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**A FALSE IMAGE OF HEALTH: HOW FAKE NEWS AND PSEUDO-FACTS SPREAD
IN THE HEALTH AND BEAUTY INDUSTRY**

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ABSTRACT

Purpose – Diffusion of fake news and pseudo-facts is becoming increasingly fast-paced and widespread, making it more difficult for the general public to separate reliable information from misleading content. The purpose of this article is to provide a more advanced understanding of the underlying processes that contribute to the spread of health- and beauty-related rumors and of the mechanisms that can mitigate the risks associated with the diffusion of fake news.

Design/methodology/approach – By adopting denialism as a conceptual lens, this article introduces a framework that aims to explain the mechanisms through which fake news and pseudo-facts propagate within the health and beauty industry. Three exemplary case studies situated within the context of the health and beauty industry reveal the persuasiveness of these principles and shed light on the diffusion of false and misleading information.

Findings – The following seven denialistic marketing tactics that contribute to diffusion of fake news can be identified: (1) promoting a socially accepted image; (2) associating brands with a healthy lifestyle; (3) use of experts; (4) working with celebrity influencers; (5) selectively using and omitting facts; (6) sponsoring research and pseudo-science; and (7) exploiting regulatory loopholes. Through a better understanding of how fake news spreads, brand managers can simultaneously improve the optics that surround their firms, promote sales organically and reinforce consumers' trust toward the brand.

Originality/value – Within the wider context of the health and beauty industry, this article sets to explore the mechanisms through which fake news and pseudo-facts propagate and influence brands and consumers. The article offers several contributions not only to the emergent literature on fake news but also to the wider marketing and consumer behavior literature.

Keywords: Brand image, Fake news, Denialism, Brand protection, Brand safety, False advertising, Health and beauty advertising, Information transparency.

INTRODUCTION

“Eat your Spinach; it’s high in Iron”. Most people have heard something along these lines over the course of their life, perhaps a parent encouraging a child to eat their leafy vegetables, a conversation amongst friends at the gym, or at the doctor’s office for anyone who has been told that they are anemic. However, the commonly held belief that spinach is high in iron is not actually true. It is an example of a fake news story that has been perpetuated for almost a century.

The association between spinach and high iron levels resulted from a small reporting error (Larsson, 1995). In 1870, Erich von Wolf, a German chemist who was researching the nutritional benefits of spinach, accidentally reported the wrong number for the iron content (Rekdal, 2014). With the incorrect placement of a decimal point, he increased the vegetable's iron level to 10 times the actual amount — from 3.5 grams of iron to 35 grams (Rekdal, 2014). The “fact” that spinach had a high level of iron was quickly picked up by the creators of Popeye, a cartoon character that ate spinach to gain extra strength. Through Popeye, spinach was advertised as a superfood, a strategy that saved spinach farmers from going under and increased consumption of the vegetable by 33% in the 1930s (Arbesman, 2013).

The story of how spinach became associated with high iron levels is a typical example of how false or misleading information emerges and is disseminated. In this case, a simple mistake (the misplacement of a decimal point) greatly influenced public perception. While the claims associated with spinach resulted from a genuine mistake, several commercial and non-commercial organizations purposely engage with questionable tactics such as selectively reporting facts, exaggerating scientific findings or engaging with borderline (and in some cases

misleading) advertising to promote products and services, resulting in the proliferation of fake news and pseudo-facts.

Fake news can be defined as fabricated information that mimics the output of the news media in form, but not in organizational process or intent (Lazer et al. 2018; Ferreira, Robertson and Kirsten, 2019). As such, fake news lacks the editorial norms and processes that ensure the accuracy and credibility of the information. Dubious facts that are intentionally and verifiably false are created to mislead readers with potentially serious consequences (Allcott and Gentzkow, 2017). Fake news tends to spread like wildfire on digital and social media channels due to the sensationalism of the claims and brands are often involved in the process of fake news dissemination, sometimes as the unwilling targets and sometimes as the sources or enablers of direct or indirect fake news diffusion (Berthon and Pitt, 2018).

Through the years, the health and beauty industry has been significantly affected by the proliferation and dissemination of fake news as shown by the growing interest for pseudo-research, the exploitation of regulatory loopholes, and the increasing use of celebrities or other online influencers (e.g., YouTube stars) to endorse various health fads (Syed-Abdul et al., 2013). Interest towards products marketed as “detox,” “superfood,” and “all-natural” has also been growing amongst those consumers who are looking for quick ways to lose weight and improve their health (Klein and Kiat, 2015).

Within the wider context of the health and beauty industry, this article sets to explore the mechanisms through which fake news and pseudo-facts propagate and influence brands and consumers. The article offers several contributions not only to the emergent literature on fake news, but also to the wider marketing and consumer behavior literature. First, we discuss the concept of denialism, an irrational cognitive process that leads to the refusal to accept an

empirically verifiable reality (O'Shea, 2008). Second, we introduce a framework which links the spread of fake news and pseudo-facts to the rhetorical tactics of denialism. Such tactics include promoting a socially accepted image, exploitation of a healthy lifestyle, using experts and celebrity influencers, selectively using or omitting facts, exploiting regulatory loopholes and sponsoring research and pseudo-science. Third, we apply the framework to analyze three case studies that show how fake news originates and spreads in the health and beauty industry. Fourth, we conclude by presenting some cautionary remarks on the potential threats of product claims which exploit fake news and pseudo-facts. In doing so, this paper contributes to the marketing literature in the fields of fake news and pseudo-facts by adopting a new perspective to investigate the rise and proliferation of this phenomenon. Additionally, this paper establishes a set of relationships between different denialistic marketing techniques and provides a conceptual framework that academics and practitioners can use to interpret and identify these techniques within the context of the health and beauty industry.

