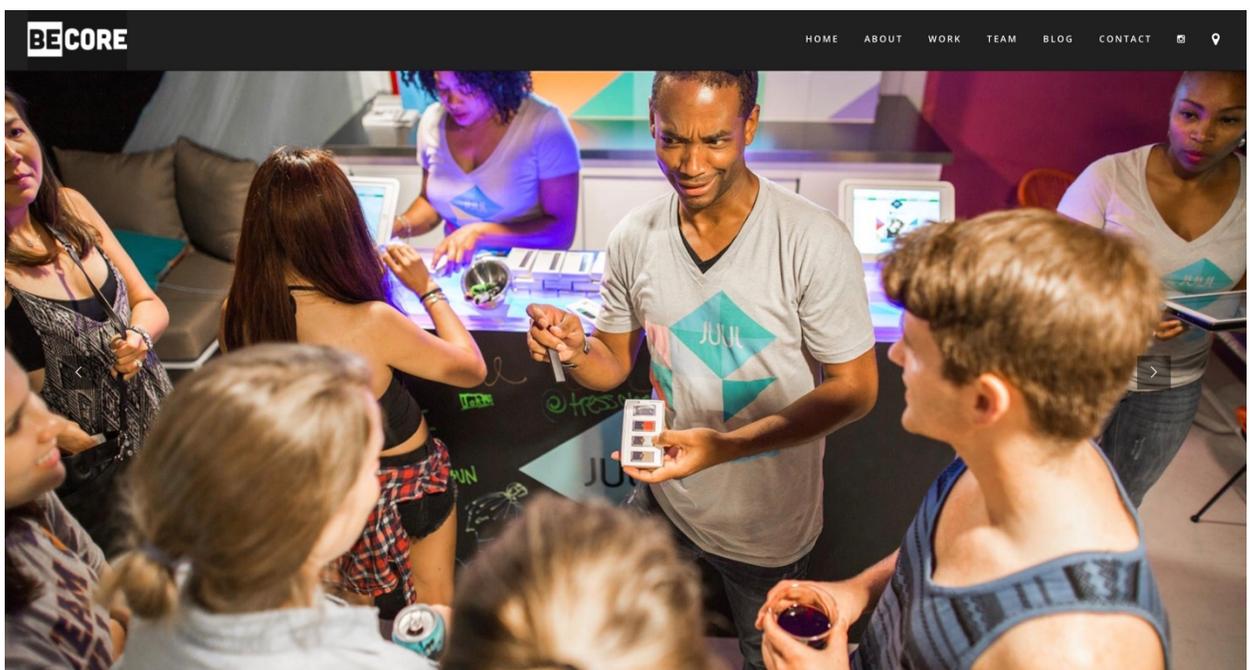
BeCore is a Los Angeles firm which manages *“sampling tours, experimental marketing, brand activation.”*<sup>24</sup> The company explained that it *“designed, fabricated and managed a custom*

*container to function as a mobile sampling lounge.”* These JUUL events were geographically dispersed: *“touring various events in multiple markets across the East Coast . . . the tour has been extended to include*

cities along the West Coast and other major cities.” According to BeCore, the results from these events were impressive: “On average, BeCore exceeded the sampling goals set by JUUL for each location (average number of samples/event distributed equals 5,000+).” (Figure 4) In July 2015, JUUL tweeted an invitation to an event at which all attendees: “get a free #juul kit.”<sup>25</sup> JUUL’s Twitter account posts numerous invitations for free sample events. Repeatedly after

October 24, 2017 JUUL tweeted the following: “FDA regulations prohibit manufacturers from providing free samples of nicotine and nicotine related products.”<sup>25</sup> On December 7, 2017 JUUL tweeted an invitation for a “demo event” for \$1 in Miami. As late as April 18, 2018 JUUL tweeted invitation to “Learn how to use your device and sample #juulpod flavors to find your favorite.”<sup>25</sup>

**Figure 4.** Distributing free samples at a JUUL event. The note at the bottom indicated that such events “exceeded the sampling goal of distributing 5000+ samples for each location.”



**THE RESULTS:**

On average, BeCore exceeded the sampling goals set by JUUL for each location (average number of samples/event distributed equals 5,000+).

The principal focus of these activities was to get a group of youthful influencers to accept gifts of JUUL products, to try out their various flavors, and then to popularize their products among their peers. The events were always free and featured popular bands such as CHAPMAN, illumanti AMS, Mary Kwok and others. Other events were movie nights held on rooftops. One Los Angeles event, managed by Cinespia, was an all night “slumber party” held in Hollywood’s Forever Cemetery featuring movies such as: Can’t Hardly Wait, SCREAM, and Cruel Intentions.

JUUL events continued well beyond its first year on the market. In 2016 and 2017, the company held sampling events in large metropolitan cities including Miami and New York City. (Figure 5) In January 2018, JUUL sponsored a “Music in Film Summit” at the Sundance Film Festival in Utah. Celebrities such as Nicholas Cage, Elijah Wood and Dan Reynolds and Tyler Glen of rock band Imagine Dragons were photographed at the JUUL lounge.<sup>26</sup> The design had evolved from the earlier events: “The brand name was displayed with life-sized backlit

letters in this sophisticated lounge. Brand ambassadors were on hand to provide guests with more information.” Celebrities were given special treatment: “For VIPs and talent, Juul had an upstairs lounge that provided a more exclusive experience and gifting suite. VIPs could even choose to have their samples custom-engraved on site.” A social media post indicated that free samples of JUUL were provided.<sup>27</sup>

The SRITA website contains 345 images from JUUL events (tobacco.stanford.edu/pods/juul/juul events).

**Figure 5** October 2017 JUUL sampling event offering \$1 flavor tasting.



**JUUL ADVERTISING:**

**JUUL’s Launch Advertising Theme (2015 to early 2016): “Vaporized”**

The initial JUUL marketing campaign, designated “Vaporized,” was designed by Creative Director Steven Baillie along with Grit (“Grit delivers strategic yet creative solutions, up-to-the-minute intel and intuition, unearthing what is and will be buzzing in culture”) and Cult Collective (“Cult Collective is devoted to giving brands a cult-like following”)<sup>28-30</sup> The targeting of youthful consumers was evident in the design and implementation of the vaporized campaign. “Vaporized” featured models in their 20s, appearing trendy in casual dress. (Figure 6) Their images were often evocative of behaviors more characteristic of underage teens than mature adults. In their case study for JUUL, Cult creative described their intention: “We created ridiculous enthusiasm for the hashtag “Vaporized,” and deployed rich experiential activations and a brand sponsorship strategy that aligned perfectly with those we knew would be our best customers.”<sup>31</sup> Based upon subsequent sales trends it is clear that this imagery resonated with underage teens who aspire to emulate these trendsetting young adults. The central message seems to be that if you try JUUL you will be blown away (i.e. vaporized) by the wonderful new vapor product. Richard Mumby, chief marketing officer over the founding JUUL campaign, described the vaporized theme as possessing “dynamic energy.”<sup>32</sup> The vivid color scheme of Vaporized advertisements closely resembles that of Natural American Spirit Cigarettes, a leading youth brand. (Figure 7) Embedded in the Vaporized campaign was the slogan “smoking evolved” which serves to associate the brand with themes of high tech and latest generation (e.g., must have newest iPhone model). The net effect of the initial campaign was to establish a notably youth-oriented brand identity for JUUL.

The SRITA website has 50 images from the Vaporized campaign (tobacco.stanford.edu/pods/juul/vaporized) and 24 videos (tobacco.stanford.edu/videos/juul).

**Figure 6.** JUUL’s “Vaporized” launch campaign of 2015 displayed happy twenty something models in trendy dress often playfully posed. The JUUL device was often surrounded by brightly colored triangles which, in digital version, flashed through a vivid color rainbow.



**Figure 7.** JUUL’s color schema appears to emulate that of American Spirit cigarettes, a popular brand among American Youth.



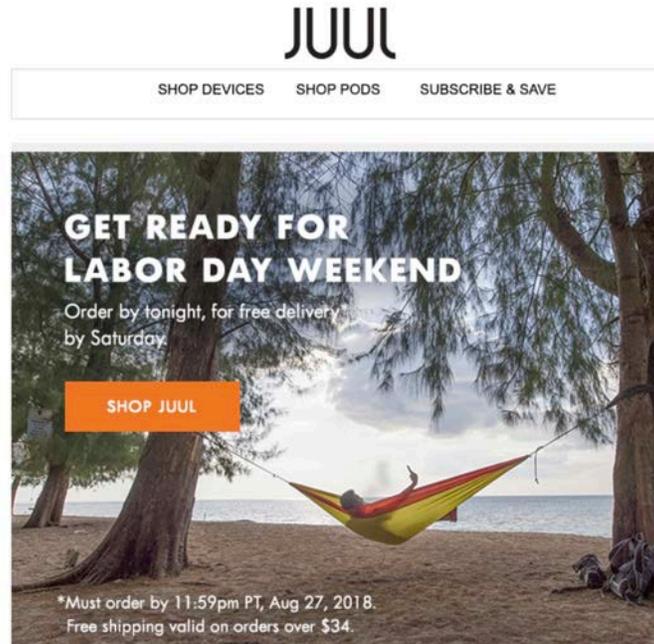
**JUUL’s Advertising Themes (2016 – mid-2018):**

In early 2016, JUUL’s advertising gradually transitioned in both its style and message content to align with 6 main themes: pleasure/relaxation, socialization/romance, flavors, economics, holiday/seasons, style/identity, and switching/satisfaction. Our entire library of JUUL advertisements can be accessed on the SRITA website.<sup>19</sup>

**Pleasure/Relaxation**

A central message of JUUL advertising, as with all tobacco promotion, is that using the product adds comfort and joy to your life. (Figure 8) Slogans such as “Enjoy a JUUL moment” and “Cozy up with JUUL” implants the notion that every period of relaxation should be accompanied by JUUL. Reinforcing this theme, JUUL frequently posts to the #juulmoment. Weekends have a special marketing appeal: “Ease into the weekend with JUUL” and “Don’t go into the long weekend unprepared.” Conversely, if you only take your JUUL to work, “Monday’s don’t need to be hard.” The message, “Enjoy yourself, you earned it” portrays the device as a reward, a special treat you deserve.

**Figure 8.** This 2018 advertisement is typical of the pleasure/relaxation theme. Note how the model puffs a vapor plume while he admires his JUUL.



**Socialization/Romance:**

JUUL is frequently portrayed as a social activity to be shared among friends. (Figure 9) Depictions of friends JUULing together are reinforced by slogans such as “Share JUUL” and “Give JUUL.” Inevitably, JUUL is associated with romance such a couple, face to face, mingling their exhaled vapor – yet another motif

traditional in tobacco marketing. JUUL encourages consumers to show their affection via JUUL: “Surprise your love with JUUL for Valentine’s Day” and “Forget diamonds. Surprise that special someone . . . with JUUL.” JUUL also exploits the fear of smokers being socially ostracized: “Say goodbye to smelling like an ashtray.”

