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Chair of Research Methodology for Marketing

**Negative Emotions Trump the Truth: The
Impact of Negative Brand-Related False News
on Customer-Based Brand Equity**

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This piece of work concludes my five years as a passionate marketing student and represents the starting point of a new, exiting, and lifelong learning experience as a marketing practitioner. The path towards this point, and my achievements along the way, would not have been possible without the endless support from my family. Therefore, I dedicate this thesis to my mother, father, and brother. Thank you Else, Ivar, and Henrik.

Little research about false news currently exists within the marketing domain, which led me to combine research within the domains of marketing, communication, psychology, journalism, folklore, and information science in the theorizing. Therefore, this pioneer research project has been highly challenging, and the vast breadth of research domains that were consulted often led to confusion. Therefore, I express my deepest gratitude to my supervisor, prof. Feray Adigüzel, whom managed to direct me closer towards the core when I was focusing too broad. In addition, I am also deeply grateful to prof. Simona Romani, for the continuous dialogue along the thesis process and for helpful insights on emotions theory. In sum, the exploration of a broad range of research along with great discussions and constructive feedback have granted me with a better understanding of the interplay between different domains and hopefully resulted in an innovative master thesis.

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Enjoy the reading.

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CHAPTER I: INTRODUCTION

In recent years, the phenomenon of negative brand-related false news (NBRFN) has increased in frequency and consequently represents a threat towards important intangible assets such as brand equity (Keller, 1993). In 2016, the owner and employees of Comet Ping Pong pizzeria in Washington D.C received death threats after several articles were spread through social media about “Pizzagate”, which can be described as a conspiracy theory (LaCapria, 2016). The articles portrayed the pizzeria as the location for a child abuse ring led by Hillary Clinton and John D. Podesta. Despite none of these claims being true, this politically-motivated misinformation severely damaged the Comet-Ping-Pong brand. In fact, it led to a severe safety risk for its employees and customers as a 29-year-old man—which wrongly believed he was saving children trapped in the child abuse ring—fired an assault rifle inside the pizzeria in December 2016 (Haag & Maya, 2017; Kang, 2016). This is an example where false news making assertions about a brand led to tangible implications for the brand and its stakeholders. However, despite its increasing frequency the phenomenon is still relatively under investigated. The present research contributes to deepen our understanding of this new phenomenon, first by providing a definition of brand-related false news (BRFN) based on a broad literature review, before focusing explicitly on NBRFN in two studies. Study 1 tests two different emotional appeals of NBRFN, whereas Study 2 examines how NBRFN influence customer-based brand equity (CBBE), compared to negative brand-related true news (NBRTN).

Background

Rapid digitalization increases our consumption of information online and social-media companies have become a focal point of our economy that enable fruitful possibilities for both individuals and organizations. Survey results from Pew Research Center (2017) show that 67% of Americans receive at least a proportion of their news through social media. However, as Google’s vice president Vinton G. Cerf (2017) points out, these possibilities also represent a threat, which became especially visible in 2016 during the U.K. vote about leaving the European Union (i.e. “Brexit”) and the U.S. presidential election. During these events, social media platforms amplified the distribution of misinformation and the term “fake news” became prominent. In fact, Collins English Dictionary named “fake news” the word of the year 2017, since the usage of the term increased by 365% in 2017 compared to 2016 (Flood, 2017). Consequently, the 2016 US presidential election have been subject to research on *fake news* especially within the journalistic domain (Allcott & Gentzkow, 2017). The majority of this research have focused on negative implications for the free press, political elections, and the democracy arising from fake or false news (Tandoc Jr, Lim, & Ling, 2018). Related past research within marketing have focused on crises (e.g. crisis management, product-harm crisis, and brand crisis), scandals, consumer brand

sabotage (CBS), and negative word of mouth (Angelis, Bonezzi, Peluso, Rucker, & Costabile, 2012; Dawar & Lei, 2009; Dawar & Pillutla, 2000; Kähr, Nyffenegger, Krohmer, & Hoyer, 2016; Roehm & Tybout, 2006; Ward & Ostrom, 2006). However, product-harm crises or negative word of mouth are most often resulting from actual events, whereas false news can originate without actual events. Therefore, Cleeren, Dekimpe, and van Heerde (2017) calls for research on whether consumers can distinguish between actual product-harm crises and fake news. Thus, a gap currently exists between the literature of false news and marketing.

Furthermore, integration of social media and mobile devices has simplified information search and increased the speed of communication between people (V. Kumar, 2015). Today, we use social media as arenas for individual expression and interaction with friends, but we also use it for decision support (Lamberton & Stephen, 2016). Consequently, firm-generated content in social media supported by electronic word of mouth and engagement can increase consumers' spending, stimulate cross-buying behavior, and even increase customer profitability (A. Kumar, Bezawada, Rishika, Janakiraman, & Kannan, 2016). Therefore, considerable resources are invested by companies in social-media marketing. According to The CMO Survey, from February 2018, spending on social-media marketing has increased with 244% since 2009, and 45.6% of the 362 CMO-participants use social media for brand awareness and brand building purposes (Moorman, 2018). The average proportion spent on social-media marketing is currently 12.05% ($SD = 12.95$) of the marketing budget, but this proportion is expected to increase by 71% during the next 5 years. However, the social-media structure allows for sharing of content between users nearly without fact-checking or third-party filtering, and the average user could reach as many receivers as the New York Times (Allcott & Gentzkow, 2017). Therefore, NBRFN that goes viral could damage brand attitudes, lower purchase intentions, disrupt customer acquisition, and shrink companies' marketing return of investment. Yet, NBRFN is a relatively under-investigated phenomenon.

Emerald Publishing (2017) currently calls for articles to a special issue of the Journal of Product and Brand Management named "Brands and Brand Management Under Threat in an Age of Fake News". Specifically, Emerald considers it particularly fruitful to examine: (1) how brands are impacted by fake news, (2) how customers process and respond to fake news about brands, (3) to what extent emotion or content attributes play a role in consumers' sharing intention, and (4) to what extent different kinds of consumers are susceptible to fake news about brands. This thesis aims to contribute by answering several of these questions.

The Purpose of the Present Studies and Research Question

The main purpose of this thesis is to deepen the understanding of how NBRFN influence CBBE, and thereby the present research aims to contribute scientifically and managerially by

deepening the understanding of an under-investigated phenomenon. Hence, the present studies seek to answer the following research question:

***RQ:** How does negative brand-related false news, compared to negative brand-related true news, conveyed through social media, influence customer-based brand equity?*

On the basis of findings from the present studies and previous research I also provide suggestions for further research, associated with the following sub question:

- *How can companies respond to negative brand-related false news to prevent brand damage?*

Scientific Relevance

There are currently no studies explicitly focusing on brand-related false news. Therefore, the present research theorizes by bridging research within marketing, journalism, communication, psychology, and information science. Crises may arise from accidents causing severe environmental damages, such as the 2010 Deepwater Horizon disaster. Negative word-of-mouth and consumer brand sabotage may arise from dissatisfied customers, such as David Carroll who made the song “United Breaks Guitars” (Mouawad, 2010; Negroni, 2009). Similarly, product-harm crises are actual events which might arise when products are contaminated or defect (Cleeren et al., 2017). Unlike product-harm crises and negative word-of-mouth, NBRFN does not need facts to occur, and can emerge independent of actual events.

The untruthful characteristics of the present topic is to some extent covered in research on rumors and urban legends (Heath, Bell, & Sternberg, 2001). Rumors can be characterized as claims of facts which has not been shown to be true, that spread between people, and which have credibility because people seem to believe them, without support from direct evidence (Sunstein, 2007). NBRFN is different from rumors in the sense that NBRFN often presents direct evidence and uses fabricated credibility cues. The presence of evidence, even though it is false evidence, and the possibility to inspect the source might lead the receiver to be more certain about the truthfulness of the news, compared to a rumor context where the source often is unknown (Dubois, Rucker, & Tormala, 2011). If this is the case, NBRFN could pose a large threat towards CBBE. However, the limited number of studies which have examined how urban legends and rumors impact brands have primarily focused on purchase intention and sharing intention (Fragale & Heath, 2004). Thus, how NBRFN might impact brand equity is not thoroughly understood.

Recent research conducted by Vosoughi, Roy, and Aral (2018) which examined a data set of 126,000 different rumors spread more than 3 million times on Twitter between 2006 and 2017, showed that false news reached more people and propagated faster, compared to true news. The researchers suggest that recipients’ emotional reactions and the fact that false news is more novel than true news might explain the observed differences. Nevertheless, the extent to which such false

news impact brand equity remains to be understood. Furthermore, Cleeren et al. (2017) call for research on whether consumers can distinguish actual product-harm crises from hoaxes or fake news, and state that little research has tried to typify firms' responses. The present research contributes scientifically by deepening our understanding of how NBRFN influence CBBE.

Managerial relevance

The endurance of corporations, non-profit organizations and other institutions is dependent on a certain degree of trust, and positive evaluations by target audiences. However, today customers' trust in the company and their evaluations of its brands have the potential to be damaged by false news. Thus, a deeper understanding of how NBRFN impact consumers, and their evaluations of brands can help companies to navigate in the challenging and interactive media landscape (V. Kumar, 2015). The studies presented here make several managerial contributions. First, I provide managerial implications for marketers regarding the extent to which NBRFN poses a threat to brands. Second, potential firm-response strategies for minimizing brand damage from NBRFN are discussed. Third, the examination of how consumers are persuaded by NBRFN provides implications both for consumers and policymakers.

Delimitations

Even though the scope of this research is outlined above, it is also valuable to clarify its boundaries. Here, I focus on how NBRFN compared to NBRTN, conveyed through social media, influence CBBE. Thus, this thesis does *not* focus on; (1) the intention or motivation process of the purveyors, (2) the information-diffusion process, (3) how NBRFN impact financial and stock-market performance, or (4) spillover effects between online advertising and content on fake-news websites. Thus, I aim to solve the research question by examining customers, using an individual level of analysis.

Outline

The context and purpose of this research are outlined above. Next, in Chapter II I combine research from marketing, psychology, journalism, communication, and folklore to develop my conceptual framework and hypotheses. Thereafter, in Chapter III, the methodology used to test the hypotheses is explained, followed by Chapter IV where the findings are reported. Consequently, in Chapter V, I summarize my findings and provide a general discussion of the scientific and managerial implications provided by the present research. Finally, I discuss the limitations of my research and provide directions for future research before I present my conclusion.

CHAPTER II: THEORETICAL FRAMEWORK

Literature Review of Fake and False News

As stated above, there is currently no explicit literature on brand-related false news. Thus, the starting point towards answering my research question—how brand-related false news, compared to brand-related true news, conveyed through social media, influence customer-based brand equity—is to define the concept of brand-related fake news. Therefore, an exploratory and broad literature review was initially conducted on the topics of “fake news” and “false news”, which primarily entails studies of journalism, communication, information science, information-diffusion online, and political science (Balmas, 2014; Brigida & Pratt, 2017; Lischka, 2017; Vosoughi et al., 2018). Furthermore, to discover other relevant and related concepts the literature review also included examination of studies of marketing, psychology, folklore, urban legends, memes and rumors (Anderson & Simester, 2014; Best & Horiuchi, 1985; Cleeren et al., 2017; Dawar & Pillutla, 2000; Dubois et al., 2011; Heath et al., 2001). This literature review, which is summarized in Table 1, serves as the foundation for my definition of brand-related false news.

TABLE 1
Summary of Previous Research on Fake and False News

Author & Journal	Topic & Method	Findings	Contribution
Simon (1980) <i>Science</i>	False Bad News <i>Secondary Data</i>	By comparing several statements in media with aggregate data, the author finds that false bad (i.e. negative) news about natural resources, population growth and the environment are published widely.	Provides evidence for the presence of phony bad news in media. The authors speculate that bad news occur since it sells newspapers, magazines and books; and peoples' preference for bad news might be a consequence of comparing the future and present with an ideal state, compared to the past.
Best and Horiuchi (1985) <i>Social Problems</i>	Urban Legends <i>Secondary Data/ Case Study</i>	Results imply that the widespread perceived threat of Halloween sadism in the U.S. has been severely exaggerated and can be viewed as an urban legend, which emerged in 1970s to express growing concern about crime and safety of children.	The authors contribute to debunk the myth about Halloween sadism, and provide an explanation of the phenomenon using social strain theory.
Dawar and Pillutla (2000) <i>Journal of Marketing Research</i>	Product-harm crisis <i>Field survey and Experiments</i>	By applying the expectations-evidence framework the authors find that customers' interpretation of firm responses after a product-harm crisis are moderated by prior expectations about the firm.	Contributes by discovering that consumers are likely to have differential interpretations of firms' responses to a product harm crisis and selectively process information. Thus, tailored crisis communication for different audiences are suggested.
Heath et al. (2001) <i>Journal of Personality and Social Psychology</i>	Emotional selection of memes <i>Experimental surveys / content analysis</i>	Findings support the emotional-selection hypotheses that a meme (e.g. ideas) compete based on the extent to which it evokes emotions like fear, disgust or anger. Specifically, people were more willing to share stories that elicited stronger disgust.	Contributes by deepening the understanding of how memes compete based on emotional selection. That is, people are more likely to share the story the stronger emotions it elicits.

Fernback (2003) <i>New Media & Society</i>	Urban Legends <i>Observation</i>	Qualitative interpretation of posts in online discussion forums suggests that technological antecedents make written computer-mediated communication more oral, which helps urban legends to spread on the internet.	Raises awareness about the increased presence of computer-mediated urban legends online, which might have higher legitimacy and authority than orally conveyed stories.
Dubois et al. (2011) <i>Journal of Marketing Research</i>	Rumors <i>Experiments</i>	Results show that consumers are less likely to convey certainty information than core beliefs, which dilutes initial certainty or uncertainty across communication. Consequently, the most effective firm response for stopping rumors are found to be <i>questioning</i> consumers' certainty of whether the rumor being true or not.	Contributes with a plausible explanation of why transmission of negative rumors happens despite initial uncertainty, and why the effect of positive WOM dilutes over time.
Marchi (2012) <i>Journal of Communication Inquiry</i>	Fake News <i>Interviews with diverse high school students</i>	A common theme across 61 interviews is that young people perceive objective news to be boring and unoriginal. Instead, they prefer opinionated news from fake-news shows that uses parody and satire; family and friends; social media networks; and blogs.	Contributes to the understanding of adolescents' attitudes to different types of news, and how news is acquired and processed.
Balmas (2014) <i>Communication Research</i>	Fake News <i>Survey</i>	Findings show an indirect positive effect of viewing fake news on feelings of alienation, cynicism, and inefficacy, through perceived realism of fake news. Furthermore, viewing hard news moderates the relationship between viewing fake news and perceived realism. Additionally, perceived realism of fake news is stronger among participants with high exposure to fake news and low exposure to hard news, compared to participants with high exposures to both fake and hard news.	Contributes by demonstrating that <i>perceived realism of fake news</i> serves as a mediating variable between fake news and individual's attitudes towards politicians.
Anderson and Simester (2014) <i>Journal of Marketing Research</i>	Fake Online Reviews <i>Secondary Data</i>	Results indicate that false reviews are written by loyal customers. Furthermore, false reviews are found to be significantly more negative, less likely to contain cues describing the fit or feel of the items and has increased likelihood of containing deception cues.	Contributes to the understanding of fake online reviews and suggest three antecedents: (1) upset customers, (2) loyal customers eager to help improving the company, or (3) consumers motivated by self-enhancement and social status.
Y. Chen, Conroy, and Rubin (2015) <i>Proceedings of the 2015 ACM on Workshop on Multimodal Deception Detection</i>	Clickbait as False News <i>Review</i>	Clickbait are associated with the rapid spread of misinformation and rumors online by appealing to our curiosity and need for sensemaking. The presentation of incomplete information creates a knowledge gap which consequently initiate exploring activity.	Contribute by raising awareness regarding content cues used in click baiting and introduces methods for deception detection.
Berkowitz and Schwartz (2016) <i>Journalism Practice</i>	Fake News <i>Qualitative Case Study: Miley Cyrus twerking at the MTV Video Music Awards in 2013</i>	Findings from textual analyses of both real (e.g. CNN) and fake news sources (e.g. the Onion) implies that columnists, bloggers, and fake-news organizations have come to serve a role as a Fifth Estate. That is, these sources watch over the mainstream journalism institutions and engage in boundary work.	While most scholars have focused on negative consequences of fake news, this paper contributes by highlighting a positive consequence of particular fake-news sources that apply parody and satire.
Lappas, Sabnis, and Valkanas (2016) <i>Information Systems Research</i>	Fake online reviews <i>Secondary Data</i>	Even small amounts of fake online reviews can significantly impact online visibility. A hybrid strategy of self-injecting positive reviews and injecting negative reviews about competitors were most effective. In markets where customers consider a small number of attributes positive injections were most effective, whereas negative injections were most effective when users consider a wider set of attributes.	Contributes to the understanding of companies' vulnerability to fake-review attacks, and differences between industries.
Tandoc Jr et al. (2017) <i>New Media & Society</i>	Fake News <i>Survey</i>	Findings imply that people rely on their own experience (i.e. "gut feeling") and their own judgement of the source and the message when assessing news. If this strategy does not provide sufficient answers, people turn to <i>external</i> resources for authentication.	Contributes to the discussion of how today's speedy information sharing through social media forces consumers to be the judge and authenticate the news they receive.

Cleeren et al. (2017)	Product-harm crisis	Product-harm crises serve as a major threat to brand equity, and companies often struggle with how to respond. Most papers about this topic apply theories from organizational learning, attribution theory, associative network theory and theory of anthropomorphism. Most common dependent variables used are blame attribution, purchase intentions, brand evaluations, post-crisis purchase intentions.	Extensive overview of papers about product-harm crises. The authors also call for research on whether consumers can distinguish actual product-harm crises from hoaxes or fake news, and state that little research has tried to typify firms' responses.
<i>Journal of the Academy of Marketing Science</i>	<i>Review</i>		
Brigida and Pratt (2017)	Fake News and Stock- Markets	The authors examine volatility in association with fake news on twitter (a fake Bloomberg site report that a bid of 31 billion are offered on Twitter, and several journalists and spokespersons comment on the "news"). The findings show that noise traders (uninformed traders) first responded by trading in equities which led to a decline in the implied volatility. Furthermore, there is a delayed reaction in the option price. Overall, stock price reacted to the news faster than option prices.	Contributes by demonstrating that fake news can influence stock performance.
<i>North American Journal of Economics and Finance</i>	<i>Secondary Data</i>		
Allcott and Gentzkow (2017)	Fake News in the 2016 American Election	Findings show websites producing fake news to be short-lived and that their names try to mimic traditional media channels. The motivation behind the websites is either generating advertising revenues or an ideological motive of advancing the candidate one favor.	Contributes theoretically by applying utility theory. Consumers receive utility through two conflicting channels: (1) knowing the truth vs. (2) confirming their priors.
<i>Journal of Economic Perspectives</i>	<i>Secondary Data/ Post-Election Survey/ Case Study</i>		
C. J. Vargo, Guo, and Amazeen (2017)	Agenda-setting power of fake news	Results from aggregate analysis show that fake news influences the agenda of partisan media. Conversely, fake news is sometimes driven by the agenda of partisan media.	By using agenda-setting theory the authors provide insights regarding the spread of fake news and its moderate agenda-setting power.
<i>New Media & Society</i>	<i>Secondary Data</i>		
Tandoc Jr et al. (2018)	Fake News	Fake news has been used to describe news parody, news satire, manipulation, fabrication, propaganda and advertising. The authors categorize the types of fake news along two dimensions across a continuum from high to low deception (i.e. intention to mislead) and facticity (i.e. reliance on facts).	The authors contribute by mapping the diverse landscape of fake-news definitions and provide a typology which is useful to direct further research.
<i>Digital Journalism</i>	<i>Review of fake-news definitions</i>		
Vosoughi et al. (2018)	Diffusion of true and false news online	Results show that false news diffuses significantly more broadly, faster, and deeper than true news in all categories (e.g. political news, urban legends, business, science). Furthermore, false news inspires <i>disgust</i> , <i>fear</i> and <i>surprise</i> in responses and are more <i>novel</i> than true news which inspire joy, sadness, trust, and anticipation. Finally, the authors find that robots equally accelerated the spread of false and true news.	With a large dataset of 126,000 true and false news—tweeted more than 4.5 million times between 2006 to 2017—this paper contributes to a deeper understanding of false news online, and provide accurate definitions associated with this new phenomenon.
<i>Science</i>	<i>Secondary Data</i>		
This thesis, 2018	Negative Brand-Related False News	Results show that negative brand-related false news influences CBBE negatively, through activation of consumers' feelings of disgust. The higher the feeling of disgust the larger the effect on CBBE. Furthermore, the higher the initial level of CBBE, the higher the indirect effect of NBRFN through disgust on CBBE after exposure. Finally, both NBRFN and NBRTN were found to have negative effects on CBBE, and no difference was found between NBRFN and NBRTN.	Contribute scientifically by conceptualizing and defining NBRFN. Yet, the main scientific contribution of the two pioneer studies is the demonstration of a negative effect of NBRFN on consumers' individual CBBE, through the elicitation of consumers' feelings of disgust.
	<i>Experimental surveys</i>		

Note: This table is limited to papers on "fake news", "false news", "rumors", "urban legends" and "product-harm crises".

Other relevant papers on other topics are cited in-text.

What is news and what makes it fake or false?

News. The first step towards my definition of brand-related false news is to clarify what we mean by *news*, and what makes them *false*. Despite the frequent use of the terms *news* and *fake news* in politics and academic literature the definition of both terms is rather fluent (Vosoughi et al., 2018). News has been defined as descriptions of interesting, recent and significant events; accounts of events that affect people in a significant way; or even as dramatic accounts of something deviant or novel (K. K. Campbell & Jamieson, 2006; Kershner, 2011; Richardson, 2006). Furthermore, news is often seen as an output made by journalists, consistent with the traditional idea of journalism as an important contributor to democracy through its governing role as the Fourth Estate (Carlyle, 1993; Tandoc Jr et al., 2018). News conveyed through journalistic institutions signals a higher legitimacy which amplifies the persuasiveness of the stories. Therefore, we expect journalists to employ objectivity and accuracy in their work to provide reliable and correct information. Nevertheless, journalists exercise some degree of subjective judgement when it comes to framing and which pieces of information to include or exclude.

Conceptualizing news as outputs made by journalists is problematic, since online social platforms now act as channels for non-journalists to reach a mass audience (Allcott & Gentzkow, 2017). Today, individuals or any organization can post text information, videos, photos, and narratives of newsworthy events they witness (Hermida, 2010). Consequently, the business models of journalistic institutions are challenged, and revenues from subscriptions are decreasing. That is, journalistic institutions is now in a market with demand-side increasing returns (i.e. network effects), where the institutions compete to increase their respective bases of readers in order to attract advertisers (Saloner, Shepard, & Podolny, 2006). Other organizations such as fake-news webpages, which is not bound by journalistic guidelines, also compete to attract readers (C. J. Vargo et al., 2017). This increased competition has led to more frequent tabloidization, sharable reporting, and attention-grabbing, also from the journalistic institutions, which subsequently has blurred the line between fact and fiction (Y. Chen et al., 2015). Since news are vulnerable to market forces and due to the diverse landscape of news providers, a broader definition of news is needed.

In a recent article published in the prestigious Science journal, Vosoughi et al. (2018) provide a large-scale examination of false-news diffusion online. The authors clearly distinguish between news and rumors. First, news is simply defined as “any story or claim with assertion in it” (p. 1). That is, any claim—either textual, visual or audiovisual—made online, for example on social media, by individuals or organizations qualify as news. Second, rumors are defined as “the social phenomena of a news story or claim spreading or diffusing through the...network” (p. 1). Thus, news is an assertion with claims, irrespective of whether the assertion is shared or not, but news first become rumors through propagation when the assertion is shared between people. Since

this definition of news fits well with today's fragmented media landscape, where news is no longer dependent on its source, it serves as a basis for my definition of brand-related false news below.

Fake News. The term “fake news” has frequently occurred in the media during the recent years, but what constitutes fake or false news? Normatively, news is based on truth, which makes the term *fake news* an oxymoron (Tandoc Jr et al., 2018). Several scholarly definitions of *fake* and *false news* have accumulated through time. Earlier studies are underlined by the journalistic definition of news. For example, Simon (1980) discusses *false bad news* conveyed through newspapers about the scarcity of natural resources and negative implications of population growth. The news is defined as false in the sense that the statements are derived from either flimsy evidence, or from no evidence at all. More recent research conducted by Allcott and Gentzkow (2017) define fake news strictly as “news articles that are intentionally and verifiably false and could mislead readers” (p. 213). Other narrower definitions incorporate the fabrication of content and the attempts to mimic credible journalism by fake-news sites, or an underlying financial motivation. For example, Nelson and Taneja (2018) conceptualize fake news as “sites that are very literally fabricating the news” (p. 6), whereas the media editor Craig Silverman views fake news as completely false information, which is created for financial gain (C. J. Vargo et al., 2017). In its broadest sense, clickbait is also a form of fake news. Clickbait is defined by Y. Chen et al. (2015) as “content whose main purpose is to attract attention and encourage visitors to click on a link to a particular web page (p. 1)”, and this attention is often achieved by exaggerating the importance of news by presenting them as more relevant, interesting, and extraordinary. Thus, the fake-news concept seems to entail nearly any form of misinformation.

Six Different Types of Fake News

A recent review of fake-news definitions in articles between 2003 and 2017 conducted by Tandoc Jr et al. (2018) identify six different forms of operationalization: news satire, news parody, photo manipulation, fabrication, propaganda, and even advertising. First, *news satire* uses exaggeration and humor to present news updates (i.e. mock news programs, such as *The Daily Show* in the US or *Mock the Week* in the UK). This might be the mildest version of fake news, since these mock news programs promote themselves as delivering entertainment, and the people on the screen are described as entertainers or comedians. Second, *news parody*, which shares many characteristics with news satire, uses humor and a presentation form that mimics mainstream news media. However, different from news satire, news parody also uses non-factual information to inject humor and it is often hard to distinguish a parody website (e.g. *The Onion*) from a legit mainstream news source. For example, in 2017, several fake-news articles made to look like journalism from *Peoples Magazine* was spread through social media. The stories reported that the

makeup and beauty chain Ulta Beauty would close its doors because of a buyout made by the competitor Sephora (LaCapria, 2017). Similarly, in May 2015 a news-link claimed that the famous food chain Taco Bell would close all its US locations on June 1, 2015 (Evon, 2017). This link was created by the prank website Feednewz.com to troll (i.e. to fool) Facebook users, and those who clicked on the link arrived at a webpage showing the words “You got owned!” next to a number expressing how many people that had been tricked. Thus, those who clicked on the link realized it was a joke, but the majority did not click and might believe Taco Bell were actually closing. The same prank was repeated in May 2017 by another source which claimed Taco Bell were bankrupt and would close all stores by 2018. Nevertheless, news satire and parody pose a relatively low risk of harmful deception, and by criticizing the editorial choices of journalistic institutions (e.g. The Onion’s critique of CNNs heavy coverage of the Miley Cyrus’ twerking performance in 2013) news satire and parody serves a useful role as the Fifth Estate (Berkowitz & Schwartz, 2016). Thus, these two mild forms of fake news are outside the scope of this thesis.

Photo manipulation as fake news refers to the editing of real images or videos to create false narratives (Tandoc Jr et al., 2018). Minor adjustments can be to increase color saturation and removing small elements, whereas more significant manipulations can be to insert a person to an image. Adjustments of color and tone are done by most journalistic institutions but adding or deleting items are forbidden for journalists according to the Reuters code of ethics. Conversely, users of social media do not need to follow such codes of ethics. For example, in October 2015, Kentucky Fried Chicken (KFC) had to answer concerned customers on Twitter after the website Now8News published an article that showed a manipulated picture of a chicken with four legs, and claimed that several thousand severely mutated chickens from KFC farms were confiscated by the U.S. Food and Drug Administration (LaCapria, 2015). According to Snopes, this information was false. Finally, Tandoc Jr et al. (2018) also highlight that misappropriation of images also should be referred to as fake news. Misappropriation is when a non-manipulated photo is taken out of the original context to make assertions. For example, a photo showing buses were shared on Twitter together with a false assertion claiming that the buses were gathered to transport anti-Trump supporters. It ended up being shared over 370.000 times.

The aforementioned “Pizzagate”-example illustrates the phenomenon of *fabrication*, which entails articles that have no factual basis and that mimics the presentation form of news articles to create legitimacy (Tandoc Jr et al., 2018). Unlike parody and satire, in the case of fabrication there is no understanding between reader and author that the item is false. Such fabricated fake-news articles are often first published on the websites of non-news organizations, before it is shared in social media by individuals, organizations or even by robots (Vosoughi et al., 2018). Thus, it is often very hard for the consumer to examine the credibility or legitimacy by face

value. Furthermore, fabricated items often incorporate pre-existing memes into the narratives, which increase the likelihood of acceptance by readers. However, Tandoc Jr et al. (2018) also points out that the success of fabrications, from the purveyors point of view, depends on pre-existing social tension regarding the topic. Therefore, persons with high trust towards the topic (e.g. food safety) might be less likely to accept contradicting information about it.

Advertising as a form of fake news referrers particularly to video news releases and native advertising, which is the concealment of marketing as real news (Tandoc Jr et al., 2018). These native advertising articles are often partially based on facts, containing statistical evidence, several sources, interviews, and a balanced discussion of a topic, but it ends by promoting a product or service. Similarly, *propaganda* also mixes fact and fiction, and refers to fake news stories created by political entities (e.g. official news channel, such as Chanel One in Russia) to influence public perceptions. However, since advertising is regulated under marketing legislation in most countries and propaganda is defined by its institutional source, advertising and propaganda as a form of fake news are outside the scope of this thesis.

Tandoc Jr et al. (2018) categorize the six different types of fake news along the continuum of the two dimensions *facticity* and *intention to deceive*. Facticity is the degree to which fake news relies on facts, whereas intention to deceive is the extent to which the author of fake news intends to mislead. Manipulation, fabrication, and news parody have low facticity, whereas news satire have high facticity. However, manipulation and fabrication are characterized by high intention to deceive, whereas news satire and news parody are characterized by low intention to deceive. Similarly, stories about brands also differ on these two dimensions. For example, the aforementioned stories about “Pizzagate” and KFC score low on facticity and high on intention to deceive, whereas the story about Ulta Beauty scores low on both facticity and intention to deceive. Therefore, the dimensions of facticity and intention to deceive will be used to explain my definition of brand-related false news below.

The terms *fake* and *false* have been used interchangeably in the discussion above to present different researchers’ views on the same phenomenon. However, labeling news that do not support one’s position as fake news has been a widely used political strategy. Therefore, Vosoughi et al. (2018) characterize the word *fake* as academically unprecise, and uses *false* instead. Thus, consistent with this recent research I use the term *false news* in my definition.

Definition of Brand-Related False News

Drawing upon the abovementioned typological discussion I hereby define brand-related false news (BRFN) as: any story or claim with assertion about a brand that is either completely false or a considerable distortion of the truth, which is conveyed online by individuals or organizations, and has the potential to harm the brand.

My definition of BRFN contains four different components. First, *any story or claim with assertion about a brand* entails the broadest possible definition of news, consistent with Vosoughi et al. (2018). Second, *either completely false or a considerable distortion of the truth* imply a low degree of facticity (Tandoc Jr et al., 2018). That is, BRFN refers to a degree of misinformation that is more similar to fabrication and manipulation, than news satire or parody. Third, *conveyed online by individual users or organizations* entail that BRFN is both source and channel independent. Therefore, it does not matter whether the story or claim is communicated through an organization's webpage or by an individual human being (or robot) through a social network platform. Thus, BRFN also entails negative word of mouth (NWOM) and consumer brand sabotage (CBS), as long as the evidence of which the assertions are made from (e.g. the antecedent event of which WOM arise) is false (Chan & Cui, 2011; Kähr et al., 2016). Finally, *has the potential to harm the brand* points to the possible consequences of BRFN. Similar to false online reviews, the valence of BRFN could in theory either be positive or negative (Lappas et al., 2016). That is, positive BRFN (PBRFN) would refer to stories with false assertions used to favorably accentuate brands (e.g. cigarettes marketed as healthy), whereas negative BRFN (NBRFN) are stories with false assertions used to adversely accentuate brands. The motivation for PBRFN is likely to be held by brand owners, whereas NBRFN is created outside the company, which implies that PBRFN are already regulated by marketing legislation. Therefore, companies caught using falsehoods to market their brands could face legal sanctions, whereas NBRFN could instill false and unfavorable brand associations within consumers' minds (Keller, 1993). Thus, I argue that both NBRFN and PBRFN has the potential to harm the brand. Nevertheless, because of its increasing frequency NBRFN poses a larger threat towards brands, compared to PBRFN. Therefore, I focus exclusively on NBRFN in the present research.

Negative Brand-Related False News. NBRFN broadly entails NWOM and CBS conveyed by consumers and fabrications conveyed by organizations, a range of which is too extensive to be covered here (Chan & Cui, 2011; Kähr et al., 2016). Previous research suggest that propagation in social media is an important component of the threat posed by false news (Vosoughi et al., 2018). Therefore, in the present studies I focus on NBRFN in the form of fabricated articles from a non-news organization that are shared by consumers on Facebook. This phenomenon can also be considered as the most novel version of NBRFN, since it differs from traditional conceptualizations of rumors, such as the one of Sunstein (2007) which states that rumors are "claims of fact...that move from one person to another, and hence have credibility not because direct evidence is available to support them, but because other people seem to believe them"(p. 6). Unlike rumors, NBRFN present direct evidence – even though this evidence is false. However, antecedents and processes associated with propagation of rumor cascades are outside my scope.