HOW FAKE NEWS SPREAD – A FRAMEWORK

Denialism

The concept of denialism can be defined broadly as the rejection of an undisputed scientific proposition or historical fact (Diethelm and McKee, 2009; Terry, 2017). Denialism is not an entirely new communication strategy (Festinger, 1962), but the explosive growth of digital media and the resulting accelerated pace and diffusion of information have amplified its impact. Denialistic views often spread when various parties with vested interests related to contrarian alternatives coordinate communication campaigns, whilst appearing to be independent entities. The aim is to manipulate public opinion through the dissemination of rumors and

misinformation in order to support specific political, social, or corporate agendas (also known as astroturfing; Ratkiewicz et al. 2011). Since the underlying motivation of denialists is to influence public policy, an upsurge in the vigor and intensity of the denialist rhetoric in the public sphere can often be observed when a new scientific issue enters the political debate (Ceccarelli, 2011).

Although denialism can take different forms, it involves primarily the presentation of fabricated or distorted evidence to negate historical events or to deny scientific discoveries. Historical denial encompasses the distortion of the accepted historical record, such as the denial of genocide and other mass atrocities (Fronza, 2018; Terry, 2017). Well-known examples of scientific denialism include the argument that “HIV is not the cause of AIDS” (Chigwedere and Essex, 2010) or the various claims against the impact of climate change (Dunlap and McCright, 2011).

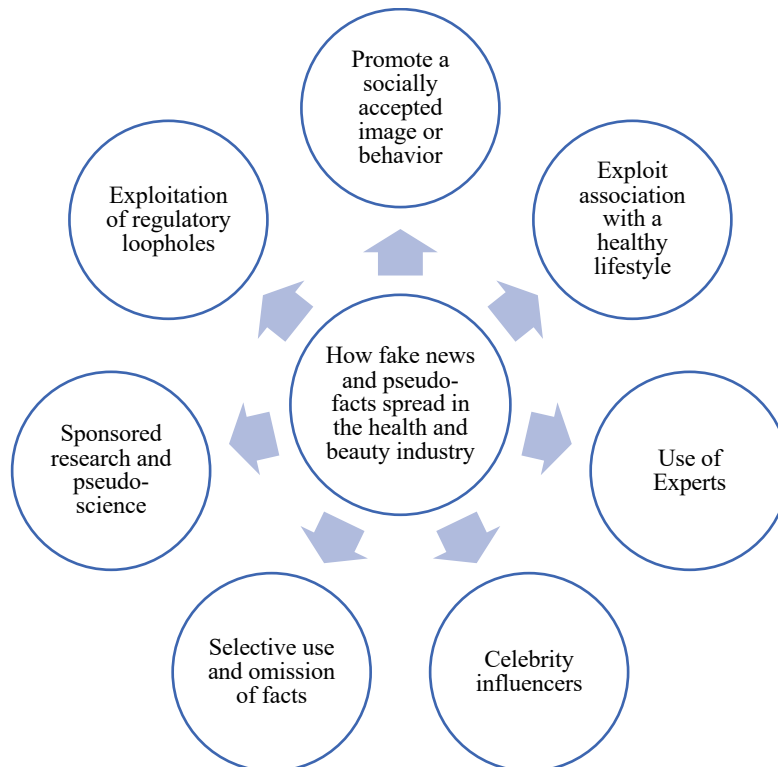
In order to manufacture doubt, denialists exploit the notion that all scientific knowledge contains an element of uncertainty. Denialists capitalize on this notion of uncertainty by equating informed skepticism and scientific debate with scientific disagreement that is confounded by differences in social, political, moral, or philosophical values (Hoofnagel and Hoofnagel, 2007). While skeptics will amend their beliefs when encountering novel ideas or information that provide a superior explanation, denialists are systematically unwilling to change their existing perspective (McKee and Diethelm, 2010). Denialists undermine the possibility of a meaningful debate by refusing to adhere to certain principles of logic or to look at the evidence as a whole. This process can be exacerbated by ineffective response strategies adopted by the scientific community (Diethelm and McKee, 2009).

The underlying and self-reinforcing mechanisms that make the fake news phenomenon persuasive must be scrutinized in order to fully understand how this type of messages spread

across multiple channels (Alemanno, 2018). Instead of focusing on the actual content of the fake news, marketing researchers and practitioners should attempt to understand the tactics employed to disseminate distorted information and the defense mechanisms which can be implemented to protect brand reputation.

By adopting denialism as a broader conceptual lens, in this article, we introduce a framework (Figure 1) that aims to explain the propagation of fake news and pseudo-facts in the health and beauty industry through seven marketing tactics which incorporate a denialistic stance. These include (1) the promotion of socially accepted image, (2) the exploitation of a healthy lifestyle, (3) the association with experts and/or (4) celebrity influencers, (5) the selective reporting of facts, (6) the use of sponsored research and pseudo-science to support product claims, and (7) the exploitation of regulatory loopholes. These tactics are discussed in detail in the next section.