**Figure 9** Example of the Socialization/Romance theme.

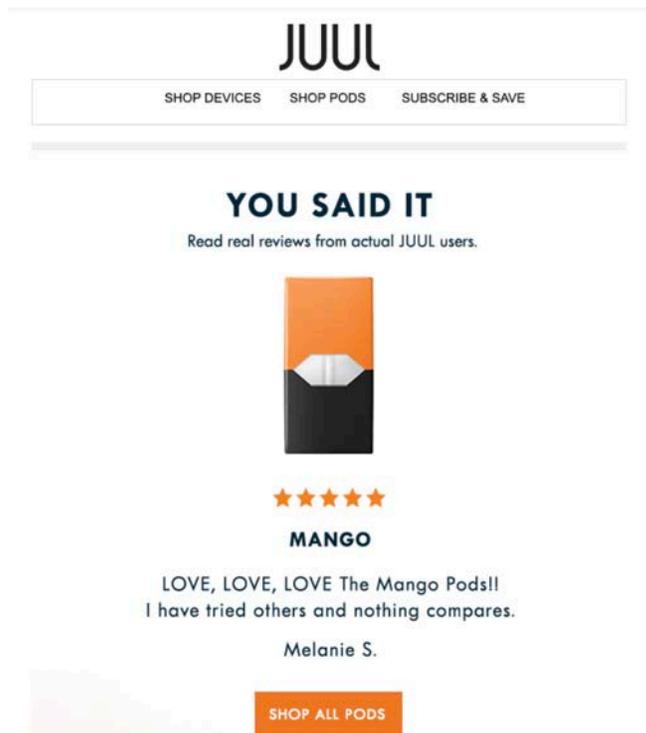


**Flavors**

In the US JUUL offer 8 flavors: Virginia tobacco, classic tobacco, mint, menthol, cucumber, mango, creme, and fruit. In late summer 2018 JUUL toned down the names of three of its flavors which were originally cool cucumber, crème brûlée, fruit medley. As of November 13, 2018 all but Virginia tobacco, mint, and menthol are available in the US only via the company website.<sup>33</sup> JUUL has offered limited edition flavors for a fixed length of time including coco mint.<sup>34</sup> JUUL has registered many other flavors with the FDA including peanut and jam, apple crumble, apple cran, peach ginger tea, chestnut croissant, mimosa, strawberry limoncello, cinnamon snap, lemon poppyseed and spicy watermelon which have not appeared on the market to date.<sup>35</sup> A June 2017 JUUL customer survey included Berry crumble, peanut jam, and classic dessert.<sup>36</sup> In the UK, JUUL offers Mango Nectar, Royal Creme, Golden Tobacco, Glacier Mint, Apple Orchard - all in 1.7% (20mg/ml) nicotine.

Since the product’s inception, flavors have played a central role in JUUL marketing. **(Figure 10)** Special emphasis has been placed upon sweet and fruity flavors such as mango. The frequency of JUUL advertisements by flavor from social media channels and via email in the period June 2015-October 2018: mango 40, cool mint/classic menthol 25, cucumber 18, classic tobacco/Virginia tobacco 18, crème brûlée 12, fruit medley 6, and multiple flavors 34. **(Table 1)** The emphasis upon dessert flavors is clear: *“Have a sweet tooth, try bruule.”* JUUL’s slogan, *“Save room for JUUL”* of early 2016 is clearly meant to be evocative of the common phrase *“Save room for dessert.”* On April 2017 JUUL posted *“Turns out a whole lot of you love mango.”* Subsequently it became the most prominently featured flavor with laudatory comments such as: *“Get into the tropical mood of summer with mango JUUL Pods”* (July 2018) and *“Love, love, love the mango pods”* (August 2018).

**Figure 10.** This 2018 advertisement is a JUUL promotion for mango pods, its most popular flavor. (*“Love, Love, Love the Mango pods!!”*)



**Table 1:** JUUL advertisements (176) with flavor as a principal theme on social media channels and via email June 2015-October 2018 (a partial list due to company deletions).

Channel	Mango	Cool Mint or Classic Menthol	Cool Cucumber	Classic Tobacco or Virginia Tobacco	Crème brûlée	Fruit Medley	Classic Menthol & Classic Tobacco	Multiple Flavor Variety
Twitter	16	10	10	7	5	2	14	6
Facebook	6	4	3	3	3	1	3	4
Instagram	5	4	3	2	2	1	0	2
Email	13	7	2	6	2	2	6	22
<b>Total</b>	<b>40</b>	<b>25</b>	<b>18</b>	<b>18</b>	<b>12</b>	<b>6</b>	<b>23</b>	<b>34</b>
<b>2018 only</b>	<b>18</b>	<b>14</b>	<b>8</b>	<b>10</b>	<b>3</b>	<b>0</b>	<b>12</b>	<b>20</b>

**Cost Savings/Discounts**

JUUL’s business model is to get their devices into as many customer’s hands as possible and then sell them nicotine containing flavor pods on a recurring basis. **(Figures 11,12)** This explains why JUUL regularly advertises discounts for its starter kits. (e.g. 15%, 25%, 40% off). Aligned with this strategy, JUUL heavily promotes its auto-ship subscription purchase plan for its pods. Soliciting its customers as marketing

partners, it offers a “JUUL referral program – give \$15 get \$15.” For those price sensitive buyers, JUUL promotes its “JUUL savings calculator” so that its customers realize that using JUUL is a cheaper way of satisfying their nicotine addiction than cigarettes. **(Table 2)**

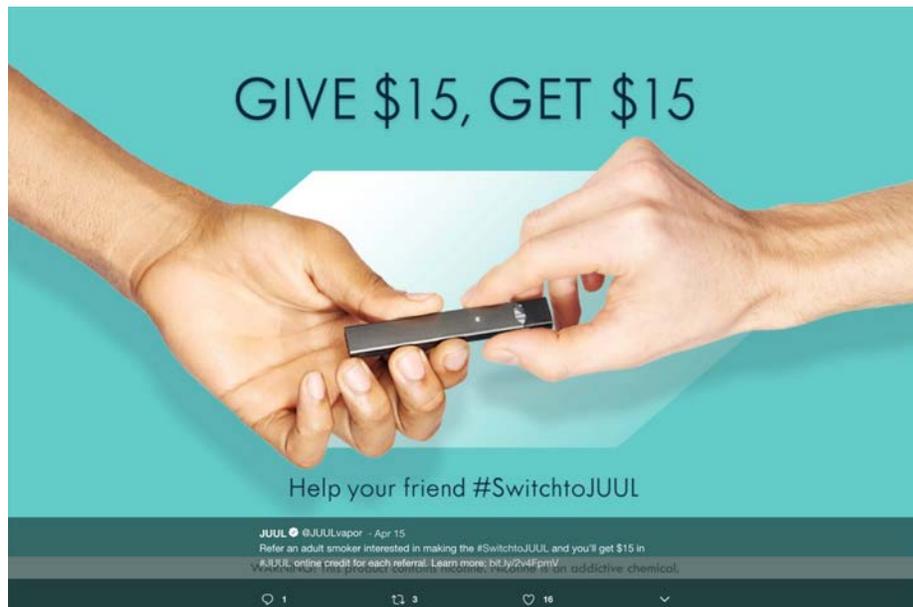
The SRITA website has 45 images of JUUL’s discount advertising (tobacco.stanford.edu/pods/juul/discounts).

**Figure 11.** Discount on a JUUL starter set.



WARNING: This product contains nicotine. Nicotine is an addictive chemical.

Figure 12. JUUL’s reward program encourages its customers to serve as brand ambassadors.

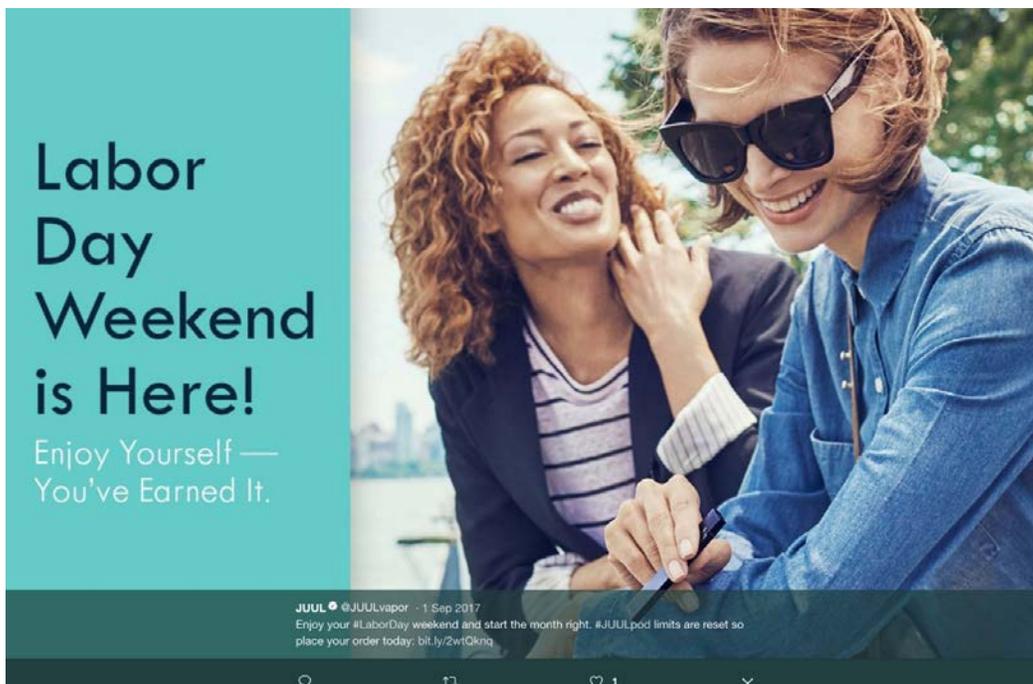


**Holidays/Seasons**

On a regular basis, JUUL posts advertisements referencing changing seasons and major holidays such as Mother’s Day, Father’s Day, St Patrick’s Day, Valentine’s Day, New Years, Labor Day, and

Thanksgiving, July 4. (Figure 13) Examples of slogans include: “Celebrate fall with JUUL,” “The perfect holiday companion,” “Enjoy the holidays with JUUL,” and “This season give JUUL.”

Figure 13. Example of the Holidays/ Seasons theme which also emphasizes that using JUUL is a social activity among friends.



**Table 2:** JUUL advertisements (June 2015-October 2018) featuring discounts and cost savings. (a partial list due to company deletions).

	Percentage Discount*	Dollars off +	“Pods on us” (free with auto-ship)	Savings Calculator#	Give \$15 Get \$15	Buy 1 Pod Pack Get 1 Free
Twitter	38	8	0	5	5	0
Facebook	8	3	0	0	0	1
Instagram	2	1	0	0	0	0
Email	11	8	10	4	2	5
<b>Total</b>	<b>59</b>	<b>20</b>	<b>10</b>	<b>9</b>	<b>7</b>	<b>6</b>

\*Percentage Discounts ranges from 15 to 40% off starter kits

+Dollars discounts range from \$15 to \$20 off starter kits

#Purported savings switching to JUUL from cigarettes

**Style/Identity**

In its early advertising, JUUL depicted stylish and attractive models of a type youthful consumers would like to emulate. Attractive girls in pants torn at the knee dressed in crop tops with their navel showing. Men wearing jeans or khaki pants. Many smiling broadly and in whimsical poses, always with a JUUL in hand. Celebrities are important cultural

symbols sought after by advertisers. In January 2016, JUUL posted images on both its Facebook and Instagram accounts of Katy Perry holding a JUUL at the Golden Globes. (Figure 14) One of its models in the Vaporized campaign resembles Ariana Grande in pose and coiffure. (Figure 15) The style of the product itself is emphasized with limited edition colors such as blush gold, silver, navy blue, and turquoise.

**Figure 14.** JUUL posted Katy Perry holding a JUUL at the Golden Globes in January 2016. Use of the image of a celebrity using the company’s product is an example of the style/identity theme.



**Figure 15.** The pose and hairstyle of this 2015 Vaporized campaign advertisement are reminiscent of popular singer Ariana Grande. This is an example of the style/identity theme.



### Company Messages

Across its social media platforms, JUUL often posts messages expressing the company's position on regulation and public policy. JUUL also conducts customer surveys and criticizes research with findings contrary to its business interest (e.g., Truth Initiative). Frequently, the postings portray the company's marketing practices in a positive light: *"We market our products responsibly, following strict guidelines to have material directly exclusively toward adult smokers and never to youth audiences."* (March 14, 2018)

The SRITA website has 45 images of JUUL company messaging ([tobacco.stanford.edu/pods/juul/companymessage](http://tobacco.stanford.edu/pods/juul/companymessage)).

### Switching/Satisfaction

Despite FDA rules which prohibit scientifically unsupported advertising claims promoting e-cigarette as a means of quitting combustible cigarette smoking, the practice is widespread among electronic nicotine delivery systems.<sup>37</sup> Many JUUL advertisements promote its use in "switching" from traditional cigarettes. (Figure 16) Examples of this genre of slogan include: *"make the switch," "help a smoker switch to JUUL," "help mom switch to JUUL," "the right tool to switch, alternative to cigarettes,"* etc. This theme has dominated since

mid-2018, in response to intense negative media attention and threatened FDA action in response to widespread use among non-smoking youth. Since May 2018 a string of advertisements have appeared with a JUUL device portrayed as the "I" in the word switch. Simultaneously, a series of video testimonials of former smokers crediting JUUL for helping them transition appeared on their website and in social media channels.