Particularly, the present studies entails how a single exposure to this type of NBRFN impacts customer-based brand equity (CBBE) (Keller, 1993), compared to a single exposure to negative brand-related true news (NBRTN).

The main concept of NBRFN is now defined, and the delimitations of the present studies are clarified. In the following subsections, I explain CBBE, which serves as the dependent variable in the present studies, before reviewing relevant research and developing hypotheses.

Customer-Based Brand Equity

Brand Equity. A frequently used, and therefore important, measure of brand performance is the concept of brand equity, which has been conceptualized as a measure of consumer behavior, a financial measure, and as a measure of consumers' beliefs (Keller, 2013). Nevertheless, the majority of authors agree that brand equity is the value contributed by the brand name to a branded product (Dawar & Pillutla, 2000). Since the scope of this thesis evolve around individual consumers I will focus on CBBE which is defined by Keller (1993) as follows: "the differential effect of brand knowledge on consumer response to the marketing of the brand" (p. 2). Thus, positive (negative) CBBE occurs when the consumer reacts more (less) positively to a marketing-mix element (e.g. price, product quality, or advertisement) for the brand compared to the same element of the marketing mix attributed to an unnamed or fictitiously named version of the service or product.

Brand knowledge. Brand knowledge is conceptualized using the associative network memory model, that views knowledge as a set of nodes (i.e. stored information or associations) in memory which are connected with associative linkages (Srull & Wyer, 1989). Thus, brand knowledge can be viewed as consisting of a brand node in a consumer's memory that is linked to a variety of brand associations (Keller, 1993). Furthermore, the spreading activation process determines which nodes and associations that gets retrieved in a given context (Collins & Loftus, 1975). When a concept node is primed (e.g. a particular consumer need, or a usage situation) the consumer conducts a memory search in which activation spreads outwards from the primed concept through chains of interrelated linkages and nodes. The accessibility of different nodes—which is determined by how strong their respective linkages are to the primed concept—determines which nodes that will be retrieved. For example, the respective strength of the associative linkages between Coca Cola (i.e. brand node) and different product usage contexts (e.g. lunch, dinner, at the cinema, or at the football game) determines whether the brand is recalled when a particular usage-context node is activated (Ratneshwar & Shocker, 1991).

Brand Awareness and Brand Image. Brand knowledge consists of the two dimensions brand awareness and brand image. First, *brand awareness*, refers to the existence and strength of

the brand node which serves as a storage foundation for other brand relevant information (Keller, 1993). Brand awareness consists of the sub dimensions depth and breadth. *Depth* refers to how easily the brand is retrieved (e.g. top of mind, unaided recall, or aided recognition) and *breadth* refers to the number of usage situations or buyer situations that primes the retrieval of the brand node (Collins & Loftus, 1975; Keller, 2013). Second, *brand image*, refers to the consumer's perception about the brand, reflected by the brand associations (i.e. informational nodes) held in the consumer's memory, which is linked to the brand node. The associations' strength, favorability, and uniqueness determines what type of brand knowledge that contributes to the differential effect on consumers' response. Thus, positive CBBE occurs when the consumer is aware of the brand and holds a set of strong, favorable, and unique brand associations in his or her memory.

Brand Associations. There are three major categories of brand associations (Keller, 1993). The first category, *attributes*, refers to descriptive features characterizing the product or service. That is, a product's physical composition which enable performance characteristics, or packaging and appearance, price information, usage imagery (i.e. in which usage contexts is the product used) and user imagery (i.e. who uses the product). The second category, *benefits*, refers to the personal value the consumer attaches to the service or product attributes. There are three main types of benefits, which is categorized according to the underlying needs and motivations they address (Park, Jaworski, & MacInnis, 1986). First, functional benefits refer to the intrinsic advantages of consumption (e.g. the detergent is good for cleaning my floor), which often depend on the tangible product attributes, and are often motivated by fairly basic needs. Second, experiential benefits refer to how the consumer feel when he or she uses the product, and these benefits often satisfy needs such as cognitive stimulation, variety, and sensory pleasure. Third, symbolic benefits refer to more extrinsic advantages of consumption, which is often related to non-product-related attributes and satisfy needs such as social approval or personal expression. The third category, *brand attitudes*, is a consumer's overall evaluation of a brand. Brand attitudes are central since they often form the basis for the consumer's behavior. The most accepted model of brand attitudes is the multi-attribute formulation that views brand attitudes as a function of the consumer's evaluative judgement of attributes and benefits associated with the brand and their respective salience in memory (Ajzen & Fishbein, 1977).

Dependent Variable. For the purposes of this research I treat CBBE as a composite of five brand-related beliefs: (1) brand attitudes, (2) brand desirability, (3) perceptions of quality, (4) brand trust (dependability, reliability and trustworthiness) and (5) brand purchase likelihood. This composite construct is adopted from Dawar and Pillutla (2000) who used it to measure effects on brands resulting from product-harm crises. The construct is chosen both since it taps into the

dimensions of brand equity, and since it includes purchase intention (i.e. behavioral intention) which is an important measure in research on product-harm crises and brand rumors, both of which shares similarities with NBRFN (Cleeren et al., 2017; Dubois et al., 2011).

The main concept and the dependent construct are now explained, in the following sections I develop the conceptual framework and hypotheses associated with the persuasiveness of NBRFN, in order to answer my research question: How does NBRFN compared to NBRTN, conveyed through social media, influence CBBE?

Persuasiveness of Negative Brand-Related False News

Differences Between Negative Brand-Related False and True News

Since NBRFN can be characterized as a *persuasion attempt*, The Persuasion Knowledge Model (PKM) serves as a theoretical foundation for my conceptual framework (Friestad & Wright, 1994). Similar to the elaboration likelihood model (ELM) and the heuristic-systematic model, the PKM assumes that *targets* (e.g. consumers) are motivated to form valid topic attitudes (Chaiken, 1980, 1987; Petty & Cacioppo, 1986). However, the PKM additionally proposes that targets are motivated to form valid attitudes about *agents* (i.e. valid agent knowledge). The special case of NBRFN I focus on here can be said to contain two different agents, namely the non-news organization that creates the fabricated article, and the consumer who shares it on Facebook. Nevertheless, Friestad and Wright (1994) defines agents as “whomever a target identifies as being responsible for designing and constructing a persuasion attempt” (p. 2). Therefore, agent refers to the creator of the fabricated article which aims to persuade consumers (targets). Conversely, the consumer who shares the NBRFN through Facebook might not aim to persuade but simply redistributes the information for his or her network. Therefore, I regard the consumers that shares NBRFN merely as *senders* of a message (Berlo, 1960). Thus, henceforth the word agent refers to journalistic institutions or non-news organizations that creates NBRTN and NBRFN, whereas the word sender refers to persons or organizations sharing NBRTN or NBRFN on Facebook.

The theoretical discussion of news suggests that NBRFN and NBRTN entails two fundamental differences. First, NBRTN are produced by well-known journalistic institutions, whereas NBRFN are produced by unknown non-news organizations. Second, the journalistic institutions (e.g. BBC) that publish NBRTN have to follow strict journalistic guidelines whereas creators of NBRFN manipulates and fabricates information in order to create seemingly relevant, interesting and extraordinary news that elicit strong emotions within consumers (Y. Chen et al., 2015; Tandoc Jr et al., 2018; Vosoughi et al., 2018). For example, as showed in the aforementioned examples about Pizzagate and KFC, NBRFN often contains narrative strategies, similar to those of urban legends, combined with visual stimuli presumably designed to elicit strong negative

emotions within targets (Fernback, 2003). The aforementioned findings by Vosoughi et al. (2018) about the emotional properties of false news also suggest that the ability to elicit strong emotions within targets is one of the main persuasive properties of NBRFN. Thus, I propose that the main process through which NBRFN impact CBBE is through elicitation of strong negative emotions.

Negative Emotions and Negative Brand-Related False and True News

Emotions. There is no consensus among emotion theorists on a definition of emotion, and several theories of emotion exists. From an appraisal-theory perspective, Bagozzi, Gopinath, and Nyer (1999) define emotions as “mental states of readiness that arise from cognitive appraisals of events or thoughts” (p. 184). That is, emotions (i.e. mental states of readiness) is a result of an evaluative judgement the consumer makes for something of relevance for his or her well-being. Something of relevance can for example be an incident that happens to the consumer (e.g. an unpleasant experience), or a change in a person, object or thought which has personal meaning for the consumer. Therefore, exposure to NBRFN or NBRTN can serve as an unpleasant experience for the consumer due to the presentation of adverse content. Furthermore, the brand of which the NBRFN or NBRTN makes negative assertions might have personal meaning for the consumer, and in such cases the negative assertions represents an unwanted change in that brand. However, the appraisal theory implies some degree of cognitive interpretation, and is what Izard (2007), from a differential emotions perspective, categorizes as *emotion schemas*, which refers to the processes associated with the dynamic interplay of basic emotions, appraisals, and cognition. *Basic emotions*, on the other hand, are distinct emotion feelings that involve bodily activity; which does not require complex appraisals or cognitive processes. Each basic emotion has a unique feeling component which is innate and consistent during the life span; and each emotion also has unique regulatory properties which modulate cognition and action. Based on accumulated evidence, Izard (2007) classifies six basic emotions—interest, joy, sadness, anger, disgust and fear—and argue that these are natural kinds (i.e. given by nature) evolved through evolution. It has also been established that these emotions, except from interest, have universal facial expressions (Ekman & Friesen, 1971). In short, emotion schemas consist of evolved emotion feelings and learned concepts and labels. Therefore, I propose that adverse visual stimuli presented by NBRFN have the potential to elicit basic emotions, which subsequently activates one or several emotion schemas, depending on the message and context. That is, when the emotion feeling is processed together with the message content, it might activate other feelings, and the target makes an evaluative judgement of the NBRFN itself and its association with the target brand. However, NBRTN does not employ as adverse stimuli as NBRFN since journalistic institutions has to report facts and follow journalistic guidelines. Thus, I expect NBRFN to activate stronger emotions in targets compared to NBRTN, which could increase persuasion.

Emotions in marketing. Several studies highlight the focal role of emotion in marketing and persuasion. For example, Lee, Amir, and Ariely (2009) stated that “the predictability of behavior relies more on emotion than what common conceptions of decision making might suggest” (p. 183) and demonstrated that a greater reliance on emotional reactions were associated with greater preference consistency and less cognitive noise. In their classical work on the ELM model, Petty and Cacioppo (1986) points to the importance of simple affective cues as determinants of attitudes when consumers’ prior knowledge or involvement is low. In another pioneer study exploring emotions within marketing, Batra and Ray (1986) provides a review of research on emotions, moods, and feelings, identifies 13 categories of affective responses (i.e. emotion schemas), and study three of these categories. Particularly, the two categories SEVA (i.e. active joy) and social affection (i.e. feelings of being loved) are found to be significant predictors of attitudes toward the ad, and to have a weak significant effect on attitudes toward the brand. In the subsequent year, Holbrook and Batra (1987), which advocates a broader view of emotions in marketing, demonstrates that the emotional dimensions *pleasure*, *arousal*, and *domination* mediates the effect of ad content on attitudes towards the ad and brand attitudes. Particularly, the dimensions pleasure and arousal, which consisted of emotions with positive valence, provided positive effects, whereas domination, which consisted of emotions with negative valence, produced a negative effect on attitude towards the ad and brand. According to Petty and Briñol (2015), emotions influences attitudes through low effort processes, such as classical conditioning, when consumers’ elaboration is low (i.e. low involvement), whereas when consumers’ elaboration is high (i.e. high involvement) the same emotions can in itself serve as arguments, or bias cognitive processes. Generally, emotions can also influence the amount of thinking and the extent to which the consumer relies on their thought processes.

Empirical research also suggest that emotions are focal determinants for consumer-brand relationships, since brand affect and brand trust positively influence purchase loyalty and attitudinal loyalty through the degree of brand attachment (Chaudhuri & Holbrook, 2001). Furthermore, the higher the brand attachment—which entails measures of the extent to which consumers feel emotionally bonded to the brand—the more willing the consumer is to forsake personal resources (i.e. engage in difficult behaviors) to maintain an ongoing relationship with the brand (Whan Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010). A high degree of brand attachment is also positively associated with actual purchase, purchase share, and need share. Additionally, consumers’ degree of *brand love*—which among other things consists of passion-driven behaviors, positive emotional connection, and positive overall attitude valence—has been found to predict brand loyalty, willingness to engage in positive WOM, question negative information, and favorable repurchase intentions (Batra, Ahuvia, & Bagozzi, 2012). Thus, the

consumer-brand relationship depends on favorable emotions (e.g. feelings of joy or happiness) to result in a positive CBBE (Keller, 2013).

Conversely, negative emotions might negatively influence CBBE. For example, Westbrook (1987) found negative affect—operationalized as a composite of contempt, anger, and disgust—to be negatively related to satisfaction and positively related to complaining and WOM. Similarly, Romani, Grappi, and Dalli (2012) found that consumers' negative emotions toward brands—dislike, anger, sadness, worry, embarrassment, and discontent—significantly predicted complaining, negative WOM, and switching. Additionally, Becheur and Das (2018) examined activation of differential emotions in response to shocking advertisements about drunk-driving consequences and their effects on persuasion. Findings revealed a four-dimensional structure of emotion schemas: (1) primary emotions (fear, anger, sadness), (2) self-conscious emotions (guilt, shame), (3) repulsion (contempt, embarrassment, disgust and repugnance), and (4) surprise. Repulsion had a negative effect, and primary emotions had a positive effect on persuasion. The findings also showed that the advertisement elicited surprise before all other emotions, and surprise further activated other emotions. The abovementioned studies suggest that consumers' tend to rely on emotion in information processing, and that consumers' emotions have the ability to predict both consumers' attitudes towards the brand and purchase intention, as well as actual consumer behavior, such as complaint behavior, WOM, and switching. All of these outcome variables are either included in or closely linked to the CBBE construct employed here. Therefore, I hypothesize that NBRFN and NBRTN will negatively influence CBBE through activation of negative emotions within targets. Nevertheless, NBRTN is limited by journalistic guidelines, whereas NBRFN employs manipulation and exaggeration to evoke strong emotions. Therefore, NBRFN are likely to activate stronger emotional reactions, and is thus likely to be perceived as a larger threat for the consumer compared to NBRTN. Furthermore, as aforementioned, Vosoughi et al. (2018) found that false news spread faster and deeper than true news, and suggest that consumers emotional reactions and the novelty of false news might explain this observation. Therefore, I hypothesize that the negative effect of NBRFN on CBBE is stronger than that of NBRTN, due to elicitation of a stronger negative emotional reaction.

In order to test these hypotheses, the present studies examine the extent to which NBRFN and NBRTN stories which makes assertions about a product-harm crisis (e.g. contaminated product) influences CBBE through the elicitation of the negatively valenced emotions of contempt, anger and disgust (CAD), which is often referred to as the *hostility triad* (Dawar & Pillutla, 2000; Izard, 1977). There are four reasons for this. First, recent examples, such as the KFC example, suggest that NBRFN designed to elicit the basic emotion disgust through assertions about contaminated products is common. Second, disgust often occur together with anger and contempt,

and form the negative-affect construct commonly used in marketing (Grappi, Romani, & Bagozzi, 2013). Third, similar to the claims about product-harm crises, the characteristics of these differential emotions involves attribution of causal agency to products and brands, which is relevant in a consumption context (Westbrook, 1987). Finally, the hostile nature of these three emotions can pose a large threat towards CBBE. Contempt can be described as a feeling of superiority and is believed to have evolved through evolution as a tool for preparing people to face a dangerous dispute, whereas anger can be seen as a response to a threat in which energy mobilizes rapidly to provide senses of courage, confidence, and power, and an impulse to strike out. Finally, disgust activates a revulsion response towards potential sources of contamination, and can be described as feelings of 'having a bad taste in one's mouth', or even feeling as if one is 'sick at the stomach' (Guido, Pino, & Peluso, 2018). Izard (1977) noted that "disgust combined with anger may motivate destructive behavior, since anger can motivate 'attack' and disgust the desire to 'get rid of'" (p. 89).

Core Disgust. Disgust is a basic emotion that might be directly evoked from mere perception of a given stimuli, and has been proposed as a relevant predictor of consumer behavior (Izard, 2007; Yi & Baumgartner, 2004). Several disgust dimensions have been identified, such as animals, food, body products, body envelope violations, sex, death, hygiene, and improbable contamination (Haidt, McCauley, & Rozin, 1994). Further, the three dimensions of animal, food, and body products together form the core disgust emotion, which can be described as a protector of the mouth against possible contaminations (Rozin, Lowery, Imada, & Haidt, 1999). Feelings of core disgust will typically be high if one nearly ingest an inappropriate substance (e.g. urine, ejaculate, feces, or a dead rat), or read a story about someone who did (Heath et al., 2001; Izard, 1992). Recent research within marketing by Guido et al. (2018) demonstrated that contamination-based disgust, which entails core disgust, reduced purchase intention towards toothpaste. Similarly, two experiments conducted by Shimp and Stuart (2004) show that consumers' level of felt disgust mediates the relationship between advertising content and purchase intention. Furthermore, Heath et al. (2001) manipulated disgust in the messages of urban-legends stories and found that people were more willing to share stories that elicited stronger disgust. These latter findings coincides with the findings of Vosoughi et al. (2018) that showed: false news, which typically inspires disgust, fear, and surprise, spread faster and to more people than true news, which inspires joy, sadness, trust, and anticipation. Therefore, because of the difference in the way in which NBRFN and NBRTN are produced, I hypothesize that NBRFN will lead to a stronger activation of the CAD emotions compared to NBRTN, which consequently will lead to a stronger negative effect of NBRFN on CBBE, than NBRTN. Thus, the following effects of NBRFN on CBBE is hypothesized:

H₁: (a) NBRFN has a negative effect on CBBE, and (b) the negative effect of NBRFN on CBBE is larger than that of NBRTN.

H₂: The effect of NBRFN on CBBE is mediated by activation of negative emotions (CAD). That is, the higher the activation of negative emotions (CAD), the higher the negative effect on CBBE.

H1 and H2 express the hypothesized focal role of negative emotions when assessing the persuasiveness of NBRFN and NBRTN. However, as previously mentioned, the case of NBRFN we focus on here entails a sender which shares the news on Facebook. Therefore, the source credibility of the sender might also influence the effects of NBRFN and NBRTN on CBBE.

Source Credibility of the Sender of Negative Brand-Related False and True News

Perceived source credibility is a multidimensional construct, which consists of the two dimensions *perceived source trustworthiness* and *perceived source expertise* (Hovland, Janis, & Kelley, 1953). Perceived source trustworthiness is the extent to which the observer perceives the source as being motivated to communicate valid assertions, whereas perceived source expertise is the extent to which the observer perceives the source as being capable of communicating valid assertions (Ohanian, 1990). The vast amount of studies that have examined the role of source credibility in marketing and in persuasion have demonstrated that high-credibility sources generally lead to more attitude change than low-credibility sources (Pornpitakpan, 2004). Source credibility can be classified as a simple affective cue, which can influence attitudes, especially when consumers' prior knowledge or involvement is low, or other instances where consumers employ heuristic processing (Chaiken, 1980; Petty & Cacioppo, 1986).

For example, perceived trustworthiness and expertise are important dimensions that account for the persuasive effects of celebrity endorsements, and the perceived source credibility of a celebrity which endorses the brand has been found to impact consumers purchase intention and attitudes towards the ad (Knoll & Matthes, 2017; Tripp, Jensen, & Carlson, 1994). Furthermore, a study by Czapinski and Lewicka demonstrated a positive bias effect for low-credibility sources, and a negative bias effect for high-credibility sources (as cited in Pornpitkpan, 2004, p. 253). That is, negative information was rejected more frequent than positive information when the source was perceived to have low credibility, whereas negative information had a higher impact than positive information when the source was perceived to have high credibility. These findings is consistent with those of Wegner, Wenzlaff, Kerker, and Beattie (1981) which found that negative direct incriminating claims were more persuasive when made by a high-credibility source, compared to a low-credibility source. Since both NBRFN and NBRTN entails negatively valanced assertions, I hypothesize that the negative effects of both NBRFN and NBRTN on CBBE,

through activation of negative emotions (CAD), will be stronger when the NBRFN story is shared by a sender with high source credibility, compared to a sender with low source credibility.

Grounded in emotion theory I propose that the particular type of NBRFN studied here triggers an immediate emotional feeling within targets, that activates further processing, in which consumers interpret the emotional schema together with the message content and other cues such as the credibility of both the agent that produced the news and the sender which shared the news. When consumers process that the news is shared by a high-credibility source, a higher credibility is attributed to the message and the immediate emotional feeling, than when the news is shared by a low-credibility source. Thus, I hypothesize that the source credibility of the sender moderates the impact from NBRFN through activation of negative emotions (CAD) on CBBE in the following way:

H₃: (a) Source credibility of the sender moderates the effect of negative emotions (CAD) on CBBE. That is, when NBRFN is shared by a high-credibility source, the activation of negative emotions (CAD) have a larger negative effect on CBBE, than when NBRFN is shared by a low-credibility source.

H3 imply a two-way interaction of negative emotions (CAD) and source credibility of the sender, in which high source credibility lead to larger negative effects of negative emotions (CAD) on CBBE, compared to low source credibility. Thus, elicitation of negative emotions paired with source credibility as an affective cue will increase persuasion especially for NBRFN. However, previous research suggest that the extent to which consumers possess and employ persuasion knowledge might serve as a boundary condition on the impact of NBRFN on CBBE (Scott, Mende, & Bolton, 2013).

Persuasion Knowledge and Negative Brand-Related False and True News

The Persuasion Knowledge Model holds that targets assess agents' *persuasion attempts* by employing a combination of their personal *persuasion knowledge*, *agent knowledge*, and *topic knowledge* (Friestad & Wright, 1994). A persuasion attempt refers to a target's perception of both the message, and the agent's strategic behavior (i.e. the agent's underlying motifs and goals), whereas agent knowledge entails the target's beliefs about the competencies, traits, and, goals of the agent. Unlike when consumers assess NBRTN from well-known journalistic institutions, consumers are not likely to hold relevant agent knowledge to assess the validity of assertions from NBRFN, since false-news webpages are short-lived (Allcott & Gentzkow, 2017). Topic knowledge, on the other hand, entails the target's beliefs about the topic of which the message makes assertions, which in our case is the brand. Unless consumers are very updated on the brand of which NBRFN makes assertions, consumers' personal topic knowledge (e.g. brand knowledge and conditions associated with its industry) might also prove to be less useful in assessing the

validity of assertions, because of the novelty associated with false news (Vosoughi et al., 2018). Therefore, the extent to which consumers possess and employ personal persuasion knowledge are likely to influence the aforementioned hypothesized effects.

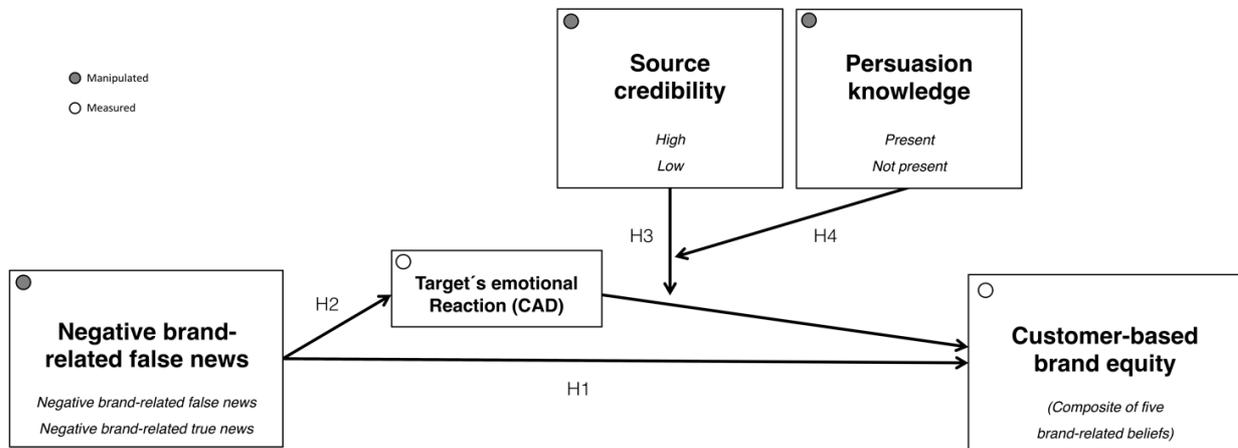
Persuasion knowledge is accumulated during the lifespan of the target through interaction with, and observation of, family, friends, co-workers, and marketers, and entails knowledge about how actors' can use different persuasion tactics to influence individuals' feelings, thoughts, and behaviors (Friestad & Wright, 1994). The consumer's persuasion knowledge works as a safeguard against the manipulative intent of the agent (M. C. Campbell, 1995). The concept of persuasion knowledge also coincides with recent results from Tandoc Jr et al. (2017) which implies that people rely on their own experience (e.g. persuasion knowledge) and their own judgement of the source and the message when assessing news. Furthermore, Scott et al. (2013) that found a seller's conspicuous consumption to increase behavioral intent towards the seller under exchange norms, discovered that when persuasion knowledge were salient these inferences were inhibited. Thus, the competence-signaling effect of conspicuous products such as expensive watches and cars disappeared when consumers based on their persuasion knowledge judged these conspicuous cues as possible persuasive attempts. Therefore, in line with the "change of meaning principle" described by Friestad and Wright (1994), I argue that the effects on CBBE resulting from the emotion-eliciting content of the news and the source credibility of the sender will change if consumers interpret these cues as part of a deliberate persuasive effort. That is, when persuasion knowledge is salient in consumers' minds about how creators of NBRFN attempts to persuade people to believe in falsehoods by appealing to people's emotions, consumers will recognize the news as a persuasion effort and resist persuasion. Therefore, I hypothesize that persuasion knowledge leads consumers to process the content and the sources with higher scrutiny and susceptibility. This higher scrutiny is likely to decrease the effects of negative emotions (CAD) evoked by NBRFN on CBBE in general, but also to decrease the amplifying effect of high source credibility on the relationship between negative emotions (CAD) and CBBE.

H₄: (a) When persuasion knowledge is absent, the hypothesized effects of H1, H2 and H3 will occur. When persuasion knowledge is present, the effect of negative emotions on CBBE is reduced, relative to when persuasion knowledge is absent, and the amplifying effect of high source credibility on the relationship between negative emotions (CAD) and CBBE is decreased.

H4 predicts a two-way interaction between negative emotions (CAD) and persuasion knowledge, and a three-way interaction of negative emotions (CAD), source credibility of the sender, and persuasion knowledge. If supported, the hypotheses provides evidence for a potential boundary condition on the phenomenon of NBRFN and can serve as a basis for consumer policy.

These four hypotheses together form the Conceptual Model (Figure 1), which is tested in the present Study 2.

FIGURE 1
Conceptual Model: The Persuasiveness of Brand-Related False News



Perceived Credibility. Tybout, Calder, and Sternthal (1981) argue that consumers are affected by rumors not because the consumers believe them, but because the rumors are processed and stored in consumers' memory by rehearsal. The aforementioned theorizing rests on the same assumption, namely that NBRN affects consumers, not necessarily because the news is believed, but because emotional schemas, messages and credibility cues are processed. However, since NBRFN is produced by relatively unknown non-news organizations and NBRTN is produced by well-known journalistic institutions, they might differentially influence consumers' overall credibility perception of the news (Pornpitakpan, 2004). Recent results from Tandoc Jr et al. (2017) implies that people rely on their own experience (i.e. "gut feeling") and their own judgement of the source and the message when assessing news. Furthermore, perceived realism have been found to mediate the effect of fake news and individuals attitudes towards politicians (Balmas, 2014). Similarly, advertising credibility has been found to mediate the relationship between ad content and brand attitudes (MacKenzie & Lutz, 1989). Therefore, I will control for the extent to which consumers' perceive the news stories as credible.

Now that the conceptual framework is outlined, I proceed to the methodology chapter which explains the research type and design, method for data collection, sampling method and considerations associated with validity and reliability for both of the two studies.

CHAPTER III: METHODOLOGY

Research Type, Research Design and Method for Data Collection

The phenomenon of NBRFN is relatively new. Therefore, I initially conducted an exploratory and qualitative data collection, using online interviews, where I asked marketing practitioners and professors open questions about their familiarity and thoughts about NBRFN. The most interesting findings have guided my theorizing above.

NBRFN often target well-known brands, because adverse content about such brands are likely to stimulate more clicks and subsequent advertising revenues. Therefore, to ensure a high degree of realism, I have chosen to use Coca-Cola as the target brand in the studies. Furthermore, to test the abovementioned hypothesized causal relationships, this conclusive research is quantitative and employs a casual design (Malhotra, 2010, p. 113). Particularly the method for data collection entails two experimental surveys, that employs a pretest-posttest control group design, in which CBBE is measured before and after the experimental treatment. The pretest-posttest control group design enables control of most extraneous variables to ensure internal validity and is especially relevant because of the use of a real brand.

The three different data collections reflect my research process. The initial phase was exploratory and focused on defining the NBRFN concept and subsequent theorizing. The second phase extends the exploratory findings by testing the hypothesized casual relationships between NBRFN, negative emotions (CAD), source credibility of the sender, persuasion knowledge, and CBBE. Study 1 pretest two different manipulations of NBRFN and source credibility, and also serves as a direct-effect study of NBRFN on CBBE. Study 2 tests the hypothesized interaction effects between negative emotions (CAD), source credibility of the sender, and persuasion knowledge on CBBE.

Sampling Method

The target population for this research is American Consumers. The data for both studies were collected through Amazon Mechanical Turk, in which members of the crowd-sourcing platform participated in the studies and received a modest payment. The use of Amazon Mechanical Turk provides satisfactory data quality and have been found to be more representative compared to other convenience samples (Buhrmester, Kwang, & Gosling, 2011; Goodman, Cryder, & Cheema, 2013). This form of convenience sampling is a non-probability sampling technique, that do not entail chance selection, which has limited external validity. Nevertheless, this sampling strategy is judged as satisfactory since the present studies are pilot studies, whose main focus is to establish the existence of a causal relationship between NBRFN and CBBE (Malhotra, 2010).

The sample sizes were defined based on qualitative assessments of the nature of the research and analysis, number of variables, resource constraints, and number of participants used in similar studies (Malhotra, 2010). In the following sections, the methodology for Study 1 and Study 2 is explained in detail.

Study 1: The Direct Effect of NBRFN on CBBE

Participants, Design and Procedure

Sixty-one-participants from the US were recruited to Study 1 through Amazon Mechanical Turk and received a payment of \$0.45 each after submission of their response. The participants were randomly assigned to one of the two NBRFN conditions (core disgust vs. righteous anger). First, participants answered questions about their brand attitudes, brand desirability, perceptions of quality, brand trust, and brand purchase likelihood associated with Coca-Cola (pre-measure of CBBE), before they were exposed to one of the two NBRFN stories about Coca-Cola (Appendix 1). Immediately after exposure, participants were asked to “write 2-5 sentences that describe your immediate thoughts and feelings associated with the news you just watched”. Thereafter, participants were asked to rate the extent to which they agreed with several adjectives associated with seven negative differential emotions—contempt, anger, disgust, fear, guilt, shame, and distress—and the neutral emotion of surprise. The eight emotions were measured by three adjectives each, and the eight sets of three adjectives were organized in blocks and presented in a random order to avoid response order bias. After the rating of emotions, participants were randomly assigned to either the high or low source-credibility condition (Appendix 2). Immediately after exposure, participants were asked to “please consider the source you just viewed and imagine that you received a consumer advice by it”, and then rated their opinion about the source’s expertise and trustworthiness. Then, the participants again answered questions about their brand attitudes, brand desirability, perceptions of quality, brand trust, and brand purchase likelihood associated with Coca-Cola (post-measure of CBBE). Finally, participants answered some demographical questions about age, gender and social media usage, and answered questions measuring persuasion knowledge.

At the end of the questionnaire the participants were presented to a disclaimer which stated that: “All of the visual compositions (e.g. news-stories, Facebook posts, Facebook profiles, and Facebook pages) presented to you in this questionnaire are completely fictitious and have been constructed solely for the purpose of this research. I want to stress that the news presented here never have happened, and therefore they do not apply to the Coca-Cola company”. The full questionnaire of Study 1 can be viewed in Appendix 9.

Manipulation

Core Disgust and Righteous Anger. The two manipulations of NBRFN appeared as a news-article, from the web address now8news.com, that is shared by a person on Facebook. In the core-disgust condition, the Facebook post contained one picture of a woman drinking from a large Coca-Cola bottle, and a picture of the bottom of a soda bottle with something lumpy inside. Furthermore, the following text statement, which is adapted from Heath et al. (2001), appears in the pictures: "I swallowed something lumpy and saw that there were pieces of a dead rat inside the bottle". Additionally, the pictures and the statement are accompanied by the following headline: "FDA investigates Coca-Cola after Helen Franklin (56) swallowed pieces of a dead rat when drinking from a Coca-Cola bottle." Conversely, in the righteous-anger condition the Facebook post contained two pictures. The first picture shows a little boy, which is covered in mud, and sitting on sugar canes. The other picture shows six Coca-Cola glass bottles. The pictures are accompanied with the following headline: "US Dept. of Labor investigates Coca-Cola for child labor as several children were found dead after a fire at a Coca-Cola sugar farm in El Salvador".

Source Credibility. Previous academic literature indicates that women are perceived as more trustworthy than men (Boltz, Dyer, & Miller, 2010). Therefore, both credibility conditions included in Study 1 entailed pictures of women (Appendix 2). The high-credibility condition entailed exposure to the Facebook page of a fictitious consumer organization named Consumer Support, which were designed to look like Consumer Report by displaying the mission statement of Consumer Report and similar visual material. Conversely, the low-credibility condition entailed exposure to the Facebook profile of the young fictitious Mary Williams that is said to be a cashier at Walmart from Queens New York, that Went to John Adams High School, and which represents an average consumer.