Figure 1 – Fake news propagation framework



Promotion of a socially accepted image

Rhetorical arguments, often built around logical reasoning fallacies that exploit emotional triggers, are one of the most recurring tactics denialists use to convey their viewpoints (Hoofnagel and Hoofnagel, 2007). A similar approach can be observed when marketers build campaigns aimed at promoting a socially accepted image by exploiting the idea that individuals should follow the public consensus when making decisions (also known as the bandwagon effect; Maxwell, 2014). These marketing claims are expressed using statements such as: “X amount of people/ brand users think this product is great – this is evidence that you should think it is great too”. By feeding on the human emotion of, “if everyone has X, I want/ need X too,” brands try to bypass the customer’s urge to verify or compare information. This process is further worsened by the rise of entire industries which perpetuate the illusion of popularity and artificially inflate social signals through digital marketing tactics (e.g., purchase fake views, reviews, fans, followers; De Cristofaro et al., 2014). New and unsuspecting potential customers are lured by apparent desirability and association to specific social “peer” groups, which can contribute to false claims on brand sentiment (Tuten and Perotti, 2019).

Exploitation of a Healthy Lifestyle

Health and beauty products are amongst the top five product categories that purport environmental claims and often associate the brand with a healthy lifestyle by using terminology such as “organic”, “chemical-free” and “all-natural” in branding campaigns (Terrachoice Environmental Marketing, 2009). However, these claims can be perceived as false, vague, or misleading when companies and products (deliberately) do not deliver on this promise. The practice of using misleading and vague labels that promote environmental benefits through

consumer advertising is called greenwashing (Lane, 2013). Implementing denialistic marketing tactics such as focusing consumers' attention to different and often unrelated topics or making false analogies and hastily generalizations (Van Eemeren and Grootendorst, 2016), can be used to further enhance the effects of greenwashing. In denialistic marketing statements the premise is often presented as a dichotomy where the two options presented are rigged to favor one answer (You either do/ use X and be healthy, or you don't do/ use X and will get sick/ killed). At the same time instead of factual evidence, personal anecdotal experiences are often used to back up a marketing claim (I know a person who always, or never, did X, and he/she is fine, so I can do, or not do, X and will be fine as well). Highlighting improbable outcomes that are based on very small samples, one or two individual "success" stories, combined with framing the usage choice in the format of unacceptable extremes, can propagate incomplete information. This can lead to customer misperceptions, which can be particularly hazardous in the health and beauty industry. Although it is undesirable if the products or services themselves are not being as beneficial as advertised, this is not the most severe consequence of exaggerated claims for effectiveness and safety. The more hazardous outcome is that overreliance on these products and services might prevent consumers from seeking evidence-based prescription and treatments (Brody and Light, 2011).

Association with (fake) experts

The association with fake, or self-proclaimed, experts is another effective tactic to reinforce the credibility of the message presented and enhance the believability and diffusion of false and misleading claims. Vocal commentators or partisan media often selectively cite individual dissenting voices (i.e., outlier views: Boykoff, 2013) as the ultimate authorities on the

topic in question. To strengthen the position of these individuals, parallels between the isolation of their views and intellectual courage are frequently provided. Occasionally this is accompanied by comparisons with important and influential historical figures that also held different views, such as Galileo (Diethelm and McKee, 2009). These contrarian views, perpetuated by individuals pretending to be experts, are often presented as an equally valid alternative to the dominant scientific consensus (Hoofnagel and Hoofnagel, 2007), sowing confusion and bolstering the idea that scientific consensus is non-existent or that the accumulated evidence is not based on sound science. To enhance these effects, the pseudo-experts might be in a position of power already (e.g., politicians) or gain notoriety and influence through excess media coverage. Consumer trust might be compromised by this practice. First of all, the integrity of medical science and the public's ability to trust the advice offered by real experts, such as physicians, is diminished (DeAngelis and Fontanarosa, 2008). Additionally, this form of deceptive advertising can lead to distrust in the brand itself, and negatively affect people's responses to persuasion attempts – both from the same as well as second-party sources (Darke and Ritchie, 2007).

Use of celebrity influencers

Pervasive celebrity culture, in which celebrities are considered trusted “authority” solely because of their fame (Holmes and Redmond, 2012), combined with the spread of denialistic tactics through social media (Hoofnagel and Hoofnagel, 2007) can create a dangerous environment to spread false and misleading marketing claims. Particularly, if the marketing communications appear to be from independent third parties, whereas they actually originate from celebrity influencers and paid ambassadors (Petty and Andrews, 2008). This lack of

transparency can be further enhanced by presenting this endorsement in a disguised advertising format as advertorials or infomercials (Hoofnagle and Meleshinsky, 2015), or by seeking further endorsement through user-generated content (Montecchi and Nobbs, 2018). By using celebrity influencers to endorse products or services in a “warm,” emotionally charged manner, as opposed to “cold” descriptive text sources, brands aim to increase trust in the branded content amongst their prospective audiences (Lou and Yuan, 2019). However, by predominantly playing to the emotional and personal connection to the celebrity influencers, and emphasizing benefits that way, important product or service information is likely to be overshadowed (Royne and Myers, 2008). This effect can be amplified when these often vocal and outspoken individuals hold denialist views on the topics they support.