The term satisfaction has a long history in tobacco advertising as a code word for overcoming the urges of nicotine addiction. JUUL advertising copy has numerous variants on the satisfaction theme: *satisfying, intensely satisfying, simply satisfying, most satisfying, satisfaction with no stink attached, share the satisfaction,* etc. A series of Instagram posts from the JUULVapor account depict JUUL devices next to coffee cups accompanied by phrases such as *"Good morning! Have you had a #juulmoment today?"* The urge to reach for a cigarette immediately upon arising is a well known behavioral marker of nicotine addiction. Continuity of nicotine dosing throughout daily activities is imbedded in JUUL advertising: upon arising and subsequently when eating, socializing with friends, partying at night, etc. Making JUUL an integral part of ordinary life is the goal: *"Before you head out remember wallet, keys, phone, #juul."* Images such as

those with suitcases accompanied by the slogan: “Pack the essentials” reinforce the central role of JUUL (ie. nicotine) in daily life.

The company touts internal “research,” without providing methodology or data for scrutiny. In 2018, it made the bold assertion that: “The company’s research shows more than one million smokers have already switched to JUUL.”<sup>38</sup> It is interesting to note that JUUL’s researchers do not make publicly available

any effort to quantify its product use among underage non-smoker. Seeking to deflect regulatory attention from its messaging, JUUL’s website maintains that: “Consistent with FDA regulations, JUUL Labs can not and does not promote its products as less harmful or safer than cigarettes.”<sup>39</sup>

The SRITA website has 112 images of JUUL’s switch themed advertising (tobacco.stanford.edu/pods/juul/switch).

**Figure 16.** In 2018, JUUL social media promotion focused on the switching/satisfaction theme. The appearance of an elderly model is extremely rare in tobacco advertising.



**JUUL’s Advertising Themes (late 2018):**

As regulatory pressures intensified, over the summer of 2018 JUUL re-focused its advertising to focus upon its ‘switch’ theme. (Figure 17,18) This included older models, primarily middle aged or older, and included numerous testimonial videos on Instagram, Facebook, and Twitter. Meanwhile, marketing emails continued to promote flavors such as mango, offer discounts, and to encourage signing up for auto-ship subscription. A series of defensive press statements from JUUL leadership also appeared in response to FDA and other regulatory attention.<sup>19</sup>

**JUUL ADVERTISING CHANNELS:**

**JUUL Traditional Media:**

**Print:**

JUUL has minimally used traditional channels used by tobacco advertisers such a magazines, newspapers, billboards, radio, and television. In 2015, JUUL chose a single magazine to launch their advertising campaign. It was VICE magazine, a glossy pop culture focused publication which markets itself to advertisers as “#1 youth media company.”<sup>40</sup> Contrary to their stated purpose, JUUL chose VICE to

launch its initial campaign to fulfill its mission of reaching “adult smokers.” The full page advertisements on the inside of the cover page were colorful and showed 20-something models in playful poses. Beginning in late summer of 2018 JUUL began to run full page newspaper advertisements on the switch theme.

The SRITA website has 12 images from Vice Magazine (2015) and the San Francisco Chronicle (2018) (tobacco.stanford.edu/pods/juul/print).

**Figure 17** December 2018 newspaper switch themed advertisement.



**Figure 18.** December 2018 newspaper switch themed advertisement.

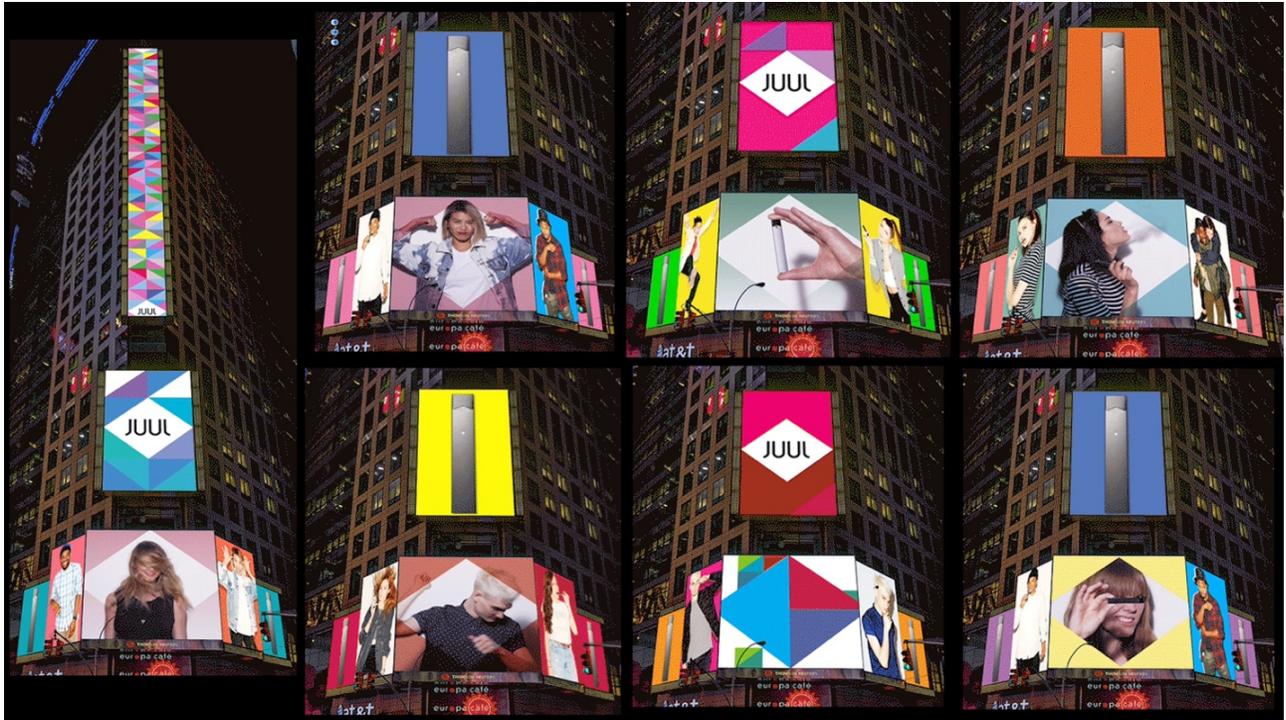


**Billboards: JUUL Times Square**

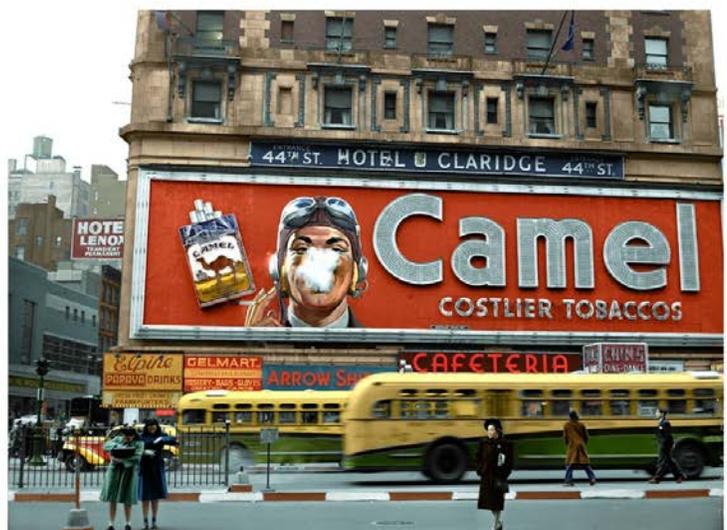
As part of JUUL’s launch in 2015, brightly colored 12-unit billboard display flashed images of attractive and fashionably casual young models smiling, joyously jumping, and kissing while enthusiastically vaping.<sup>28</sup> (Figure 19) The display, which was up for a month, was designed by Georgia, a creative production center based in Soho, New York City.<sup>41</sup> While striking in still pictures, their youthful emphasis is most vividly depicted in animated gifs.<sup>19,28</sup> Animated tobacco billboards in Times Square have a long history. A block long Camel Cigarette billboards (1941-1966) puffed impressive “smoke rings” made of steam followed by an illuminated Joe Camel (1989-1994), Marlboro, Winston, Kool and others. In 1999, major American tobacco companies agreed to halt outdoor billboards.<sup>42</sup> (Figure 20)

The SRITA website has 14 images and 3 videos of JUUL’s Time Square Billboard Promotion (tobacco.stanford.edu/pods/juul/timesquare)

**Figure 19.** A collage of images from JUUL’s 2015 Times square animated billboard which were vividly colorful and featured twenty something models in playful activities while vaping a JUUL.



**Figure 20.** Times Square advertisements for JUUL (2015) and Camel (1940s).



**Point of Sale:**

Vaporized imagery predominated in early JUUL point of sale promotions. According to the creative team (Georgia) campaign appeared in over 20,000 retailers.<sup>41</sup> Discounts predominate in store window posters. In product displays JUUL kits and pods are often elegantly arranged in clear plastic “jewel” cases.

The SRITA website has 49 store window posters and displays (tobacco.stanford.edu/pods/juul/stores).

**Mobile Phone Advertising**

Over the calendar year of 2015, even though it was not introduced until mid-year, JUUL did by far the most paid mobile advertising of any e-cigarette company.<sup>43</sup> JUUL’s 5 different advertising impression appeared in 468 mobile advertising observations which comprised 74% of all e-cigarette advertising for the entire year. The advertisements were to be part of the youth-oriented “Vaporized” campaign.

**Radio:**

In mid-2018, JUUL launched radio advertisements.<sup>44</sup> The messages are focused upon the “switch” theme. Unlike other major e-cigarette companies, we are not aware of television advertising by JUUL.

**JUUL Social Media****Instagram, Facebook, Twitter**

We collected advertisements from JUUL’s Twitter, Facebook, and Instagram accounts.<sup>19</sup> Our assembled collection included a total of 2691 tweets collected from JUUL’s official twitter handle for the years 2015 to November 2018 [2015 (172), 2016 (216), 2017 (927) and 2018 (1376)]. We also collected 248 Facebook posts from the same time period [2015 (12), 2016 (25), 2017 (62) and 2018 (149)]. On Instagram, our collection included 187 Instagram posts. As of November 2018, followers of JUUL’s Instagram was 77,600, Twitter 19,700, and Facebook 10,280.

It is important to acknowledge that JUUL has deleted a large portion of its social media history. In July 2018, a JUUL spokesperson indicated that the

company has worked with social media companies to remove youth-oriented content with some 4000 such posts removed from Instagram and Facebook.<sup>45</sup> For example, the entire inventory of JUUL communications from its initial marketing campaign “Vaporized” have been expunged by the company. “Vaporized” would have remained vaporized had we not been able to resurrect this campaign from other sources. Instagram postings prior to June 17, 2017 were entirely deleted prior to mid-2018 and then a second deletion occurred in August 2018 leaving only new postings on the switch theme. As of October 2018, JUUL’s Instagram had reduced to 46 posts. On November 14, 2018 JUUL ceased using Instagram and Facebook in the United States.<sup>38</sup>

While non-company posting were not a primary subject of this study, even a cursory evaluation shows them to be voluminous. Over a quarter of a million followers of #juul on Instagram is dwarfed by the multitudes of YouTube videos returned by a search on JUUL which includes 11 with >1,000,000 views and 109 with >100,000 (October 2018). Scanning through voluminous social media show it to be permeated with postings by teenagers.

The SRITA website has 223 Twitter, 175 Facebook, and 216 Instagram samples of JUUL promotion (tobacco.stanford.edu/juul).