Measurement

Dependent Variable. CBBE were operationalized using the aforementioned composite construct adopted from Dawar and Pillutla (2000) which includes the following five brand-related beliefs: (1) brand attitudes, (2) brand desirability, (3) perceptions of quality, (4) brand trust (dependability, reliability and trustworthiness) and (5) brand purchase likelihood. Both the pre- and post-measures of CBBE were measured using the items and scales displayed in Table 2.

Differential Emotions. In Study 1, the eight differential emotions were measured using sets of three adjectives (items) for each emotion, in which participants indicated the extent to which they agreed on a seven-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neither agree nor disagree; 5 = somewhat agree; 6 = agree; 7 = strongly agree). The multi-item constructs of contempt (contemptuous, scornful, disdainful), anger (mad, angry, very

annoyed), disgust (disgusted, feeling distaste, feeling revulsion) and fear (threatened, scared, fearful) were adopted from Grappi et al. (2013), whereas distress (discouraged, downhearted, sad), guilt (gilt, blameworthy, repentant), and surprise (amazed, astonished, surprised) were adopted from Fuenzalida, Emde, Pannabecker, and Stenberg (1981), and is identical to the original operationalization by Izard (1977). Finally, the multi-item construct of shame (ashamed, disgraced, humiliated) were adopted from Mosher and White (1981).

TABLE 2
Constructs, Items and Scales included in the
Composite Measure of Customer-Based Brand Equity

Construct	Item	Scale
Brand Attitudes (multi-item)	1) How will you describe your attitude towards the Coca-Cola brand?	unfavorable – favorable bad – good negative – positive
Brand Desirability	2) How desirable do you find the Coca-Cola brand to be?	not at all desirable – very desirable
Perceptions of Quality	3) How will you describe the overall quality of the Coca-Cola <u>brand</u> ?	low quality – high quality
	4) How will you describe the overall quality of the <u>products</u> provided by the Coca-Cola brand?	low quality – high quality
Brand Trust (multi-item)	5) How will you describe your trust towards the Coca-Cola brand?	not at all trustworthy – very trustworthy not at all dependable – very dependable not at all reliable – very reliable
Brand Purchase Likelihood	6) How likely is it that you will purchase a product from the Coca-Cola brand during the next week?	not at all likely – very likely

NOTE: All the items are measured on seven-point bipolar scales, which imply ordinal scales, that is assumed to have equal distance between each point and is therefore treated as interval scales in the subsequent statistical analyses.

Source Credibility. To conduct a manipulation check of source credibility in Study 1, a 10-item semantic differential scale measuring source trustworthiness and source expertise were adopted from Ohanian (1990). The following five items were used to measure source trustworthiness: dependable-undependable; honest-dishonest; reliable-unreliable; sincere-insincere; trustworthy-untrustworthy, whereas source expertise was measured using the five items of: expert-not an expert; experienced-inexperienced; knowledgeable-unknowledgeable; qualified-unqualified; skilled-unskilled.

Persuasion Knowledge. Measures of persuasion knowledge were included in Study 1 for descriptive purposes and were adapted from Scott et al. (2013). Participants were asked to indicate on a 7-point Likert scale the extent to which they agreed with the following two statements: “People are constantly trying to trick me in social media”, and “I must be vigilant about detecting deceptions in social media”.

Study 2: The Persuasiveness of NBRFN

Participants, Design and Procedure

Two-hundred-fifty-two participants from the US were recruited through Amazon Mechanical Turk and were given a payment of \$0.60 each, after completion of the survey. The participants were randomly assigned to one of the eight conditions, in a 2 (negative brand-related false news: NBRFN vs. NBRTN) x 2 (source credibility of the sender: high vs. low) x 2 (persuasion knowledge: present vs. not present) between-subjects factorial design.

Identical to Study 1, participants first answered questions about their brand attitudes, brand desirability, perceptions of quality, brand trust, and brand purchase likelihood associated with Coca-Cola (pre-measures of CBBE). Second, each participant read either an article about the emerging phenomenon of fake news (presence of persuasion knowledge), or an article about the working day of the average journalist (absence of persuasion knowledge). Third, participants were exposed to either the fictitious Facebook page of Consumer Support (high-credibility condition) or the fictitious Facebook profile of the consumer Mary Williams (low-credibility condition). Before exposure to the article and before exposure to the Facebook account, participants were instructed to “please read the content carefully and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.” After viewing the source credibility manipulation, participants were informed that “on the next page you will see a recent news story about Coca-Cola that were shared by Consumer Support [Mary Williams] on Facebook. Please read the story carefully and use at least 10 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.” Following this message, each participant was exposed to either a NBRFN or NBRTN story, shared by either Consumer Support or Mary Williams. The source sharing the news were determined by the initial exposure. That is, all participants initially exposed to the Facebook page of Consumer Support received either a NBRFN or NBRTN message shared by Consumer Support, and the opposite applied to participants exposed to Mary Williams.

Immediately after exposure to the news stories, participants were asked to rate the extent to which they agreed with three adjectives for each of the five emotions contempt, anger, disgust, fear and surprise. The three sets of three adjectives associated with the hostility triad were organized in blocks and presented in a random order to avoid response order bias, whereas surprise and fear were measured after the CAD-emotions. After the rating of emotions, the participants again answered questions about their brand attitudes, brand desirability, perceptions of quality, brand trust, and brand purchase likelihood associated with Coca-Cola (post-measures of CBBE). Thereafter, participants assessed three items measuring the control variable of perceived credibility of the news, and answered questions included in the manipulation checks of persuasion knowledge and source credibility. Then, participants indicated whether they believed the news story they just watched to be true or false, and stated their degree of certainty associated with that belief. Finally, participants were asked to “write 2-5 sentences that describe your immediate thoughts and feelings associated with the news you just watched”, before answering some demographical questions about age, gender and social media usage.

Similar to Study 1, at the end of the survey the participants were presented to the same disclaimer as described above. The full questionnaire of Study 2 can be viewed in Appendix 10.

Manipulations

Persuasion Knowledge. Presence of persuasion knowledge was manipulated using an article (Scott et al., 2013). In the persuasion-knowledge condition, participants read an article with 264 words about the emerging phenomenon of fake news about politicians, celebrities and brands. The article was designed to raise suspicion about persuasion attempts by discussing how writers of fake news use fabrication and exaggeration to appeal to peoples’ emotions. In the control condition, participants read an article with 264 words about the daily life of the average journalist. The two articles were pretested prior to Study 2 and can be found in Appendix 4. The questionnaire used to pretest persuasion knowledge can be found in Appendix 11.

Negative Brand-Related News. The NBRFN condition was identical to the core-disgust condition used in Study 1, whereas the NBRTN condition was an actual story from bbc.com with the headline “Police investigates ‘human waste in Coca-Cola cans’”, which were adapted to fit the study format. Both the news stories can be viewed in Appendix 4.

Source Credibility of Sender. The source-credibility manipulation was identical to that of Study 1. In the high source-credibility condition, participants viewed the fictitious Facebook page of Consumer Support, whereas in the low source-credibility condition participants viewed the fictitious Facebook profile of Mary Williams. Both stimuli can be viewed in Appendix 2.

TABLE 3
Factor level settings for Study 2

<u>Independent Variable A: Negative Brand-Related False News</u>				
A1: Negative Brand-Related False News (NBRFN)			A2: Negative Brand-Related True News (NBRTN)	
<u>Independent Variable B: Source Credibility</u>			<u>Independent Variable B: Source Credibility</u>	
B1			B1	
B2			B2	
<u>Independent variable C:</u> <u>Persuasion Knowledge</u>	A1 = NBRFN	A1 = NBRFN	A2 = NBRTN	A2 = NBRTN
	C1 B1 = High S.C.	B2 = Low S.C.	C1 B1 = High S.C.	B2 = Low S.C.
	C1 = PK present	C1 = PK present	C1 = PK present	C1 = PK present
	A1 = NBRFN	A1 = NBRFN	A2 = NBRTN	A2 = NBRTN
	C2 B1 = High S.C.	B2 = Low S.C.	C2 B1 = High S.C.	B2 = Low S.C.
	C2 = PK not present	C2 = PK not present	C2 = PK not Repeated	C2 = PK not present

Measurement

Dependent Variable. CBBE as the dependent variable were operationalized in the same way as in Study 1, by using the items and scales displayed in Table 2.

Differential Emotions. The mediator negative emotions (CAD) were measured on a seven-point Likert scale using the same multi-item operationalization of contempt, anger, and disgust as in Study 1, with items and scales adopted from Grappi et al. (2013).

Control Variables. The control variable perceived credibility of the news was measured using three semantic differential items (unconvincing 1-7 convincing; unbelievable 1-7 believable; unbiased 1-7 biased), adopted from MacKenzie and Lutz (1989). Since the extent to which participants believe the news or not can be considered a potential extraneous variable, a dichotomous measure of belief (True/False) were included. Furthermore, participants were also asked to state their degree of certainty associated with their belief on a seven-point Likert scale (1 = very uncertain; 2 = uncertain; 3 = somewhat uncertain; 4 = neither certain nor uncertain; 5 = somewhat uncertain; 6 = certain; 7 = very certain).

Scales for Manipulation Checks. Perceived source credibility were measured as in Study 1, by using the 10-items adopted from Ohanian (1990). Since persuasion knowledge is a broad concept, operationalization of situational persuasion knowledge relies on the researcher, and the specific context and nature of the study (Ham, Nelson, & Das, 2015). However, since I manipulated persuasion knowledge similar to Scott et al. (2013) I adapted their manipulation check to fit a news context, consisting of the following two statements: “I must be vigilant about detecting deceptions by authors of fake news stories online” and “Authors of fake news stories are constantly trying to trick readers”. The extent to which participants agreed with the statements were measured on a seven-point Likert scale (1 = Strongly disagree; 7 = Strongly agree). Finally, inference of

manipulative intent was also measured as part of the manipulation check for persuasion knowledge. I adapted the original scale from M. C. Campbell (1995), as displayed in Table 4, to make it fit the false news context.

TABLE 4
Adaption of Items Measuring Inference of Manipulative Intent

Original (M. C. Campbell, 1995)	Adapted
<p>Items</p> <p>* (1) The way this ad tries to persuade people seems acceptable to me.</p> <p>(2) The advertiser tried to manipulate the audience in ways that I don't like.</p> <p>(3) I was annoyed by this ad because the advertiser seemed to be trying to inappropriately manage or control the consumer audience.</p> <p>* (4) I don't mind this ad; the advertiser tried to be persuasive without being excessively manipulative.</p> <p>* (5) This ad was fair in what was said and shown.</p> <p>* (6) I think that this advertisement is unfair/fair.</p>	<p>* (1) The way this news story tries to persuade people seems acceptable to me.</p> <p>(2) The news story tried to manipulate the audience in ways that I don't like.</p> <p>(3) I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience.</p> <p>* (4) I don't mind this news story; the author tried to be persuasive without being excessively manipulative.</p> <p>* (5) This news story was fair in what was said and shown.</p> <p>* (6) I think that this news story is fair.</p>
Measures	<i>Likert scale: (Strongly disagree - 7 Strongly agree)</i>

*NOTE: * = reverse coded items. Thus, high scores on items 2 and 3 together with low scores on item 1, 4, 5, and 6 indicate high IMI.*

Different approaches to the reverse coding were evident in past research. Therefore, I contacted professor Campbell on Research Gate, who clarified that the abovementioned reverse coding is in line with the original paper.

Methodology for Data Analysis

Reliability and Validity

The choice of a pretest-posttest control group design has been made in order to increase internal validity. Particularly, by controlling for extraneous variables by assigning participants to the experimental groups by randomization, and by measuring pre-measures of CBBE, belief, certainty and perceived credibility of the news (Malhotra, 2010). Furthermore, the order in which variables are measured has also been carefully designed to enable causal inference about the hypothesized relationships between variables. Additionally, choosing Facebook as the context in which participants receive the story, and the choice of sampling strategy, have been made to enhance ecological validity. That is, the participants completed the questionnaire online on their own computer and viewed the NBRFN stories in a Facebook format which mimics real-life.

Researchers also has the responsibility for using reasonably valid and reliable scales (Malhotra, 2010). Reliability is the degree to which a scale produces consistent results if measurements are repeated, and validity is the degree to which differences in the observed scores on the scale truly reflects differences among objects on the phenomenon being measured. Qualitative assessments of construct and content validity as well as internal consistency reliability were initially made when choosing the scales included in this research. That is, all the measurement scales for the focal constructs are established scales which have been chosen from previous

research. After the data collection, calculations of the Cronbach's alpha associated with each multi-item scale were made to measure internal consistency reliability. Finally, exploratory factor analyses were performed and interpreted based on an a-priori determined numbers of factors specified theory, to assess the validity of the scales.

Explanation of Planned Hypothesis Testing

Study 1. Independent samples t-tests were used to test the between-group differences of CBBE in the core-disgust and righteous-anger group. Three simple linear regressions using least squares were conducted to test the between-subjects' difference between the high and low source credibility conditions, by regressing source credibility, trustworthiness, and expertise on a high-source-credibility dummy variable. Finally, paired samples t-tests were conducted in order to check within-subject difference between the pre- and post-measure of CBBE, which served as a test of H1a.

Pretest of persuasion knowledge. After the data was collected for the pretest of persuasion knowledge, two linear OLS regressions were estimated in which the presence of persuasion knowledge condition as a dummy variable predicted two measures of persuasion knowledge. The measures of persuasion knowledge were adapted from Scott et al. (2013), and were the same as used in Study 1.

Study 2. To test the hypothesized casual relationships of the conceptual model I primarily used the PROCESS macro for SPSS, which is developed by Andrew Hayes (2018). However, in order to test H1a, paired samples t-tests were first conducted in order to check within-subject difference between the pre- and post-measure of CBBE. Thereafter, the analysis process was divided into two steps, in which Model 4 first was calculated to test for the mediation effect of CAD on the relationship between NBRFN and CBBE (H2). Thereafter, Model 18 was used to test the conceptual model by estimating a second stage moderated moderated mediation model (Hayes, 2018). The model consists of the following two separate OLS regression models

$$(1) \hat{M} = i_M + a_1X$$

$$(2) \hat{Y} = i_Y + c_1X + b_1M + b_2W + b_3Z + b_4MW + b_5MZ + b_6WZ + b_7MWZ$$

where a is the effect of X on M , b_1 is the effect of M on Y , and c_1 is the direct effect of X on Y . The dichotomous variables NBRFN, source credibility, and persuasion knowledge were coded as dummy variables (such that NBRFN = 1, high source credibility = 1, and presence of persuasion knowledge = 1), the mediator was mean centered, and the control variable perceived credibility were added as a covariate. Thus, the two regression models for my conceptual model is as follows:

$$(3) \widehat{CAD} = i_M + a_1NBRFN + a_2PC$$

$$(4) \widehat{CBBE} = i_Y + c_1NBRFN + b_1CAD + b_2HighCred + b_3PK + b_4CAD * HighCred + b_5CAD * PK + b_6HighCred * PK + b_7CAD * HighCred * PK + b_8PC$$

CHAPTER IV: RESULTS

Reliability and Validity

Reliability

In both studies, reliability analyses were carried out for each of the focal constructs after the initial re-coding of variables. Table 5 displays the Cronbach's alpha scores associated with each of the focal constructs across the two studies.

TABLE 5
Cronbach's Alpha Reliability measures for the focal constructs

Construct	Number of items	Cronbach's Alpha	
		Study/Pretest 1 <i>n</i> = 61	Study 2 <i>n</i> = 252
Brand Attitude (Pre)	3	0.97	0.97
Brand Attitude (Post)	3	0.97	0.98
Quality Perceptions (Pre)	2	0.89	0.95
Quality Perceptions (Post)	2	0.92	0.98
Brand Trust (Pre)	3	0.93	0.95
Brand Trust (Post)	3	0.95	0.98
CBBE (Pre)	10	0.96	0.97
CBBE (Post)	10	0.97	0.98
Contempt	3	0.94	0.92
Anger	3	0.93	0.92
Disgust	3	0.98	0.94
Surprise	3	0.91	0.81
Fear	3	0.91	0.96
Guilt	3	0.95	-
Shame	3	0.95	-
Distress	3	0.86	-
Source Trustworthiness (ST)	5	0.92	0.96
Source Expertise (SE)	5	0.95	0.97
Source Credibility (SC)	10	0.94	0.96
Inference of Manipulative Intent (IMI)	6	-	0.90
Persuasion Knowledge (Original by Scott et al. 2013)	2	0.84	-
Persuasion Knowledge (Adapted)	2	0.87	0.76

As seen in Table 5, all multi-level items have a Cronbach's Alpha above .70 and therefore seem to be reliable measures of the focal constructs. As aforementioned, all scales were adopted from theory, except for the IMI scales and the persuasion knowledge scales. The adapted

persuasion knowledge measure is a general measure of persuasion knowledge and were changed before Study 2. The adoption of the IMI scales is successful with a Cronbach's Alpha of .90, whereas the change of the adapted general persuasion knowledge scales is less efficient due to the decrease in Cronbach's Alpha from Study 1 to Study 2. Therefore, this general persuasion knowledge measure will be used in analysis with caution. Nevertheless, the IMI construct serves as the main measure of persuasion knowledge and is used as the manipulation check for persuasion knowledge in Study 2.

Validity

The construct validity associated with each of the focal constructs were assessed using exploratory factor analysis, with Principal Component Analyses (PCA) as extraction method, which were interpreted based on a-priori determined numbers of factors specified theory. Validity tests were conducted on all studies, but to ensure efficiency only the validity tests conducted on the data from Study 2 are reported here. The analysis outputs of the factor analyses carried out on the data from Study 2 can be viewed in Appendix 6.

Construct validity of CBBE. In order to assess the construct validity of the dependent variable CBBE, all the 10 variables associated with the six items displayed in Table 2 were included in the PCA. Bartlett's test of sphericity, which is a test of overall significance for all correlations within the correlation matrix, was significant ($\chi^2(45) = 3508.74, p < .001$), and the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) were in the "very good" range at .93, which indicates strong relationships between variables. Thus, it is meaningful to conduct a factor analysis on this set of variables. Furthermore, inspections of anti-image correlations reveal that all measures of sampling adequacy (MSA) is greater than .84, which is well above the cut-off value of .50, and all original variables have high communalities, which suggests that each original variable shares a high amount of variance with all of the other variables which is included in the analysis. Only one factor yields an eigen value above one and this factor alone accounts for 79.98% of variance. Therefore, on the basis of theory, percent of variance explained, and the scree plot we arrive at a one-factor solution (Dawar & Pillutla, 2000). Thus, no rotation is needed, and the CBBE construct appears to be a valid measure of the concept. After this analysis, three composite measures were made, the first in which the 10 pre-measured items formed a pre-CBBE composite variable, and the second in which the 10 post-measured items formed a post-CBBE composite variable. Finally, the pre-CBBE composite variable was subtracted from the post-CBBE composite variable to form a change-in-CBBE variable.

Construct validity of source credibility. In order to assess the construct validity of the source-credibility construct, all the 10 variables associated with the two source-credibility

dimension, source expertise and source trustworthiness, were included in the PCA. Bartlett's test of sphericity was significant ($\chi^2(45) = 3314.87, p < .001$), and the KMO was in the "very good" range at .93, which indicates strong relationships between variables. Thus, it is meaningful to conduct a factor analysis on this set of variables. Furthermore, inspections of anti-image correlations reveal that all measures of sampling adequacy (MSA) is greater than .89, and all the original variables have high communalities. A two-factor solution is suggested in which Factor 1 explains 74.72% of variance and Factor 2 explains 13.03% of variance. Since the source trustworthiness and source expertise are closely related, I choose to use oblique rotation (Promax, Kappa = 4), in which the factors are allowed to correlate (Ohanian, 1990). Inspection of the pattern matrix shows that the source-trustworthiness variables load onto one factor with high factor loadings, whereas the source-expertise variables load onto another factor with high factor loadings. Consequently, it seems appropriate with a two-factor solution, and thus the 10-items are valid measures of Source Trustworthiness and Expertise. After this analysis, two composite measures were made, one for Expertise and one for Trustworthiness. Thereafter, these two composite measures were averaged to form the Source Credibility variable, to use for the manipulation check of source credibility.

Construct validity of IMI. In order to assess the construct validity of the adapted IMI construct, all the six variables associated with the construct, were included in the PCA. Bartlett's test of sphericity was significant ($\chi^2(15) = 1220.87, p < .001$), and the KMO was in the "good" range at .83, which indicates strong relationships between variables. Thus, it is meaningful to conduct a factor analysis on this set of variables. Furthermore, inspections of anti-image correlations reveal that all measures of sampling adequacy (MSA) is greater than .75, and all the original variables have high communalities. A two-factor solution is suggested by the scree plot, in which Factor 1 explains 67.30% of variance and Factor 2 explains 17.153% of variance. However, since theory suggests that all items should be correlated, I choose to conduct the analysis again using oblique rotation (Promax, Kappa = 4). Inspection of the rotated component matrix reveal that it is just the two items (2 and 3) which has not been reverse coded that load on the second factor. Since we are treating ordinal data as measured on an interval scale, it is likely that SPSS is overestimating the number of factors (Baglin, 2014). Additionally, theory predict that these items should form one factor, and I also suspect that the two items that is not reverse-coded load on a second factor because they share this methodological communality (M. C. Campbell, 1995). Therefore, I finally extracted based on a fixed number of factors, namely one. In the final one-factor solution both item 2 and 3 have factor loadings above .66 which I view as sufficient since the scales are drawn from theory. After this analysis an IMI composite variable were computed based on the six items, which serves as the focal variable in the manipulation check of

the persuasion-knowledge manipulation. The IMI measure was coded such that a high score indicates high inference of manipulative intent.

Construct validity of differential emotions. In order to assess the construct validity of the adopted measures of the five differential emotions, all fifteen items were included in the PCA. Bartlett's test of sphericity was significant ($\chi^2(105) = 3171.62, p < .001$), and the KMO was in the "good" range at .87, which indicates strong relationships between variables. Thus, it is meaningful to conduct a factor analysis on this set of variables. Furthermore, inspections of anti-image correlations reveal that all measures of sampling adequacy (MSA) is greater than .75, and all the original variables have relatively high communalities. The eigen-value-above-one rule of thumb suggests a four-factor solution. However, interpretation of the scree plot shows that the elbow happens after component number 5, as the 5th factor has an eigenvalue very close to one. Since differential emotions theory advocates the use of distinct emotions, orthogonal rotation was used. Inspection of the rotated component matrix shows that disgust, surprise, and fear load onto separate factors with high factor loadings, whereas contempt and anger load onto the same factor. This is not completely unexpected, since theory suggests that anger and contempt is closely related. Nevertheless, since differential emotions theory suggests five factors and since the fifth factor has an eigenvalue very close to one, namely .81, accounts for 5.39% of the variance, and raises the cumulative variance from 81.19% to 86.58% I decided to conduct a final estimation using a fixed number of five factors (Izard, 1977). The rotated component matrix of the final extraction with five fixed factors shows that the items associated with each of the five differential emotions loads onto one factor each. The factors explain 19.69%, 19.41%, 17.19%, 15.52%, and 14.77% of the variance, respectively. Therefore, on the basis of theory, I decided to go for the five-factor solution, and consequently composite variables were computed for each of the five differential emotions, using the three items associated with each emotion (Romani et al., 2012).

Results: Study 1

Descriptive Statistics

In the total sample of 61 participants, 39% are female and 61% are male, the mean age is 38.11 years ($SD = 13.64$), and none of the responses are missing. The mean exposure time for the 32 participants that were exposed to the righteous-anger condition was 27.53 seconds, whereas mean exposure time was 24.62 for the 29 participants that were exposed to the core-disgust condition. Furthermore, inspection of frequencies associated with social media usage (Appendix 5) show that the majority of the sample are frequent users of Facebook and YouTube, and that the usage frequency of Instagram, Twitter, Reddit, and Google+ are diverse, whereas the majority of

the sample answered that they never use Snapchat and LinkedIn. Finally, 49.18% of the participants answered either strongly agree or agree on the following statement: “I must be vigilant about detecting deceptions in social media”. Thus, the descriptive analysis suggest that the majority of participants are frequent users of social media and are skeptical to information received online.

Comparing pre- and post-measures of Customer-Based Brand Equity

Customer-Based Brand Equity. Paired samples t-tests were used to test the difference between pre- and post-measures of the CBBE composite variable, both in the sample, and in each condition separately. First, the sample-post-measures of CBBE ($M = 4.07$, $SD = 1.76$) were significantly lower than the pre-measures ($M = 4.80$, $SD = 1.49$), $t(60) = 4.80$, $p < .001$. Second, the post-measures of CBBE ($M = 4.15$, $SD = 1.84$) were significantly lower than the pre-measures ($M = 5.09$, $SD = 1.26$), $t(28) = 3.63$, $p = .001$, also in the core disgust condition. Third, the same effect appears in the righteous anger condition, where the post-measures of CBBE ($M = 4.00$, $SD = 1.70$) is significantly lower than the pre-measures ($M = 4.54$, $SD = 1.65$), $t(31) = 3.21$, $p = .003$. Thus, the statistically significant decrease in CBBE holds for both the sample, and for the two conditions in isolation. These results provide support for H1a, which states that NBRFN has a negative effect on CBBE.

Finally, paired samples t-tests executed on each of the six components of the CBBE variable, which is displayed in Table 6, shows that participants’ brand attitudes, brand trust, perceptions of quality, and brand purchase likelihood significantly decreased as a result of exposure to the stimuli. These are interesting results, especially since several of the participants expressed doubt concerning the validity of the NBRFN when writing their associations immediately after exposure (Appendix 3).

TABLE 6
Comparison of pre- and post-measures of the CBBE dimensions

Variable	Time of Measurement				Paired Differences		
	Pre-Measure		Post-Measure		<i>M</i>	<i>(SD)</i>	<i>t</i>
Brand Attitude	4.84	(1.62)	4.02	(1.95)	0.81	(1.50)	4.236**
Brand Desirability	4.39	(2.08)	3.82	(2.15)	0.57	(1.64)	2.736*
Perceptions of Quality	4.94	(1.46)	4.26	(1.86)	0.68	(1.49)	3.575**
Brand Trust	4.96	(1.51)	4.20	(1.83)	0.77	(1.27)	4.711**
Purchase Intention	4.38	(2.24)	3.72	(2.24)	0.66	(1.52)	3.380*

Note: $df = 60$ for all tests. * $p < .05$, ** $p < .001$

Results from Pretests of Source Credibility and NBRFN

Source Credibility. The three regressions that were performed to test the manipulations of source credibility are displayed in Table 7. The high-credibility treatment yielded significantly higher ratings on source credibility and the sub-dimension source expertise, compared to the low-credibility condition. The high-credibility condition did also yield higher scores on the source trustworthiness variable, than the low-credibility condition, yet only a weak significant effect was found, $b = .54$, $t(59) = 1.82$, $p = .074$. This was expected since the manipulation itself is primarily based on the source expertise dimension. Thus, the manipulation was considered sufficient and were implemented to the subsequent Study 2.

TABLE 7
Three Regressions to Determine the Source-Credibility Conditions' Ability to Predict Source Credibility, Source Trustworthiness, and Source Expertise.

Variable	Source Credibility		Source Trustworthiness		Source Expertise	
	Coeff.	SE	Coeff.	SE	Coeff.	SE
Constant	3.897	0.204	4.329	0.207	3.465	0.249
High Credibility D	0.910	0.291	0.538	0.296	1.282	0.354
R^2	.142		.053		.182	
$F(1,59)$	9.757*		3.310		13.088*	
p	.003		.074		.001	

NOTE: The low-credibility condition is included in the constant.

Core Disgust and Righteous Anger. Independent samples t-tests were conducted to compare mean scores of self-reported differential emotions between the two NBRFN conditions. Participants in the core disgust condition reported significantly higher levels of disgust ($M = 5.43$, $SD = 1.51$) than participants in the righteous anger condition ($M = 4.23$, $SD = 2.08$), $t(56) = 2.58$, $p = .012$. Levene's test indicated unequal variances ($F = 4.26$, $p = .044$), so degrees of freedom were adjusted from 59 to 56. However, the two conditions did not yield significant differences on any of the other differential emotions.

Inspection of the mean scores associated with each emotion, as displayed in Table 8, shows that the righteous anger condition elicited too little anger, and too much distress. This is also confirmed by inspection of the qualitative statements given by participants immediately after exposure to the stimuli. As can be seen in Appendix 3, the majority of participants in the core-disgust condition used words like disgusting, grossed out, sick to my stomach and repulsion to

describe their immediate feelings, which are common descriptors of disgust in the literature (Izard, 1977). Conversely, in the righteous-anger condition the most frequent responses reflected sadness, and one of the respondents stated, “I feel sad for those kids”. Participants felt sadness on behalf of the kids, instead of anger towards the exploiting actions of the company. Thus, the core-disgust condition performed good, whereas the righteous-anger condition did not elicit the right emotions.

TABLE 8
Mean Scores of Differential Emotions Between Conditions

Variable	Core Disgust <i>n</i> = 29		Righteous Anger <i>n</i> = 32	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Fear	3.40	(1.44)	2.85	(1.80)
Anger	4.75	(1.49)	4.21	(2.00)
Disgust	5.43	(1.51)	4.23	(2.08)
Contempt	4.36	(1.48)	3.72	(1.56)
Guilt	2.64	(1.52)	3.21	(1.89)
Surprise	4.34	(1.77)	3.73	(1.83)
Distress	3.85	(1.62)	4.18	(1.74)
Shame	3.20	(1.68)	3.18	(1.80)

NOTE: Only Disgust is significantly different between groups.

Study 1 provided supporting evidence for H1a, that NBRFN has a negative effect on CBBE. Additionally, Study 1 yielded significant manipulation checks for the source-credibility manipulation and the NBRFN manipulation. Thus, the source-credibility manipulation and the core disgust condition were subsequently implemented in Study 2.

Results: Pretest of Persuasion Knowledge

Descriptive statistics

A sample of 59 participants from the US completed the pretest through Amazon Mechanical Turk and received a payment of \$0.3 each. After preparing the data for analysis, I inspected the time each participant used viewing the article. In the persuasion-knowledge-present condition, six of the participants used below two seconds, and one participant used over 345.86 seconds. The latter were considered very high, since the second highest viewing time were 145.16 seconds. Furthermore, four participants in the persuasion-knowledge-not-present condition used below two seconds. These 11 participants were excluded from further analyses, since below two seconds reading an article of 264 words were considered unrealistic, and 345.86 seconds were an outlier. In the sample of 48 participants used for analysis, 66.7% were male and 33.3% were female. This overrepresentation of males is not ideal, but at least the distribution of males and females were similar in the persuasion-knowledge-present condition (Male = 65.2%; Female = 34.8%) and the persuasion-knowledge-not-present condition (Male = 68.0%; Female = 32.0%).

The mean age was also similar in the persuasion-knowledge-present condition ($M = 37.57$ years; $SD = 10.26$) and in the persuasion-knowledge-not-present condition ($M = 35.52$; $SD = 14.43$).

Table 9 displays the means and standard deviations associated with the pre- and post-measures of persuasion knowledge. Inspection of the change from 1a to 1b and from 2a to 2b confirms that the manipulation works in the intended direction. That is, the mean score on 3b is higher than the mean score on 3a for the present group, whereas for the not-present group the mean score on 3b is lower than the mean score on 3a. Therefore, participants exposed to the persuasion knowledge article appears to be more skeptical towards persuasion tactics after exposure, whereas participants exposed to the control article, about the life of a journalist, appears to be less skeptical about persuasion tactics after exposure.

TABLE 9
Descriptive Statistics from Pre-test of the Persuasion Knowledge Manipulation

		Persuasion Knowledge Manipulation			
		<u>Present</u>		<u>Not Present</u>	
		<i>n</i> = 23		<i>n</i> = 25	
No	Variables	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Pre-measures	1a I must be vigilant about detecting deceptions by authors of news stories online.	5.70	(1.26)	5.56	(1.00)
	2a Authors of news stories are constantly trying to trick readers.	4.83	(1.67)	5.16	(1.77)
	3a Persuasion knowledge (pre)	5.26	(1.21)	5.36	(1.22)
Post-measures	1b I must be vigilant about detecting deceptions by authors of news stories online.	6.09	(1.16)	5.60	(1.22)
	2b Authors of news stories are constantly trying to trick readers.	4.91	(1.53)	4.64	(1.82)
	3b Persuasion knowledge (post)	5.50	(1.14)	5.12	(1.40)

Inferential Statistics

Two OLS simple linear regressions were carried out to check the manipulation of persuasion knowledge. The first regression was calculated to predict variable number 1b based on the dichotomous presence-of-persuasion-knowledge dummy variable, and variable number 1a as a covariate. This regression were significant ($F(2,45) = 29.60$, $p < .001$), with an R^2 of .57. However, the dummy variable did not significantly predict variable 1b ($b = 0.38$, $p = .112$). The second regression was calculated to predict variable number 2b based on the dichotomous presence-of-persuasion-knowledge dummy variable, and variable number 2a as a covariate. This regression were also significant ($F(2,45) = 37.84$, $p < .001$), with an R^2 of .57. However, the dummy variable did not significantly predict variable 2b ($b = 0.52$, $p = .118$). Thus, a significant

difference between the two groups could not be inferred. Nevertheless, the results indicate that the manipulations influence participants in the hypothesized direction. Additionally, the variables number 1b and 2b did not form a reliable persuasion-knowledge construct (Cronbach's Alpha = .66). Since the manipulation appear to work as expected and since the insignificant between-groups difference might be explained due to a problem in the dependent variable, I decided to implement the persuasion knowledge manipulation in Study 2 without adjustments. Finally, instead of the problematic dependent variables from the pretest, the situational persuasion knowledge measure of IMI was implemented as manipulation check in Study 2.