Selectively using and omitting facts

Another denialistic strategy that can occasionally be observed in the health and beauty industry is blatantly ignoring or re-framing the existing body of scientific knowledge. One way to dismiss the information is to label it as a conspiracy theory, followed by the marginalization and denigration of established experts and researchers who produced the evidence in the first place. The latter is done by either painting the scientific community as an “old boys network” or questioning the researchers’ motivations, and posing that as evidence that the entire body of research should be contested (Hoofnagle and Hoofnagle, 2007; Diethelm and McKee, 2009). Additionally, the weight of the scientific discoveries is downplayed by selectively picking specific information and utilizing facts out of their scientific context (McKee, and Diethelm, 2010). By omitting knowledge and casting the blame of undesirable consequences towards other

factors, this practice contributes to truth decay by increasing disagreement about facts and analytical interpretations of data (Arbesman, 2013; Rich, 2018).

Exploiting Regulatory Loopholes

Advocating for research expectations, which are nearly impossible to meet is a tactic that facilitates the exploitation of regulatory loopholes. By continuously demanding additional investigations of an issue as a prerequisite for belief (i.e., moving goalposts; Hoofnagel and Hoofnagel, 2007), this approach obstructs scientific discovery and progress (Specter, 2009) and delays important public policy decisions. This is relevant when discussing potential health risks, because time delay can distance people cognitively from the reality of undesirable outcomes (Chandran and Menon, 2004). Additionally, industry self-regulation is often less strict compared to State regulations (Sharma et al., 2010), leaving more leeway regarding interpretation of the rules and regulation – which is used to benefit the internal stakeholders and shareholders of the brand. However, even when State regulations are enforced, the industry often makes use of the “grey areas” of the law to try and skew the balance in their favor. For example, by focusing on the exemption in the commercial television code of practice that allows alcohol advertisements alongside sport events, the alcohol industry managed to advertise their products during children’s viewing hours (up to 8:30 pm) in which alcohol advertising is otherwise restricted (EUCAM, 2018).

Sponsoring research and pseudo-science

One of the most obvious ways in which brands are enabling the spread of fake news and pseudo-facts is through funding research that could provide results that oppose the scientific

consensus (Berthon et al., 2018). For example, the Sugar Association paid three Harvard researchers to minimize the link between sugar and heart conditions to avoid changes in existing regulations (Kearns et al., 2016). To further perpetuate and enhance the impact of these sponsored findings some corporations distribute “magazines” that are 100% marketing vehicles (Petty and Andrews, 2008) – with some trying to enhance the perceived credibility by incorporating scientific jargon in the content or title (e.g., Journal of Longevity; Gardavita, 2019). With corporate social responsibility rapidly increasing in the 21st century (Öberseder, Schlegelmilch and Murphy 2013) “wasting” resources on sponsored research and pseudo-science, is becoming increasingly frowned upon by the general public. The growing social pressure might result in a decrease in these practices and contribute to the investment, innovation and exploration of newer and better products and services that could enhance the general health and beauty of the overall population.

THE SPREAD OF FAKE NEWS IN THE HEALTH AND BEAUTY INDUSTRY: THREE EXEMPLARY CASES

The tactics of denialistic marketing described above can explain how fake news and pseudo-facts emerge and spread and how these are used by commercial and non-commercial organizations to exploit market opportunities and support dubious products and brands claims. By building on these principles, we introduce and analyze three case studies in the health and beauty industry which demonstrate how denialistic tactics are implemented, leading to the diffusion of fake news. The first case describes the evolution of the general sentiment towards the tobacco industry and how cigarettes were initially advertised as healthy products to improve well-being, suppress appetite, and decrease stress. The second case analyzes how firms operating

in the indoor tanning sector have exploited the health benefits of vitamin D. Finally, the third case reviews the impact of dieting and detox fads by showing how various regimes have become extremely popular amongst consumers despite the lack of robust scientific evidence. These three cases were selected because they exemplify prominent product/market contexts within the health and beauty industry. Additionally, smoking, tanning and dieting behaviors are common across different genders and age-groups, and the impact and misinformation and dubious claims can potentially harm a large proportion of the general population. An in-depth analysis of these issues will provide initial conceptual support the fake news propagation framework discussed in this article.

Case 1: the tobacco industry

In our current society, there is hardly any dispute amongst researchers and health practitioners that tobacco consumption can be directly linked to severe detrimental health and well-being implications (e.g., reduction of life time expectancy due to cancer, heart and circulation disease and respiratory illness; Doll et al., 2005; Law et al., 1997; Li et al., 1999). However, for a long time the tobacco industry systematically denied the carcinogenic nature of their products and even promoted them for the positive effects on health and well-being as well as an appetite suppressant. Although policy interventions such as advertising and marketing regulations (e.g., 1971 ban on broadcast advertising) and smoke-free public places legislation helped to improve the situation in developed countries (García-Esquinas et al., 2018), the tobacco industry has shifted their focus towards emerging, and less governed, markets (for example in developing nations; Bates and Rowell, 2004). Therefore, raising public awareness

and increasing knowledge of health-related consequences of tobacco products remains paramount.

Russo, Metcalf and Stephens (1981) classify an advertisement as misleading if, the group that is exposed to the advertisement holds more false beliefs than a comparison group that is not exposed to the advertisement. It is equally important to discover how exactly people arrive at these beliefs (what media and marketing techniques were implemented). Product design, promotion, pricing, and the claims that firms communicate to their potential and current customers, play a pivotal role in perpetuating false beliefs.