**Social Media Influencers:**

JUUL has employed influencers - social media users with sizable followings recruited to increase brand awareness and to inspire sales. (**Figure 21,22,23**) Confirming that JUUL used influencers since its inception was a June 2015 listing for an Influencer Marketing Intern. The job description makes the strategy clear: *“The Influencer Marketing Intern will create and manage blogger, social media and celebrity influencer engagements. . . to build and nurture appropriate relationships with key influencers in order to drive positive commentary and recommendations through word of mouth and social media channels, etc.”*<sup>46</sup>

Influencers are a form of paid promotion. For example, an influencer may earn \$1000 for each 100,000 followers.<sup>47</sup> A particularly well documented example is that of DonnySmokes (Donny Karle, age

21), whose JUUL “unboxing” YouTube video garnered some 52,000 views.<sup>48</sup> With 120,000 subscribers on his YouTube channel, Mr. Karle was able to earn a good income stream from vapor companies before YouTube interrupted his channel. In October 2018, JUUL’s website still requests applications to “Join the JUUL

*Influencers.”*<sup>49</sup> The application requires candidates to disclose their profiles for Instagram, Twitter, Facebook, blogs, and vlogs along with their number of followers for each.

**Figure 21.** 2015 JUUL summer influencer marketing internship solicitation from Internships.com (<https://www.internships.com/marketing/influencer-marketing-intern-i7391759>).

Influencer Marketing Intern

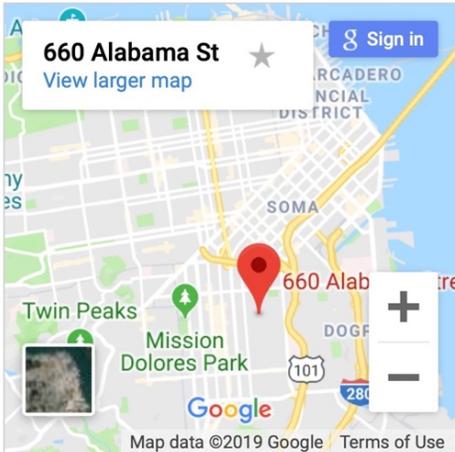
**PAX Labs**  
 660 Alabama Street  
 San Francisco, CA  
 Posted: May 15 2015

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**Application Deadline:** Closed  
**Position:** Full-time, Paid  
**Timeframe:** 06/01/15 — 09/01/15

Closed

 This position is closed



A Google Map of San Francisco, California, with a red location pin placed at 660 Alabama Street. The map shows the surrounding area, including SOMA, Mission Dolores Park, and Twin Peaks. A search bar at the top of the map displays '660 Alabama St' and includes a star icon and a 'View larger map' link. The Google logo and 'Map data ©2019 Google' are visible at the bottom of the map interface.

This role will focus on the research, development and tracking of PAX and JUUL growth and expansion through influencerbased marketing opportunities. The Influencer Marketing Intern will create and manage blogger, social media and celebrity influencer engagements. This includes research, design, implementation and execution of all components of the programming, communication, and tracking. This role requires a broad understanding of the full breadth of PAX Labs, Inc. products and target customers. This knowledge will be used to build and nurture appropriate relationships with key influencers in order to drive positive commentary and recommendations through wordofmouth and social media channels, etc. You will also work with supporting our assistant brand manager, ecommerce manager, and social media manager to ensure influencer experience is running smoothly and is being tracked and measured. This role reports to the Experiential Marketing Manager.

Figure 22. Invitation on JUUL’s website (October 2018) to recruit social media Influencers.

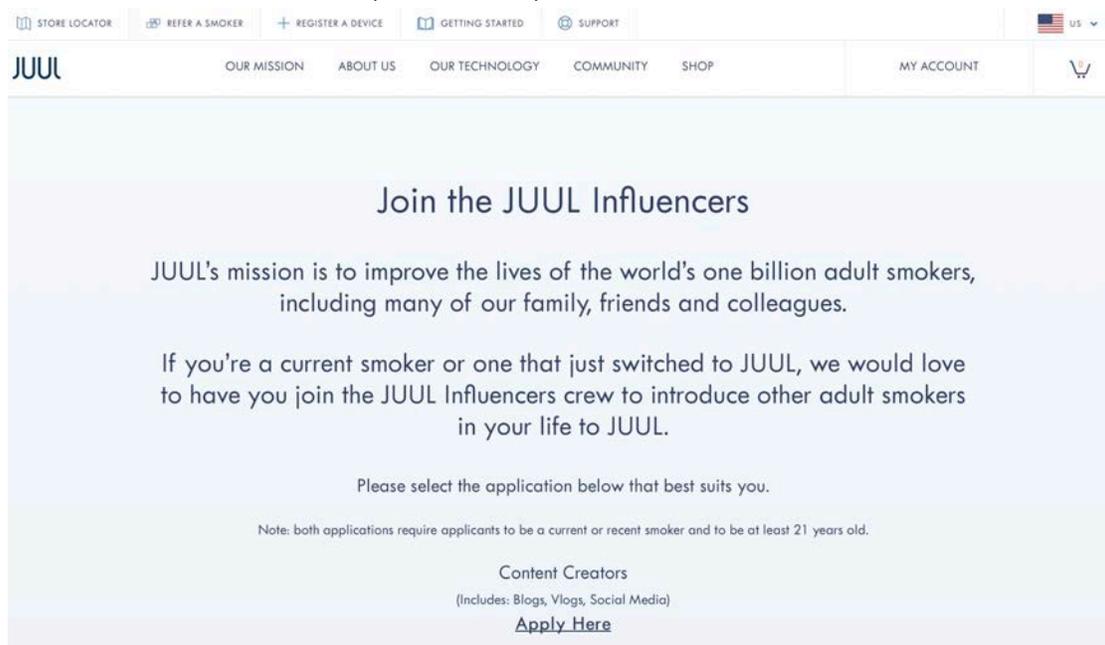


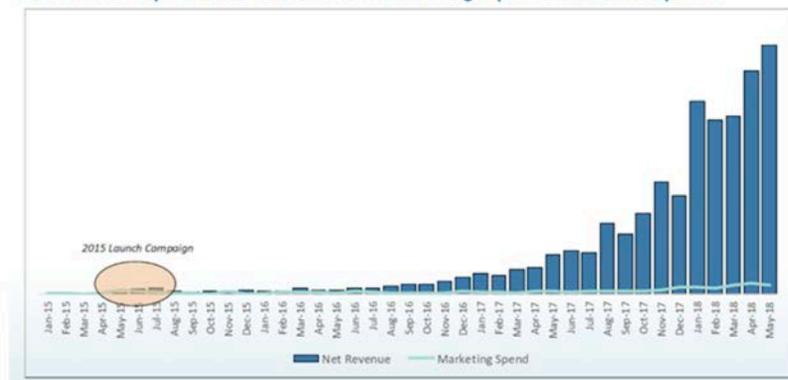
Figure 23. From JUUL website in November, 2018, JUUL “marketing spend” may refer only to spending external to the company. It may, or may not, include hired social media managers and influencers. Superimposing the number of social media postings on this curve would likely show a vast frequency during the time of little reported market spending. Because the company has deleted much of its social media history over its period of rapid growth, such a quantitative depiction is not possible.



We welcome the opportunity to work with the Massachusetts Attorney General because, we too, are committed to preventing underage use of JUUL. We utilize stringent online tools to block attempts by those under the age of 21 from purchasing our products, including unique ID match and age verification technology.

Furthermore, we have never marketed to anyone underage. In fact, we have done very little marketing relative to our growth:

JUUL Monthly Net Revenue and Marketing Spend Since Inception



**JUUL Affiliate Program:**

JUUL has used an affiliate program which makes payouts to online sites which refer business to them. In the vaping industry, this most often takes the form of sites which review the product favorably and include a link to the product’s website, especially to their “buy now” section. JUUL partnered with the company Impact Radius (<https://impact.com/>) whose goal is to: “optimize partner marketing investments.”<sup>50</sup> In their affiliation application, JUUL explained: *How it works: You get paid by advertising performance campaigns to your audience on your blog, website, newsletter, search landing page. Depending on the specific terms of our agreement you can get paid as frequently as daily using direct deposit into your bank account.*<sup>50</sup> It goes on to specify: “The purpose of this Agreement is to allow HTML linking

*between your web site and the juulvapor.com web site” and “At all times, you must clearly represent yourself and your web sites as independent from juulvapor.com.” (Figure 24)*

JUUL offers payment of as much as 25% of net sales for new customer and 10% of net sales for existing customers. On October 31, 2018 JUUL halted its affiliate program.<sup>51</sup> JUUL did not wait for an internet admirer to apply to its affiliates program. In response to a complimentary tweet on JUUL’s Twitter feed, the company replied with an invitation for the individual to join the affiliates program 18 times (15 in 2017 and 3 in 2018).

**Figure 24.** Application to Join JUUL Affiliates program (November 2018).

Online Purchase	Referral Period	Auto-Ship Subscription	Referral Period
<b>20%</b>	<b>30 days</b>	<b>10%</b>	<b>30 days</b>

**Complete Application**

**JUUL e-Mails to Customers**

JUUL has sent out marketing e-mails to customers and those who have signed up to their newsletter on a regular basis since the company launched its product and continues to do so as of November 2018. We examined 189 JUUL emails to its

customers spanning 2015-2018. In 2018, JUUL’s claims that it employs a strict system to prohibit purchasing of their products via their website by those under age 21 sales. To test its efficiency, in July 2018 we have had 5 underage student summer interns (ages 15-19) attempt to purchase JUUL products from the company

website. All were appropriately rejected after uploading their demographic data. However, within a day each received a follow up e-mail notice that read “Welcome to JUUL.” Shortly thereafter they received a series of advertising emails from JUUL including a discount coupon to buy a starter kit. After notifying senior leaders of JUUL of this practice, they promptly discontinued it.

The SRITA website has 189 JUUL emails to its customers (tobacco.stanford.edu/pods/juul/email).

**JUUL Brand Website:**

Numerous versions of the JUUL website were captured by the internet archive Wayback Machine.<sup>18</sup> At the time of JUUL’s launch (June 19, 2015) JUUL’s website prominently featured the Vaporized campaign imagery including an animated gif. A link to its Instagram, Facebook, Twitter, and YouTube sites were included. Six months later (Jan 19, 2016) the website showed popular singer Katy Perry at the Golden Globes holding a JUUL, the image was reposted on JUUL’s social media channels.

**JUUL HASHTAGS**

**JUUL Hashtag Marketing:**

Hashtags are of special interest as they have been extensively used by JUUL and greatly expand the reach of the company’s social media postings. (Figure 25) Hashtags connections used in their Instagram postings can be considered in several categories: Those created by JUUL (eg. #juul, #juulvapor, #switchtojuul, #vaporized); JUUL focused but created by customers or vendors (eg. #juulnation, #juullife); and trending topics unrelated to JUUL (eg. #mothersday, #goldenglobes, #nyc). Comparing JUUL’s first year on the market with its third, JUUL actually ramped up its hashtag use substantially. (Tables 3,4) As of 1/21/2019 the company’s premier hashtag (#juul) has 336,308 posts. The growth in hashtag posting remains robust. In the 27 days between October 17, and November 12, 2018 #juul alone added 23,676 or an average of 877 posts per day.

The SRITA website has 212 examples of youth oriented community posts to #juul from the last week

of November 2018 (tobacco.stanford.edu/pods/juul/hashtagjuul). Of note, these #juul community posts were gathered after JUUL had halted use of Instagram and deleted all of its earlier posts.

**Table 3.** JUUL Hashtags cited on company Twitter account during JUUL’s first year on the market (June 2015 – May 2016).

<b>JUUL Specific</b>	<b>Vapor related</b>
#juul	#vape
#juulvapor	#vapelite
#juulpods	
#juultip	<b>Other Hashtags</b>
#juulallnight	#nyc
#vaporized	#DomenicoSpano
#cocomiint	#NYFWM
#tabaac	#LifelsBeautiful2015
#LightsCameraVapor	#CyberMonday
	#recipe
	#foody

**JUUL Hashtag Content Analysis:**

The three 19 year old content reviewers evaluating JUUL related community posts, which contained either the image of a person or a meme, identified 68.8% (362/526) on #juul and 48.3% of images tagged @juulvapor (56/116) to be “youthful.” (Table 5) Among #juul community posts humor (40.7%), memes (31.2%), and pop culture references (29.1%) were most commonly identified. The average number of likes for #juul was 80 (range 0-1879) and @juulvapor 395 (range 12-13,733). Intercoder reliability via Krippendorff’s alpha values ranging from 0.781 to 1.0. In order to provide others the opportunity to independently examine the images coded, the entire set coded will be made available to any researcher who requests it.