Results: Study 2

Descriptive Statistics

In the total sample of 252 participants, 127 were male and 125 were female (male = 50.40%; female = 49.60%), and the mean age were 38.37 years ($SD = 11.92$). Initial examinations revealed that all responses were complete, such that missing value analysis were not necessary. Inspection of completion times show that the distribution of time spent to complete the questionnaire and the time spent examining the different stimuli are right skewed. Therefore, since the median is more robust than the mean, I use the median and the interquartile range (IQR) to report central tendency for the completion times. First, the median duration for completing the survey were 9.34 minutes ($IQR = 7.12 - 12.66$). Second, the median time spent reading the persuasion-knowledge article ($Mdn = 64.81$ seconds; $IQR = 43.71 - 94.59$) were similar to the median time spent reading the non-persuasion-knowledge article ($Mdn = 64.46$ seconds; $IQR = 42.35 - 92.16$). Further, the median time spent viewing the high-credibility manipulation ($Mdn = 34.62$ seconds; $IQR = 19.20 - 51.17$) were similar to the median time spent viewing the low-credibility manipulation ($Mdn = 34.97$ seconds; $IQR = 21.84 - 48.26$). Finally, the median time spent viewing NBRFN shared by the high-credibility source ($Mdn = 28.60$ seconds; $IQR = 15.39 - 35.14$) were relatively similar to the median time spent viewing NBRFN shared by the low-credibility source ($Mdn = 31.36$ seconds; $IQR = 17.81 - 44.10$), and the median time spent viewing NBRTN shared by the high-credibility source ($Mdn = 22.68$ seconds; $IQR = 13.97 - 35.16$) were a little lower than the median time spent viewing NBRTN shared by the low-credibility source ($Mdn = 34.18$ seconds; $IQR = 18.66 - 47.30$).

As written in the methodology chapter, each participant was asked to stay at least 15 seconds on the page when viewing each of the three manipulations (initial article, Facebook account, and the news story). Therefore, these timing variables were inspected at the participant level, and analyses were conducted to identify outliers. Based on these analyses I deleted 31 cases that used under 10 seconds on one of the timer variables. However, since removing extreme

variables had no influence on the subsequent analyses, I choose to keep the original sample of 252 participants. Thus, all of the analyses reported here is based on the full sample of 252 participants.

Similar to Study 1, the participants are frequent users of Facebook and YouTube. That is, 77.38% of participant use Facebook weekly or more often, and 82.54% use YouTube weekly or more often. The high proportion of Facebook usage is beneficial, since it indicates that most participants are familiar with the format in which the stimuli were presented. Further inspections of usage frequencies (Appendix 7) show that 49.21% use Twitter weekly or more often, 46.03% use Instagram weekly or more often, whereas 57.14% never uses Snapchat, 46.03% never uses Google+, and 41.67% never uses LinkedIn. Thus, the usage of social media seems to reflect the relatively mature mean age, in the sense that participants primarily uses the most established social media platforms, namely Facebook and YouTube.

TABLE 10
Mean Scores of Emotions and Perceived Credibility in the NBRFN and NBRTN Groups

Variable	NBRFN		NBRTN (control)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	<i>n = 126</i>		<i>n = 126</i>	
Contempt	4.46	(1.58)	4.50	(1.44)
Anger	4.55	(1.54)	4.65	(1.60)
Disgust	5.78	(1.36)	5.40	(1.47)
Surprise	4.04	(1.75)	3.84	(1.57)
Fear	3.37	(1.90)	3.45	(1.85)
CAD	4.93	(1.26)	4.85	(1.30)
Perceived Credibility	3.50	(1.74)	3.41	(1.78)

Note: CAD is a composite measure of Contempt, Anger, and Disgust.

Table 10 displays the mean and standard deviation of emotions and the control variable perceived credibility in the NBRFN group and the NBRTN control group. As expected, the NBRFN story activates higher levels of disgust, and marginally higher levels of surprise than the NBRTN story. However, the levels of contempt, anger and fear are similar across the two groups, which consequently accounts for the between-group indifference on the CAD measure. Nevertheless, both the NBRFN story and the NBRTN story activated high levels of disgust, which suggests that the NBRTN story serves as a strong control condition for the NBRFN story. Finally, another unexpected finding is that perceived credibility is relatively low for both groups. It is possible that participants also perceived the NBRTN as a low-credibility story since they were unable to click into the article to validate that it originated from *bbc.com*.

Inspections of the mean changes in the dependent variable and its components, as displayed in Table 11, suggest that there is a decrease in CBBE from the pre-measures to the post-measures. Thus, NBRFN indeed seems to have a negative effect on CBBE. However, there seems to be no

difference between the NBRFN story and the NBRTN story. The latter is an unexpected result, and when it is seen together with the abovementioned findings, it raises several questions. Does it not matter whether the news is false or true? Is it the negativity in the story which persuades? What role does emotions play in the relationship between the news and CBBE?

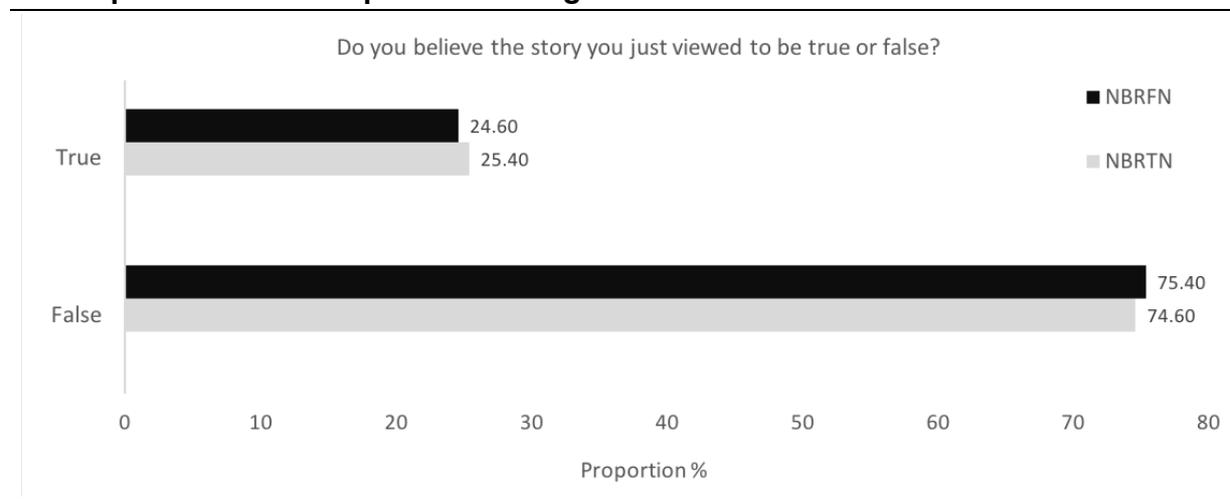
TABLE 11
Mean change from Pre to Post Measures
of the Dependent Variable and its Components

Variable	NBRFN <i>n</i> = 126		NBRTN <i>n</i> = 126	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Δ in CBBE	-0.84	(1.42)	-0.85	(1.41)
Δ in Brand Attitude	-0.90	(1.56)	-0.90	(1.53)
Δ in Brand Desirability	-0.78	(1.75)	-0.76	(1.64)
Δ in Quality Perceptions	-0.87	(1.50)	-0.93	(1.54)
Δ in Product Quality	-0.88	(1.57)	-0.86	(1.56)
Δ in Brand Quality	-0.85	(1.54)	-1.00	(1.68)
Δ in Brand Trust	-0.94	(1.59)	-0.94	(1.64)
Δ in Purchase Intention	-0.75	(1.32)	-0.71	(1.52)

Note: The variable Quality Perceptions is a composite of Product Quality and Brand Quality.

The abovementioned decrease in CBBE is even more astonishing when seen in light of the proportions displayed in Figure 2, namely that the majority of the sample did believe the news story they viewed to be false. That is, there is no difference between the NBRFN and the NBRTN story when it comes to belief. How can consumers be persuaded to lower their brand attitudes, brand desirability, quality perceptions, brand trust and purchase intention by a news story they believe to be false?

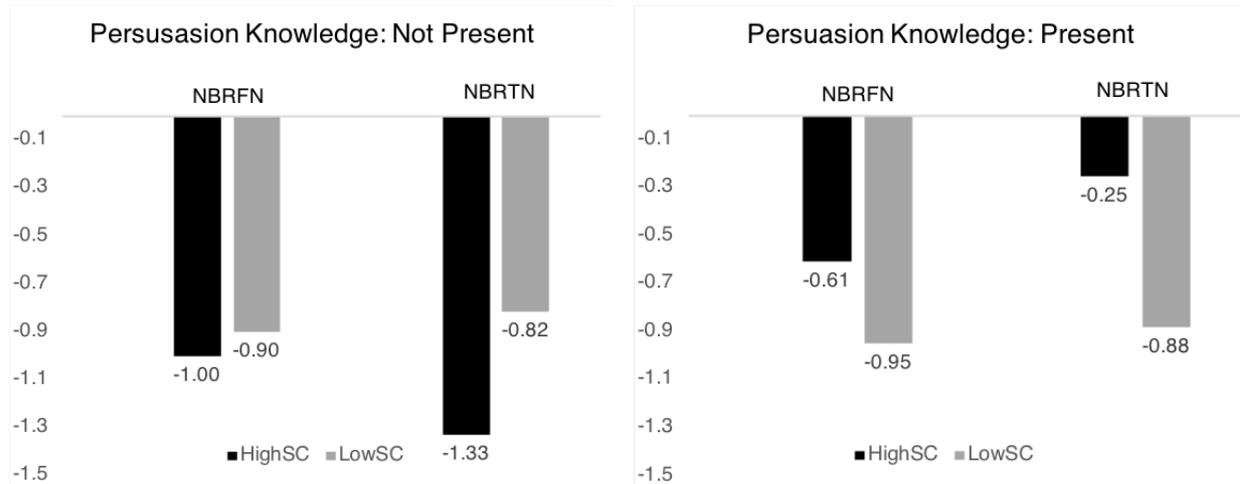
FIGURE 2
Proportions of Participants Believing the NBRFN and NBRTN Were True and False



Note: NBRFN = Negative Brand-Related False News; NBRTN = Negative Brand-Related True News.

The proportions displayed in Figure 2 are consistent with inspections of the thoughts and feelings participants expressed in writing at the end of the questionnaire. The majority expressed uncertainty associated with whether the news story was true, a large proportion used the term *fake news*, and a common explanation for participants' disbelief were the fact that the particular news story was not to find in other news channels. Therefore, these qualitative findings indicate that checking whether stories appear across channels is a common heuristic when assessing the credibility of news.

FIGURE 3
Mean Change in the CBBE Construct Across the Eight Experimental Groups



Note: SC = Source Credibility

Figure 3 displays the mean change in CBBE across the eight experimental groups. As expected, the change in CBBE is negative in all groups, which indicates support for H1a. Conversely, the data does not seem to support H1b, since NBRFN does not seem to be more persuasive than NBRTN. Furthermore, NBRFN shared by a high-credibility source yields a marginally larger decrease in CBBE, than NBRFN shared by a low-credibility source, when persuasion knowledge is absent. Thus, the predicted direction of effects from H3 is present, but the difference appears to be small. Furthermore, the negative change in CBBE is larger when persuasion knowledge is absent than when persuasion knowledge is present. However, the presence of persuasion knowledge seems to decrease the effect of only high-source credibility, which indicates partial support for H4.

The data set has now been explored, and key descriptive statistics has been reported. In the following sections I conduct manipulation checks for Study 2 and statistically tests the hypotheses associated with the conceptual model. Since NBRFN, high source credibility, and presence of persuasion knowledge is of main interest, dummy coding (i.e. indication coding) was used on the independent variables in all subsequent analyses to simplify interpretation.

Inferential Statistics

Manipulation Checks. Two OLS simple linear regressions were carried out to check the manipulations of source credibility and persuasion knowledge. The first regression was calculated to predict perceived source credibility based on the dichotomous high-source-credibility dummy variable. This regression were significant ($F(1,250) = 5.03, p < .05$), with an R^2 of .02, and thus the high-credibility dummy variable significantly predicted source credibility ($b = .41, p < .05$). That is, the high source credibility condition was associated with higher scores of perceived source credibility than the low source credibility condition. The second regression was calculated to predict inference of manipulative intent (IMI) based on the dichotomous persuasion knowledge factor. This regression were also significant ($F(1,250) = 9.62, p < .05$), with an R^2 of .04, and thus the presence-of-persuasion-knowledge dummy variable significantly predicted IMI ($b = .54, p < .05$). That is, the presence-of-persuasion-knowledge condition led to higher scores of IMI, than the persuasion-knowledge-not-present condition. Even though the proportion of explained variance is low for both regressions, they are both significant, and therefore the manipulations is considered to be sufficient.

Testing H1. In order to test hypothesis 1a, a paired samples t-test were conducted in which the pre- and post-measures of CBBE were compared, to test the significance of the within-subject change in the CBBE construct (Appendix 8). Similar to Study 1, the sample-post-measures of CBBE ($M = 4.23, SD = 1.95$) were significantly lower than the pre-measures ($M = 5.08, SD = 1.59, t(251) = 9.54, p < .001$). Therefore, exposure to negative news stories led to a significant decrease in consumers individual CBBE, which provides support for hypothesis 1a, and thus NBRFN has a negative effect on CBBE. In order to test hypothesis 1b, a simple OLS regression were calculated in which the change in CBBE were regressed on the NBRFN dummy variable (Appendix 8). This regression was not significant ($F(1, 250) = 0.00, p = .98$), with an R^2 of .00, and thus the NBRFN dummy variable did not significantly predict the change in CBBE ($b = .005, p = .98$). Therefore, no difference between the negative effects of NBRFN and NBRTN on CBBE can be claimed, and thus hypothesis 1b is not supported.

Testing H2. In order to test hypothesis 2, a mediation analysis was conducted using SPSS PROCESS Model 4, which consists of two OLS regressions (Hayes & Preacher, 2014). The model was first estimated using NBRFN as the independent variable, CAD as the mediator, and change in CBBE as the dependent variable (Appendix 8). However, NBRFN did not significantly predict CAD, which was expected since the aforementioned findings from the descriptive analyses suggested that levels of contempt and anger were equal between the NBRFN and NBRTN condition. Because of this between-groups similarity of contempt and anger, the model was re-

estimated using only the disgust construct as a measure of negative emotions, and the control variable perceived credibility was added as a covariate.

The first of the two OLS regressions, which predicted disgust based on the dichotomous NBRFN dummy variable and perceived credibility was significant ($F(2, 249) = 6.28, p < .05$), with an R^2 of .05. The NBRFN-story lead to significantly higher level of disgust ($b = .36, p < .05$) than the NBRTN story, and the control variable perceived credibility were also positively related to disgust ($b = .1418, p < .05$). The second of the two OLS regressions, which predicted change in CBBE based on the dichotomous NBRFN dummy variable, the mediator disgust, and the control variable perceived credibility was also significant ($F(3, 248) = 16.67, p < .001$), with an R^2 of .17. The mediator disgust ($b = -.34, p < .001$) and the control variable perceived credibility ($b = -.14, p < .05$) significantly predicted the change in CBBE, whereas the effect from NBRFN were insignificant ($b = .15, p = .377$). Therefore, no direct effect exists from NBRFN on CBBE, but the indirect effect of NBRFN through disgust on CBBE is equal to $-.125$ and is significant since the 95% percentile bootstrap confidence interval ($-.269$ $-.006$) does not contains zero (Hayes, 2018). It is no longer necessary to have a direct effect between the independent and dependent variable in order to infer mediation (Zhao, Lynch Jr, & Chen, 2010). Therefore, the established indirect effect is sufficient to claim that disgust significantly mediates the relationship between NBRFN and CBBE, which provides support for H2. That is, NBRFN lead to higher activation of negative emotions in terms of disgust, which consequently has a negative effect on CBBE.

Testing H3 and H4. In order to test H3 and H4, the full moderated moderated mediation model was estimating using SPSS PROCESS model 18, which consists of two OLS regressions (Hayes, 2018). The model was estimated using NBRFN as the independent variable (X), disgust as the mediator (M), source credibility as the primary moderator (W), persuasion knowledge as the secondary moderator (Z), and perceived credibility as a covariate. The regression coefficients for the models of disgust (M) and change in CBBE (Y) can be found in Table 12.

The disgust model were statistically significant ($F(2, 249) = 6.27, p = .002$), with an R^2 of .05, as were the model of change in CBBE ($F(9, 242) = 6.59, p < .001$), which had an R^2 of .1969. The 95% CIs associated with the disgust model (M) show that there is a significant positive relationship between NBRFN and disgust, and a positive relationship between the control variable perceived credibility and disgust. Furthermore, the 95% CIs associated with the model of change in CBBE reveal that the mediator disgust, the control variable perceived credibility, and the interaction between source credibility and persuasion knowledge is significant. Additionally, inspection of the 95% bootstrap CIs associated with the conditional indirect effects of NBRFN through disgust on change in CBBE, under different levels of source credibility and persuasion knowledge, show that the indirect effect of NBRFN through disgust on change in CBBE is

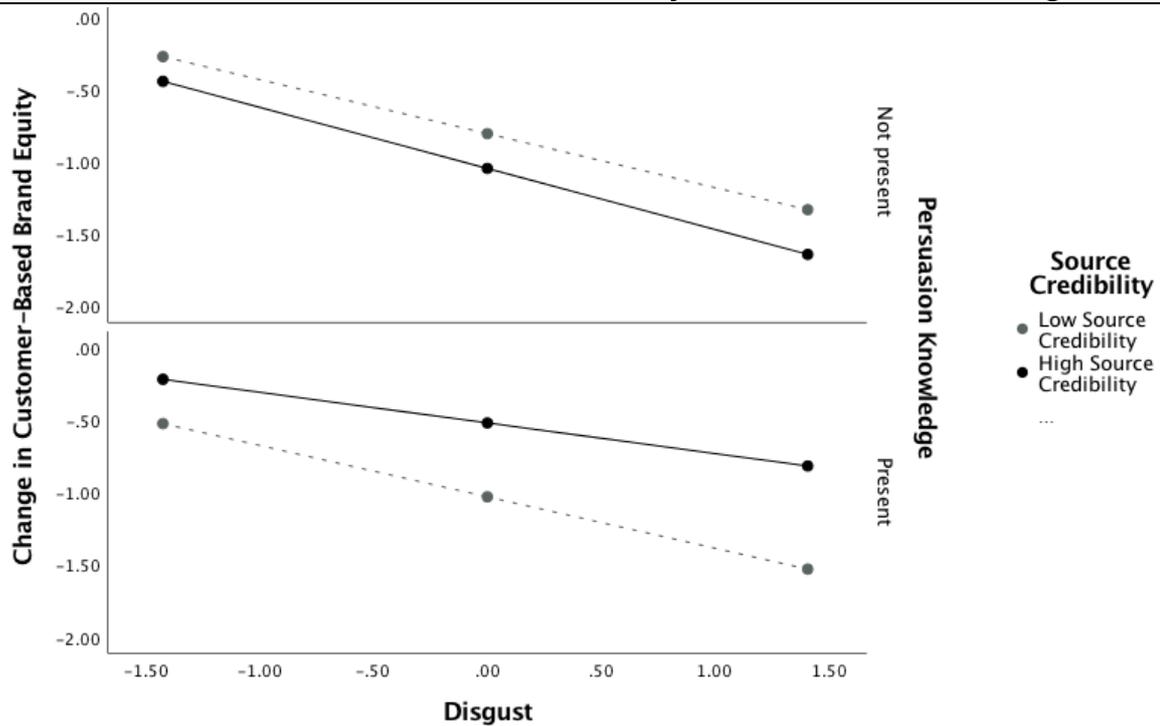
significant when source credibility is low and persuasion knowledge is absent; when source credibility is low and persuasion knowledge is present; and when source credibility is high and persuasion knowledge is absent; but not when source credibility is high and persuasion knowledge is present. Finally, the index of moderated moderated mediation was not significant, since its 95% bootstrap CI contains zero. Therefore, we cannot definitely claim that persuasion knowledge moderates the moderation of source credibility on the indirect effect of NBRFN through disgust on CBBE. That is, H3 and H4 were not supported.

TABLE 12
Ordinary Least Squares Regression Coefficients,
Standard Errors, 95% CI, and the conditional indirect effects of NBRFN
on CBBE from the Second Stage Moderated Moderated Mediation Model

Variables	Outcome							
	M: Disgust				Y: Change in CBBE			
	<i>b</i>	(SE)	95% CI		<i>b</i>	(SE)	95% CI	
		[LL,	UL]			[LL,	UL]	
Constant		-0.672(0.212)	[-1.088,	-0.255]		-0.439(0.247)	[-0.925,	0.047]
X: NBRFN	$a_1 \rightarrow$	0.364(0.176)	[0.017,	0.710]	$c_1 \rightarrow$	0.081(0.165)	[-0.245,	0.407]
Cov.: Perceived Credibility	$a_2 \rightarrow$	0.142(0.050)	[0.043,	0.241]	$b_8 \rightarrow$	-0.118(0.049)	[-0.214,	-0.022]
M: Disgust					$b_1 \rightarrow$	-0.373(0.117)	[-0.604,	-0.143]
W: Source Credibility (SC)					$b_2 \rightarrow$	-0.241(0.235)	[-0.704,	0.223]
Z: Persuasion Knowledge (PK)					$b_3 \rightarrow$	-0.225(0.235)	[-0.687,	0.237]
MW: Disgust x SC					$b_4 \rightarrow$	-0.049(0.157)	[-0.358,	0.261]
MZ: Disgust x PK					$b_5 \rightarrow$	0.019(0.168)	[-0.312,	0.349]
WZ: SC x PK					$b_6 \rightarrow$	0.751(0.331)	[0.099,	1.403]
XWZ: Disgust x SC x PK					$b_7 \rightarrow$	0.192(0.231)	[-0.263,	0.647]
	R^2	.048				.197		
Conditional Indirect effects of X on Y (<i>NBRFN</i> \rightarrow <i>Disgust</i> \rightarrow <i>ACBBE</i>):					Effect	BootSE	95% bootstrap CI ^a	
	Disgust	Low SC	PK absent		-0.136	0.083	[-0.332,	-0.006]
	Disgust	Low SC	PK present		-0.129	0.089	[-0.348,	-0.004]
	Disgust	High SC	PK absent		-0.154	0.081	[-0.332,	-0.008]
	Disgust	High SC	PK present		-0.077	0.060	[-0.233,	0.000]
					Index	BootSE	95% bootstrap CI ^a	
Moderation of moderated mediation					0.070	0.092	[-0.105,	0.282]

^aPercentile bootstrap CI based on 5,000 bootstrap samples.

FIGURE 4
Conditional Effect of NBRFN through Disgust on Change in CBBE,
Under Different Levels of Source Credibility and Persuasion Knowledge



Note: Black line = High Source Credibility; Dotted grey line = Low Source Credibility. All conditional effects from NBRFN through disgust on CBBE were significant, except for when source credibility is high and persuasion knowledge is present.

Even though H3 and H4 were not supported, the conditional indirect effects were in the hypothesized direction. That is, the highest conditional indirect effect occurred when NBRFN was shared by a high credibility source and persuasion knowledge was not present; and the second highest conditional effect occurred when NBRFN was shared by a low credibility source and persuasion knowledge was absent, whereas the lowest conditional effects occurred when persuasion knowledge were present. The full moderated moderated mediation model was also estimated without perceived credibility as a covariate (Appendix 8). When perceived credibility is absent, all conditional indirect effects is significant. That is, the conditional indirect effect of NBRFN through disgust on change in CBBE when source credibility is high and persuasion knowledge is present becomes insignificant when perceived credibility is controlled for. This pattern of results coincides with the conceptual framework which hypothesize that consumers are expected to process the NBRFN with higher scrutiny when persuasion knowledge is present. Furthermore, the abovementioned significant interaction between persuasion knowledge and source credibility suggests that participants exposed to the high-credibility source in the persuasion knowledge condition might realize that Consumer Support were a made-up organization. Nevertheless, the moderation of moderated mediation was not significant, which suggests that the negative effect of NBRFN on CBBE through the elicitation of the negative emotion disgust is robust across the boundary condition of persuasion knowledge and that the persuasive properties

of NBRFN is less dependent on source credibility. However, further research is needed in order to confirm or disconfirm the extent to which source credibility and persuasion knowledge moderates the indirect effect of NBRFN through disgust on CBBE.

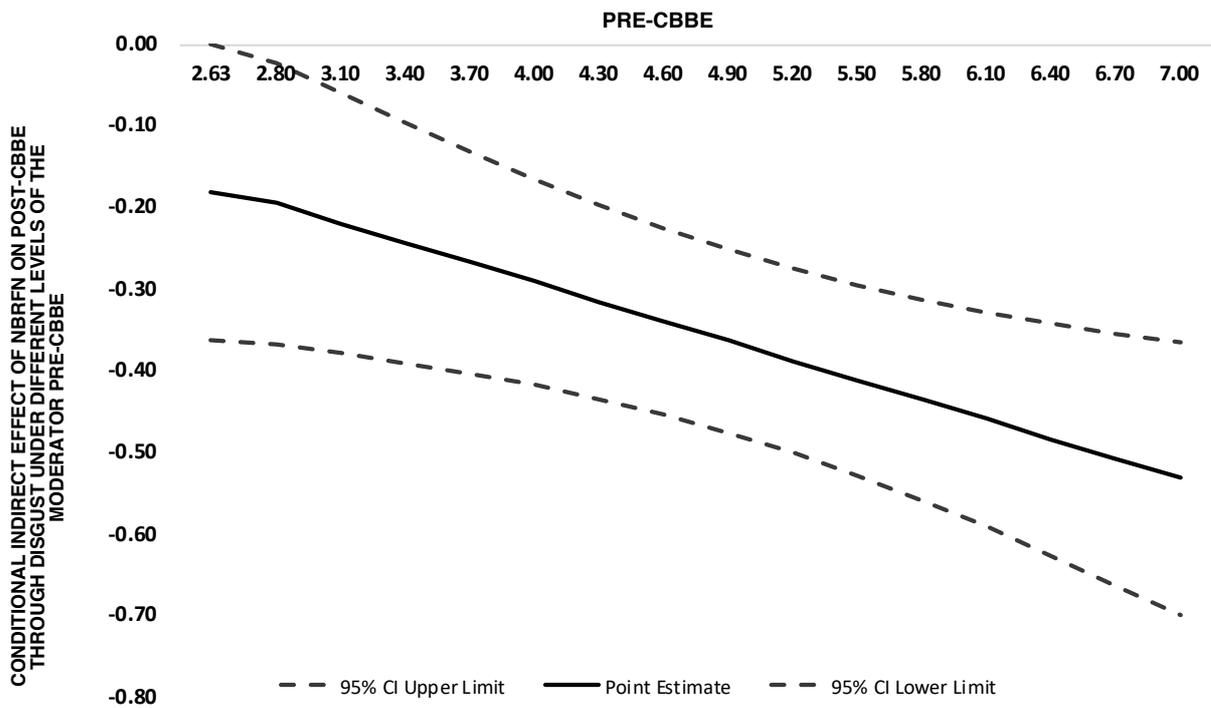
In summary, the planned hypotheses tests yielded support for H1a and H2, but not for H1b, H3 and H4. Before I proceed to the general discussion, the next section presents an additional ad-hoc analysis which were considered meaningful in order to deepen our understanding of the indirect effect of NBRFN through disgust on CBBE.

Moderating effect of pre-CBBE. To simplify interpretation, all the analyses above were performed using the change in CBBE construct as a dependent variable. However, the present research entails inference about consumers attitudes about a real brand, and it is likely that the brand in question represents greater personal meaning for consumers with high initial CBBE, than for consumers with lower initial CBBE (Bagozzi et al., 1999). Therefore, consumers with high initial CBBE might have a worse experience while viewing NBRFN targeted at their favorite brand, compared to consumers with low initial CBBE which might be more indifferent towards the NBRFN. Therefore, in line with the expectancy-evidence framework employed by Dawar and Pillutla (2000), and because Dawar and Lei (2009) found that pre-crisis-brand-familiarity influenced brand evaluations after a brand crisis I consider it meaningful to examine the extent to which the indirect effect of NBRFN through disgust on consumers post-CBBE is moderated by consumers initial CBBE.

Two OLS regressions were estimated using SPSS PROCESS model 14 with the post-CBBE variable as dependent variable (Y), the NBRFN dummy variable as the independent variable (X), disgust as the mediator (M), the pre-CBBE variable as the moderator (W) and the control variable perceived credibility as a covariate (Hayes, 2018). The disgust model were statistically significant ($F(2, 249) = 6.27, p = .002$), with an R^2 of .05, and both the NBRFN dummy variable ($b = .36, p < .05$) and the control variable perceived credibility ($b = .14, p < .05$) significantly predicted disgust. That is, NBRFN activated higher disgust than NBRTN, and the higher the perceived credibility the higher the activation of disgust. The model of post-CBBE were also significant ($F(5, 246) = 73.33, p < .001$), with an R^2 of .60. In this model, the NBRFN dummy variable ($b = .16, p = .31$) and the disgust mediator ($b = .03, p = .86$) were not significant, whereas the pre-CBBE variable ($b = 1.28, p < .001$) and perceived credibility ($b = -.14, p = .002$) significantly predicted post-CBBE. Most interestingly, the interaction between the mediator disgust and the pre-CBBE variable were also significant ($b = -.08, p = .009$). That is, the higher the consumer's initial CBBE, the higher the negative indirect effect of NBRFN on post-CBBE through disgust. Furthermore, inspection of the Johnson-Neyman significance region, which is displayed in Figure 5, confirms that this interaction is significant when pre-CBBE is between 2.635

and 7.0. Thus, these findings suggest that NBRFN stories have the highest persuasive impact on customers with strong positive CBBE, which are often the most loyal and profitable customers of a brand (Dick & Basu, 1994; Johnson, Gustafsson, Andreassen, Lervik, & Cha, 2001).

FIGURE 5
Conditional Indirect Effect of NBRFN on Post-CBBE through Disgust, Under Different Levels of the Moderator Pre-CBBE



Notes: The plot displays the Johnson-Neyman significance region, defined by the moderator value 2.625 (10.32% below; 89.68% above).

CHAPTER V: GENERAL DISCUSSION

Discussion

Summary of Findings

The two present pioneer studies provide coinciding evidence in support of H1a and demonstrates that NBRFN negatively impacts CBBE. That is, consumers that were exposed to NBRFN had lower brand attitudes, brand desirability, quality perceptions, brand trust, and purchase intention after exposure, than before exposure. Study 2 also provided support for H2, by demonstrating that the negative effect of NBRFN on CBBE is mediated by consumers' feelings of the emotion disgust, and the higher the feeling of disgust the larger the negative effect on CBBE.

Furthermore, ad-hoc analyses demonstrated that the indirect effect of NBRFN through disgust on consumers' CBBE after exposure is higher when consumers have high initial CBBE, compared to when consumers have low initial CBBE. That is, the higher the initial level of CBBE, the higher the indirect effect of NBRFN through disgust on CBBE after exposure. However, both NBRFN and NBRTN had negative effects on CBBE, and no difference was found between NBRFN and NBRTN. Furthermore, the hypothesized moderated mediation of persuasion knowledge and source credibility on the indirect effect of NBRFN through disgust on CBBE did not occur. That is, neither source credibility (H3), nor persuasion knowledge (H4) influenced the indirect effect of NBRFN through disgust on CBBE. Nevertheless, the interaction between persuasion knowledge and source credibility were significant, in which high source credibility had a lower negative effect on CBBE when persuasion knowledge was present, compared to when persuasion knowledge was absent, which supports the conceptual framework. Finally, even though the present research advocates that the main mechanism through which NBRFN influence consumers' CBBE is through emotions, the control variable perceived credibility was also found to have a positive relationship with disgust and a negative relationship with CBBE.

Scientific and Managerial Implications

The present research contributes scientifically by combining theory and findings from marketing, journalism, psychology, and information science, to develop a conceptual framework for the persuasive properties of the under-investigated phenomenon of NBRFN, and by providing theoretical guidelines for the definition of NBRFN. Yet, the main scientific contribution of the two present pioneer studies is the demonstration of a negative effect of NBRFN on consumers' individual CBBE, through the elicitation of consumers' feelings of disgust. To my knowledge, the present research is the first to demonstrate that NBRFN lead to a decrease in consumers' individual CBBE. These present findings coincides with the ones of Vosoughi et al. (2018), which found that false news diffused broader and deeper than true news, and that false news, among other emotions, inspires disgust. The fact that false news tends to spread faster and deeper than true news, seen together with the present findings that NBRFN has a negative impact on CBBE is disturbing from a marketing perspective.

The finding that NBRFN influenced consumers' CBBE even though the story were perceived to be false supports the emotional-selection hypothesis that a meme competes based on the extent to which it evokes strong emotions (Heath et al., 2001). Furthermore, the present findings extends the findings of Romani et al. (2012) about how negative emotions drive consumers away from brands, and coincides with previous research on brand rumors by Tybout et al. (1981) which argue that consumers are affected by rumors not because the consumers believe

them, but because the rumors are processed and stored in consumers' memory by rehearsal. Therefore, one explanation of the present findings is that the NBRFN first elicits the basic emotion of disgust, which subsequently activates unfavorable emotional schemas (i.e. appraisals) within consumers' minds which in turn decrease the CBBE (Bagozzi et al., 1999; Izard, 1992, 2007).