Broadly, advertisement claims can be divided into three groups: (1) objectively true claims, (2) potentially misleading claims and (3) false claims (Faerber and Kreling, 2014). Objectively true claims often focus on a product's basic properties, marketing characteristics, or emphasize the product's superiority in the market. Potentially misleading claims are those that exaggerate, omit, or use "cherry-picked" information, or focus on non-factual information that may, or may not be, directly related to the product (linking the product with a lifestyle). False claims either do not have enough information, or directly contradict existing evidence to back up the claim. All these techniques have been implemented by the tobacco industry, specifically in the 1930s-1970s. To make matters worse, (fake) doctors, scientists, and other health professionals were frequently used in advertisements promoting tobacco products.

Examples of objectively true claims made by cigarette brands in the 1950s relate to the shift from unfiltered to filtered cigarettes. Various cigarette brands stated the enhanced product features, for example "the new and improved Marlboro filter". Initially there appeared to be a sincere research and development effort to engineer filters that could mitigate health hazards of smoking. However, the agenda of cigarette designers changed in the 1960s when the tobacco

industry used the new “low-tar” filter design as their unique selling point in marketing campaigns (Harris, 2011)

Potentially misleading claims in the tobacco industry were often related to specific “beneficial” aspects of the nicotine chemical while omitting facts regarding the negative outcomes. Although biological effects of nicotine are well documented (Yildiz, 2004), the evidence by no means unequivocally links smoking to weight loss or cognitive enhancement. Additionally, research into the apparent claims of the relaxant effect of smoking even shows a reversed pattern in which nicotine dependency heightens stress levels, and smoking cessation leads to reduced stress (Parrott, 1999). With regards to promoting smoking through the use of a positive social image, the portrayal of a very masculine, independent, rugged cowboy as the “Marlboro Man”, is perhaps the most well-known example. However, with the cigarette market exploiting the ideas of liberation, power and emancipation to recruit women (the cigarette as “torches of freedom”; Amos and Haglund, 2000) the social stigma surrounding female smoking changed into a socially acceptable and even socially desirable image. Lucky Strike launched one of the first media campaigns targeted at women in 1925. With their “reach for a Lucky instead of a sweet” campaign they marketed the cigarette as a fat-free way to alleviate hunger, attempting to establish the link between the desired beauty and healthy lifestyle.

False claims in tobacco advertisements itself were built around pseudo-science, generally combined with appeals to (self-proclaimed) medical authority, after which these “facts” were translated into marketable and bold statements such as “the nicotine and tars trapped in the Viceroy filter can never stain your teeth”. However, the tobacco industry has a long history of denying scientific evidence and preventing it from reaching the general public. Mainly through legal procedures and civil litigations (i.e., exploiting regulatory loopholes). Additionally,

alternative and conflicting evidence derived from research sponsored by the tobacco industry itself has been distributed to undermine and distort the emerging scientific facts – i.e., disinformation campaigns often incorporating the “common knowledge defense” (Callard, 2015). Up to this day the tobacco industry still publicly denies that people under 18 are an inherently important target group. The tobacco industry claims that current marketing practices do not impact the initiation of tobacco use amongst this group, nor increase the total consumption of tobacco within the total population (Bates and Rowell, 2004).

Although the examples stated above are all derived from the 20th century, the techniques and marketing practices that were implemented then are still being implemented today – albeit perhaps subtler. One of the most recent innovations in the tobacco industry is the introduction of the electronic nicotine delivery system (a.k.a. electronic-cigarette). Just like the filter cigarette in the 1950s, it is being portrayed as a healthier alternative to conventional cigarettes – often phrased as a dichotomous choice between the conventional and e-cigarette. This time the benefits of heating rather than burning the tobacco are highlighted and are claimed to produce no second-hand smoke, thus causing no harm to the people around you (contributing to the social acceptability). In line with this, it has been suggested that e-cigarettes could be used to initiate smoking cessation (Siegel et al., 2011). However, a scientific consensus on the effectiveness of this method (especially when comparing it to other alternatives like nicotine patches) has not been reached yet (Bullen, 2013). Just like with the conventional cigarette before, e-cigarette regulations take considerable time to develop (Voigt, 2015), which has opened up marketing opportunities to promote the product by exploiting regulatory loopholes. Perhaps the most apparent trend is the marketing of the broad range of flavors available to e-cigarette smokers. The industry has circumvented the regulation that is in place for conventional cigarettes, which

states that fruit and candy flavoring is banned because it is particularly appealing to adolescents (Manning, Kelly and Comello, 2009). Marketing opportunities also present themselves through the web and social media, where people have access to content and products under the guise of age verification and where (user-generated) videos with misleading claims about the health consequences of electronic cigarettes perpetuate the disruptive normative science (Albarracin et al., 2018; Brandt, 2012).

In addition to electronic cigarettes, “indie cigarettes” (e.g., <https://hestiatobacco.com>) are on the rise. They are also portrayed as a healthier alternative, by explicitly establishing a link with a healthy lifestyle by pointing out the all-natural, organic, fair-trade nature of the cigarettes. Additionally, stressing the environmentally respectful premise, they enhance the link with a desirable social lifestyle (i.e., healthy and cool by association). While it can be argued that the cigarette has been a fashion accessory for decades, we now see that the traditional tobacco brands are increasingly appearing in the streetwear scene as style symbols. The tobacco brands are used as ironic fashion statement by the group rebelling against the ultra-health-conscious lifestyle (Weissburg, 2018) and are used as a tool to challenge the current norms and values.