**Figure 25.** A sampling of community images from #juul. While JUUL halted its own Instagram posts in November 2018, a vast community, predominantly young people continue to post to #juul it created. As of January 21, 2019, #juul has 336,308 posts.



## WARNINGS

While JUUL advertisements and social media posts routinely carry warnings against underage use and disclose nicotine content in 2018, these notifications were not always included and have evolved over time. (Figure 26) A review of the earliest among 171 JUUL promotional e-mails found that between product launch in June 2015 to April 7, 2016 no mention was made of JUUL nicotine content. After that, JUUL emails carried the message about the addictiveness of nicotine discreetly positioned in fine print at the bottom of the e-mail. JUUL’s Twitter feed containing 2691 tweets did not add a nicotine warning until October 6, 2017. In 2017-2018, JUUL’s Instagram posts carried the admonition: *“Warning: This product contains nicotine.” Nicotine is an addictive chemical.* In late June 2018, the Instagram warning text changed to: *“WARNING: Contains nicotine, which can be poisonous. Avoid contact with skin and eyes. Do not drink. Keep out of reach of children and pet. In case of accidental contact, seek medical help.”* Beginning on July 30, 2018, advertising imagery on JUUL’s Twitter feed placed a black box nicotine warning above the image. Since August 9, 2018, JUUL’s video testimonials on Instagram commence with a prominent black box

warning. In November 2018, the FDA published detailed guidance labelling requirements for tobacco products regarding nicotine addiction.<sup>52</sup>

Warnings against use of JUUL by underage youth have also evolved over the years. JUUL’s e-mails and tweets were each studied. A search of JUUL company tweets from 2015 to 2018 in the SRITA collection, the terms *“adult”* or *“adult smoker”* first appeared on July 5, 2017, where it stated that: *“Here at JUUL we are focused on driving innovation to eliminate cigarettes, with the corporate goal of improving the lives of the world’s one billion adult smokers.”* A December 12, 2017, tweet references a section in JUUL’s website titled *“How JUUL Labs is Combating Underage Use of our Product.”*

Review of JUUL emails to customers showed *“Intended for adult smokers only”* first appeared on Nov 26, 2015 and appeared sporadically after. Beginning with an April 7, 2016 email, this changes to: *“Intended for adult smokers only – not for sale to minors.”* In August 2017 the wording changed again to: *“Age restricted product. Not for sale to minors”* and later to: *“For adults 21+ years old only. Not for sale to minors.”* A black box was added to the underage use warning in October 2018 to JUUL advertisements which include a visual.

**Figure 26.** JUUL flavor variety starter kit before and after the placement of a nicotine warning label.



**Table 4.** Hashtags used by JUUL on the advertisements they posted to their Instagram account over the brand’s third year on the market with number of postings to each hashtag (as of October 17, 2018). Note that many other JUUL related hashtags exist (eg #juultricks, #juulgod, #juuling, #doitforjuul, #juul memes, #juulinschool) but were not used in JUUL advertising postings. (\*still in use by JUUL as of October, 2018)

<b>JUUL Specific</b>			
#juul*	260,866	#thesmokingalternative	21
#juulvapor*	33,945	#juulmiami	15
#juulnation	23,273	#juulinhand	17
#juulpods	28,741	#juulfacts	6
#coolmint	11,940	#sharejuul	1
#juullife	10,299	#juulhandcheck	2
#fruitmedley	5,163		
#fruitfriday	3,694		
#coolcucumber	3,558		
#mangomonday	3,488		
#juulpod	3,189		
#virginiatobacco	2,418		
#switchtojuul*	997		
#tobaccotuesday	914		
#juulmoment	797		
#classictobacco	389		
#classicmenthol	319		
#juulnyc	81		
#mintpod	33		
<b>Non-JUUL Specific</b>			
		#TBT	454,246,460
		#nyc	105,612,598
		#miami	55,280,014
		#tgif	32,260,047
		#mothersday	16,047,324
		#mango	12,207,495
		#fathersday	8,512,901
		#laborday	2,626,705
		#cremebrulee	659,193
		#taxseason	493,694

**Table 5:** Content analysis of youthful attributes of community posts to #juul and tagged @juulvapor (6/28 - 7/4, 7/18-7/24). Krippendorf’s alpha is a measure of inter-coder reliability.

<b>Themes*</b>	<b>#juul</b>	<b>Tagged @juulvapor</b>	<b>Krippendorf’s Alpha</b>
Youthful	362 (69%)	56 (48%)	0.891
Humorous	214 (41%)	8 (7%)	0.831
Meme	164 (31%)	3 (3%)	1.0
Pop Culture	153 (29%)	15 (13%)	0.781
Animated Character	75 (14%)	4 (3%)	1.0
JUUL tricks	55 (10%)	5 (4%)	1.0
Covert Use	29 (6%)	2 (2%)	1.0
Alternative to Smoking	24 (5%)	5 (4%)	1.0
<b>Total</b>	<b>526*</b>	<b>116</b>	

\* Count exceeds total as some posting had multiple themes

**DISCUSSION:****Evolution of JUUL advertising:**

JUUL's advertising has evolved over the three plus years since its introduction to the market in three recognizable phases. Between its launch in June 2015 and early 2016 JUUL's Vaporized campaign featured patently youth-oriented imagery and messaging. Vaporized advertisements were distributed via the brand website, emails, multiple social media channels, and in an enormous animated billboard in New York City's Times Square. Vaporized had neither nicotine nor underage use warning messages. The campaign included distribution of thousands of free samples at parties hosted in a number of major America cities. Ultimately, JUUL's Vaporized campaign initiated a surge in demand for their product among American youth. In a recent interview, co-founder James Monsees admitted the early Vaporized campaign as "flawed."<sup>53</sup>

Few products have disrupted a market as quickly and thoroughly as JUUL has to e-cigarettes. Aside from becoming its dominant player, JUUL's rise also expanded the size of the overall e-cigarette market. Over its first few years, the Vaporized campaigns and its successors fulfilled the aspirations of its creative agency (Cult Collective) to give the brand "*a cult-like following.*" In so doing it, it pursued the path advocated by its creative Director Steven Baillie by aligning to: "*what is and will be buzzing in culture.*"<sup>28</sup>

**The Roots of JUUL Promotion in Traditional Tobacco Advertising:**

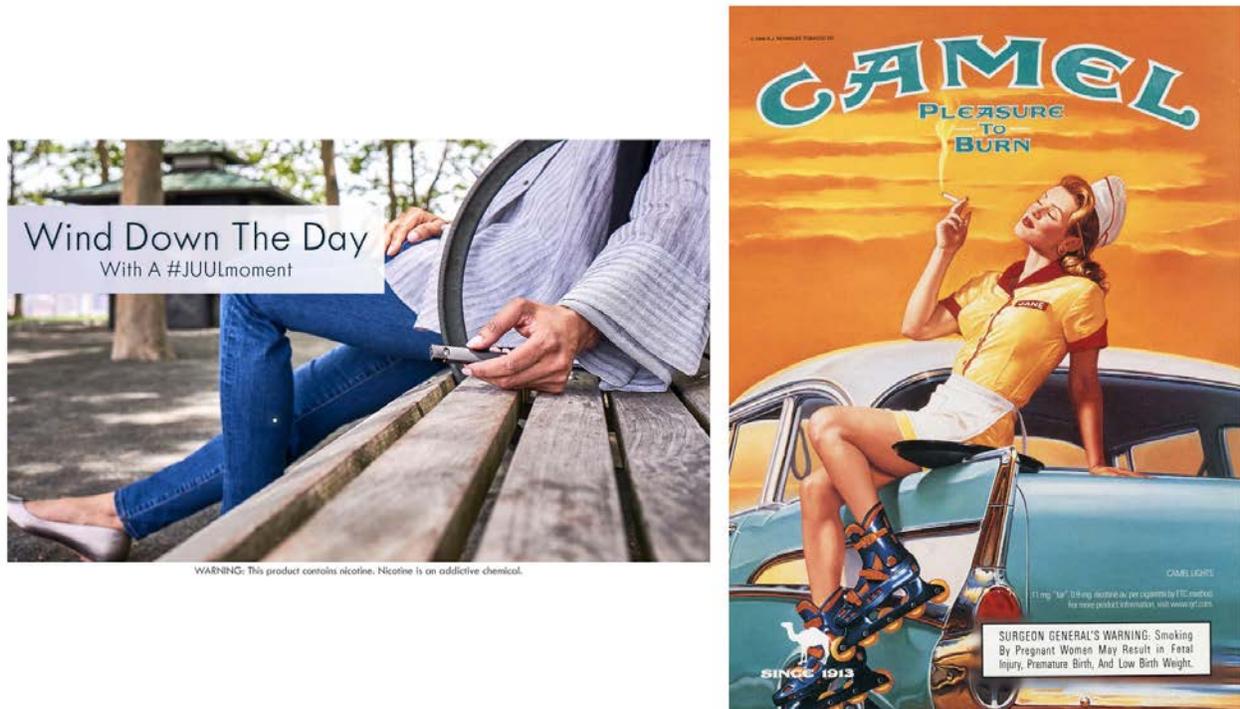
JUUL's principal advertising themes (pleasure/relaxation, socialization/romance, flavors, cost savings and discounts, holidays/ seasons, style/identity, and satisfaction) are closely aligned with that of traditional tobacco advertising. In an interview with the authors, JUUL co-founder James Monsees indicated that design of JUUL's advertising had been informed by traditional tobacco advertisements and that our SRITA online tobacco advertising collection had been quite useful to them. The SRITA website includes 82 comparisons between JUUL and historical cigarette advertisements ([tobacco.stanford.edu/juultobaccocomparison](http://tobacco.stanford.edu/juultobaccocomparison)).

**(Figures 27-37)** Clear references exist to both historical and contemporary tobacco advertising themes. Contemporary examples include the coloration of American Spirit, the playful twentysomethings of Newport (Alive with Pleasure), the relaxed poses of Camel (Pleasure to Burn), the stylish smoking of Virginia Slims ("You've Come a Long Way Baby), among many others. The one theme not characteristic of traditional tobacco marketing is the "switch" theme which predominates in 2018. To avoid possible action by the FDA regarding therapeutic claims, JUUL has avoided explicit messaging that its customers use its product to quit smoking.<sup>37</sup> Transitioning from conventional cigarettes to JUUL as a means of satisfying nicotine addiction is also a better business model for JUUL, whose profit is based upon long term use of their consumables (nicotine e-liquid pods). The term satisfaction, used by JUUL in some advertisements, has long been used by tobacco advertisers as a proxy for satisfying one's craving driven by nicotine addiction.

Figure 27. Tobacco advertisements have long featured attractive young women in suggestive poses.



Figure 28. Similarities between a JUUL advertisement and the 2000 Camel “Pleasure to Burn” campaign. Tobacco products are promoted both as a way of relaxing and perking up, an example of elasticity of meaning.



**Figure 29.** Similarities between a JUUL advertisement and a 2002 advertisement typical of the “Newport Pleasure” campaign of 1973 – 2016. Playfully arranged groups of young people.



**Figure 30.** Similarities between a JUUL advertisement and a 1987 advertisement typical of the Virginia Slims “You’ve Come a Long Way Baby” campaign of 1968 – 1990.



**Figure 31.** Similarities between a JUUL “Smart” advertisement and a 1950s advertisement from a 1955 Parliament “Smart” advertisement. In both the term ‘smart’ conveys a message of health reassurance.