As I noted in the introduction, Cleeren et al. (2017) called for research on whether consumers can distinguish actual product-harm crises from hoaxes or fake news. The present findings indicate that consumers might have difficulties determining whether news with assertions about product-harm crises are true or false, at least when they are not able to assess the origin of the story. Furthermore, the present findings provide answers to several of the questions proposed by Emerald Publishing (2017) noted in the introduction. Namely that brands are impacted by false news; and that strong emotions play a focal role in consumers' processing of false news, and consequently influences consumers' response to false news about brands.

The findings of the present research also provide several managerial implications. The endurance of corporations, non-profit organizations and other institutions is dependent on positive CBBE by their target audiences (Keller, 1993, 2013). However, today consumers' brand attitudes, brand desirability, quality perceptions, brand trust, and purchase intention have the potential to be damaged by NBRFN. Even worse, it appears that the higher the consumer's initial CBBE, the more susceptible the consumers' CBBE is to NBRFN. Thus, a brand's "heavy users" might be more influenced by NBRFN, compared to relative infrequent users. This is a very unfortunate pattern, which represents a serious threat towards the intangible assets and the profitability of brands, since the customer group with highest CBBE are likely to contain the most loyal and most frequent buyers (Dick & Basu, 1994; Johnson et al., 2001; S. L. Vargo & Lusch, 2008). Therefore, marketing practitioners are advised to frequently monitor the online landscape to identify NBRFN about their brands, and to carefully assess the risk associated with each piece of NBRFN. If the NBRFN possesses the potential to diffuse broadly or deeply within an important consumer segment, the marketing practitioner should consider to initiate a strategic response (Vosoughi et al., 2018). I identify and discuss such potential firm-response strategies under suggestions for further research below.

An observed tendency is also that NBRFN most often targets well-known brands, such that in a sense brands are exploited by creators of NBRFN since their personal meaning are likely to generate clicks and consequently advertising revenues (Y. Chen et al., 2015). Therefore, I encourage marketing practitioners and advertising intermediaries to refrain from investing in webpages that are associated with NBRFN. Furthermore, it is crucial that the platforms that facilitates interaction online, such as Facebook and Google, works with preventive measures to minimize the spread of NBRFN (Cerf, 2017). Additionally, a recent study by Nsangi et al. (2017)

published in *The Lancet* which employed a cluster-randomized sample of 170 schools with over 10,000 children showed that children participating in a pre-tested course about informed health choices had an improved ability to assess claims about the effects associated with different medical treatments, compared to a control group which were not participating in the course. Therefore, I also call for policy makers to increase the focus in schools on critical assessment of online information to enable future consumers' to make more informed choices.

Limitations and Suggestions for Future Research

The sampling strategy of the present studies can be considered a limitation, since non-probability sampling were employed, and the samples were drawn from the US as a whole. Therefore, geographical differences in participants experience with false news, perceptions and opinions might serve as extraneous variables that influence the hypothesized causal relationships. Additionally, small sample sizes also represent a source of error, and the mean age in the two present samples is relatively high, which limits the external validity (Malhotra, 2010). Therefore, more research is needed to obtain a proper basis for generalizability. Future research could employ laboratory experiments to obtain results with high internal validity and field studies with high sample sizes to ensure better generalizability, as well as a higher ecological validity.

The present studies also focused explicitly on NBRFN that were made to evoke disgust. Thus, the generalizability of results is limited to NBRFN with core-disgust-eliciting assertions about a product-harm crisis in the form of contaminated products. Therefore, further research could benefit from examining the extent to which different emotions such as surprise, fear, guilt, or sadness play differential roles in consumers' processing of NBRFN. Additionally, further research might also benefit from controlling for individual differences in consumers' sensitivity associated with different emotions, such as *disgust sensitivity* (Olatunji et al., 2007).

In the present studies, I attempted to create as realistic scenarios as possible to ensure ecological validity (Malhotra, 2010). Therefore, the NBRFN-manipulation were designed using rich stimuli where the NBRFN story contained more extreme wording and more disgusting images, than the NBRTN story, which contained more neutral wording and images. However, usage of rich stimuli makes it difficult to determine which of the different cues that contributed to the effects. Therefore, further research might benefit from manipulating specific elements of the false news, such as image, message, source or valence, in order to identify the contributors of the effect.

The present research finds no difference between the effect of the NBRFN story and the NBRTN story both in terms of effects on CBBE, and in terms of belief. Inspection of the thoughts and feelings participants expressed in writing at the end of the questionnaire showed that a common explanation for participants disbelief were the fact that the particular news story was not

to find in other news channels and that they did not have the possibility to click onto the link to read the article and verify the source. The latter represents a limitation of the present studies, and further research could benefit from making even more interactive research designs in which participants have the possibility to assess the origin of the news. Nevertheless, these qualitative findings indicate that checking whether stories appear across channels is a common heuristic when assessing the credibility of news. These findings are consistent with the ones of Tandoc Jr et al. (2017) that found people to rely on their own experience (i.e. “gut feeling”) and their own judgement of the source and the message when assessing news, but when this strategy does not provide sufficient answers, people turn to *external* resources for authentication.

Nevertheless, the present studies establish a negative indirect effect of NBRFN through disgust on CBBE. Therefore, a promising opportunity for future research is to identify and test strategies companies can employ to minimize the effects of NBRFN on their brands. Henceforth, in the closing sections of this thesis I derive possible firm-response strategies from previous research and provides hypotheses to be tested by future research.

How Should Firms Respond to Negative Brand-Related False News?

If a firm becomes victim of NBRFN, it might seek to employ strategic communication in order to discredit or debunk the story for its consumers. Since the NBRFN studied here entails negative assertions about product contamination, I reviewed literature on product-harm crises and crisis communication in search for possible firm-response strategies to NBRFN. Situation crisis communication theory (SCCT) holds that strategic communicative responses can best protect the intangible assets of a firm when one assess the crisis before selecting a response strategy that fits the crisis (Coombs & Holladay, 2002). Among other characteristics, crisis responsibility and the extent to which the organization is to blame for the event is assessed when choosing strategy. Furthermore, response strategies can be categorized along a continuum from defensive to accommodative, where the former puts the organization’s interest first and the latter puts the victim’s concerns first. Accommodative strategies such as full apology, corrective actions, product recalls, and compensation of consumers are often employed for product-harm crises (Yubo Chen, Ganesan, & Liu, 2009; Liu, Shankar, & Yun, 2017). However, product-harm crises occur when products fail to meet safety standards, or products contain a defect which could cause serious harm to its users (Cleeren et al., 2017). NBRFN does not entail any actual contamination of products or physical harm. Therefore, such accommodative strategies would not be fruitful. Nevertheless, NBRFN poses a threat since it causes consumers to elicit feelings of disgust, which consequently might lead to a decrease in consumers’ brand attitudes, brand desirability, brand trust, and purchase intention, and cause consumers’ to doubt the mere product quality of the brand. Therefore, a

suitable communication strategy could be employed to completely discredit the NBRFN or at least reduce its persuasive effects, without the firm acknowledging responsibility.

Defensive Communication Strategies. Coombs and Holladay (2002) and Coombs (2007) suggest that the defensive communication strategy of *denial* should be applied as a crisis response strategy for rumors. Similarly, Dubois et al. (2011) tested the following three defensive strategies in a rumor context: (1) denial, in which a spokesperson from the company denied the rumor, (2) reassociation, which means associating a negative association with a positive one, and finally (3) questioning, in which the CEO of the company stated in a written interview: “One thing I would ask our customers to do is to ask how certain they are this rumor is true, based on what they heard and where they heard it.” The questioning strategy lead to a higher purchase intent than the denial strategy and the reassociation strategy, respectively. Therefore, future research could extend the research of Dubois et al. (2011) to the context of NBRFN and test the effects of the two response strategies denial and questioning.

Denial strategies eliminate negative affect if consumers accept there is no crisis (Coombs, 2007). Furthermore, denial has been shown to activate a correction process in which consumers change their perceptions after viewing a counter claim by the company. Thus, a denial strategy employed by the company is likely to reduce the ambiguity caused by the assertions of NBRFN. Therefore, I hypothesize that a denial strategy will dampen the negative effects of NBRFN on CBBE. However, consumers’ certainty about their beliefs is less salient than their core beliefs, and consumers often fail to convey their degree of certainty when communicating their core beliefs to each other. Questioning strategies increase the salience of consumers’ uncertainty associated with a particular assertion or a core belief, and has been demonstrated to be the most effective strategy to counter rumors (Dubois et al., 2011). Thus, based on the findings of Dubois et al. (2011), I hypothesize that a questioning strategy will decrease the negative effects of NBRFN on CBBE, and that this moderating effect will be larger than that of a denial strategy.

Advertising as Firm Response. Both the denial and questioning strategy entails that the company respond directly to and thereby acknowledges the existence of a NBRFN story. Furthermore, several studies suggest that direct responses using rebuttal strategies (e.g. denial) can be less effective than positive communication campaigns that instill the rumor target (i.e. brand) with favorable attributes. As aforementioned, on the basis of information processing theory Tybout et al. (1981) argue that consumers are affected by rumors not because the consumers believe them, but because the rumors are processed and stored in consumers’ memory by rehearsal. The authors’ test of the differential effect of the three strategies storage, retrieval, and rebuttal demonstrates that the retrieval and storage strategy is more efficient than the refuting strategy. The storage strategy were identical to the reassociation strategy that proved to be the least effective in the study of

Dubois et al. (2011), whereas the retrieval strategy involves presenting a new stimulus which make consumers' retrieve other associations in memory than the associations instilled by the rumor. This new stimulus can for example be a brand advertisement which highlights the brand. Koller (1992) also found a positive advertisement to be more efficient than a rebutting strategy in countering rumors. The author explains that rebutting strategies direct consumers' focus towards the rumor such that an undesirable rehearsal occurs, whereas advertisements direct consumers' thoughts away from rumors and towards favorable brand attributes. Furthermore, initiation of brand advertisements after product recalls in product-harm crises has also been shown to be positive related to long-term abnormal returns (Liu et al., 2017). Previous research points to the efficiency of advertising in countering rumors, and initiation of an advertisement also allows the firm to 'continue as usual' without acknowledging the existence of a NBRFN story and without explicitly investing in debunking the story. Therefore, advertising could be a viable response strategy which might perform better than denial, since advertising do not increase the salience of NBRFN.

Heretofore, the criteria used to assess the applicability of firm-response strategies has been its abilities to minimize the negative effects of NBRFN on CBBE. However, it is also important to consider how strategies influence consumers not initially exposed to NBRFN. *When consumers have been exposed to NBRFN*, I hypothesize that the questioning strategy will lead to a larger decrease in the negative effects from NBRFN on CBBE than advertising and denial, respectively (Dubois et al., 2011). However, consumers that are exposed to a denial strategy without a preceding exposure to NBRFN will not see any external source that accounts for the response strategy (Koller, 1992). Since consumers view the firm protests in the absence of an accusation, they are likely to infer that the firm has a 'guilty conscience' (Yandell, 1979). Therefore, *when consumers are not initially exposed to NBRFN*, I hypothesize that the denial strategy will negatively influence CBBE. However, since a questioning strategy does not entail as strong a defense as a denial strategy I expect the questioning strategy to have no effect on CBBE in the no-exposure condition. Conversely, since the advertisement do not contain a link to NBRFN and at the same time highlights positive attributes with the brand, I hypothesize that the advertisement will positively influence the CBBE of consumers not initially exposed to NBRFN. Thus, I hypothesize the following effects for future research to test:

H₅: For consumers exposed to NBRFN, the questioning strategy will decrease the negative effect of NBRFN on CBBE more than the advertisement and the denial strategy, respectively. For consumers not exposed to NBRFN, the advertisement will increase CBBE, the questioning strategy will have no effect, whereas the denial strategy will decrease CBBE.

Conclusion

The main objective behind this research project has been to deepen our understanding of the new and under-investigated phenomenon of NBRFN, and how it influences consumers' individual CBBE. The present research has developed a conceptual framework by combining theory from a broad range of research domains and provides theoretical guidelines for the definition of NBRFN. Through two pioneer studies the present research demonstrated a significant indirect effect of NBRFN through consumers' feelings of disgust, on consumers' CBBE. That is, NBRFN elicited higher levels of disgust than NBRTN; and participants exposed to NBRFN had lower brand attitudes, brand desirability, quality perceptions, brand trust, and purchase intention after exposure, than before exposure, even though the majority of participants reported that they believed the story to be false. Therefore, the present research presents evidence for the existence of emotional-selection in the context of NBRFN, and one explanation of the present findings is that the NBRFN first activates the basic emotion of disgust, which subsequently activates unfavorable emotional schemas (i.e. appraisals) within consumers' minds which in turn decrease their CBBE (Bagozzi et al., 1999; Izard, 1992, 2007). Additionally, it is demonstrated that the higher the consumer's initial CBBE, the more susceptible the consumers' CBBE is to NBRFN. Thus, NBRFN poses a large threat towards the intangible assets of brands. Therefore, brand managers are advised to frequently monitor the online landscape to identify NBRFN about their brands, and to consider initiating a strategic response if the NBRFN possesses the potential to diffuse broadly or deeply within an important consumer segment. Furthermore, marketing practitioners and advertising intermediaries are encouraged to refrain from investing in webpages associated with NBRFN, platforms that facilitates interaction online are encouraged to minimize the spread of NBRFN, and policy makers are called upon to increase the focus in schools on critical assessment of online information to enable future consumers' to make more informed choices. Finally, the firm-response strategies discussed here, could be employed by brand managers and could be fruitful for future research to test.

I hope the increased understanding of the mechanisms through which NBRFN impact CBBE provided here can improve the ability of companies, marketing practitioners, consumers, and policy makers to navigate in today's challenging and interactive media landscape.

Department of Business and Management
Chair of Research Methodology for Marketing

**Negative Emotions Trump the Truth: The
Impact of Negative Brand-Related False News
on Customer-Based Brand Equity**

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- SUMMARY OF THESIS -

ACADEMIC YEAR

2017/2018

Acknowledgements

This piece of work concludes my five years as a passionate marketing student and represents the starting point of a new, exiting, and lifelong learning experience as a marketing practitioner. The path towards this point, and my achievements along the way, would not have been possible without the endless support from my family. Therefore, I dedicate this thesis to my mother, father, and brother. Thank you Else, Ivar, and Henrik.

Little research about false news currently exists within the marketing domain, which led me to combine research within the domains of marketing, communication, psychology, journalism, folklore, and information science in the theorizing. Therefore, this pioneer research project has been highly challenging, and the vast breadth of research domains that were consulted often led to confusion. Therefore, I express my deepest gratitude to my supervisor, prof. Feray Adigüzel, whom managed to direct me closer towards the core when I was focusing too broad. In addition, I am also deeply grateful to prof. Simona Romani, for the continuous dialogue along the thesis process and for helpful insights on emotions theory. In sum, the exploration of a broad range of research along with great discussions and constructive feedback have granted me with a better understanding of the interplay between different domains and hopefully resulted in an innovative master thesis.

Since the present thesis entails an under-investigated phenomenon, I initially conducted an exploratory data collection using online interviews, where I asked marketing practitioners and professors open questions about their familiarity and thoughts about NBRFN. Therefore, I am highly grateful for the reflections and thoughts provided by Terje Eide, Børge Aanestad, Kamilla Ruud, and Sverre P. Jonassen, which have guided my theorizing.

I will also use this opportunity to salute a selection of my previous professors, namely Morten H. Abrahamsen, Bernt Ronningsbakk, Njål Foldnes, Auke Hunneman and, Rutger van Oest, for their inspiring lectures at BI Norwegian Business School. Finally, I express my deepest gratitude to Marianne Rygh and Thomas Ottesen for their excellent mentorship.

Enjoy the reading.

Best regards,



Introduction

In recent years, the phenomenon of negative brand-related false news (NBRFN) has increased in frequency and consequently represents a threat towards important intangible assets such as brand equity (Keller, 1993). In 2016, the owner and employees of Comet Ping Pong pizzeria in Washington D.C received death threats after several articles were spread through social media about “Pizzagate”, which can be described as a conspiracy theory (LaCapria, 2016). The articles portrayed the pizzeria as the location for a child abuse ring led by Hillary Clinton and John D. Podesta. Despite none of these claims being true, this politically-motivated misinformation severely damaged the Comet-Ping-Pong brand. In fact, it led to a severe safety risk for its employees and customers as a 29-year-old man—which wrongly believed he was saving children trapped in the child abuse ring—fired an assault rifle inside the pizzeria in December 2016 (Haag & Maya, 2017; Kang, 2016). This is an example where false news making assertions about a brand led to tangible implications for the brand and its stakeholders. However, despite its increasing frequency the phenomenon is still relatively under investigated. The present research contributes to deepen our understanding of this new phenomenon, first by providing a definition of brand-related false news (BRFN) based on a broad literature review, before focusing explicitly on NBRFN in two studies. Study 1 tests how two different emotional appeals of NBRFN influence customer-based brand equity (CBBE), whereas Study 2 examines how NBRFN influence CBBE, compared to negative brand-related true news (NBRTN).

The main purpose of this thesis is to deepen the understanding of how NBRFN influence CBBE. Hence, the present studies seek to answer the following research question:

***RQ:** How does negative brand-related false news, compared to negative brand-related true news, conveyed through social media, influence customer-based brand equity?*

On the basis of findings from the present studies and previous research I also provide suggestions for further research, associated with the following sub question:

- *How can companies respond to negative brand-related false news to prevent brand damage?*

There are currently no studies explicitly focusing on negative brand-related false news. Therefore, the present research theorizes by bridging research within marketing, journalism, communication, psychology, and information science. Recent research conducted by Vosoughi et al. (2018) which examined a data set of 126,000 different rumors spread more than 3 million times on Twitter between 2006 and 2017, showed that false news reached more people and propagated faster, compared to true news, and false news inspires the emotions disgust, surprise, and fear. The researchers suggest that recipients’ emotional reactions and the fact that false news is more novel than true news might explain the observed differences. Nevertheless, the extent to which such false news impact CBBE remains to be understood.

Theoretical Framework

Defining Brand-Related False News

Drawing upon the typological discussion presented in the full thesis, I define brand-related false news (BRFN) as: any story or claim with assertion about a brand that is either completely false or a considerable distortion of the truth, which is conveyed online by individuals or organizations, and has the potential to harm the brand.

Negative Brand-Related False News. NBRFN broadly entails NWOM and CBS conveyed by consumers and fabrications conveyed by organizations, a range of which is too extensive to be covered here (Chan & Cui, 2011; Kähr et al., 2016). Previous research suggests that propagation in social media is an important component of the threat posed by false news (Vosoughi et al., 2018). Therefore, in the present studies I focus on NBRFN in the form of fabricated articles from a non-news organization that are shared by consumers on Facebook. This phenomenon can also be considered as the most novel version of NBRFN, since it differs from traditional conceptualizations of rumors (Sunstein, 2007). Unlike rumors, NBRFN presents direct evidence—even though this evidence is false. However, antecedents and processes associated with propagation of rumor cascades are outside my scope. Particularly, the present studies entail how a single exposure to this type of NBRFN impacts CBBE, compared to a single exposure to NBRTN.

Customer-Based Brand Equity

Brand Equity. Brand equity is a frequently used measure of brand performance, and has been conceptualized as a measure of consumer behavior, a financial measure, and as a measure of consumers' beliefs (Keller, 2013). Nevertheless, the majority of authors agree that brand equity is the value contributed by the brand name to a branded product (Dawar & Pillutla, 2000). Since the scope of this thesis evolves around individual consumers I will focus on CBBE which is defined by Keller (1993) as follows: “the differential effect of brand knowledge on consumer response to the marketing of the brand” (p. 2). Thus, positive (negative) CBBE occurs when the consumer reacts more (less) positively to a marketing-mix element (e.g. price, product quality, or advertisement) for the brand compared to the same element of the marketing mix attributed to an unnamed or fictitiously named version of the service or product. For the purposes of this research I treat CBBE as a composite of five brand-related beliefs: brand attitudes, brand desirability, perceptions of quality, brand trust (dependability, reliability and trustworthiness) and brand purchase likelihood. This composite construct is adopted from Dawar and Pillutla (2000) who used it to measure effects on brands resulting from product-harm crises. The construct is chosen both since it taps into the dimensions of brand equity, and since it includes purchase likelihood (i.e. behavioral intention) which is an important measure in research on product-harm crises and brand rumors, both of which share similarities with NBRFN (Cleeren et al., 2017; Dubois et al., 2011).

Differences Between Negative Brand-Related False and True News

Since NBRFN can be characterized as a *persuasion attempt*, The Persuasion Knowledge Model (PKM) serves as a theoretical foundation for my conceptual framework (Friestad & Wright, 1994). Friestad and Wright (1994) defines agents as “whomever a target identifies as being responsible for designing and constructing a persuasion attempt” (p. 2). Therefore, agent refers to the creator of the fabricated article which aims to persuade consumers (targets). Conversely, the consumer who shares the NBRFN through Facebook might not aim to persuade but simply redistributes the information for his or her network. Therefore, I regard the consumers that shares NBRFN merely as *senders* of a message (Berlo, 1960). Thus, henceforth the word agent refers to journalistic institutions or non-news organizations that creates NBRTN and NBRFN, whereas the word sender refers to persons or organizations sharing NBRTN or NBRFN on Facebook.

The theoretical discussion of news provided in the full thesis suggests that NBRFN and NBRTN entails two fundamental differences. First, NBRTN are produced by well-known journalistic institutions, whereas NBRFN are produced by unknown non-news organizations. Second, the journalistic institutions (e.g. BBC) that publish NBRTN have to follow strict journalistic guidelines whereas creators of NBRFN manipulates and fabricates information in order to create seemingly relevant, interesting and extraordinary news that elicit strong emotions within consumers (Y. Chen et al., 2015; Tandoc Jr et al., 2018; Vosoughi et al., 2018). For example, as showed in the aforementioned example about Pizzagate, NBRFN often contains narrative strategies, similar to those of urban legends, combined with visual stimuli presumably designed to elicit strong negative *emotions* within targets (Fernback, 2003). The aforementioned findings by Vosoughi et al. (2018) about the emotional properties of false news also suggest that the ability to elicit strong emotions within targets is one of the main persuasive properties of NBRFN. Thus, I propose that the main process through which NBRFN impact CBBE is through elicitation of strong negative emotions.

Negative Emotions and Negative Brand-Related False and True News

Negative emotions might negatively influence CBBE. For example, Westbrook (1987) found negative affect—operationalized as a composite of contempt, anger, and disgust—to be negatively related to satisfaction and positively related to complaining and WOM. Similarly, Romani et al. (2012) found that consumers’ negative emotions toward brands—dislike, anger, sadness, worry, embarrassment, and discontent—significantly predicted complaining, negative WOM, and switching. Additionally, Becheur and Das (2018) examined activation of differential emotions in response to shocking advertisements about drunk-driving consequences and their effects on persuasion. Findings revealed a four-dimensional structure of emotion schemas: primary emotions (fear, anger, sadness), self-conscious emotions (guilt, shame), repulsion (contempt,

embarrassment, disgust and repugnance), and surprise. Repulsion had a negative effect, and primary emotions had a positive effect on persuasion. The findings also showed that the advertisement elicited surprise before all other emotions, and surprise further activated other emotions. The abovementioned studies suggest that consumers' tend to rely on emotion in information processing, and that consumers' emotions have the ability to predict both consumers' attitudes towards the brand and purchase intention, as well as actual consumer behavior, such as complaint behavior, WOM, and switching. All of these outcome variables are either included in or closely linked to the CBBE construct employed here. Therefore, I hypothesize that NBRFN and NBRTN will negatively influence CBBE through activation of negative emotions within targets. Nevertheless, NBRTN is limited by journalistic guidelines, whereas NBRFN employs manipulation and exaggeration to evoke strong emotions. Therefore, NBRFN are likely to activate stronger emotional reactions, and is thus likely to be perceived as a larger threat for the consumer compared to NBRTN. Furthermore, as aforementioned, Vosoughi et al. (2018) found that false news spread faster and deeper than true news, and suggest that consumers emotional reactions and the novelty of false news might explain this observation. Therefore, I hypothesize that the negative effect of NBRFN on CBBE is stronger than that of NBRTN, due to elicitation of a stronger negative emotional reaction.

In order to test these hypotheses, the present studies examine the extent to which NBRFN and NBRTN stories which makes assertions about a product-harm crisis (e.g. contaminated product) influences CBBE through the elicitation of the negatively valenced emotions of contempt, anger and disgust (CAD), which is often referred to as the *hostility triad* (Dawar & Pillutla, 2000; Izard, 1977). There are four reasons for this choice. First, recent examples suggest that NBRFN designed to elicit the basic emotion disgust through assertions about contaminated products is common. Second, disgust often occur together with anger and contempt, and form the negative-affect construct commonly used in marketing (Grappi et al., 2013). Third, similar to the claims about product-harm crises, the characteristics of these differential emotions involves attribution of causal agency to products and brands, which is relevant in a consumption context (Westbrook, 1987). Finally, the hostile nature of these three emotions can pose a large threat towards CBBE. Contempt can be described as a feeling of superiority and is believed to have evolved through evolution as a tool for preparing people to face a dangerous dispute, whereas anger can be seen as a response to a threat in which energy mobilizes rapidly to provide senses of courage, confidence, and power, and an impulse to strike out. Finally, disgust activates a revulsion response towards potential sources of contamination, and can be described as feelings of 'having a bad taste in one's mouth', or even feeling as if one is 'sick at the stomach' (Guido et al., 2018). Izard (1977) noted

that “disgust combined with anger may motivate destructive behavior, since anger can motivate ‘attack’ and disgust the desire to ‘get rid of’” (p. 89).

Core Disgust. Disgust is a basic emotion that might be directly evoked from mere perception of a given stimuli, and has been proposed as a relevant predictor of consumer behavior (Izard, 2007; Yi & Baumgartner, 2004). Several disgust dimensions have been identified, such as animals, food, body products, body envelope violations, sex, death, hygiene, and improbable contamination (Haidt et al., 1994). Furthermore, the three dimensions of animal, food, and body products together form the core disgust emotion, which can be described as a protector of the mouth against possible contaminations (Rozin et al., 1999). Feelings of core disgust will typically be high if one nearly ingest an inappropriate substance (e.g. urine, ejaculate, feces, or a dead rat), or read a story about someone who did (Heath et al., 2001; Izard, 1992). Recent research within marketing by Guido et al. (2018) demonstrated that contamination-based disgust, which entails core disgust, reduced purchase intention towards toothpaste. Similarly, two experiments conducted by Shimp and Stuart (2004) show that consumers’ level of felt disgust mediates the relationship between advertising content and purchase intention. Furthermore, Heath et al. (2001) manipulated disgust in the messages of urban-legends stories and found that people were more willing to share stories that elicited stronger disgust. These latter findings coincides with the findings of Vosoughi et al. (2018) that showed: false news, which typically inspires disgust, fear, and surprise, spread faster and to more people than true news, which inspires joy, sadness, trust, and anticipation. Therefore, because of the difference in the way in which NBRFN and NBRTN are produced, I hypothesize that NBRFN will lead to a stronger activation of negative emotions compared to NBRTN, which consequently will lead to a stronger negative effect of NBRFN on CBBE, than NBRTN. Thus, the following effects is hypothesized:

H₁: (a) NBRFN has a negative effect on CBBE, and (b) the negative effect of NBRFN on CBBE is larger than that of NBRTN.

H₂: The effect of NBRFN on CBBE is mediated by activation of negative emotions (CAD). That is, the higher the activation of negative emotions (CAD), the higher the negative effect on CBBE.

Source Credibility of the Sender of Negative Brand-Related False and True News

Perceived source credibility is a multidimensional construct, which consists of the two dimensions *perceived source trustworthiness* and *perceived source expertise* (Hovland et al., 1953). Perceived source trustworthiness is the extent to which the observer perceives the source as being motivated to communicate valid assertions, whereas perceived source expertise is the extent to which the observer perceives the source as being capable of communicating valid assertions (Ohanian, 1990). The vast amount of studies that have examined the role of source credibility in marketing and in persuasion have demonstrated that high-credibility sources

generally lead to more attitude change than low-credibility sources (Pornpitakpan, 2004). Source credibility can be classified as a simple affective cue, which can influence attitudes, especially when consumers' prior knowledge or involvement is low, or other instances where consumers employ heuristic processing (Chaiken, 1980; Petty & Cacioppo, 1986).

For example, perceived trustworthiness and expertise are important dimensions that account for the persuasive effects of celebrity endorsements, and the perceived source credibility of a celebrity which endorses the brand has been found to impact consumers purchase intention and attitudes towards the ad (Knoll & Matthes, 2017; Tripp et al., 1994). Furthermore, a study by Czapinski and Lewicka demonstrated a positive bias effect for low-credibility sources, and a negative bias effect for high-credibility sources (as cited in Pornpitakpan, 2004, p. 253). That is, negative information was rejected more frequent than positive information when the source was perceived to have low credibility, whereas negative information had a higher impact than positive information when the source was perceived to have high credibility. These findings is consistent with those of Wegner et al. (1981) which found that negative direct incriminating claims were more persuasive when made by a high-credibility source, compared to a low-credibility source. Since both NBRFN and NBRTN entails negatively valanced assertions, I hypothesize that the negative effects of both NBRFN and NBRTN on CBBE, through activation of negative emotions (CAD), will be stronger when the NBRFN story is shared by a sender with high source credibility, compared to a sender with low source credibility.

Grounded in emotion theory I propose that the particular type of NBRFN studied here triggers an immediate emotional feeling within targets, that activates further processing, in which consumers interpret the emotional schema together with the message content and other cues such as the credibility of both the agent that produced the news and the sender which shared the news. When consumers perceive the news to be shared by a high-credibility source, a higher credibility is attributed to the message and the immediate emotional feeling, than when the news is shared by a low-credibility source. Thus, the following effect is hypothesized:

H₃: (a) Source credibility of the sender moderates the effect of negative emotions (CAD) on CBBE. That is, when NBRFN is shared by a high-credibility source, the activation of negative emotions (CAD) have a larger negative effect on CBBE, than when NBRFN is shared by a low-credibility source.

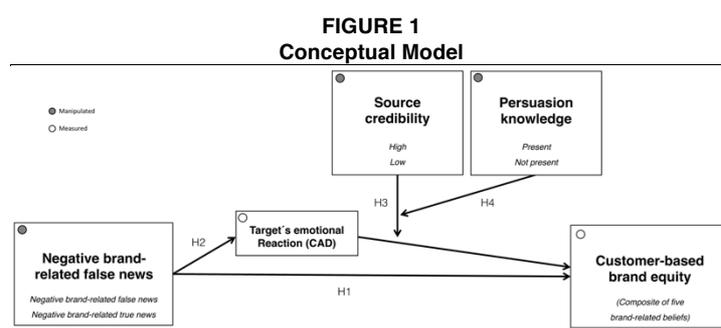
Persuasion Knowledge and Negative Brand-Related False and True News

Persuasion knowledge is accumulated during the lifespan of the consumer through interaction with, and observation of, family, friends, co-workers, and marketers, and entails knowledge about how actors' can use different persuasion tactics to influence individuals' feelings, thoughts, and behaviors (Friestad & Wright, 1994). Thus, consumers' persuasion knowledge works as a safeguard against the manipulative intent of the agent (M. C. Campbell, 1995). The concept of persuasion knowledge also coincides with recent results from Tandoc Jr et

al. (2017) which implies that people rely on their own experience (e.g. persuasion knowledge) and their own judgement of the source and the message when assessing news. Furthermore, Scott et al. (2013) that found a seller's conspicuous consumption to increase behavioral intent towards the seller under exchange norms, discovered that when persuasion knowledge were salient these inferences were inhibited. Thus, the competence-signaling effect of conspicuous products such as expensive watches and cars disappeared when consumers based on their persuasion knowledge judged these conspicuous cues as possible persuasive attempts. Therefore, in line with the "change of meaning principle" described by Friestad and Wright (1994), I argue that the effects on CBBE resulting from the emotion-eliciting content of the news and the source credibility of the sender will change if consumers interpret these cues as part of a deliberate persuasive effort. That is, when persuasion knowledge is salient in consumers' minds about how creators of NBRFN attempts to persuade people to believe in falsehoods by appealing to people's emotions, consumers will recognize the

news as a persuasion effort and resist persuasion. Therefore, I hypothesize that persuasion knowledge leads consumers to process the content and the sources with higher scrutiny and susceptibility. This higher scrutiny is likely to decrease the effects of negative emotions (CAD) evoked by NBRFN on CBBE in general, but also to decrease the amplifying effect of high source credibility on the relationship between negative emotions (CAD) and CBBE.

H₄: (a) When persuasion knowledge is absent, the hypothesized effects of H1, H2 and H3 will occur. When persuasion knowledge is present, the effect of negative emotions on CBBE is reduced, relative to when persuasion knowledge is absent, and the amplifying effect of high source credibility on the relationship between negative emotions (CAD) and CBBE is decreased.



Perceived Credibility. Tybout et al. (1981) argue that consumers are affected by rumors not because the consumers believe them, but because the rumors are processed and stored in consumers' memory by rehearsal. The

forementioned theorizing rests on the same assumption, namely that NBRN affects consumers, not necessarily because the news is believed, but because emotional schemas, messages, and credibility cues are processed. However, since NBRFN is produced by relatively unknown non-news organizations and NBRTN is produced by well-known journalistic institutions, they might differentially influence consumers' overall credibility perception of the news (Pornpitakpan, 2004). Therefore, the extent to which consumers' perceive the news stories as credible is controlled for in the present Study 2.

Methodology

To ensure a high degree of realism, I have chosen to use Coca-Cola as the target brand in the studies. Furthermore, to test the abovementioned hypothesized causal relationships, this conclusive research is quantitative and employs a casual design (Malhotra, 2010, p. 113). Particularly the method for data collection entails two experimental surveys, that employs a pretest-posttest control group design, in which CBBE is measured before and after the experimental treatment.