In conclusion, it is fair to say that current marketing practices in the tobacco industry build on the tested and trialed methods implemented in the past. However, the more prevalent and irrefutable scientific evidence linking smoking to various cancers, resulted in a decline in false claims in the tobacco advertisements. However, exaggerating or omitting “cherry-picked” information and linking the product to a certain lifestyle remain popular marketing tools.

Case 2: the indoor tanning industry

Exposure to ultraviolet radiation emitted from indoor tanning devices is associated with both acute and chronic negative health consequences (Wehner et al., 2012). Despite the fact that ultraviolet radiation is a known carcinogen and there is a growing body of evidence pointing out the health risks associated with exposure to sunlamps or sunbeds, indoor tanning has remained popular especially amongst white female adolescents (Friedman, English and Ferris., 2015; Demko et al., 2003). This could be particularly problematic since research suggests a higher vulnerability to the harmful effects of indoor tanning at a younger age (Ghiasvand et al., 2017) and recent studies indicate that indoor tanning may have addictive properties (Diehl et al., 2018). Le Clair and Cockburn (2016) highlight that currently there is a widespread public misunderstanding of the negative effects of indoor tanning. Since part of the misunderstanding might originate from the communication strategies utilized by the indoor tanning industry, it is imperative to examine the advertising, media and marketing techniques that are currently implemented (Greenman and Jones, 2010).

The main communication strategy implemented by the tanning industry involves mitigating the health concerns of indoor tanning through associations with a healthy lifestyle. The overarching rhetoric is based on the link between sun exposure and vitamin D production. The industry often portrays indoor tanning as a controlled way to boost vitamin D levels, thus shifting the debate away from tanning risks and towards its perceived health benefits. This may sound reasonable to the public since this logic is backed up with (sponsored) research focusing on vitamin D metabolism and deficiency (Holick, 2007). Additionally, the advertising messages are often accompanied by quotes or visuals of individuals portrayed as doctors or other health practitioners. However, the industry messages cause consumer misperceptions because they exaggerate the need for vitamin D to justify the use of tanning beds as the solution for a problem

that in reality does not exist – since only small amounts of sunlight are sufficient to produce adequate vitamin D levels (Levine et al., 2005).

Another health misconception in the tanning industry is the idea of a “base tan” to provide protection and prevent sunburns. Although evidence does not support the protective effect of tanning bed usage against skin damage from subsequent sun exposure (O’Sullivan and Tait, 2014), this myth has given rise to one particularly dangerous practice: pre-vacation tanning. Besides boosting ultraviolet radiation exposure in the period leading up to the vacation, it also induces a decrease in the use of sun-protective precautions (e.g., sunscreen) while being away due to a false sense of security generated by over reliance on the base tan. Additionally, tanning beds located inside or in the near vicinity of gyms and health centers could reinforce the misconception that tanning is healthy (Pagoto et al., 2018) plus aid overexposure to ultraviolet rays by offering pricing incentives for frequent sessions (Kwon et al., 2002).

Additionally, the tanning industry heavily relies on social beauty constructs and appearance motivations to market ultraviolet exposure (Cafri, Thompson and Jacobsen, 2006). The idea that tanning is part of a beauty regime is strengthened by the fact that indoor tanning services are also provided by some beauty salons and spas (Elliot, Suppa and Leake, 2012). While until the early 1900s a paler skin was perceived as a mark of higher social status, wealth and beauty (only people who could afford not to spend time working outdoors had a pale complexion), tanned skin seems to have taken that place now that it signifies that an individual has the time and money to leisurely darken their complexion. This idea is further strengthened by the various celebrities and influencers that are sporting a tanned look (e.g., Kim Kardashian) and propagate this image to their fan-base using social media networks (e.g., Instagram and Pinterest).

With the increasing pressure from health care organizations, and governing bodies expressing their concerns regarding the safety of tanning beds and the effectiveness of the tanning industry self-regulations (Sinclair and WHO, 2003), legislation limiting ultraviolet tanning is growing (Geller, 2018). As a result of stricter rules and regulation, the industry is shifting its focus towards sunless-tanning. These sunless-tans, also known as spray-on or fake tans, are generated through artificial tanning products such as sunless tanners or bronzers in the form of tinted moisturizers or brush-on powders that utilize the color additive dihydroxyacetone or water-soluble dyes to generate a darkened complexion. Since no exposure to ultraviolet radiation is involved, these products are marketed as “safe alternative” and have become increasingly popular over the years—appealing to consumers that seek to avoid ultraviolet exposure as well as consumers that use tanning preparations to enhance the longevity of their ultraviolet tan (Fu, Dusza, and Halpern, 2004). Although some health campaigners have welcomed this industry shift, Brooks et al. (2006) have cautioned for the potential risks that are associated with endorsing sunless-tans since this trend could reinforce positive attitudes and social acceptance of sunbathing and sunbed usage.

Case 3: dieting and detox fads

Most people will turn to dieting at some stage in their life to address health concerns or body image issues, often achieving unsatisfactory results (Polivy and Herman, 2006; Truby et al., 2006). Appearance concerns can begin at a very early age and studies have shown that children as young as 7 (especially girls) experience weight problems and various forms of body dissatisfaction, which prompt them to consider diets in order to lose weight (Abramovitz and Birch, 2000).