**Figure 32.** JUUL’s “smoking evolved” conveys a similar message of health reassurance to L&M’s “miracle tip.”



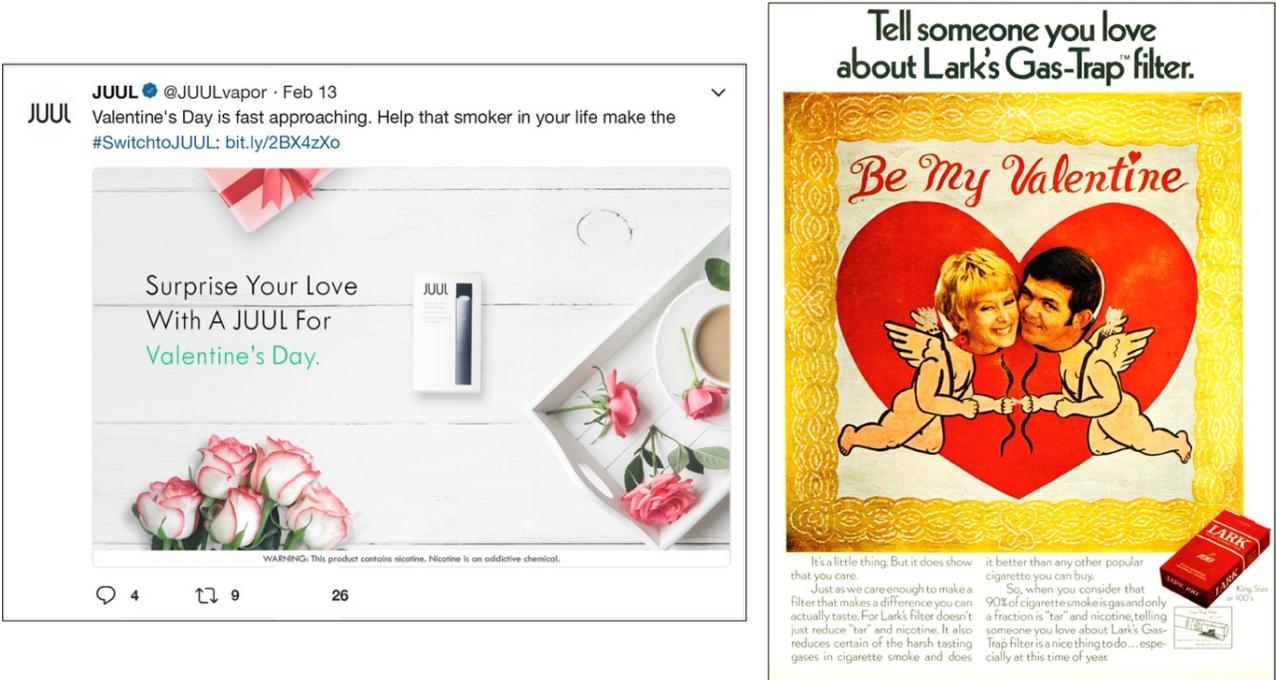
**Figure 33.** Tobacco advertisements often showed romantic couples mingling smoke. In this 1932 Lucky Strike advertisement the future groom exhales a set of wedding rings.



**Figure 34.** Tobacco marketers use myriad themes suggesting that their products foster success in romance.



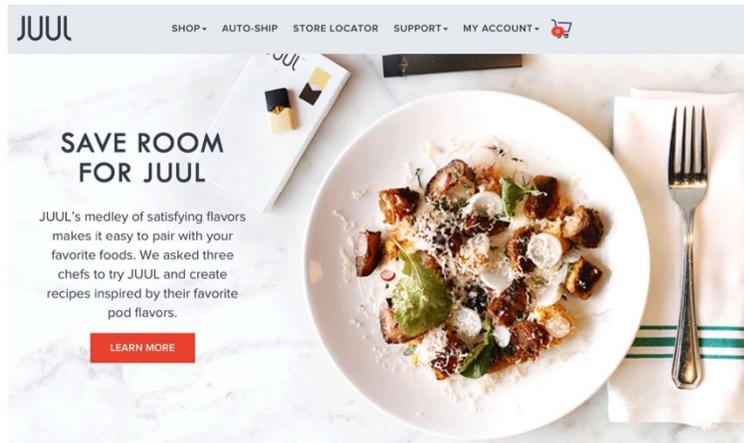
**Figure 35.** Both the JUUL and Lark advertisement suggest giving the gift of a safer product to enhance a loved one’s health.



**Figure 36.** Similarities between a JUUL “Mother’s Day” advertisement and a 1950s advertisement from Chesterfield.



**Figure 37.** The slogan “Save room for JUUL” emulates the phrase of “Save room for dessert” reinforcing the notion that JUUL is a sweet treat (eg.Creme brulee).



### JUUL's Advertising Appeal to Youth:

Advertisers tailor their advertising to the channels of the age ranges they intend to target (eg. baby boomers, Gen X-Y-Z). Use of media channels frequented by underage youth, such as teen magazines, has long been prohibited in the US for tobacco products. Gen Y, commonly referred to as millennials (born 1980-1994), are known to be tech savvy and were the first consumer age group to heavily use social media. Their attention to product promotion could be grabbed by graphic content (eg. videos, animations) and they have less interest in television than earlier generations.<sup>54</sup> Present day middle and high school students fall into Gen Z (born 1995 to 2012). Gen Z youth have never experienced the world without the internet and live immersed in social media, most often viewed on mobile phones.<sup>55</sup> They are especially technology driven, are drawn to entertaining interactions, and are easily swayed by messages that the company is committed to doing good for humanity.<sup>56</sup> Gen Z's social media engagement is even more intensive than their older Gen Y brethren. As of April 2018 Instagram, an image and video sharing platform which is the favorite social media site among US teens, was used by 63% of teens

age 13-14 and 78% ages 15-17.<sup>57</sup> The time spent online is high.<sup>58</sup> In 2018, 89% of teens were online either “almost constantly” (45%) or “several times a day” (44%).<sup>58</sup> Minimally used in JUUL's advertising are the traditional media channels (eg. magazines, newspaper, radio, television) principally used in targeting baby boomers and Gen X.<sup>59</sup> While under intense regulatory scrutiny, in mid 2018 JUUL began newspaper and radio advertising on the adult oriented switch theme.

The generational focus of JUUL's advertising has clearly been upon Gen Y young adults and Gen Z school age youth. JUUL's channels are clearly not aligned to the media preferences typical of the baby boom generation (1946-1964) and Gen X (1965-1980) generations. JUUL's advertising regularly carries the phrase “for adult smokers only.” Among Adults, in 2016 the CDC estimated there were some 37.8 million cigarette smokers in the US of whom 18-24 (3.9 million), 25-44 (14.7 million), 45-64 (15.0 million), and ≥65 (4.5 million).<sup>60</sup> Among adolescents, in 2017 CDC reported there were approximately 1.35 million cigarette smokers in the US (high school 1.1 million, middle school 0.25 million).<sup>61</sup> This implies that only about 10% of American cigarette smokers are among

the age group of those most heavily frequenting JUUL's social media advertising channels, highlighting that JUUL's promotional efforts are notably misaligned with its professed purpose.

### **Efforts to Achieve Maximal Reach for JUUL's Social Media Channels:**

JUUL funds its advertising differently from most of its competitors. After its initial 6 months, it did not use paid advertisement until newspaper and radio promotion appeared in mid-2018. This does not mean that it did not have a budget for promotion, quite the contrary. Searches on LinkedIn, Glassdoor, and other job listing sites reveal that JUUL maintains a sizable in house social media team including managers and staff overseeing content, community, and analytics.<sup>62</sup> Social media, which was originally used for conversation and content, has become a well established channel for customer acquisition. Unlike many competing e-cigarette brands, JUUL has avoided paid social media advertisement. It may be relevant that, in 2018, 46% of those ages 15-25 use ad blocking software, substantially the highest of any consumer age group.<sup>63</sup>

The goal of unpaid, often referred to as organic, social media marketing is to stimulate conversation about their product to encourage creation of a community who will contribute favorable user generated comments. JUUL's organic social media marketing helped to create a community who came to call themselves "JUULers." Enthusiasm among this group was ginned up by JUUL's "influencers" - individuals with large inventories of followers on social media who are compensated to serve as brand ambassadors. JUUL has used influencers to create and nurture conversations about their brand. Influencers contribute what appears to be independent user generated content which is influential, in part, due to its perceived independence from marketers' influences. JUUL has used celebrities in its promotion such as Katy Perry at the Golden Globes holding a JUUL and an Ariana Grande look-alike. A study of e-cigarettes advertisements on Instagram showed that celebrities increased positive attitudes towards the product and intentions to use it compared with non-celebrity advertisements.<sup>64</sup>

Sophisticated social media marketers use various methods to achieve diffusion of their message beyond their brand account. Creating a hashtag (eg. #juul) is free and powerful method of mingling brand advertising messages with large audiences. These include both interested parties and those, for example, who know #juul to be popular among their peer group and use it to post their unrelated material to enhance its visibility. Similarly, JUUL uses unrelated hashtags (eg. #goldenglobes, #nyc, #mothersday) to display its advertisements to a potentially vast audience who have not yet indicated any interest in their products. Tagging of images enabled on JUUL's Instagram page was another means of linking youthful imagery to their brand advertising. The scope and scale of JUUL's hashtag distribution is noteworthy with over a quarter of a million community posts to #juul. Even after JUUL ceased posting to its Instagram account in November 2018, the vibrant community of #juul lives on, including an abundant representation of youthful postings.

JUUL's affiliates program was a means of incentivizing positive reviews by what consumers believed to be independent evaluators who were actually compensated for their favorable commentary by as much as 25% of net sales using a customized link crediting them as the source. That JUUL shut down its affiliate program when under focused regulatory attention (October 31, 2018) was a tacit admission that the company feared that scrutiny of this program would not reflect well on its marketing practices.

### **JUUL Flavors**

As part of their action plan in advance of anticipated FDA regulation JUUL issued a press release (November 13, 2018 – 2 days before the FDA announcement) with the following statement: *We launched flavors like Mango, Fruit, Creme, and Cucumber as effective tools to help adult smokers switch from combustible cigarettes, and we do not sell flavors like Gummy Bear or Cotton Candy, which are clearly targeted to kids.*<sup>33</sup> In their statement, JUUL makes a distinction for which the demarcation line is unsupportable. JUUL flavors currently on the market such as mango and crème (recently crème brûlée) may

be preferred by some adult smokers, but they have differential appeal to youth. In addition, the limited edition flavor coco mint (a mix of chocolate and mint) as well as many of their developmental flavors (eg. peanut and jam, classic dessert, cinnamon snap) would similarly have youthful orientation.

#### **Literature on the Impact of E-cigarette Advertising:**

A number of academic studies have appeared over the last few years evaluating the impact of e-cigarette advertising. A recent study analyzed the volume of JUUL related postings on Twitter, Instagram, and YouTube.<sup>65</sup> The vast majority of the postings counted were community generated, while the present study focuses upon postings originating from the company as part of their marketing campaigns. Multiple studies have shown that exposure to e-cigarette advertising on social networking sites among youth who had never used e-cigarettes increases the likelihood of subsequent e-cigarette use.<sup>66-68</sup> In addition, the number of channels of e-cigarette advertising exposure increased the probability of use among youth.<sup>69</sup> The ability of teens to recall e-cigarette advertising is associated with both susceptibility and actual use.<sup>70</sup> Exposure to digital e-cigarette advertising was associated with lower perceived harm.<sup>71</sup> The regulatory environment also has an effect. Adults smokers in countries with few e-cigarette advertising restrictions and less restrictive e-cigarette regulations, such as the United States, were more likely to notice advertisements.<sup>72</sup>

The message content of e-cigarette advertisements appears similar to the findings of this study. An analysis of e-liquid Instagram postings found that messages emphasized positive experiences, personalization, aspirational identities, taste, pleasurable physical and emotional effects, edgy/cool themes, and tended not to emphasize health and cessation claims.<sup>73</sup> Socially themed advertisements (eg. as fashionable, socially approved, socially enhancing) more effectively communicated reduced harm message among young adults than health themed advertisements.<sup>74</sup> Despite JUUL's claims that it is meant as an alternative to smoking, less than one-third of 1% of tweets mentioned using JUUL to quit

smoking.<sup>75</sup> The frequency of postings in October 2018 on #juul (237,190) and #juulvapor (32,560) compared with #switchtojuul (901) suggests that its customer base are not especially engaged in the switching message.