Sampling Method

The target population for this research is American Consumers. The data for both studies were collected through Amazon Mechanical Turk, in which members of the crowd-sourcing platform participated in the studies and received a modest payment. The use of Amazon Mechanical Turk provides satisfactory data quality and have been found to be more representative compared to other convenience samples (Buhrmester et al., 2011; Goodman et al., 2013). This sampling strategy is judged as satisfactory since the present studies are pilot studies, whose main focus is to establish the existence of a causal relationship between NBRFN, negative emotions, and CBBE (Malhotra, 2010).

Study 1: Participants, Design and Procedure

Sixty-one-participants from the US were recruited to Study 1 through Amazon Mechanical Turk and received a payment of \$0.45 each after submission of their response. The participants were randomly assigned to one of the two NBRFN conditions (core disgust vs. righteous anger). First, participants answered questions associated with the pre-measure of CBBE, before they were exposed to one of the two NBRFN stories about Coca-Cola (Appendix 1). Immediately after exposure, participants were asked to “write 2-5 sentences that describe your immediate thoughts and feelings associated with the news you just watched”. Thereafter, participants were asked to rate the extent to which they agreed with several adjectives associated with eight differential emotions. The eight emotions were measured by three adjectives each, and the eight sets of three adjectives were organized in blocks and presented in a random order to avoid response order bias. After the rating of emotions, participants were randomly assigned to either the high or low source-credibility condition (Appendix 2). Immediately after exposure, participants were asked to “please consider the source you just viewed and imagine that you received a consumer advice by it”, and then rated their opinion about the source’s expertise and trustworthiness (Ohanian, 1990). Then, the participants answered questions associated with the post-measure of CBBE. Finally, participants answered some demographical questions about age, gender and social media usage, and answered questions measuring persuasion knowledge. At the end of the survey, participants viewed a disclaimer clarifying that the news they just viewed was false.

Study 2: Participants, Design and Procedure

Two-hundred-fifty-two participants from the US were recruited through Amazon Mechanical Turk and were given a payment of \$0.60 each, after completion of the survey. The participants were randomly assigned to one of the eight conditions, in a 2 (negative brand-related false news: NBRFN vs. NBRTN) x 2 (source credibility of the sender: high vs. low) x 2 (persuasion knowledge: present vs. not present) between-subjects factorial design.

Identical to Study 1, participants first answered questions associated with the CBBE composite measure. Second, each participant read either an article about the emerging phenomenon of fake news (presence of persuasion knowledge), or an article about the working day of the average journalist (absence of persuasion knowledge). Third, participants were exposed to either the fictitious Facebook page of Consumer Support (high-credibility) or the fictitious Facebook profile of the consumer Mary Williams (low-credibility). After viewing the source credibility manipulation, each participant was exposed to either a NBRFN or NBRTN story, shared by either Consumer Support or Mary Williams. The source sharing the news were determined by the initial exposure. That is, all participants initially exposed to the Facebook page of Consumer Support received either a NBRFN or NBRTN message shared by Consumer Support, and the opposite applied to participants exposed to Mary Williams. Immediately after exposure to the news stories, participants were asked to rate the extent to which they agreed with three adjectives for each of the five emotions contempt, anger, disgust, fear and surprise. The sets of three adjectives associated with the hostility triad were presented in a random order to avoid response order bias, whereas surprise and fear were measured after the CAD-emotions. After the rating of emotions, participants answered questions associated with the post-measure of CBBE. Thereafter, participants assessed three items measuring the control variable of perceived news credibility, and answered questions included in the manipulation checks of persuasion knowledge and source credibility. Then, participants indicated whether they believed the news story they just watched to be true or false, and stated their degree of certainty associated with that belief. Finally, participants were asked to “write 2-5 sentences that describe your immediate thoughts and feelings associated with the news you just watched”, before answering some demographical questions. At the end of the survey, participants viewed a disclaimer clarifying that the news they just viewed was false.

Results***Reliability and Validity***

All multi-level items have a Cronbach’s Alpha above .70 and were therefore judged to be reliable measures of the focal constructs. The construct validity associated with each of the focal constructs were assessed using exploratory factor analysis, with Principal Component Analyses (PCA) as extraction method, which were interpreted based on a-priori determined numbers of

factors specified theory. The multi-item constructs of CBBE, source credibility, IMI and the differential emotions contempt, anger, disgust, fear and surprise formed valid measures.

Results: Study 1

Paired samples t-tests were used to test the difference between pre- and post-measures of the CBBE composite variable, both in the sample, and in each condition separately. First, the sample-post-measures of CBBE ($M = 4.07$, $SD = 1.76$) were significantly lower than the pre-measures ($M = 4.80$, $SD = 1.49$), $t(60) = 4.80$, $p < .001$. Second, the post-measures of CBBE ($M = 4.15$, $SD = 1.84$) were significantly lower than the pre-measures ($M = 5.09$, $SD = 1.26$), $t(28) = 3.63$, $p = .001$, also in the core disgust condition. Third, the same effect appears in the righteous anger condition, where the post-measures of CBBE ($M = 4.00$, $SD = 1.70$) is significantly lower than the pre-measures ($M = 4.54$, $SD = 1.65$), $t(31) = 3.21$, $p = .003$. Thus, the statistically significant decrease in CBBE holds for both the sample, and for the two conditions in isolation. These results provide support for H1a, which states that NBRFN has a negative effect on CBBE.

Results: Study 2

Testing H1. In order to test H1a, a paired samples t-test were conducted in which the pre- and post-measures of CBBE were compared, to test the significance of the within-subject change in the CBBE construct (Appendix 8). Similar to Study 1, the sample-post-measures of CBBE ($M = 4.23$, $SD = 1.95$) were significantly lower than the pre-measures ($M = 5.08$, $SD = 1.59$), $t(251) = 9.54$, $p < .001$. Therefore, exposure to negative news stories led to a significant decrease in consumers individual CBBE, which provides support for H1a, and thus NBRFN has a negative effect on CBBE. In order to test H1b, a simple OLS regression were calculated in which the change in CBBE were regressed on the NBRFN dummy variable (Appendix 8). This regression was not significant ($F(1, 250) = 0.00$, $p = .98$), with an R^2 of .00, and thus the NBRFN dummy variable did not significantly predict the change in CBBE ($b = .005$, $p = .98$). Therefore, no difference between the negative effects of NBRFN and NBRTN on CBBE can be claimed, and thus hypothesis 1b is not supported.

Testing H2. In order to test H2, a mediation analysis was conducted using SPSS PROCESS Model 4, which consists of two OLS regressions (Hayes & Preacher, 2014). The model was first estimated using NBRFN as the independent variable, CAD as the mediator, and change in CBBE as the dependent variable (Appendix 8). However, NBRFN did not significantly predict CAD, which was expected since the aforementioned findings from the descriptive analyses suggested that levels of contempt and anger were equal between the NBRFN and NBRTN condition. Because of this between-groups similarity of contempt and anger, the model was re-estimated using only the disgust construct as a measure of negative emotions, and the control variable perceived credibility was added as a covariate.

The first of the two OLS regressions, which predicted disgust based on the dichotomous NBRFN dummy variable and perceived credibility was significant ($F(2, 249) = 6.28, p < .05$), with an R^2 of .05. The NBRFN story lead to significantly higher level of disgust ($b = .36, p < .05$) than the NBRFN story, and the control variable perceived credibility were also positively related to disgust ($b = .1418, p < .05$). The second of the two OLS regressions, which predicted change in CBBE based on the dichotomous NBRFN dummy variable, the mediator disgust, and the control variable perceived credibility was also significant $F(3, 248) = 16.67, p < .001$, with an R^2 of .17. The mediator disgust ($b = -.34, p < .001$) and the control variable perceived credibility ($b = -.14, p < .05$) significantly predicted the negative change in CBBE, whereas the effect from NBRFN were insignificant ($b = .15, p = .377$). Therefore, no direct effect exists from NBRFN on CBBE, but the indirect effect of NBRFN through disgust on CBBE is equal to $-.125$ and is significant since the 95% percentile bootstrap confidence interval ($-.269$ $-.006$) does not contains zero (Hayes, 2018). It is no longer necessary to have a direct effect between the independent and dependent variable in order to infer mediation (Zhao et al., 2010). Therefore, the established indirect effect is sufficient to claim that disgust significantly mediates the relationship between NBRFN and CBBE, which provides support for H2. That is, NBRFN lead to higher activation of negative emotions in terms of disgust, which consequently has a negative effect on CBBE.

Testing H3 and H4. In order to test H3 and H4, the full moderated moderated mediation model was estimating using SPSS PROCESS model 18, which consists of two OLS regressions (Hayes, 2018). The model was estimated using NBRFN as the independent variable (X), disgust as the mediator (M), source credibility as the primary moderator (W), persuasion knowledge as the secondary moderator (Z), and perceived credibility as a covariate. The regression coefficients for the models of disgust (M) and change in CBBE (Y) can be found in Table 1.

The disgust model were statistically significant ($F(2, 249) = 6.27, p = .002$), with an R^2 of .05, as were the model of change in CBBE ($F(9, 242) = 6.59, p < .001$), which had an R^2 of .1969. The 95% CIs associated with the disgust model (M) show that there is a significant positive relationship between NBRFN and disgust, and a significant positive relationship between the control variable perceived credibility and disgust. Furthermore, the 95% CIs associated with the model of change in CBBE reveal that the effects from mediator disgust, the control variable perceived credibility, and the interaction between source credibility and persuasion knowledge is significant. Additionally, inspection of the 95% bootstrap CIs associated with the conditional indirect effects of NBRFN through disgust on change in CBBE, under different levels of source credibility and persuasion knowledge, show that the indirect effect of NBRFN through disgust on change in CBBE is significant when source credibility is low and persuasion knowledge is absent; when source credibility is low and persuasion knowledge is present; and when source credibility

is high and persuasion knowledge is absent; but not when source credibility is high and persuasion knowledge is present. Finally, the index of moderated moderated mediation was not significant, since its 95% bootstrap CI contains zero. Therefore, we cannot definitely claim that persuasion knowledge moderates the moderation of source credibility on the indirect effect of NBRFN through disgust on CBBE. That is, H3 and H4 were not supported.

TABLE 1
Ordinary Least Squares Regression Coefficients, Standard Errors, 95% CI, and the conditional indirect effects of NBRFN on CBBE from the Second Stage Moderated Moderated Mediation Model

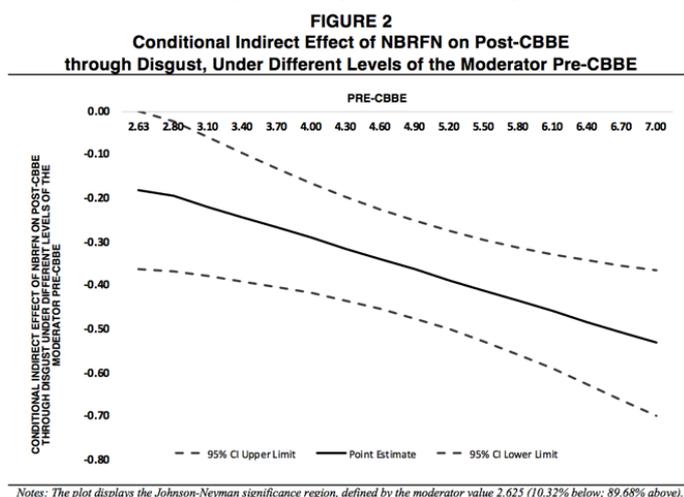
Variables	Outcome					
	M: Disgust			Y: Change in CBBE		
	<i>b</i>	(SE)	95% CI [LL, UL]	<i>b</i>	(SE)	95% CI [LL, UL]
Constant	-0.672(0.212)		[-1.088, -0.255]	-0.439(0.247)		[-0.925, 0.047]
X: NBRFN	$a_1 \rightarrow$	0.364(0.176)	[0.017, 0.710]	$c_1 \rightarrow$	0.081(0.165)	[-0.245, 0.407]
Cov.: Perceived Credibility	$a_2 \rightarrow$	0.142(0.050)	[0.043, 0.241]	$b_8 \rightarrow$	-0.118(0.049)	[-0.214, -0.022]
M: Disgust				$b_1 \rightarrow$	-0.373(0.117)	[-0.604, -0.143]
W: Source Credibility (SC)				$b_2 \rightarrow$	-0.241(0.235)	[-0.704, 0.223]
Z: Persuasion Knowledge (PK)				$b_3 \rightarrow$	-0.225(0.235)	[-0.687, 0.237]
MW: Disgust x SC				$b_4 \rightarrow$	-0.049(0.157)	[-0.358, 0.261]
MZ: Disgust x PK				$b_5 \rightarrow$	0.019(0.168)	[-0.312, 0.349]
WZ: SC x PK				$b_6 \rightarrow$	0.751(0.331)	[0.099, 1.403]
XWZ: Disgust x SC x PK				$b_7 \rightarrow$	0.192(0.231)	[-0.263, 0.647]
	R^2	.048			.197	
Conditional Indirect effects of X on Y (NBRFN \rightarrow Disgust \rightarrow Δ CBBE):				Effect	BootSE	95% bootstrap CI ^a
	Disgust	Low SC	PK absent	-0.136	0.083	[-0.332, -0.006]
	Disgust	Low SC	PK present	-0.129	0.089	[-0.348, -0.004]
	Disgust	High SC	PK absent	-0.154	0.081	[-0.332, -0.008]
	Disgust	High SC	PK present	-0.077	0.060	[-0.233, 0.000]
Moderation of moderated mediation				Index	BootSE	95% bootstrap CI ^a
				0.070	0.092	[-0.105, 0.282]

^aPercentile bootstrap CI based on 5,000 bootstrap samples.

Moderating effect of pre-CBBE. To simplify interpretation, all the analyses above were performed using the change in CBBE construct as a dependent variable. However, the present research entails inference about consumers attitudes about a real brand, and it is likely that the brand in question represents greater personal meaning for consumers with high initial CBBE, than for consumers with lower initial CBBE (Bagozzi et al., 1999). Therefore, consumers with high initial CBBE might have a worse experience while viewing NBRFN targeted at their favorite brand, compared to consumers with low initial CBBE which might be more indifferent towards the NBRFN. Therefore, in line with the expectancy-evidence framework employed by Dawar and

Pillutla (2000), and because Dawar and Lei (2009) found that pre-crisis-brand-familiarity influenced brand evaluations after a brand crisis I consider it meaningful to examine the extent to which the indirect effect of NBRFN through disgust on consumers post-CBBE is moderated by consumers initial CBBE.

Two OLS regressions were estimated using SPSS PROCESS model 14 with the post-CBBE variable as dependent variable (Y), the NBRFN dummy variable as the independent variable (X), disgust as the mediator (M), the pre-CBBE variable as the moderator (W) and the control variable perceived credibility as a covariate (Hayes, 2018). The disgust model were statistically significant ($F(2, 249) = 6.27, p = .002$), with an R^2 of .05, and both the NBRFN dummy variable ($b = .36, p < .05$) and the control variable perceived credibility ($b = .14, p < .05$) significantly predicted disgust. That is, NBRFN activated higher disgust than NBRTN, and the higher the perceived credibility the higher the activation of disgust. The model of post-CBBE were also significant ($F(5, 246) = 73.33, p < .001$), with an R^2 of .60. In this model, the NBRFN dummy variable ($b = .16, p = .31$) and the disgust variable ($b = .03, p = .86$) were not significant, whereas the pre-CBBE variable ($b = 1.28, p < .001$) and perceived credibility ($b = -.14, p = .002$) significantly predicted post-CBBE. Most interestingly, the interaction between the mediator disgust and the pre-CBBE variable were also significant ($b = -.08, p = .009$). That is, the higher the consumer's initial CBBE, the higher the negative indirect effect of NBRFN on post-CBBE through disgust. Furthermore, inspection of the Johnson-Neyman significance region, which is displayed in Figure 2, confirms that this interaction is significant when pre-CBBE is between 2.635 and 7.0. Thus, these findings suggest that NBRFN stories have the highest persuasive impact on customers with strong positive CBBE, which are often the most loyal and profitable customers of a brand (Dick & Basu, 1994; Johnson et al., 2001).



Discussion

Scientific and Managerial Implications

The main scientific contribution of the two present pioneer studies is the demonstration of a negative effect of NBRFN on consumers' individual CBBE, through the elicitation of consumers' feelings of disgust. To my knowledge, the present research is the first to demonstrate that NBRFN lead to a decrease in consumers' individual CBBE. These present findings coincides with the ones of Vosoughi et al. (2018), which found that false news diffused broader and deeper

than true news, and that false news, among other emotions, inspires disgust. The fact that false news tends to spread faster and deeper than true news, seen together with the present findings that NBRFN has a negative impact on CBBE is disturbing from a marketing perspective.

The finding that NBRFN influenced consumers' CBBE even though the story were perceived to be false supports the emotional-selection hypothesis that a meme competes based on the extent to which it evokes strong emotions (Heath et al., 2001). Furthermore, the present findings extends the findings of Romani et al. (2012) about how negative emotions drive consumers away from brands, and coincides with previous research on brand rumors by Tybout et al. (1981) which argue that consumers are affected by rumors not because the consumers believe them, but because the rumors are processed and stored in consumers' memory by rehearsal. Therefore, one explanation of the present findings is that the NBRFN first elicits the basic emotion of disgust, which subsequently activates unfavorable emotional schemas (i.e. appraisals) within consumers' minds which in turn decrease the CBBE (Bagozzi et al., 1999; Izard, 1992, 2007).

The findings of the present research also provide several managerial implications. Today consumers' brand attitudes, brand desirability, quality perceptions, brand trust, and purchase intention have the potential to be damaged by NBRFN. Even worse, it appears that the higher the consumer's initial CBBE, the more susceptible the consumers' CBBE is to NBRFN. Thus, a brand's "heavy users" might be more influenced by NBRFN, compared to relative infrequent users. This is a very unfortunate pattern, which represents a serious threat towards the intangible assets and the profitability of brands, since the customer group with highest CBBE are likely to contain the most loyal and most frequent buyers (Dick & Basu, 1994; Johnson et al., 2001; S. L. Vargo & Lusch, 2008). Therefore, marketing practitioners are advised to frequently monitor the online landscape to identify NBRFN about their brands, and to carefully assess the risk associated with each piece of NBRFN. If the NBRFN possesses the potential to diffuse broadly or deeply within an important consumer segment, the marketing practitioner should consider to initiate a strategic response (Vosoughi et al., 2018).

Limitations and Suggestions for Future research

Usage of non-probability sampling, and the fact that the samples were drawn from the US as a whole can be considered a limitation, since geographical differences in participants experience with false news might serve as extraneous variables. The present studies also focused explicitly on NBRFN that were made to evoke disgust. Thus, the generalizability of results is limited to NBRFN with core-disgust-eliciting assertions about contaminated products.

Nevertheless, the present research demonstrates that NBRFN can influence consumers individual CBBE, through evoking consumers feelings of disgust. Therefore, in the thesis I provide a theoretical discussion of possible firm-response strategies to NBRFN on the basis of previous

research and deduce the following hypothesized effects for future research to test: *When consumers have been exposed to NBRFN*, I hypothesize that the questioning strategy will lead to a larger decrease in the negative effects from NBRFN on CBBE than advertising and denial, respectively (Dubois et al., 2011). However, consumers that are exposed to a denial strategy without a preceding exposure to NBRFN will not see any external source that accounts for the response strategy (Koller, 1992). Since consumers view the firm protests in the absence of an accusation, they are likely to infer that the firm has a 'guilty conscience' (Yandell, 1979). Therefore, *when consumers are not initially exposed to NBRFN*, I hypothesize that the denial strategy will negatively influence CBBE. However, since a questioning strategy does not entail as strong a defense as a denial strategy I expect the questioning strategy to have no effect on CBBE in the no-exposure condition. Conversely, since the advertisement do not contain a link to NBRFN and at the same time highlights positive attributes with the brand, I hypothesize that the advertisement will positively influence the CBBE of consumers not initially exposed to NBRFN.

Conclusion

The main objective behind this research project has been to deepen our understanding of the new and under-investigated phenomenon of NBRFN, and how it influences consumers' individual CBBE. The present research has developed a conceptual framework by combining theory from a broad range of research domains and provides theoretical guidelines for the definition of NBRFN. Through two pioneer studies the present research demonstrated a significant indirect effect of NBRFN through consumers' feelings of disgust, on consumers' CBBE. That is, NBRFN elicited higher levels of disgust than NBRTN; and participants exposed to NBRFN had lower brand attitudes, brand desirability, quality perceptions, brand trust, and purchase intention after exposure, than before exposure, even though the majority of participants reported that they believed the story to be false. Additionally, it was demonstrated that the higher the consumer's initial CBBE, the more susceptible the consumers' CBBE is to NBRFN. Thus, NBRFN poses a large threat towards the intangible assets of brands. Therefore, brand managers are advised to frequently monitor the online landscape to identify NBRFN about their brands, and to consider initiating a strategic response if the NBRFN possesses the potential to diffuse broadly or deeply. Furthermore, marketing practitioners and advertising intermediaries are encouraged to refrain from investing in webpages associated with NBRFN, platforms that facilitates interaction online are encouraged to minimize the spread of NBRFN, and policy makers are called upon to increase the focus in schools on critical assessment of online information to enable future consumers' to make more informed choices. Finally, the firm-response strategies discussed here could be employed by brand managers and could be fruitful for future research to test.

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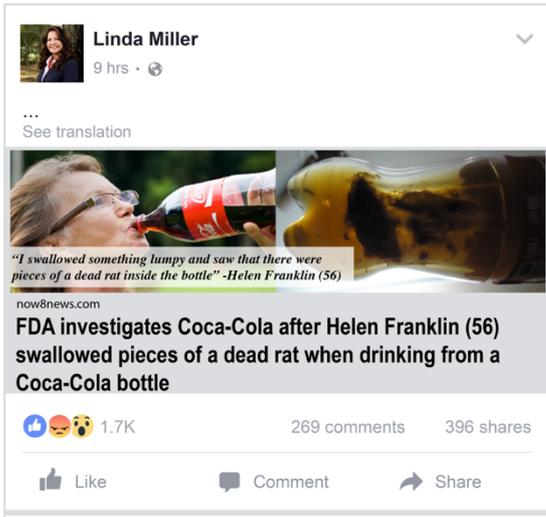
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APPENDICES

Appendix 1: Manipulation of NBRFN (Two Emotional Appeals) in Study 1

NBRFN-message: Core Disgust Condition



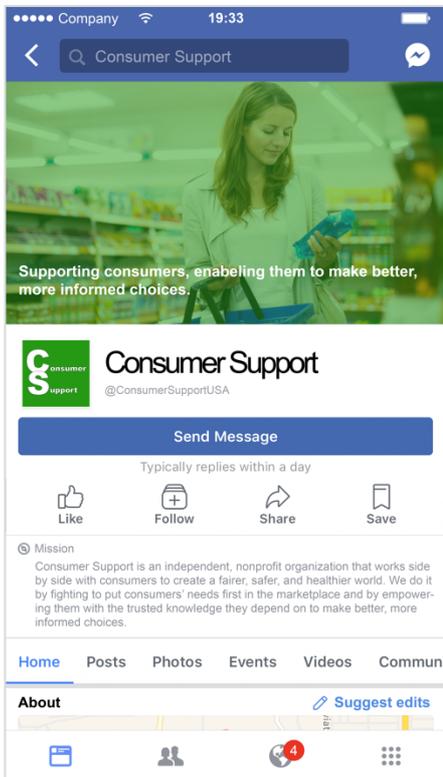
NBRFN-message: Righteous Anger Condition



Notes: Core Disgust condition performed as expected, whereas the righteous anger conditions activated wrong emotions.

Appendix 2: Manipulation of Source Credibility in Study 1 and Study 2

High Source Credibility Condition



Low Source Credibility Condition



Notes: Both conditions performed well in both Study 1 and Study 2

Appendix 3: Analysis Study 1

Independent Samples t-tests, comparing means of emotions between the two NBRFN emotional appeal conditions

Group Statistics

	Emotional Condition	N	Mean	Std. Deviation	Std. Error Mean
FEAR	Righteous Anger	32	2.8542	1.80389	0.31889
	Core Disgust	29	3.4023	1.44304	0.26797
ANGER	Righteous Anger	32	4.2083	1.99776	0.35316
	Core Disgust	28	4.7500	1.48968	0.28152
DISGUST	Righteous Anger	32	4.2292	2.08156	0.36797
	Core Disgust	29	5.4253	1.51159	0.28069
CONTEMPT	Righteous Anger	32	3.7188	1.55913	0.27562
	Core Disgust	29	4.3563	1.48252	0.27530
GUILT	Righteous Anger	32	3.2083	1.88514	0.33325
	Core Disgust	29	2.6437	1.51692	0.28168
SURPRISE	Righteous Anger	32	3.7292	1.83248	0.32394
	Core Disgust	29	4.3448	1.76717	0.32815
DISTRESS	Righteous Anger	32	4.1771	1.74131	0.30782
	Core Disgust	29	3.8506	1.62468	0.30169
SHAME	Righteous Anger	32	3.1771	1.79602	0.31749
	Core Disgust	29	3.1954	1.67975	0.31192

Righteous Anger = Group 1

Core Disgust = Group 2

Independent Samples Test

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
FEAR	Equal variances assumed	1.742	0.192	-1.302	59	0.198	-0.54813	0.42113	-1.39080	0.29454
	Equal variances not assumed			-1.316	58.141	0.193	-0.54813	0.41653	-1.38186	0.28559
ANGER	Equal variances assumed	2.295	0.135	-1.176	58	0.244	-0.54167	0.46046	-1.46337	0.38004
	Equal variances not assumed			-1.199	56.651	0.235	-0.54167	0.45164	-1.44617	0.36284
DISGUST	Equal variances assumed	4.255	0.044	-2.545	59	0.014	-1.19612	0.47003	-2.13664	-0.25560
	Equal variances not assumed			-2.584	56.422	0.012	-1.19612	0.46281	-2.12309	-0.26916

CONTEMPT	Equal variances assumed	0.522	0.473	-1.633	59	0.108	-0.63757	0.39054	-1.41904	0.14389
	Equal variances not assumed			-1.637	58.854	0.107	-0.63757	0.38956	-1.41711	0.14197
GUILT	Equal variances assumed	1.049	0.310	1.280	59	0.205	0.56466	0.44104	-0.31787	1.44718
	Equal variances not assumed			1.294	58.219	0.201	0.56466	0.43635	-0.30872	1.43803
SURPRISE	Equal variances assumed	0.003	0.959	-1.333	59	0.188	-0.61566	0.46195	-1.54001	0.30869
	Equal variances not assumed			-1.335	58.760	0.187	-0.61566	0.46111	-1.53842	0.30710
DISTRESS	Equal variances assumed	0.139	0.711	0.755	59	0.453	0.32651	0.43251	-0.53894	1.19196
	Equal variances not assumed			0.758	58.944	0.452	0.32651	0.43102	-0.53597	1.18899
SHAME	Equal variances assumed	0.347	0.558	-0.041	59	0.967	-0.01832	0.44657	-0.91191	0.87527
	Equal variances not assumed			-0.041	58.935	0.967	-0.01832	0.44508	-0.90895	0.87231

Levene's test for equal variance assumed is not rejected, except for Disgust. The p values of interest are highlighted in bold, and the red ones express significant effects.

By using a significance level of $\alpha = 0.05$, there is a **statistically significant difference in DISGUST** between our two emotional appeal conditions. $p = 0.012$ in the two-tailed test. Furthermore, $0.0012 / 2 = 0.0006$. Thus, Core Disgust evoke a significantly higher level of Disgust than Righteous Anger.

Regressing Source Trustworthiness on the high-source-credibility dummy variable**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.230 ^a	0.053	0.037	1.15385

a. Predictors: (Constant), HIGH_CREDIBILITY_D

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.407	1	4.407	3.310	.074^b
	Residual	78.551	59	1.331		
	Total	82.957	60			

a. Dependent Variable: TRUSTWORTHINESS_Composite

b. Predictors: (Constant), HIGH_CREDIBILITY_D

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.329	0.207		20.889	0.000
	HIGH_CREDIBILITY_D	0.538	0.296	0.230	1.819	0.074

a. Dependent Variable: TRUSTWORTHINESS_Composite

(Weak) significant difference between conditions:

The high-credibility condition (Consumer Support Profile) evoke a significantly higher Perceived Source Trustworthiness than the low-credibility condition, given a significance level of $\alpha = .10$.

Regressing Source Expertise on the high-source-credibility dummy variable**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.426 ^a	0.182	0.168	1.38384

a. Predictors: (Constant), HIGH_CREDIBILITY_D

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.063	1	25.063	13.088	.001^b
	Residual	112.986	59	1.915		
	Total	138.049	60			

a. Dependent Variable: EXPERTISE_Composite

b. Predictors: (Constant), HIGH_CREDIBILITY_D

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.465	0.249		13.939	0.000
	HIGH_CREDIBILITY_D	1.282	0.354	0.426	3.618	0.001

a. Dependent Variable: EXPERTISE_Composite

Significant difference between conditions:

The high-credibility condition (FB Page: Consumer Support) evoke a significantly higher Perceived Source Expertise than the low-credibility condition (FB Profile: Mary Williams), given a significance level of $\alpha = .05$.

*Regressing Source Credibility on the High-Source Credibility dummy variable***Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.377 ^a	0.142	0.127	1.13741

a. Predictors: (Constant), HIGH_CREDIBILITY_D

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.622	1	12.622	9.757	.003^b
	Residual	76.328	59	1.294		
	Total	88.950	60			

a. Dependent Variable: SOURCE_CREDIBILITY_Composite

b. Predictors: (Constant), HIGH_CREDIBILITY_D

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.897	0.204		19.075	0.000
	HIGH_CREDIBILITY_D	0.910	0.291	0.377	3.124	0.003

a. Dependent Variable: SOURCE_CREDIBILITY_Composite

Significant difference between conditions:

The high-credibility condition (FB Page: Consumer Support) evoke a significantly higher Perceived Source Credibility than the low-credibility condition (FB Profile: Mary Williams), given a significance level of $\alpha = .05$.

Comparing Pre- and Post-measures of CBBE
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_CBBE	4.8049	61	1.49124	0.19093
	Post_CBBE	4.0721	61	1.75520	0.22473

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pre_CBBE & Post_CBBE	61	0.742	0.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_CBBE - Post_CBBE	0.73279	1.19272	0.15271	0.42732	1.03826	4.798	60	0.000

Significant decrease of CBBE after exposure to BRFN:

The post-measure of Customer-Based Brand Equity (Composite Variable) is significantly lower than the pre-measure, given a significance level of $\alpha = .05$.

The significant decrease in CBBE holds for both conditions separately

A paired samples T-test were carried out with a split file (split on the NBRFN Emotional Condition).