In the US alone, the overall weight loss and diet control market is worth approximately 66 billion dollars (Marketresearch, 2017), providing dieters with a wide choice of regimes, weight management programs, supplements, calorie-controlled foods, and meal replacements. Within this market, a growing number of food fads and diet fads have appeared, which promote unusual diets, food combinations, and eating patterns to achieve short-term gains. These solutions are often detrimental to more sustainable and long-term weight reduction and, in some cases, to dieters' health and safety (Bellows and Moore, 2013).

The history of food and diet fads and their sensational claims is surprising (Wdowik, 2017). It includes various liquid concoctions, cleanses made with hide, horns and tendons, and even more extreme remedies such as eating cotton balls or living on spirituality and sunlight. Unfortunately, hopeful followers have ended up with no weight-loss results, serious health conditions, or have even died (Wdowik, 2017). Less extreme fad diets have gone in and out fashion by offering not only fast weight loss but also the opportunity to improve dieters' health and wellbeing through various forms of body detoxification. In the 1940s, Stanley Burroughs developed the Master Cleanse, a liquid-only dietary regime based on lemon juice, maple syrup, water, and cayenne pepper. Proponents of the regime argued that the cleanse could detoxify the body, curb food cravings, and increase vitality and energy levels (WebMD, 2018). More recently, Beyonce has made this diet popular again, by claiming it helped her losing a significant amount of weight in preparation for the movie *Dreamgirls* (Sklar, 2008).

Following the success of the Master Cleanse, many detox regimes became available on the market. Although compositions and instructions can vary, most of these regimes work by combining fasting routines and various "cleansing foods." Such regimes are based on a simple idea: to get rid of dangerous toxins which accumulate in the body and could potentially lead to

physical and mental diseases (Dixon, 2005). Detox diets claim to offer various benefits alongside weight reduction, including improvement of liver functions, increased energy levels, reduction of inflammatory conditions and the ability to strengthen the immune system, to name a few (Klein and Kiat, 2015). However, suppliers of these products often fail to specify the toxins that the diet is set to remove from the body and the process through which the toxins will be expelled through dieting, thus rendering such claims difficult to verify (Dixon, 2005). Detox diets are marketed by suggestive book guides written by experts. When scientific evidence is presented to provide support to the product's claims, this is often affected by serious methodological flaws (Klein and Kiat, 2015). Despite the lack of concrete evidence on their effectiveness, old and new detox regimes often raise to popularity thanks to celebrities, newspaper commentators and various lifestyle bloggers endorsing their extraordinary results.

At the present time, no rigorous scientific studies have established that detox regimes can either reduce weight or support toxins' elimination (Harvard women's health watch, 2008; Klein and Kiat, 2015). The body is equipped with systems to get rid of toxins, which do not need the help of a dedicated detox product. The hepatic, urinary, gastrointestinal, respiratory, and immune systems operate as the body's defense and filtering mechanisms, ensuring that all substances that are toxic are effectively eliminated (Harvard women's health watch, 2008). Weight reductions that some dieters have experienced can be explained by the significant decrease in calories intake, which lowers the body's basal metabolic rate (Harvard women's health watch, 2008). These reductions are often the result of fluid loss and frequent bowel movements. When the dieters resume their normal eating habits, they often quickly regain any lost weight (Harvard women's health watch, 2008). Following an extreme detox routine can cause severe lack of energy, various nutrients deficiencies, and lead to more serious health conditions (Crowe, 2014;

Klein and Kiat, 2015). On top of these potential health risks, consumers have to invest substantial financial resources to purchase the necessary dietary kits and ingredients.

Despite the lack of scientific evidence and the potential health-related risks, these products continue to be popular amongst dieters due to confusing and unrealistic marketing claims. Suppliers continue to operate in a market that is still vastly unregulated. In Europe, for example, many products and ingredients marketed as detox are not recorded in the Health and Nutrition Claim Registers (Klein and Kiat, 2015). Furthermore, more suppliers are starting to adopt different labeling strategies by replacing detox claims with words such as “reinvention” or “revamping”, making products more difficult to monitor (Klein and Kiat, 2015). Further scrutiny and more information provided by trusted medical professionals is needed in order to protect customers from the risks of detox products and their largely unsubstantiated claims. Consumers are becoming increasingly more skeptical of the integrity of the products they purchase and consume (Barbarossa et al., 2016) and demand further assurances beyond traditional marketing messages.

PROTECTING BRANDS FROM THE THREAT OF FAKE NEWS

The three case studies presented in this article illustrate some of the most recurring mechanisms through which fake news might spread in the health and beauty industry. Such mechanisms build on established marketing tactics which are employed to distort consumers’ attitudes and behaviors. The cases show that companies often support the claims used to promote brands and products by creating and reinforcing social norms and promoting socially accepted behaviors such as the association of indoor tanning with a healthy lifestyle (Cafri, Thompson and Jacobsen, 2006; Elliot, Suppa and Leake, 2012). Similarly, as outlined in the first case, cigarettes

have been portrayed through history as symbols of masculinity, rebellion and emancipation in order to increase acceptance, and downplay health-related concerns (Amos and Haglund, 2000).