Social media conversations relating to e-cigarettes have been studied. Between April and December 2017 over 80,000 tweets discussed JUUL. Most common were direct communication from one person to another, usually in the form of recommending JUUL to a friend. The topic of school, most often as a place for JUULing, was found in 3.66% of posts.<sup>75</sup> A study of JUUL's official Twitter account found that 25% were youth  $\leq 18$  and that they often shared the tweet with other adolescents.<sup>76</sup> On Instagram, images showing the e-cigarettes in use (e.g., blowing vapor) or the vaping device received the most likes.<sup>77</sup> Also on Instagram, 38% of images related to customization of the device, 18% juices/flavors, and 13% performing vape tricks.<sup>78</sup> Among JUUL related twitter posts most notify friends about buying or using JUUL.<sup>75</sup> A study of a vaping related hashtag on Instagram (#vapelifelife) suggested that user generated posts establish a social identity among e-cigarette users and that communication within a peer network escalated usage.<sup>79</sup>

Youth perceived that flavored e-liquids advertisements are meant for them.<sup>80</sup> An fMRI study among college age youth showed greater nucleus accumbens activity (function is reward and reinforcement) for sweet/fruit versus tobacco flavor e-cigarette advertisement.<sup>81</sup> Exposure to e-cigarette advertisement is associated with use of multiple tobacco products including cigarettes, hookah, and cigars.<sup>82</sup> In general, Pod based e-cigarette are associated with a high rate of polytobacco use, especially cigarettes, among adolescents.<sup>83</sup> While use of traditional cigarettes is higher among lower socioeconomic groups, the demographics are different for e-cigarettes. Higher socioeconomic status was associated with greater recent exposure to e-cigarette advertising.<sup>84</sup>

### JUUL as a Fad:

The ultimate metric of success of efforts to spur viral marketing is creations of a fad - an intense and widely shared enthusiasm for the company's product. Attaining such a level of feverish purchasing is rare. Beanie Babies of the 1990s and fidget spinners in 2017 are well known examples.<sup>85</sup> Fads are triggered by an informational cascade among potential customers.<sup>86</sup> Information transmission, which earlier might have been driven by phone conversation, is greatly facilitated by the speed and ubiquity of social media. One of the best examples of viral social media driven marketing is the 2014 Ice Bucket Challenge which stimulated donations to the charity supporting research into amyotrophic lateral sclerosis. Teens, who demonstrate their individuality by conforming to the behaviors of their peers, are especially vulnerable to fads. There is little controversy that JUUL has greatly benefited from the craze for its products among the Gen Z cohort. While fads are idiosyncratic, they are also typically fragile and short lived. Companies benefiting from such frenzy of purchasing have roles in both the initiation and propagation of the craze. While JUUL's creators certainly could not have predicted the extraordinary rate of adoption of their product, the company's initial Vaporized campaign certainly triggered the interest among US teens and its prolific presence on youth consumed social media channels, enhanced by company paid influencers, undoubtedly sustained the craze and furthered its attaining a fevered pitch.

Once the initial youth-oriented Vaporized campaign introduced JUUL to youthful trendsetters, the growth of JUUL in 2017 and 2018 may have been driven predominantly by viral peer to peer spread among teens both in person and via social media. Advertisers dream that their product will ride the wave of such a consumer craze, but advertising alone cannot achieve this level of growth realized by JUUL. The growth of JUUL may be attributed to its perception as the latest high tech gadget, its stealthfulness making it easily hidden from parents and teachers, and its offering of youth appealing sweet and fruity flavors (eg. mango, crème brûlée).

### Measures Taken by JUUL in Response to Regulatory Criticism of its Marketing Practices:

The JUUL founders have portrayed their company as wholly focused upon rescuing billions of adult smokers.<sup>7</sup> **(Figure 38)** Suggesting an awareness of underage uptake, on August 23, 2017 JUUL raised purchase via JUUL's website from 18 to 21 years. Beginning in the last quarter of 2017, a flurry of media reports appeared expressing concern over the rapid adoption of JUUL by American high school students. On October 15, 2017, New York Senator Charles Schumer pushed for regulation of JUUL.<sup>87</sup> The company publicly admitted their problem with teen sales on their website in November 2017.<sup>88</sup>

On April 18, 2018, eleven senators signed a letter to JUUL with a series of pointed interrogatories concerning youth uptake of their product.<sup>89</sup> Shortly thereafter, on April 25, 2018, FDA requested documents from JUUL on the drivers of youth sales (marketing, design, flavors) and the issued citations and warning to 40 retailers for underage sales of JUUL.<sup>11</sup> On April 25, 2018 the day after the FDA announced that it was focusing regulatory attention on its products, JUUL issued a press release announcing their "*comprehensive strategy to combat underage use*" stating: "*Company Will Support State and Federal Initiatives to Raise Minimum Purchase Age to 21+ and Work with a Group of Public and Tobacco Control Officials as Part of \$30 Million Initiative.*" The company's \$30 million commitment over the next three years was designated for "*youth prevention and community engagement.*"<sup>90</sup> This proposal rapidly drew criticism from the public health community based upon the long history of tobacco industry youth education being either ineffective or disguised tobacco promotion.<sup>91</sup> The proposed JUUL youth education curriculum has been criticized as having little mention of either JUUL itself or the role of flavors in attracting youth.<sup>92</sup> In response to the upwelling of criticism, JUUL halted this program.<sup>93</sup>

Figure 38. October 2018 public relations newspaper advertisement.

A18 | Sunday, October 14, 2018 | SFCHRONICLE.COM \*\*\*\*\*

**WARNING: This product contains nicotine. Nicotine is an addictive chemical.**

**WHAT PARENTS NEED TO KNOW ABOUT JUUL**



JUUL device      JUULpod cartridge

**JUUL Labs is on a mission to improve the lives of the world's one billion adult smokers by eliminating cigarettes**

JUUL devices use JUULPod cartridges that contain a salt-based nicotine e-liquid to satisfy smokers when transitioning away from cigarettes.

JUULpod cartridges contain nicotine, which is an addictive chemical.

JUUL is a closed system vapor product and is not designed to be refillable.

JUUL uses an intelligent heating mechanism that creates an aerosol and is engineered to minimize combustion.

**Learn more at [juulfacts.com](http://juulfacts.com)**

On June 12, 2018, JUUL announced that only adult models would be used on their Instagram, Twitter or Facebook who are former smokers who switched to JUUL.<sup>94</sup> JUUL Also announced a new Marketing and Social Media Policy and indicated that it was taking down some social media posts.<sup>95</sup> In mid-August 2018, JUUL removed all posts from its Instagram account except those relating to the “switch” theme.

During this period of JUUL’s efforts to assuage regulators concerns, it also engaged in political appeals which many would consider contrary to the goal of youth protection. On June 6, San Francisco voters overwhelming rejected a tobacco industry supported referendum to reverse their ban on sales of flavored tobacco products.<sup>96</sup> On June 7, 2018 JUUL appealed to its customers via email to oppose flavor bans by posting comments to the FDA in support of flavored nicotine products with the plea: *“If flavors have been important to your switching journey, please let the FDA know. Furthermore, please tell your friends and family that their voices should also be heard, and encourage them to speak out against flavor bans.”*<sup>97</sup> (Figure 39) A second such appeal was sent on December 8, 2018, targeted to citizens of California, making the plea that they contact their legislators to voice opposition to proposed flavor limiting legislation.

In November, 2018, one day before the FDA announced its proposed steps to prevent youth access, JUUL announced its own *“action plan”* to counter youth use. This included halting social media advertising in the United States and limiting sale of flavors other than tobacco and mint/menthol to the company’s age-gated website.<sup>33</sup> JUUL’s decision to halt its social media only in the US (but not Canada, United Kingdom, or Russia where JUUL is also on the market) suggests that their action is more a defensive tactic in response to threatened regulation than a genuine commitment to stemming underage use. It is hard to escape the impression that JUUL seems willing to give up social media marketing in the US, where it has a dominant market share, and keep using it in a global markets.

**Figure 39.** JUUL e-mail to customer soliciting them to support their flavor offerings by submitting comments to the FDA. (June 7, 2018)

From: JUUL <support@e.juul.com>  
 Reply-To: "support@juulvapor.com" <support@juulvapor.com>  
 Date: Thursday, June 7, 2018 at 2:07 PM  
 To:  
 Subject: What Do JUUL Flavors Mean To You?



Hello,

Based on our own consumer insights and your feedback to us, we believe that vapor flavors play a critical role in helping adult smokers switch (and stay switched) from cigarettes to vapor products like JUUL.

**There are several proposals — on all levels from local to federal — to ban all vapor flavors, which we believe would make it more difficult for adult smokers to switch from cigarettes.** Additionally, the FDA, in its own analysis of this subject, is seeking comments from the public to obtain information related to the role that flavors play in products like JUUL.

We encourage you to make your voice heard. If flavors have been important to your switching journey, please [let the FDA know](#). If you would like further information about potential vapor flavor bans or flavor regulation at the federal level, you can read more [here](#).

**BE HEARD**

Furthermore, please tell your friends and family that their voices should also be heard, and encourage them to speak out against flavor bans.

We appreciate your engagement in this important debate.

Sincerely,  
 JUUL Labs

### Study Limitations:

The primary limitation of this study was the sizable fraction of JUUL's social media history which had been deleted by the company. Drawing upon a disparate number of sources we have been able to reconstruct a comprehensive picture of the company's promotion, but we cannot exclude the possibility that relevant material was out of our purview. Another limitation stemmed from our primary focus upon online marketing. The retail environment, both point-of-sale advertising and product displays, has an important influence over purchase decisions. A 2016 survey showed that 68% of middle and high school students were exposed to e-cigarette advertisements in the retail environment.<sup>98</sup> As our focus was on brand advertising, company generated social media postings were emphasized. While advertising likely played a major role in the rapid growth of JUUL, the role of

peer to peer social media traffic in popularizing JUUL was likely substantial. While a fraction of these communications may have been independent of company influence, an indeterminate component of this activity was influenced by compensated brand ambassadors.

The content analysis was limited in that it only involved community posts accompanying JUUL advertising in #juul, not JUUL's advertising itself. Content analysis, by its nature, raises the possibility of bias. While we have tried to minimize this potential by using a carefully configured code book and validating intercoder reliability, our three 19 year old coders all came from a single age group and were all highly accomplished students. In order to provide others the opportunity to independently examine the images coded, the entire set coded will be available to researchers who requests it.

**Perspective:**

In a Twitter posting (March 14, 2018) JUUL stated: *“We market our products responsibly, following strict guidelines to have material directed exclusively toward adult smokers & never to youth audiences.”*<sup>25</sup> JUUL leadership has repeatedly denied that the company targets youth in its marketing. In August 2018, co-founder James Monsees described selling JUUL to youth was *“antithetical to our mission.”*<sup>99</sup> JUUL describes their Marketing and Social Media Code as *“our responsibility”* and *“we adhere to strict guidelines”* including:

*“We do not feature images or situations intended for a youth audience.”*

*“We only share user generated social media content that does not feature underage users”*

*“We ensure responsible placement of our product designed to limit exposure to an underage demographic.”*

*“We only post social media content targeting adult smokers, and always demonstrate the product in a mature context.”*<sup>95</sup>

This study shows that during the phenomenal upswing in demand over 2015 to 2018 JUUL continued to engage in advertising either targeted to youth (initial year) or by placing its promotional material preferentially in youth consumed media channels (later 2 years). During its meteoric growth, JUUL posted a prodigious volume of advertisements via social media, promoted them via paid influencers, and distributed its messages to a wide community via hashtags. The credibility of JUUL leadership denials of youth targeting is undermined by their diligent efforts to expunge their social media history. It seems improbable that a company which describes itself as the *“most educated company, the most diligent, the most well-researched,”* would not have early on recognized that underage youth were an important driver of their phenomenal revenue growth.<sup>100</sup> Evidence in support of this inference comes from a New York Times article which quoted a former JUUL manager that the company was aware as early as 2015 that its product was finding its way to teenagers.<sup>99</sup>

Positioning itself as a high tech alternative to traditional combustible smoking has been central to JUUL’s brand identity since its inception. In 2018, JUUL differentiated itself from the tobacco industry by asserting: *“JUUL Labs is not big tobacco.”*<sup>101</sup> Positioning itself as the rebel outsider seeking to disrupt the tobacco industry while saving billions of lives is likely a core element of the brand’s appeal to youth. Marketers know that promoting their brand as *“doing good for humanity”* resonates with idealistic youth. Internal tobacco industry documents have shown that traditional tobacco companies claim that their advertising targets only adult smokers, while in reality they systematically target youthful *“starter smokers.”*<sup>102</sup> In many senses, in its promotional practices JUUL has faithfully recapitulated the playbook of traditional cigarette marketers. JUUL’s transition from disruptive upstart into a mainstream tobacco company is increasingly evident.