Emotional Condition = Righteous Anger

Paired Samples Statistics ^a					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_CBBE	4.5438	32	1.65255	0.29213
	Post_CBBE	4.0000	32	1.69991	0.30050

a. EmotionalCondition = RighteousAnger

Paired Samples Correlations ^a				
		N	Correlation	Sig.
Pair 1	Pre_CBBE & Post_CBBE	32	0.838	0.000

a. EmotionalCondition = RighteousAnger

Paired Samples Test ^a									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre_CBBE - Post_CBBE	0.54375	0.95645	0.16908	0.19891	0.88859	3.216	31	0.003

a. EmotionalCondition = RighteousAnger

Emotional Condition = Core Disgust

Paired Samples Statistics^a

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_CBBE	5.0931	29	1.25611	0.23325
	Post_CBBE	4.1517	29	1.84112	0.34189

a. EmotionalCondition = CoreDisgust

Paired Samples Correlations^a

		N	Correlation	Sig.
Pair 1	Pre_CBBE & Post_CBBE	29	0.652	0.000

a. EmotionalCondition = CoreDisgust

Paired Samples Test^a

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre_CBBE - Post_CBBE	0.94138	1.39630	0.25929	0.41025	1.47250	3.631	28	0.001

a. EmotionalCondition = CoreDisgust

Separate comparison of Pre- and Post-measures of the dimensions of CBBE

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Brand Attitude (Pre)	4.8361	61	1.62347	0.20786
	Brand Attitude (Post)	4.0219	61	1.95113	0.24982
Pair 2	Brand Trust (Pre)	4.9617	61	1.51425	0.19388
	Brand Trust (Post)	4.1967	61	1.82815	0.23407
Pair 3	Brand Quality (Pre)	4.93	61	1.559	0.200
	Brand Quality (Post)	4.23	61	1.918	0.246
Pair 4	Product Quality (Pre)	4.95	61	1.510	0.193
	Product Quality (Post)	4.30	61	1.935	0.248
Pair 5	Purchase Intention (Pre)	4.38	61	2.237	0.286
	Purchase Intention (Post)	3.72	61	2.244	0.287
Pair 6	Brand Desirability (Pre)	4.39	61	2.076	0.266
	Brand Desirability (Post)	3.82	61	2.149	0.275

		Paired Samples Test							
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Brand Attitude (Pre) - Brand Attitude (Post)	0.81421	1.50126	0.19222	0.42972	1.19870	4.236	60	0.000
Pair 2	Brand Trust (Pre) - Brand Trust (Post)	0.76503	1.26834	0.16239	0.44019	1.08986	4.711	60	0.000

Pair 3	Brand Quality (Pre) – Brand Quality (Post)	0.705	1.838	0.235	0.234	1.176	2.995	60	0.004
Pair 4	Product Quality (Pre) – Product Quality (Post)	0.656	1.622	0.208	0.240	1.071	3.158	60	0.002
Pair 5	Purchase Intention (Pre) – Purchase Intention (Post)	0.656	1.515	0.194	0.268	1.044	3.380	60	0.001
Pair 6	Brand Desirability (Pre) – Brand Desirability (Post)	0.574	1.638	0.210	0.154	0.993	2.736	60	0.008

Immediate Associations and Feelings after the Core Disgust Stimulus

Number	Participant's answer	My interpretation
1	At first I'm disgusted . Then I remembered that it's very easy to "create" an issue. I will be sure to check coke zero in the future	Disgusted
2	Eww this is gross if true. I wonder how the woman knew it was pieces of rat and how she identified what this was in the bottle, <u>if this is true at all</u> .	Disgusted Doubt the validity
3	How you fit a dead rat in a bottle opening the size of dime? Sort of disgusted by the thought of it.	Disgusted Doubt the validity
4	I feel disgusted with the idea of drinking a rat and animal parts. It makes me wonder if this is a <u>trustworthy news source</u> and if it isn't, sad that so many people believed it. I also was <u>upset that they showed the gross picture in the image</u> .	Disgusted Doubt the validity
5	I feel inspired. I feel bubbly. I feel stronger. I feel thirsty.	Hahah!
6	I feel pretty grossed out about a rat in any drink, and pretty shocked that it was in a Coke. I usually consider them very reliable, but that makes my stomach churn.	Grossed out (Disgusted) Stomach churn
7	I felt absolutely disgusted . I thought how I would feel if I was her very mortified. But disbelief because cocoa cola is a great company	Disgusted Disbelief (because of Coca-Cola)
8	I felt absolutely repulsed by this article. I could actually picture taking a drink from a Coca Cola bottle and getting pieces of dead rat in my mouth. It turned my stomach. However, I also have some doubt as to the validity of the article.	Repulsed Doubt the validity
9	I have been disappointed of the coca-cola, I did not think it was a bad drink, I thought it was a common soda	?? Disappointed Rational / No emotions
10	I think that Coke will continue to be around for a while because people lovwe the taste and it is addicting.	Rational / No emotions
11	i thought it was interesting to say the least.	Interesting Rational / No emotions

12	I want to scream . I want to throw up . Holy fucking shit . That is disgusting . They would have to give me at least a million dollars for that.	Strong disgust feeling Throw up...
13	I was disgusted and grossed out at first but then I noticed <u>the news website didn't seem too reliable</u> so then I was a little relieved and no longer felt as disgusted.	Disgusted and grossed out Doubt the validity
14	I was horrified and could imagine the soda in the bottle had dissolved most of the rat so the liquid she swallowed could have been filled with bacteria and diseases . <u>Absolutely inexcusable for this to have happened.</u>	Horrified Seem to believe it
15	I was totally disgusted . I couldn't believe what I was reading and seeing. That is so appalling and disappointing. I find that hard to believe that this could be true	Totally disgusted Doubt the validity
16	Immediately, I was fearful I would be sick to my stomach . I considered that <u>the woman may be lying</u> . I considered this because <u>the picture doesn't look like the kind of woman who would chug a two liter bottle of regular Coke</u> . Who does that?	Fearful, sick to my stomach (Disgust) The woman in the picture might not be plausible??
17	In the Albanian version, Linda is a feminine name which means "birth" or "fertility". The masculine form is Lind.[3] In African terms the name Linda means "wait" and is not gender based; similar names are Lindiwe also meaning "waited for" but often just written as Lindi in short.[clarification needed] Lindokuhle (waiting for something beautiful) and its short form Lindo are related South African-American name	This is a dictionary imputation. Remove this respondent???
18	Initially I felt disgust and repulsion after reading the article, but then I questioned the article's validity. <u>You can't be too careful in your skepticism regarding the news these days</u> . I would need to validate the article's sources before I would seriously believe anything it told me.	Disgust and Repulsion Doubt the validity Talk about source credibility
19	intrigue and confusion because these studies are true and I really feel that cocacola is very bad for health	Intrigue and confusion Coca-cola bad for health
20	It is definitely fake. No way would a rat be able to remain intact inside of an acidic beverage like Coke.	Definetly fake Rational / No Emotion
21	It make me felt worry and bad	Worry and bad
22	likeble product but side effect for very danger	Rational / No Emotion
23	My immediate thoughts included shock and disgust . In the US we have <u>health standards</u> so a rat should not be in a bottling facility, nor should it be inside of a bottle.	Disgust and shock Rational about how the rat could have ended up there
24	That is absolutely disgusting and I hope that poor woman is compensated fairly. How exactly does something like that happen? Aren't there regulations in place to avoid this from happening?	Disgusting Seem to believe it
25	That is nasty . To know someone went through something like that is ridiculous. The question is, how did it get in there?	Nasty (Disgust) Seem to believe it
26	That's absolutely disgusting . I don't drink soda anymore and I'm glad that I don't. I'm surprised the acid didn't decay it.	Absolutely disgusting
27	That's really freaking disgusting . With that being said, I don't buy that for a second.	Freaking disgusting Do not believe the story
28	This news story is obviously fake . It is so outrageous and stupid that it seems as if it may be a joke. The number of dumb stories like this is getting really sad.	Do not believe the story Participant show high persuasion knowledge (skepticism)
29	This seems very <u>unlikely</u> to be a real story. I wouldn't spend the time to even click on it.	Doubt the validity

Immediate Associations and Feelings after the Righteous Anger Stimulus

Number	Participant's answer	My interpretation
1	Child labor is a crime. I felt very angry and upset after reading the news. A big brand like coca cola never support child labor. And that too without efficient safety measures. I really feel bad about this brand.	Very angry and upset Seems to believe it
2	Children were found dead at a sugar farm owned or run by Coca Cola, so there is an investigation to see if Coke was responsible or at fault. This makes sense to me. I don't automatically assume Coke has done anything wrong, but if they have, I assume they are a responsible enough company that they would put into place new rules to prevent injuries. It's sad that they use child labor, but that seems to be common throughout the world.	Sad Seems to believe it
3	children were found dead in el salvador because of where they were working	Rationalizing answer No emotions
4	Coca cola is a bad company and they should be fiones severely . TYe people running the plant shouldbe jailed .Tje company should be banned form the counbtry so they sare not tem,pted to do it again	Expressing anger towards Coca Cola Seems to believe it
5	Coca-Cola as a brand will suffer in some markets due to their association now with child labor practices abroad. Though a foreign problem or practice child labor issues will be used to steer Coca-Cola into new policies and focus of donations.	Rational / Reflected answer No emotions
6	Horrible. I am appalled and had no idea that Coke subscribed to this practice. It makes me wonder what else I don't know about the brand. I always thought they were pretty trustworthy.	Horrible Appalled Seems to believe the story
7	I always hear about exploitative practices but without constantly looking for new information it's difficult to keep in mind. It is definitely sad to hear , and it isn't the only controversy I've heard about coca-cola	Sad to hear Seems to believe it
8	I do not believe that this is true; because is a US made product. Coke is not made in a foreign country.	Do not believe it Haha, what a dumb person.
9	i dont have nothing to say.	Rational / No emotions
10	i feel a bit concerned for social media in general and it needs better security.	Concerned Maybe because the participant believe this is fake
11	I feel appalled . This is unacceptable! If they were doing the child labor thing they should not be allowed. I won't buy anymore products from them until I know for sure what happened.	Appalled Seem to believe the story Expresses ZERO purchase intention
12	I feel sad for those kids. There must be a reasonable explanation for this	Feel sad for those kids. Doubt the story slightly
13	i felt a little sad i guess it was hard to watch i did not like it at all	Sad Hard to watch Did not like it at all.
14	I felt sorry for the kids that were kids. It's a dam shame that people (like you) don't want to pay fair wages. These people will burn in hell.	Feel sorry for the kids
15	I find it almost unbelievable. Coca cola does not seem like a brand that would use this type of labor. If this is a real story then it really sickens me and I would have a major problem with the brand. It would be hard to believe but if the source is true I would not be buying coca cola products again.	Almost unbelievable If real, it sickens me If true, the participant expresses Zero purchase intention
16	I think it is very sad and it should be investigated.	Sad Seems to believe it
17	I thinks it's terrible. Who knows what the conditions were like there.	The story is terrible Seems to believe it
18	I was not surprised. Most large corporations have terrible business practices and many countries allow modern day slavery from these corporations to be inflicted on their own citizens. It's just modern day slave trade.	Was not suprised (supported priors) Rational / No emotions
19	I was unaware that Coke was using child labor. It seems that they should have been following better safety procedures too. I really don't know why children are working in a factory at all. This seems pretty dehumanizing and is something that could be easily stopped.	Rational / No emotions
20	I wonder how much of this is true. I wouldn't have expected this to happen. I suppose if it's true, they will immediately rectify this problem.	Doubt the validity
21	I would feel that the country is already very poor and these are the only jobs available. I think Coco Cola is like any other corporation and will use the cheapest way to achieving maximum profit.	Rational / No emotions

22	I'm shocked. I'm quite interested in finding out if this is true	Shocked Doubts the validity
23	If this is true, it is quite terrible and something the company will need to answer and make amends for. It would also make me hesitant to continue knowingly to buy or consume their products until said amends are made.	Doubts the validity Hesitant to buy if its real
24	My immediate thought is that the article is fabricated. The photograph is bait and doesn't appear to have anything to do with the article. But for that matter I pretty much don't believe anything a major news outlet ever puts out; they've been caught lying more times than a used-car-salesman.	Article is fabricated. Photo is bait This participant do not believe anything. He/she believe everything is fake-news.
25	My initial thought was it was very sad and troubling to see. My next thought was whether or not it was true, and if it was, why were children allowed to work at a sugar farm.	Sad and troubling to see Doubt the validity Asks why the children were there?
26	Oh my god, I completely forgot about this! I read several news articles about this not too long ago, and somehow it completely slipped my mind when thinking about Coke and answering questions about them. Is my memory that bad, or is Coca Cola REALLY good at sweeping things under the rug?	This news-post seems to support the priors of this participant. Seems to believe it
27	The news I think was a good perspective.	Seems to believe it
28	The order of the news showed the main events in the articles and the text.	Rational/ No emptions
29	The story is a bit disturbing. My feelings are that I would want Coca-cola to invest more in the communities that produce its products. Even bigger than the problem of child labor, is child torture.	Disturbing story Rational / Feeling sad for the kids
30	this is terrible news, but not unexpected as giant world businesses do their business in any means possible, including child labor. It is deplorable, and unfortunately it happens.	Terrible news Seems to believe it
31	This report looks bogus and untrue. The professional copy of this looks phony and manufactured.	Do not believe the news.
32	This would be a terrible thing to happen and I would definitely be interested to hear what Cocacola's response would be. However, it is unlikely Coca-cola manages this farm themselves and therefore they cannot control the entirety of their supply chain. I would appreciate it if they tried their best to, but I understand it isn't always possible	Rationalizing on behalf of Coca-Cola. Doubt the validity?

Appendix 4: Study 2 Scenarios
Factor 1: Persuasion Knowledge (Present vs. Not Present)

Present Condition

In the wake of the 2016 election, everyone from President Obama to Pope Francis has raised concerns about fake news and the potential impact on both political life and innocent individuals and organizations. Some fake news has been widely shared, and so-called “Pizzagate” stories led a North Carolina man to bring a gun into a popular Washington, D.C. pizza restaurant under the impression that it was hiding a child prostitution ring.

Fabricated stories posing as serious journalism from rather unknown publishers are not likely to go away as they have become a means for some writers to make money and potentially influence public opinion.

Writers of fake news manipulate, fabricate and frame information to create seemingly extraordinary and relevant stories that often appeal to peoples’ emotions. Writers of fake news does not just write about politicians but may write about anything they know you care about and that are likely to appeal to your feelings, such as your favorite brand or celebrity. Several examples exist of fake news claiming that famous celebrities are dead, or fake news that claims a well-known brand is closing its stores. These stories are often made to stimulate clicks which in turn generate advertising revenues.

Even as Americans recognize that fake news causes confusion about current issues and events, they continue to circulate it. A December 2016 survey by the Pew Research Center suggests that 23 percent of U.S. adults have shared fake news, knowingly or unknowingly, with friends and others. Thus, Pew Research Center hope that people start to think twice when reading exaggerated stories from unknown sources.

Not Present Condition

Beyond the fact-checking, interviews, proof-reads and contacts book, a journalist is expected to be on the edge of their culture. They’ll have in-depth conversations with an editor about what stories are current and unusual, suggesting a perspective on the world that should be brought to light. This could involve staying on top of political, financial and social developments, or researching celebrity and human-interest stories.

The average journalist might get to work fairly early, perhaps around the 8am mark. They often have a morning print edition to finalize, in which case they’ll go over every detail with a team of editors and feature writers, helping to select front page stories, correct mistakes, and generally make sure it reads well.

Then they’re off sourcing ideas for their next article, moving at a million miles an hour to do so. This could involve hunting down an address, going to an event, managing email chains. If something big is happening, you’ll be swooping on it like a locust, chewing up all the reactions and details you can. As long as you get results, there aren’t many activities you can’t justify.

In any case, office-based work usually ends around 5.30-6pm, and in the evening you might have dinner or drinks with someone from your contact network.

No two days for a journalist are ever the same. Finding the best material for a story could mean attending a press conference, holding an interview over the phone, trawling through professional contacts, or hammering out paragraphs. The story comes first, and journalists do whatever it takes to make it accurate and thought-provoking.

Note: Participants were initially exposed to either of the two articles. Then they were exposed to either of the two Source Credibility manipulations, before they were exposed to either of the four conditions displayed on the next page.

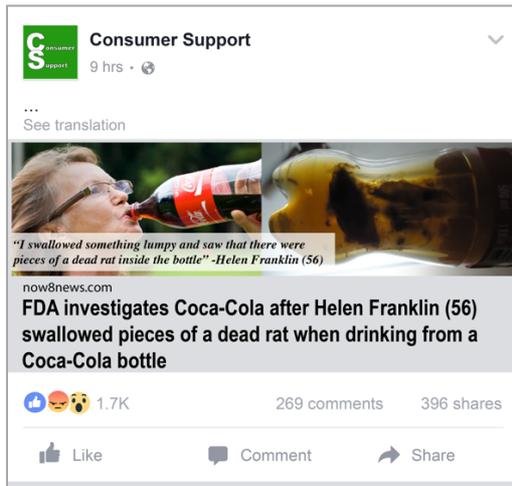
Appendix 4 continues on the next page...

Factor 2 and 3: Brand-Related News and Source Credibility of Sender

Source Credibility: High

Source Credibility: Low

NBRFN



Consumer Support
9 hrs · 🌐

...
See translation



"I swallowed something lumpy and saw that there were pieces of a dead rat inside the bottle" -Helen Franklin (56)

now8news.com
FDA investigates Coca-Cola after Helen Franklin (56) swallowed pieces of a dead rat when drinking from a Coca-Cola bottle

👍👎👤 1.7K 269 comments 396 shares

👍 Like 💬 Comment ➦ Share



Mary Williams
9 hrs · 🌐

...
See translation



"I swallowed something lumpy and saw that there were pieces of a dead rat inside the bottle" -Helen Franklin (56)

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FDA investigates Coca-Cola after Helen Franklin (56) swallowed pieces of a dead rat when drinking from a Coca-Cola bottle

👍👎👤 1.7K 269 comments 396 shares

👍 Like 💬 Comment ➦ Share

NBRTN



Consumer Support
9 hrs · 🌐

...
See translation



Police have begun an investigation after what appeared to be human waste was found in drinks cans delivered to a Coca Cola factory in Lisburn.

bbc.com
Police investigating 'human waste in Coca Cola cans'

👍👎👤 1.7K 269 comments 396 shares

👍 Like 💬 Comment ➦ Share



Mary Williams
9 hrs · 🌐

...
See translation



Police have begun an investigation after what appeared to be human waste was found in drinks cans delivered to a Coca Cola factory in Lisburn.

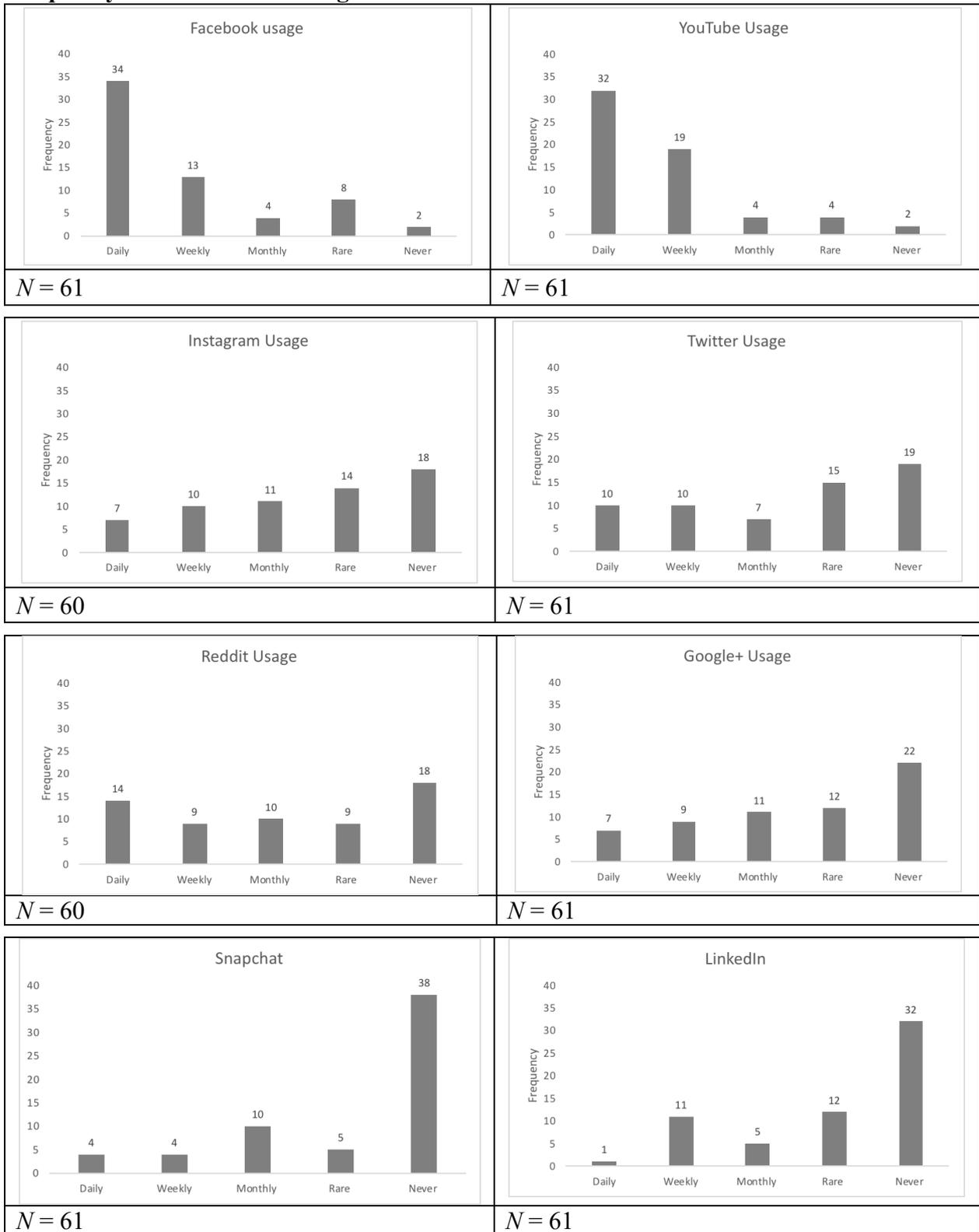
bbc.com
Police investigating 'human waste in Coca Cola cans'

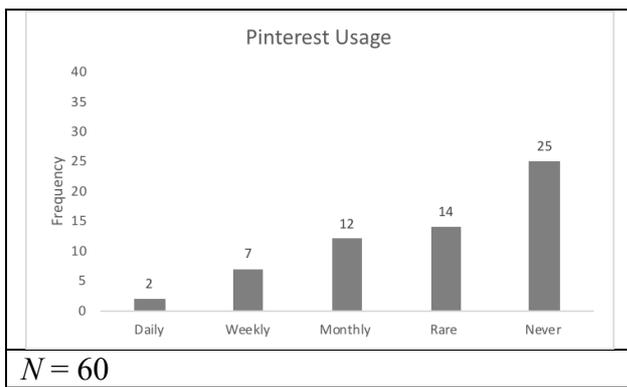
👍👎👤 1.7K 269 comments 396 shares

👍 Like 💬 Comment ➦ Share

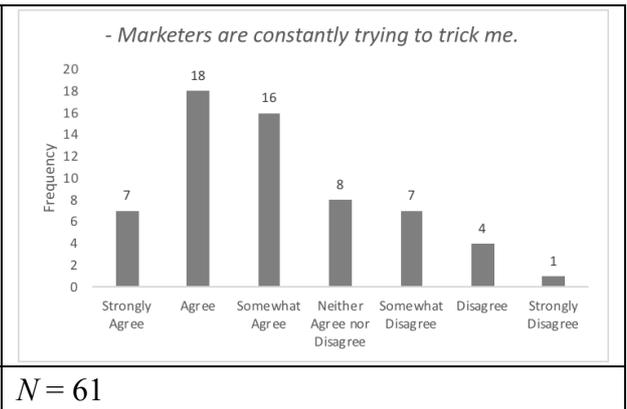
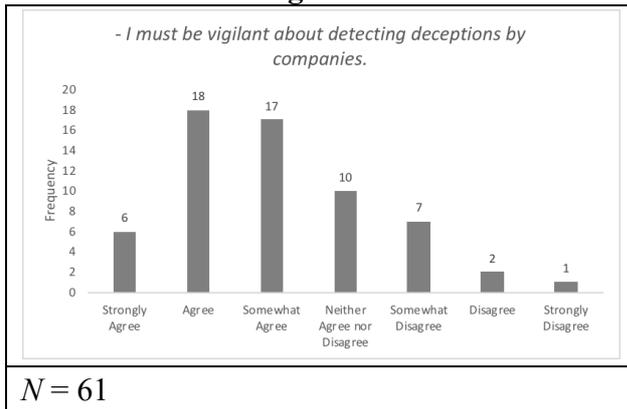
NOTE: Source Credibility was manipulated as displayed in Appendix 2, and participants initially exposed to the Facebook profile of Mary Williams, were exposed to either the NBRFN or NBRTN story shared by Mary Williams as displayed in the right column above.

Appendix 5: Descriptive Statistics from Study 1
Frequency of Social Media Usage

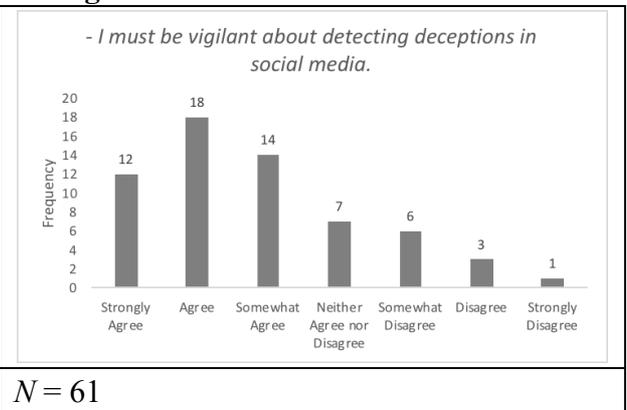
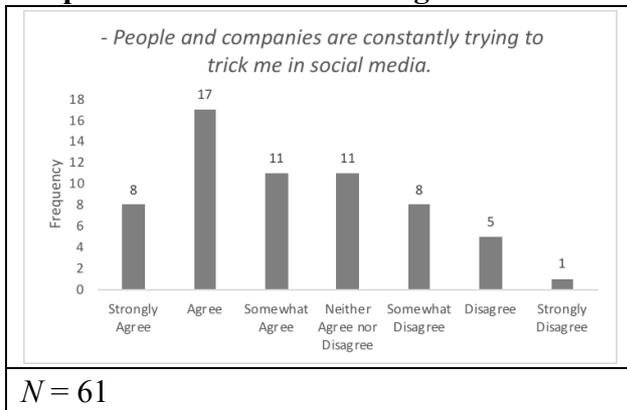




Persuasion Knowledge Statements



Adapted Persuasion Knowledge Statements Focusing on Social Media



Appendix 6: Validity Tests using Principal Factor Analysis)

All validity tests were conducted by first extract an unrotated solution based on eigenvalues above 1. Then correlations, Barlett's test for sphericity, KMO and Measures of Sampling Adequacy from anti-image correlations were inspected. Thereafter, another solution was extracted using either orthogonal (Carimax) or oblique (Promax) rotation based on theoretical considerations. The final factor solution was chosen based on interpretation of communality, Scree plots, eigenvalues, the % of explained variance associated with each eigenvalue and theoretical considerations. Since all scales are either adopted or adapted from previous theory, the final call associated with final number of factors were made based on theory.

Factor Analysis of the 10 Items Included in the CBBE Construct (Using the Pre-Measures)

		Correlation Matrix									
		pr_atti1 - unfavorable:favorable	pr_atti2 - bad:good	pr_atti3 - negative:positive	pr_des - not at all desirable:very desirable	pr_bqual - low quality:high quality	pr_pqual - low quality:high quality	pr_trust1 - not at all trustworthy:very trustworthy	pr_trust2 - not at all dependable:very dependable	pr_trust3 - not at all reliable:very reliable	pr_pi - not at all likely:very likely
Correlation	pr_atti1 - unfavorable:favorable	1.000	0.906	0.938	0.885	0.820	0.793	0.799	0.784	0.797	0.643
	pr_atti2 - bad:good	0.906	1.000	0.898	0.824	0.836	0.775	0.788	0.786	0.782	0.623
	pr_atti3 - negative:positive	0.938	0.898	1.000	0.864	0.832	0.822	0.797	0.786	0.803	0.640
	pr_des - not at all desirable:very desirable	0.885	0.824	0.864	1.000	0.778	0.758	0.744	0.751	0.767	0.681
	pr_bqual - low quality:high quality	0.820	0.836	0.832	0.778	1.000	0.897	0.777	0.783	0.768	0.606
	pr_pqual - low quality:high quality	0.793	0.775	0.822	0.758	0.897	1.000	0.769	0.764	0.764	0.627
	pr_trust1 - not at all trustworthy:very trustworthy	0.799	0.788	0.797	0.744	0.777	0.769	1.000	0.828	0.857	0.583
	pr_trust2 - not at all dependable:very dependable	0.784	0.786	0.786	0.751	0.783	0.764	0.828	1.000	0.933	0.578
	pr_trust3 - not at all reliable:very reliable	0.797	0.782	0.803	0.767	0.768	0.764	0.857	0.933	1.000	0.597
	pr_pi - not at all likely:very likely	0.643	0.623	0.640	0.681	0.606	0.627	0.583	0.578	0.597	1.000
Sig. (1-tailed)	pr_atti1 - unfavorable:favorable		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	pr_atti2 - bad:good	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	pr_atti3 - negative:positive	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
	pr_des - not at all desirable:very desirable	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000
	pr_bqual - low quality:high quality	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
	pr_pqual - low quality:high quality	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
	pr_trust1 - not at all trustworthy:very trustworthy	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000
	pr_trust2 - not at all dependable:very dependable	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
	pr_trust3 - not at all reliable:very reliable	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
	pr_pi - not at all likely:very likely	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

- All correlations were significant

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.933
Bartlett's Test of Sphericity	Approx. Chi-Square	3508.739
	df	45
	Sig.	0.000

- The KMO is in the “very good” range, and Bartlett’s test of sphericity is significant, which suggests that factor analysis is meaningful.

Anti-image Matrices

	pr_atti1 - unfavorable:favorable	pr_atti2 - bad:good	pr_atti3- negative:positive	pr_des - not at all desirable:very desirable	pr_bqual - low quality:high quality	pr_pqual - low quality:high quality	pr_trust1 - not at all trustworthy:very trustworthy	pr_trust2 - not at all dependable:very dependable	pr_trust3 - not at all reliable:very reliable	pr_pi - not at all likely:very likely	
Anti-image Covariance	pr_atti1	0.084	-0.035	-0.044	-0.044	0.001	0.002	-0.013	0.001	0.000	0.003
	pr_atti2	-0.035	0.136	-0.028	0.003	-0.041	0.026	-0.014	-0.014	0.006	-0.016
	pr_atti3	-0.044	-0.028	0.094	-0.016	0.002	-0.026	-0.001	0.006	-0.009	0.003
	pr_des	-0.044	0.003	-0.016	0.184	-0.010	0.001	0.008	-0.002	-0.010	-0.081
	pr_bqual	0.001	-0.041	0.002	-0.010	0.142	-0.095	-0.010	-0.016	0.009	0.011
	pr_pqual	0.002	0.026	-0.026	0.001	-0.095	0.162	-0.018	-0.003	-0.005	-0.043
	pr_trust1	-0.013	-0.014	-0.001	0.008	-0.010	-0.018	0.215	-0.007	-0.049	-0.005
	pr_trust2	0.001	-0.014	0.006	-0.002	-0.016	-0.003	-0.007	0.116	-0.079	0.007
	pr_trust3	0.000	0.006	-0.009	-0.010	0.009	-0.005	-0.049	-0.079	0.101	-0.011
	pr_pi	0.003	-0.016	0.003	-0.081	0.011	-0.043	-0.005	0.007	-0.011	0.502
Anti-image Correlation	pr_atti1	.925 ^a	-0.327	-0.496	-0.359	0.006	0.015	-0.098	0.005	-0.002	0.014
	pr_atti2	-0.327	.949 ^a	-0.245	0.020	-0.296	0.177	-0.082	-0.110	0.050	-0.063
	pr_atti3	-0.496	-0.245	.942 ^a	-0.119	0.014	-0.214	-0.007	0.053	-0.093	0.013
	pr_des	-0.359	0.020	-0.119	.961 ^a	-0.064	0.008	0.041	-0.014	-0.072	-0.268
	pr_bqual	0.006	-0.296	0.014	-0.064	.917 ^a	-0.627	-0.055	-0.123	0.077	0.042
	pr_pqual	0.015	0.177	-0.214	0.008	-0.627	.915 ^a	-0.099	-0.025	-0.035	-0.152
	pr_trust1	-0.098	-0.082	-0.007	0.041	-0.055	-0.099	.975 ^a	-0.041	-0.329	-0.016
	pr_trust2	0.005	-0.110	0.053	-0.014	-0.123	-0.025	-0.041	.907 ^a	-0.728	0.029
	pr_trust3	-0.002	0.050	-0.093	-0.072	0.077	-0.035	-0.329	-0.728	.894 ^a	-0.048
	pr_pi	0.014	-0.063	0.013	-0.268	0.042	-0.152	-0.016	0.029	-0.048	.971 ^a

- Inspection of anti-image correlations reveal that all MSA measure is greater than .84 (well above the cutoff at .50).

Communalities

	Initial	Extraction
pr_atti1 - unfavorable:favorable	1.000	0.882
pr_atti2 - bad:good	1.000	0.851
pr_atti3- negative:positive	1.000	0.885
pr_des - not at all desirable:very desirable	1.000	0.814
pr_bqual - low quality:high quality	1.000	0.825
pr_pqual - low quality:high quality	1.000	0.798
pr_trust1 - not at all trustworthy:very trustworthy	1.000	0.793
pr_trust2 - not at all dependable:very dependable	1.000	0.804
pr_trust3 - not at all reliable:very reliable	1.000	0.818
pr_pi - not at all likely:very likely	1.000	0.528

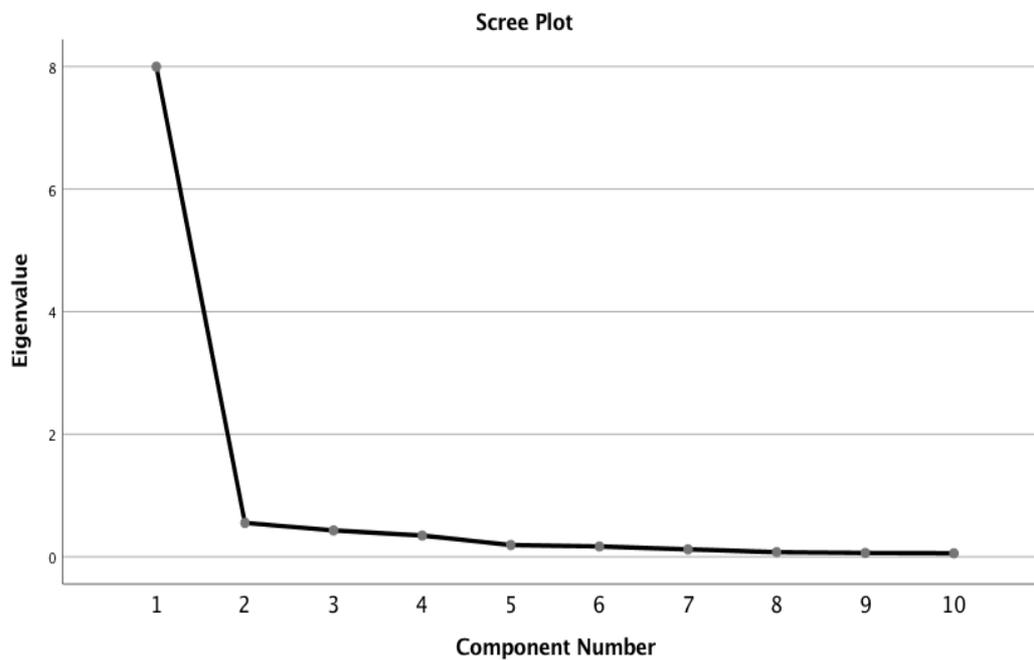
- High communalities on each of the items

Total Variance Explained

Component	Initial Eigenvalues	Extraction Sums of Squared Loadings
-----------	---------------------	-------------------------------------

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.998	79.975	79.975	7.998	79.975	79.975
2	0.553	5.530	85.505			
3	0.430	4.297	89.802			
4	0.346	3.461	93.263			
5	0.191	1.913	95.177			
6	0.168	1.681	96.857			
7	0.121	1.207	98.064			
8	0.075	0.754	98.818			
9	0.062	0.617	99.436			
10	0.056	0.564	100.000			

Extraction Method: Principal Component Analysis.