The three cases highlight that the association with experts, such as medical professionals and self-proclaimed or pseudo-experts, is another tactic that is commonly implemented to enhance the persuasiveness of messages and increase the perceived trustworthiness. Celebrity endorsements further reinforce positive attitudes towards the products and the associated claims, even when supporting evidence is lacking. Association with pseudo-experts and celebrities are strategies used by firms to move consumers' attention away from the lack of evidence needed to support product claims (e.g., Sklar, 2008).

When research findings are presented, the case studies show that some firms selectively use data and often omit important facts. Through these distorted representations, firms paint an incomplete picture to their target audience by emphasizing the benefits and downplaying health-related risks (Callard, 2015). Furthermore, when pseudo-scientific evidence is presented, this is often based on sponsored research (e.g., Holick, 2007) which lacks rigor and is affected by major methodological flaws (Klein and Kiat, 2015).

Several brand management implications can be gleaned from the analysis of the fake news in the health and beauty industry. While we note that the mechanisms for spreading fake news described in this article will not disappear anytime soon, we argue that brand managers should reconsider whether these tactics are effective in the long-term for building brand reputation and consumer loyalty. Brand managers have important ethical choices to make in their advertising strategies and must consider the vulnerability of consumers and how their actions impact consumer trust, reputational capital, and brand equity.

Vulnerable Consumers and Ethical Brands

While the marketing strategies presented in this article are used in a variety of industries, when used in the health and beauty industry, they leave consumers particularly vulnerable to potentially unsafe products and practices that could have severe health consequences. The regulatory frameworks currently in place to safeguard consumers lacks the responsiveness and flexibility needed to control a continuously evolving set of market offerings in the health and beauty industry. As a consequence of this, consumers are left exposed to product claims based on fake news and pseudo-facts which are given credibility through the tactics of denialistic marketing.

This presents a unique ethical dilemma for marketing managers and brand spokespeople in this industry. Brands have the choice to continue with previously used tactics that have the potential to endanger consumers or adopt new strategies that aim to increase transparency and consumer safety (Montecchi, Plangger and Etter, 2019). By avoiding those actions that perpetuate fake news, firms can act in an ethical manner, gain a social license to operate, and portray a positive brand image (Weidner, Beuk and Bal, 2019). For example, the sun care brand Coppertone was able to pivot its advertising strategy and positively change its brand image to reflect changing consumer preferences while avoiding perpetuating fake news about UV exposure. Originally, Coppertone marketed its product as “tanning lotion,” but as research revealed the harmful effects of UV exposure, the brand changed direction and promoted its products as “sunblock.” In contrast to the three case studies presented in this article, Coppertone’s story illustrates how a company can adapt and change its messaging strategy to embrace more truthful and transparent product claims, thus protecting vulnerable consumers and acting in an ethically responsible way.

Consumer Trust, Reputational Capital, and Brand Equity

The cases presented in this article demonstrate how the tactics used by some firms in the health and beauty industry have the potential to create and perpetuate fake news and pseudo-facts which are then used to validate products claims. However, as consumers are becoming increasingly more skeptical, this approach is not without its risks. The unprecedented proliferation of fake news within a wide range of contexts (Berthon, Treen and Pitt, 2018), global scares involving several consumer goods (Yeung and Yee, 2012), and a generalized lack of confidence in the regulatory powers of public bodies and international institutions (Kendall et al., 2018), have significantly undermined consumers' trust. Consumers are now demanding transparency, ethical actions, and more engagement with corporate social responsibility initiatives. Research shows that these factors influence consumption and the likelihood of purchase (Kang and Hustvedt, 2014). Furthermore, with the proliferation of social media and electronic word of mouth (e-WOM), consumers can expose false claims about products that are ineffective or even dangerous thereby decreasing a brand's reputational capital and equity. In this way, perpetuating pseudo-facts and false claims can seriously undermine consumers' trust towards brands. Therefore, focusing on fake news avoidance may be a more effective advertising strategy in the long run (Mills, Pitt, and Ferguson, 2019).

CONCLUSIONS AND FURTHER RESEARCH

This article introduces a comprehensive framework to explain the mechanisms through which fake news and pseudo-facts propagate in the health and beauty industry. The contribution of the article is twofold: firstly, it extends the marketing literature on fake news and pseudo-facts

by adopting a new perspective to investigate the rise and proliferation of this phenomenon. The use of denialism as a theoretical lens highlights how rhetorical mechanisms can be misused as marketing tactics and the impact that these approaches might have on the propagation of fake news. Secondly, the research further establishes a set of relationships between different denialistic marketing techniques and provides a conceptual framework, giving academics and practitioners a tool to help interpret and identify these techniques within the context of the health and beauty industry. Further research should focus on the empirical validation of the proposed conceptual framework and whether the identified mechanisms and relationships are transferable to other product and market contexts.

From a managerial point of view, the proposed framework will allow brand managers to identify potentially dangerous tactics which might put the safety of the brand at risk. Fake news is now a ubiquitous phenomenon that can harm brands directly and indirectly in different ways. By understanding the mechanisms which propel fake news, brand managers will be able to implement appropriate contingency plans and avoid damaging the brand's reputation and equity. Additionally, this knowledge will aid brand managers in pro-actively disassociating their brand from fake news and pseudo-facts and could be used as a starting point to discuss ethical marketing practices within the industry.

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Figure 1 – Fake news propagation framework