In December 2018, the maker of Marlboro cigarettes (Altria Group, Inc., Richmond, Virginia) announced a \$12.8 billion investment to acquire a 35% equity interest in JUUL giving the 3+ year old company a valuation of \$38 billion.<sup>103</sup> The combining of Altria’s flagship brand Marlboro with JUUL brings together the leading cigarette and e-cigarette starter brands among American high school students. Concern that the two brands have a strong potential for marketing synergies led FDA Commissioner Scott Gottlieb to express concern that the alignment of the brands will undermine efforts to reduce youth initiation to nicotine addiction.<sup>104</sup> That Marlboro and JUUL promotional tactics each separately led to dominance among youth, their joining forces highlights the pressing need for regulatory intervention.

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*Author Roles: All authors participated collecting and analyzing data. Content book created by BDG & MMW; analyzed by JLH, AMB, & SKO. RKJ authored the manuscript.*

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### **JUUL & the Youth Vaping Epidemic**

*"It is as though they lit the kindling, stood by making no effort to contain the resulting fire, even stoked it, and when the fire department came expressed shock and dismay about the resulting major conflagration while loudly protesting that their actions had absolutely nothing to do with it."*

RKJ

**Supplemental Table 1: Content Analysis Coding Tool:**

Coders are to analyze the post using the image/video in the post, the caption of the post (excluding hashtags), and the username associated with the post. Coders are permitted to search through a post's username to discern post origin and intent.

1. **Coder Name**
  - a. Clearly write in the name of the coder in the space provided.
2. **Post Number**
  - a. Clearly write in image number.
3. **Post Origin**
  - a. Consumer: *User name of individual or group of people, no mention of store/vendor in content. Can be an account that consumers send posts to.*
  - b. Vendor/Store: *A company or person selling a product*
  - c. Meme Account: *An account that primarily posts memes*

*Notes: If you are uncertain of the origins of an account you may look up their page on Instagram. A meme account is an account where the majority of posts are memes. Consumer pages can be accounts where individuals send in posts to a single page (i.e. multiple consumers present).*

4. **Meme:** *A humorous image, video, piece of text, etc., that is copied (often with slight variations) and spread rapidly by Internet users. If it is a cartoon with text, consider it a meme. Screenshotted snapchat, Twitter pages, altered texts, cartoons etc. count as memes.*
5. **Reference pop culture:** *The accumulation of cultural products such as movies, TV shows, video games, sports, fads, literature, music, art, celebrities, etc. that are aimed at and/or appealing to younger people. Please be sure to consider captions in your answer.*

*Note: Fads can include dance moves such as flossing, fidget spinners, In My Feelings challenge, Fortnite, eating TidePods etc. Do not consider fashion style to be 'pop-culture'. **Do not consider 'Juuling' and/or vaping in itself as pop-culture.***

6. **Is the post youthful?** *Youthful people, typical high school/college behavior, peer pressure, youthful paraphernalia or accessories (i.e. friendship bracelets), partying, immature behavior, etc.*

*Note: Please do not consider fashion trends as youthful*

7. **Quit Smoking, Switch, Alternative:** *i.e. promotes product as safer than cigarettes, alternative to cigarettes, no second hand smoke, less toxins than cigarettes, etc. \*\*Adapted from Curry Codebook*
8. *Are there animated characters/cartoons/illustrations/animal?*
  - a. No
  - b. Yes
9. **Social:** *Only count real people whose faces you can see.*

- a. No People (*only inanimate objects featured*)
  - b. 1 Person
  - c. More than 1 person
  - d. **ONLY** body parts are discernable in post
10. **Age of people:** *Estimate age only if face is visible. If a group of people, estimate age of youngest person **ONLY ANSWER FOR REAL PEOPLE***
11. **Themes** \* Adapted from Brianna A Lienemann et al (Methods for Coding Tobacco-Related Twitter Data: A Systematic Review)
- a. Party Scene (*at a bar, club, party, concert, etc.*)
  - b. Joke or Humorous (*contains a pun, an understatement, joke, something ludicrous, satire, exaggeration, irony, or humorous intent*) \*\*\* The Impact of Humor in Advertising, Weinberger.
  - c. Action, Adventure (*Person is actively engaged in activity*)
  - d. Romance (*people are holding hands, showing affection, kissing, etc.*)
  - e. Other

*Note: If there are multiple themes present, please select the primary theme in the image. Consider the **INTENT** of the post and read captions carefully when making your decision.*

12. **Sexual Appeal:** *Libido; horny. Sexual attractiveness beyond beauty or glamour because the image or texts convey a feeling of sexiness or sexuality. Revealing outfits, regardless of gender. Sexually suggestive poses. Images with exaggerated, enhanced, or exposed sex organs (e.g., breasts, cleavage, crotch, backside) in focus. Sexual entendres. Hooking up.*
13. **Is any person in the post using a Juul covertly or stealthily and/or referring to covert Juul use?** *ie. in covert locations, in a public location hiding use, using in bathroom, classroom, under clothing, etc.*

*Note: Locations listed are considered inherently covert (i.e. if using a Juul in a bathroom this is a covert behavior).*

14. **Place/Location** *Indicate the setting of the ad. Look at the surroundings, what the model is wearing, props, etc. Also select a location if the image is referencing a specific location (i.e. high school bathroom) \*\*\*definition from Divya's codebook*
- a. Bar, Nightclub, day or night time party, Concert, or Restaurant Scene- *Bar, nightclub, party, or restaurant scene is primarily an indoor scene, unless it is a bar, nightclub, or restaurant in the open air (sometimes found on beach resorts).*
  - b. School Property - *Post takes place on school property including classrooms, bathrooms, sporting events, school assemblies, etc.*
  - c. Other/Not Applicable - *Cannot discern background, none of the above categories fit but you can still discern a background (i.e. you cannot make sense of the location, it is unclear where the subject is, shot is zoomed in on face, text only, etc.)*

**Supplemental Table 2 JUUL Events at which samples were distributed:**

June 4, 2015. **JUUL Launch Party.** Jack Studios, Chelsea, NY

Event Photos:

([https://www.shutterstock.com/editorial/search/vapor?search\\_source=base\\_search\\_form&sort=date&cat=&page=eyJ2ljoxLCJzlj02MzJ9&date\\_range=](https://www.shutterstock.com/editorial/search/vapor?search_source=base_search_form&sort=date&cat=&page=eyJ2ljoxLCJzlj02MzJ9&date_range=))

June 6, 2015. **The JUUL Vapor Lounge.** Marquee, New York City, NY

Partner: BeCore, Boxman Studios

BeCore. <https://becore.com/portfolio/juul-sampling-tour/>

Boxman Studios. <http://boxmanstudios.com/portfolio/juul-vapor-lounge/>

Event Photos:

(<https://www.flickr.com/photos/boxmanstudios/albums/72157654940327559/with/19167315070/>)

June 16, 2015. **Yacht Party.** New York City, NY

Partner: Insidehook

Event Photo: Instagram post (community user)

June 18, 2015. **The Chinese Major!** Old American Can Factory, Brooklyn, NY

*"After Party Sponsored by New Amsterdam Vodka, featuring a Vapor Lounge by JUUL."*

Partner: Rooftop Films

Via: (<https://docs.google.com/forms/d/e/1FAIpQLSfPUfJtUPnMvfjUcxa-TJ0iFggG7IEgk-hEolBV79CsjV8NQ/viewform>)

(<https://www.facebook.com/search/top/?q=Rooftop%20Films%2C%20juul>)

June 19, 2015. **New York Non-Fiction.** Industry City, NY

Partner: SPIN, Rooftop Films

Event Photos: (<https://www.spin.com/2015/06/dj-parler-spin-juul/>)

July 11, 2015. **Party @ 1OAK.** Southampton, NY

Partner: TURBZ

Invitation via: Twitter (JUUL) and JUUL E-mail

July 18, 2015. **The Chinese Mayor!** New York City, NY

Partner: Rooftop Films

Invitation via: Twitter & Facebook post (both JUUL)

July 23, 2015. **NY VICE Photo Show.** New York City, NY

Partner: PioneerWorks, VICE

Invitation via: JUUL E-mail

August 6, 2015. **LA VICE Photo Show.** Los Angeles, CA

Partner: VICE

Invitation via: JUUL E-mail

August 8, 2015. **Saturdays at Create.** Los Angeles, CA

Partner: SBE Group

Invitation via: JUUL E-mail

August 13, 2015. **Art Walk.** (Downtown) Los Angeles, CA.

Partner: unknown

Invitation via: JUUL E-mail

August 15, 2015. **Movies All Night Slumber Party.** Los Angeles, CA

Partner: Cinespia

Invitation via: Instagram Post (JUUL Scrubbed)

August 23, 2015. **Sundays at VIX.** Los Angeles, CA

Partner: SBE Group

Invitation via: JUUL E-mail

August 27-30, 2015. **LA Food & Wine Festival.** Los Angeles, CA

Partner: LA Food and Wine Festival

Invitation via: JUUL E-mail

September 4-6, 2015. **JUUL Vapor Lounge.** San Manuel Amphitheater, San Bernardino, CA

Partner: Nocturnal Wonderland (music festival)

Invitation via: Instagram (scrubbed) and Twitter post (both on @juulvapor)

September 12-13, 2015. **Bite of Las Vegas.** Desert Breeze Park, Las Vegas, NV

Partner: Bite of Las Vegas

Invitation via: JUUL E-Mail and Twitter Post (JUUL)

September 18-20, 2015. **California Beer Festival.** Plaza Park, Ventura, CA

Partner: California Beer Festival

Invitation via: JUUL E-mail and Twitter Post (JUUL)

September 18, 2015. **JUUL @Cinespia.** Hollywood Forever Cemetery, Los Angeles, CA

Partner: Cinespia, BeCore

Invitation via: Facebook Post (BeCore)

September 27, 2015. **JUUL Vapor Lounge.** Downtown Las Vegas, Las Vegas, NV

Partner: Life is Beautiful (music festival)

Event Photo: Twitter (Life is Beautiful & JUUL's account) and Yelp images from community

([https://www.yelp.com/biz\\_photos/life-is-beautiful-festival-las-vegas-2?select=KuVIBmtGIFA9a7pe5ljinOQ](https://www.yelp.com/biz_photos/life-is-beautiful-festival-las-vegas-2?select=KuVIBmtGIFA9a7pe5ljinOQ))

October 2, 2015. **NASCAR Truck Series.** Las Vegas, NV

Partner: NASCAR

Invitation via: JUUL E-mail

October 9-10, 2015. **Wine Amplified.** Las Vegas, NV

Partner: Wine Amplified

Invitation via: JUUL E-Mail, Twitter (JUUL), and Instagram (community user)

October 14, 2015. **The Players Club.** Die Fabrik Nightclub, New York City, NY

Partner: American Two Shot

Event Photos: (<https://www.wmagazine.com/story/american-two-shot-justine-skye-players-club>)

(<https://bfa.com/home/photo/1710575?collection-fk=13840>)

October 17-18, 2015. **Las Vegas Red Bull Air Races.** Las Vegas, NV

Partner: Red Bull  
Invitation via: JUUL E-Mail

October 31-November 1, 2015. **Hard: Day of the Dead.** Pomona, CA  
Partner: HARD  
Invitation via: JUUL E-Mail

December 8-9, 2015. **Wynwood Smoke & Lounge.** Miami, FL  
Partner: Wynwood Smoke & Lounge  
Invitation via: Twitter post

April 7-8, 20?? (assuming 2016/2017). **JUUL Vapor Lounge.** Miami Beach, Miami, FL  
Event Photos: (<https://www.ohellomedia.com/all-projects/juul>)

October 13-14, 2017. **JUUL in NYC.** New York City, NY  
Partner: Iconic Magazines  
Invitation via: Facebook Post (JUUL)

February 8, 2018. **Partner: Sundance Film Festival.** Park City, UT  
Event Photos: (<http://www.mirroredmedia.com/2018/02/02/sundance-film-festival-2018-park-city-live-activations/>)