- Based on theory, % variance explained, and the Scree plot we arrive at a one-factor solution. Thus, no rotation is needed, and the CBBE construct appears to be a valid measure of the concept.

Factor Analysis of the 10 Items Used to Measure the Source Credibility Construct (5 for Expertise and 5 for Trustworthiness)

Correlation Matrix^a

		High number = high trustworthiness	High number = high expertise								
Correlation	High number = high trustworthiness	1.000	0.793	0.856	0.768	0.856	0.551	0.624	0.672	0.643	0.658
	High number = high trustworthiness	0.793	1.000	0.846	0.872	0.806	0.521	0.590	0.637	0.584	0.616
	High number = high trustworthiness	0.856	0.846	1.000	0.803	0.873	0.637	0.666	0.710	0.687	0.682
	High number = high trustworthiness	0.768	0.872	0.803	1.000	0.820	0.456	0.513	0.599	0.560	0.609
	High number = high trustworthiness	0.856	0.806	0.873	0.820	1.000	0.584	0.632	0.705	0.659	0.683
	High number = high expertise	0.551	0.521	0.637	0.456	0.584	1.000	0.843	0.832	0.868	0.777
	High number = high expertise	0.624	0.590	0.666	0.513	0.632	0.843	1.000	0.901	0.866	0.828
	High number = high expertise	0.672	0.637	0.710	0.599	0.705	0.832	0.901	1.000	0.901	0.872
	High number = high expertise	0.643	0.584	0.687	0.560	0.659	0.868	0.866	0.901	1.000	0.851
	High number = high expertise	0.658	0.616	0.682	0.609	0.683	0.777	0.828	0.872	0.851	1.000
Sig. (1-tailed)	High number = high trustworthiness		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	High number = high trustworthiness	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	High number = high trustworthiness	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
	High number =	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000

high trustworthiness											
High number = high trustworthiness	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000
High number = high expertise	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
High number = high expertise	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
High number = high expertise	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000
High number = high expertise	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
High number = high expertise	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
High number = high expertise	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a. Determinant = 1.471E-6

- All correlations were significant.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.932
Bartlett's Test of Sphericity	Approx. Chi-Square	3314.872
	df	45
	Sig.	0.000

- The KMO is in the “very good” range, and Bartlett’s test of sphericity is significant, which suggests that factor analysis is meaningful.

Anti-image Matrices

	High number = high trustworthiness	High number = high expertise								
High number = high trustworthiness	0.205	-0.022	-0.053	0.001	-0.063	0.029	-0.010	0.002	-0.013	-0.011
High number = high trustworthiness	-0.022	0.171	-0.048	-0.101	0.006	-0.003	-0.022	-0.005	0.018	0.010
High number = high trustworthiness	-0.053	-0.048	0.146	-0.010	-0.050	-0.032	-0.003	0.005	-0.006	0.009
High number = high trustworthiness	0.001	-0.101	-0.010	0.184	-0.048	0.027	0.029	-0.003	-0.014	-0.029

	High number = high trustworthiness	-0.063	0.006	-0.050	-0.048	0.164	-0.003	0.008	-0.018	0.006	-0.007
	High number = high expertise	0.029	-0.003	-0.032	0.027	-0.003	0.200	-0.044	-0.007	-0.066	-0.011
	High number = high expertise	-0.010	-0.022	-0.003	0.029	0.008	-0.044	0.149	-0.055	-0.015	-0.023
	High number = high expertise	0.002	-0.005	0.005	-0.003	-0.018	-0.007	-0.055	0.108	-0.040	-0.040
	High number = high expertise	-0.013	0.018	-0.006	-0.014	0.006	-0.066	-0.015	-0.040	0.130	-0.033
	High number = high expertise	-0.011	0.010	0.009	-0.029	-0.007	-0.011	-0.023	-0.040	-0.033	0.201
Anti-image Correlation	High number = high trustworthiness	.947 ^a	-0.118	-0.309	0.003	-0.346	0.143	-0.060	0.014	-0.079	-0.052
	High number = high trustworthiness	-0.118	.906 ^a	-0.302	-0.570	0.033	-0.017	-0.139	-0.036	0.120	0.052
	High number = high trustworthiness	-0.309	-0.302	.939 ^a	-0.061	-0.323	-0.184	-0.022	0.039	-0.044	0.050
	High number = high trustworthiness	0.003	-0.570	-0.061	.895 ^a	-0.278	0.143	0.174	-0.022	-0.094	-0.153
	High number = high trustworthiness	-0.346	0.033	-0.323	-0.278	.938 ^a	-0.016	0.051	-0.136	0.043	-0.039
	High number = high expertise	0.143	-0.017	-0.184	0.143	-0.016	.932 ^a	-0.255	-0.049	-0.409	-0.056
	High number = high expertise	-0.060	-0.139	-0.022	0.174	0.051	-0.255	.934 ^a	-0.437	-0.105	-0.133
	High number = high expertise	0.014	-0.036	0.039	-0.022	-0.136	-0.049	-0.437	.929 ^a	-0.337	-0.275
	High number = high expertise	-0.079	0.120	-0.044	-0.094	0.043	-0.409	-0.105	-0.337	.932 ^a	-0.203
	High number = high expertise	-0.052	0.052	0.050	-0.153	-0.039	-0.056	-0.133	-0.275	-0.203	.966 ^a

a. Measures of Sampling Adequacy(MSA)

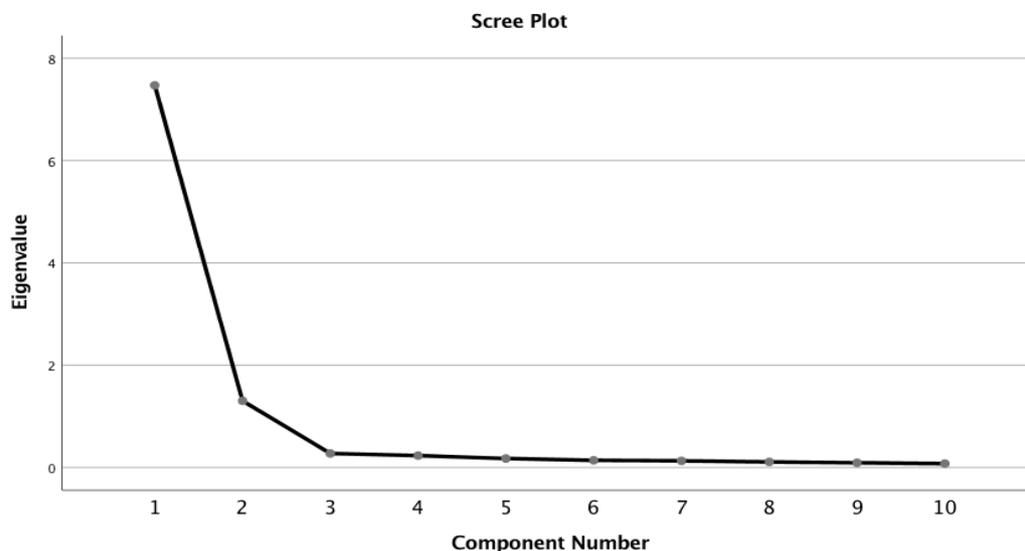
- Inspection of anti-image correlations reveal that all MSA measures is greater than .89 (well above the cutoff at .50)

Communalities		
	Initial	Extraction
High number = high trustworthiness	1.000	0.839
High number = high trustworthiness	1.000	0.872
High number = high trustworthiness	1.000	0.886
High number = high trustworthiness	1.000	0.869
High number = high trustworthiness	1.000	0.876
High number = high expertise	1.000	0.865
High number = high expertise	1.000	0.895
High number = high expertise	1.000	0.919
High number = high expertise	1.000	0.912
High number = high expertise	1.000	0.843

- High communalities on each of the items.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.472	74.718	74.718	7.472	74.718	74.718
2	1.303	13.029	87.746	1.303	13.029	87.746
3	0.274	2.738	90.484			
4	0.232	2.317	92.802			
5	0.175	1.747	94.549			
6	0.140	1.397	95.945			
7	0.130	1.295	97.241			
8	0.109	1.085	98.326			
9	0.092	0.917	99.243			
10	0.076	0.757	100.000			



- Both the scree plot and % of variance explained suggests a two-factor solution.
- Since Trustworthiness and Expertise construct are closely related, I choose to use oblique rotation (Promax, Kappa = 4).

Pattern Matrix^a

	Component	
	1	2
High number = high trustworthiness	0.085	0.857
High number = high trustworthiness	-0.038	0.959
High number = high trustworthiness	0.154	0.830
High number = high trustworthiness	-0.123	1.010
High number = high trustworthiness	0.104	0.863
High number = high expertise	0.999	-0.108
High number = high expertise	0.953	-0.010
High number = high expertise	0.884	0.106
High number = high expertise	0.939	0.024
High number = high expertise	0.818	0.140

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Structure Matrix

	Component	
	1	2
High number = high trustworthiness	0.661	0.914
High number = high trustworthiness	0.607	0.933
High number = high trustworthiness	0.713	0.934
High number = high trustworthiness	0.556	0.927
High number = high trustworthiness	0.684	0.933
High number = high expertise	0.927	0.564
High number = high expertise	0.946	0.631
High number = high expertise	0.955	0.700
High number = high expertise	0.955	0.655
High number = high expertise	0.912	0.690

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

- After inspecting the factor loadings, it seems appropriate with a two-factor solution. Thus, the 10-items are valid measures of Source Trustworthiness and Expertise.
- After this analysis, two composite measures were made, one for Expertise and one for Trustworthiness. Thereafter, a composite measure of Source Credibility was computed, to use for the Manipulation Check of Source Credibility.

Factor Analysis of the 6 Items Used to Measure the IMI Construct

Correlation Matrix							
		imi 1 reverse	imi2 - The news story tried to manipulate the audience in ways that I don't like.	imi3 - I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience.	imi 4 reverse	imi 5 reverse	imi 6 reverse
Correlation	imi 1 reverse	1.000	0.464	0.424	0.686	0.764	0.786
	imi2	0.464	1.000	0.705	0.429	0.437	0.417
	imi3	0.424	0.705	1.000	0.466	0.489	0.436
	imi 4 reverse	0.686	0.429	0.466	1.000	0.785	0.771
	imi 5 reverse	0.764	0.437	0.489	0.785	1.000	0.917
	imi 6 reverse	0.786	0.417	0.436	0.771	0.917	1.000
Sig. (1-tailed)	imi 1 reverse		0.000	0.000	0.000	0.000	0.000
	imi2 -	0.000		0.000	0.000	0.000	0.000
	imi3	0.000	0.000		0.000	0.000	0.000
	imi 4 reverse	0.000	0.000	0.000		0.000	0.000
	imi 5 reverse	0.000	0.000	0.000	0.000		0.000
	imi 6 reverse	0.000	0.000	0.000	0.000	0.000	

- All the correlations were significant

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.831
Bartlett's Test of Sphericity	Approx. Chi-Square	1220.866
	df	15
	Sig.	0.000

- KMO is in the “good” range, and Bartlett’s test for sphericity is significant, which suggest that factor analysis is purposeful.

Anti-image Matrices

		imi 1 reverse	imi2 - The news story tried to manipulate the audience in ways that I don't like.	imi3 - I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience.	imi 4 reverse	imi 5 reverse	imi 6 reverse
Anti-image Covariance	imi 1 reverse	0.345	-0.078	0.021	-0.046	-0.025	-0.065
	imi2 -	-0.078	0.469	-0.285	-0.013	0.011	-0.002
	imi3 -	0.021	-0.285	0.455	-0.039	-0.043	0.019
	imi 4 reverse	-0.046	-0.013	-0.039	0.350	-0.054	-0.035
	imi 5 reverse	-0.025	0.011	-0.043	-0.054	0.138	-0.098
	imi 6 reverse	-0.065	-0.002	0.019	-0.035	-0.098	0.138
Anti-image Correlation	imi 1 reverse	.928 ^a	-0.193	0.054	-0.134	-0.113	-0.298
	imi2	-0.193	.750 ^a	-0.617	-0.032	0.045	-0.008
	imi3	0.054	-0.617	.756 ^a	-0.097	-0.170	0.075
	imi 4 reverse	-0.134	-0.032	-0.097	.948 ^a	-0.248	-0.160
	imi 5 reverse	-0.113	0.045	-0.170	-0.248	.802 ^a	-0.711
	imi 6 reverse	-0.298	-0.008	0.075	-0.160	-0.711	.794 ^a

a. Measures of Sampling Adequacy(MSA)

- Inspection of anti-image correlations reveal that all MSA measure is greater than .75 (well above the cutoff at .50)

Communalities		
	Initial	Extraction
imi_1_reverse	1.000	0.774
imi2 - The news story tried to manipulate the audience in ways that I don't like.	1.000	0.856
imi3 - I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience.	1.000	0.848
imi_4_reverse	1.000	0.777
imi_5_reverse	1.000	0.902
imi_6_reverse	1.000	0.910

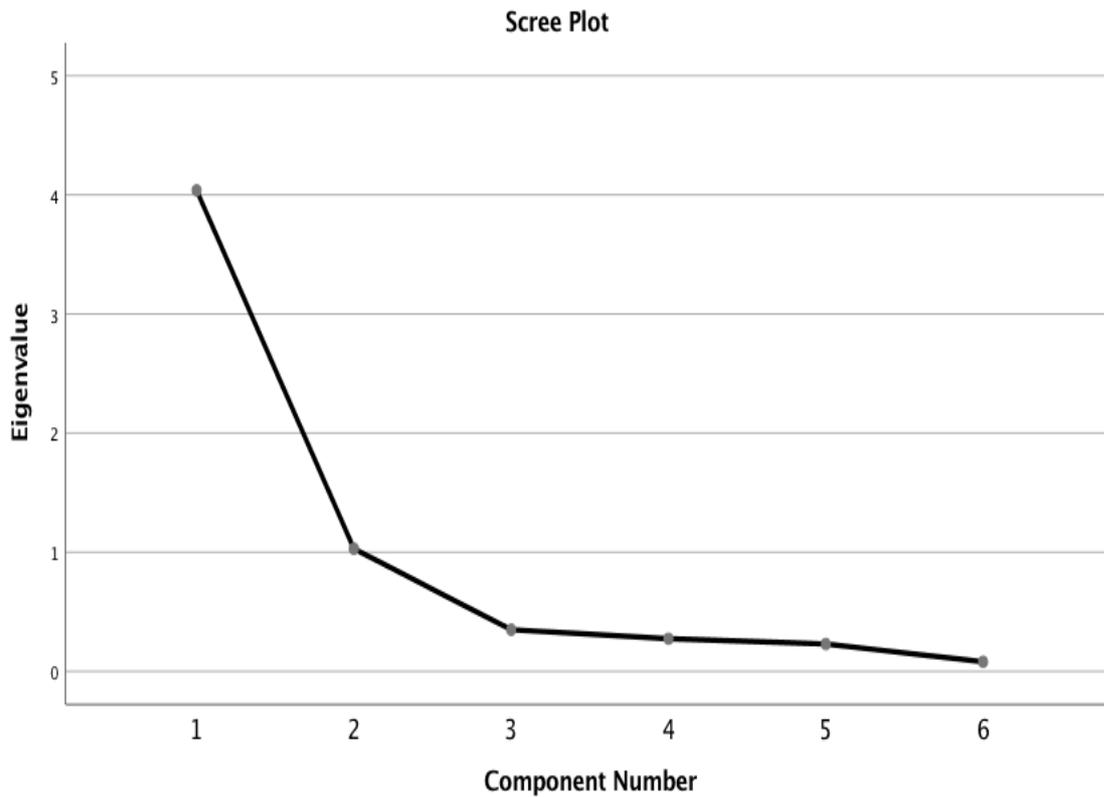
Extraction Method: Principal Component Analysis.

- Communalities are relatively high.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.038	67.301	67.301	4.038	67.301	67.301
2	1.029	17.153	84.455	1.029	17.153	84.455
3	0.349	5.817	90.272			
4	0.274	4.569	94.841			
5	0.230	3.826	98.667			
6	0.080	1.333	100.000			

Extraction Method: Principal Component Analysis.



- Both the % variance explained, and the scree plot suggest a two-factor solution
- Since all of the six items should be closely related, I choose to use oblique rotation (Promax, Kappa = 4).

Pattern Matrix^a

	Component	
	1	2
imi_1_reverse	0.859	0.039
imi2 - The news story tried to manipulate the audience in ways that I don't like.	-0.009	0.930
imi3 - I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience.	0.024	0.908
imi_4_reverse	0.858	0.044
imi_5_reverse	0.947	0.006
imi_6_reverse	0.980	-0.053

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Structure Matrix

	Component	
	1	2
imi_1_reverse	0.879	0.481
imi2 - The news story tried to manipulate the audience in ways that I don't like.	0.469	0.925
imi3 - I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience.	0.492	0.921
imi_4_reverse	0.881	0.485
imi_5_reverse	0.950	0.493
imi_6_reverse	0.953	0.451

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

- Inspection of the rotated component matrix reveal that it is just the two items that is not reverse-coded that load on the second factor. Since we are treating ordinal data as measured on an interval scale, it is likely that SPSS is overestimating the number of factors (Baglin, 2014). Additionally, theory predict that these items should form one factor, and I also suspect that the two items that is not reverse-coded load on a second factor because they share this methodological communality. Therefore, I finally extracted based on a fixed number of factors, namely one.

Component Matrix^a

	Component 1
imi_1_reverse	0.856
imi2 - The news story tried to manipulate the audience in ways that I don't like.	0.667
imi3 - I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience.	0.683
imi_4_reverse	0.858
imi_5_reverse	0.916
imi_6_reverse	0.905

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

- Item 2 and 3 both have loadings above .66 which I view as sufficient since the scales are drawn from theory, and due to the fact that it is just the two reverse coded items that

Factor Analysis of the 15 Items Used to Measure the Five Differential Emotions Contempt, Anger, Disgust, Surprise and Fear

Correlation Matrix^a

	Contempt1	Contempt2	Contempt3	Anger1	Anger2	Anger3	Disgust1	Disgust2	Disgust3	Surprise1	Surprise2	Surprise3	Fear1	Fear2	Fear3
Contempt1	0.000														
Contempt2	0.000	0.000													
Contempt3	0.000	0.000	0.000												
Anger1	0.000	0.000	0.000	0.000											
Anger2	0.000	0.000	0.000	0.000	0.000										
Anger3	0.000	0.000	0.000	0.000	0.000	0.000									
Disgust1	0.000	0.000	0.000	0.000	0.000	0.000	0.000								
Disgust2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
Disgust3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
Surprise1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015					
Surprise2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
Surprise3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Fear1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Fear2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Fear3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

a. Determinant = 3.702E-7

- All correlations are significant

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.867
Bartlett's Test of Sphericity	Approx. Chi-Square
	3171.622
	df
	105
	Sig.
	0.000

- KMO is in the “good” range at .87, and Bartlett’s test for sphericity is significant, which suggest that factor analysis is purposeful.

Anti-image Matrices

	Contempt1	Contempt2	Contempt3	Anger1	Anger2	Anger3	Disgust1	Disgust2	Disgust3	Surprise1	Surprise2	Surprise3	Fear1	Fear2	Fear3
Contempt1	0.255	-0.123	-0.059	-0.028	0.026	-0.030	0.003	-0.001	-0.008	-0.028	-0.024	0.040	-0.033	0.010	0.006
Contempt2	-0.123	0.202	-0.100	0.000	-0.007	-0.029	-0.019	0.017	0.008	-0.022	0.002	0.017	-0.006	-0.014	0.000
Contempt3	-0.059	-0.100	0.289	0.016	-0.027	0.014	0.017	-0.004	-0.038	0.051	-0.007	-0.014	0.014	-0.006	-0.002
Anger1	-0.028	0.000	0.016	0.139	-0.105	-0.018	-0.017	0.008	0.000	-0.031	0.035	-0.018	-0.023	0.000	0.007
Anger2	0.026	-0.007	-0.027	-0.105	0.125	-0.052	-0.002	-0.007	0.005	0.025	-0.044	0.004	0.021	-0.009	-0.006
Anger3	-0.030	-0.029	0.014	-0.018	-0.052	0.396	0.026	-0.050	-0.006	0.041	-0.009	0.005	-0.025	0.011	0.004
Disgust1	0.003	-0.019	0.017	-0.017	-0.002	0.026	0.227	-0.073	-0.073	0.049	-0.031	-0.026	-0.001	0.017	-0.011
Disgust2	-0.001	0.017	-0.004	0.008	-0.007	-0.050	-0.073	0.176	-0.099	-0.016	0.022	-0.022	-0.004	-0.009	0.011
Disgust3	-0.008	0.008	-0.038	0.000	0.005	-0.006	-0.073	-0.099	0.172	-0.001	-0.003	0.000	0.013	6.213E-05	-0.007
Surprise1	-0.028	-0.022	0.051	-0.031	0.025	0.041	0.049	-0.016	-0.001	0.446	-0.237	-0.069	-0.024	-0.012	0.011
Surprise2	-0.024	0.002	-0.007	0.035	-0.044	-0.009	-0.031	0.022	-0.003	-0.237	0.383	-0.151	0.034	0.019	-0.022
Surprise3	0.040	0.017	-0.014	-0.018	0.004	0.005	-0.026	-0.022	0.000	-0.069	-0.151	0.512	-0.027	-0.022	0.008
Fear1	-0.033	0.006	0.014	-0.023	0.021	-0.025	-0.001	-0.004	0.013	-0.024	0.034	-0.027	0.213	-0.026	-0.056
Fear2	0.010	-0.014	-0.006	0.000	-0.009	0.011	0.017	-0.009	6.213E-05	-0.012	0.019	-0.022	-0.026	0.103	-0.074
Fear3	0.006	0.000	-0.002	0.007	-0.006	0.004	-0.011	0.011	-0.007	0.011	-0.022	0.008	-0.056	-0.074	0.094
Contempt1	.884 ^a	-0.542	-0.219	-0.147	0.146	-0.095	0.012	-0.006	-0.037	-0.083	-0.076	0.110	-0.144	0.063	0.036
Contempt2	-0.542	.882 ^a	-0.415	-0.002	-0.046	-0.101	-0.088	0.092	0.045	-0.074	0.009	0.051	0.027	-0.095	-0.003
Contempt3	-0.219	-0.415	.921 ^a	0.079	-0.142	0.042	0.067	-0.020	-0.172	0.142	-0.021	-0.036	0.057	-0.033	-0.015
Anger1	-0.147	-0.002	0.079	.847 ^a	-0.797	-0.076	-0.093	0.053	0.001	-0.123	0.151	-0.067	-0.134	0.004	0.062
Anger2	0.146	-0.046	-0.142	-0.797	.840 ^a	-0.232	-0.014	-0.045	0.037	0.106	-0.199	0.017	0.127	-0.075	-0.051
Anger3	-0.095	-0.101	0.042	-0.076	-0.232	.957 ^a	0.086	-0.191	-0.024	0.097	-0.022	0.011	-0.088	0.056	0.021
Disgust1	0.012	-0.088	0.067	-0.093	-0.014	0.086	.896 ^a	-0.366	-0.369	0.155	-0.106	-0.077	-0.005	0.112	-0.074
Disgust2	-0.006	0.092	-0.020	0.053	-0.045	-0.191	-0.366	.853 ^a	-0.568	-0.057	0.086	-0.072	-0.020	-0.068	0.084
Disgust3	-0.037	0.045	-0.172	0.001	0.037	-0.024	-0.369	-0.568	.866 ^a	-0.002	-0.011	0.001	0.069	0.000	-0.057
Surprise1	-0.083	-0.074	0.142	-0.123	0.106	0.097	0.155	-0.057	-0.002	.746 ^a	-0.574	-0.145	-0.077	-0.058	0.052
Surprise2	-0.076	0.009	-0.021	0.151	-0.199	-0.022	-0.106	0.086	-0.011	-0.574	.773 ^a	-0.341	0.118	0.097	-0.114
Surprise3	0.110	0.051	-0.036	-0.067	0.017	0.011	-0.077	-0.072	0.001	-0.145	-0.341	.918 ^a	-0.080	-0.096	0.036
Fear1	-0.144	0.027	0.057	-0.134	0.127	-0.088	-0.005	-0.020	0.069	-0.077	0.118	-0.080	.916 ^a	-0.177	-0.395
Fear2	0.063	-0.095	-0.033	0.004	-0.075	0.056	0.112	-0.068	0.000	-0.058	0.097	-0.096	-0.177	.841 ^a	-0.749
Fear3	0.036	-0.003	-0.015	0.062	-0.051	0.021	-0.074	0.084	-0.057	0.052	-0.114	0.036	-0.395	-0.749	.819 ^a

a. Measures of Sampling Adequacy(MSA)

- Inspection of anti-image correlations reveal that all MSA measures is greater than .75 (well above the cutoff at .50).

Communalities

	Initial	Extraction
Contempt1 - contemptuous	1.000	0.803
Contempt2 - scornful	1.000	0.850
Contempt3 - disdainful	1.000	0.755

Anger1 - mad	1.000	0.699
Anger2 - angry	1.000	0.716
Anger3 - very annoyed	1.000	0.635
Disgust1 - disgusted	1.000	0.861
Disgust2 - feeling distaste	1.000	0.893
Disgust3 - feeling revulsion	1.000	0.874
Surprise1 - amazed	1.000	0.796
Surprise2 - astonished	1.000	0.831
Surprise3 - surprised	1.000	0.707
Fear1 - threatened	1.000	0.882
Fear2 - fearful	1.000	0.935
Fear3 - scared	1.000	0.940

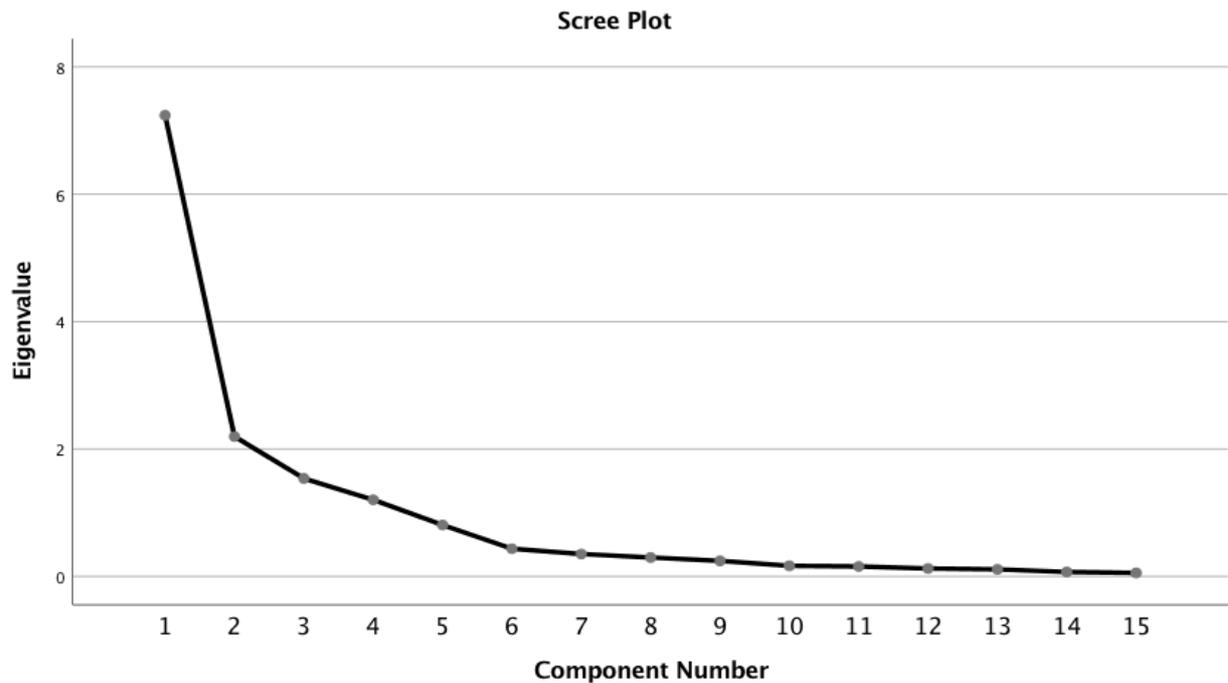
Extraction Method: Principal Component Analysis.

- All communalities are relatively high.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.239	48.261	48.261	7.239	48.261	48.261
2	2.197	14.647	62.908	2.197	14.647	62.908
3	1.538	10.256	73.164	1.538	10.256	73.164
4	1.204	8.024	81.188	1.204	8.024	81.188
5	0.808	5.388	86.576			
6	0.435	2.903	89.479			
7	0.352	2.346	91.825			
8	0.297	1.983	93.807			
9	0.245	1.631	95.439			
10	0.167	1.112	96.551			
11	0.157	1.046	97.596			
12	0.125	0.830	98.426			
13	0.111	0.739	99.165			
14	0.070	0.467	99.632			
15	0.055	0.368	100.000			

Extraction Method: Principal Component Analysis.



- The eigen-value-above-one rule of thumb suggests a four-factor solution.
- Interpretation of the Scree plot shows that the elbow happens after component number 5.
- The 5th factor has an eigenvalue very close to one, namely .81 and accounts for 5.39% of the variance, and raises the cumulative variance from 81.19% to 86.58%.
- Since differential emotions theory advocates the use of distinct emotions, orthogonal rotation (varimax) were used in the next step.

Rotated Component Matrix^a

	Component			
	1	2	3	4
Contempt1 - contemptuous	0.861	0.122	0.166	0.141
Contempt2 - scornful	0.868	0.118	0.257	0.130
Contempt3 - disdainful	0.798	0.280	0.193	0.049
Anger1 - mad	0.641	0.376	0.310	0.226
Anger2 - angry	0.635	0.406	0.305	0.235
Anger3 - very annoyed	0.632	0.452	0.159	0.078
Disgust1 - disgusted	0.250	0.886	0.071	0.093
Disgust2 - feeling distaste	0.230	0.911	0.077	0.071
Disgust3 - feeling revulsion	0.276	0.887	0.086	0.070
Surprise1 - amazed	0.141	-0.095	0.149	0.863
Surprise2 - astonished	0.222	0.127	0.069	0.872
Surprise3 - surprised	0.028	0.345	0.315	0.699
Fear1 - threatened	0.267	0.065	0.886	0.148
Fear2 - fearful	0.270	0.101	0.907	0.169
Fear3 - scared	0.251	0.111	0.914	0.171

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

- Inspection of the rotated component matrix shows that Disgust, surprise and fear lodes onto separate factors with high factor loadings, whereas contempt and anger lode onto the same factor. This is not completely unexpected, since theory suggests that anger and contempt is closely related.
- Nevertheless, since theory suggests five factors and since the 5th factor has an eigenvalue very close to one, namely .81, accounts for 5.39% of the variance, and raises the

cumulative variance from 81.19% to 86.58% I choose to conduct a final estimation using a fixed number of five factors.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.239	48.261	48.261	7.239	48.261	48.261	2.954	19.692	19.692
2	2.197	14.647	62.908	2.197	14.647	62.908	2.911	19.410	39.102
3	1.538	10.256	73.164	1.538	10.256	73.164	2.578	17.189	56.290
4	1.204	8.024	81.188	1.204	8.024	81.188	2.327	15.514	71.805
5	0.808	5.388	86.576	0.808	5.388	86.576	2.216	14.772	86.576
6	0.435	2.903	89.479						
7	0.352	2.346	91.825						
8	0.297	1.983	93.807						
9	0.245	1.631	95.439						
10	0.167	1.112	96.551						
11	0.157	1.046	97.596						
12	0.125	0.830	98.426						
13	0.111	0.739	99.165						
14	0.070	0.467	99.632						
15	0.055	0.368	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
Contempt1 - contemptuous	0.169	0.189	0.853	0.242	0.154
Contempt2 - scornful	0.154	0.275	0.834	0.288	0.140
Contempt3 - disdainful	0.322	0.214	0.778	0.249	0.061
Anger1 - mad	0.237	0.271	0.285	0.812	0.190
Anger2 - angry	0.267	0.266	0.277	0.814	0.199
Anger3 - very annoyed	0.340	0.129	0.329	0.718	0.050
Disgust1 - disgusted	0.882	0.074	0.171	0.231	0.095
Disgust2 - feeling distaste	0.907	0.080	0.151	0.225	0.074
Disgust3 - feeling revulsion	0.902	0.096	0.230	0.176	0.078
Surprise1 - amazed	-0.081	0.156	0.150	0.024	0.867
Surprise2 - astonished	0.120	0.070	0.172	0.156	0.872
Surprise3 - surprised	0.311	0.306	-0.066	0.187	0.692
Fear1 - threatened	0.058	0.887	0.205	0.176	0.147
Fear2 - fearful	0.094	0.908	0.204	0.184	0.169
Fear3 - scared	0.107	0.916	0.194	0.164	0.171

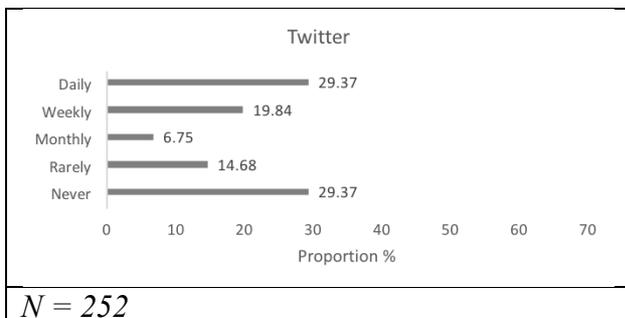
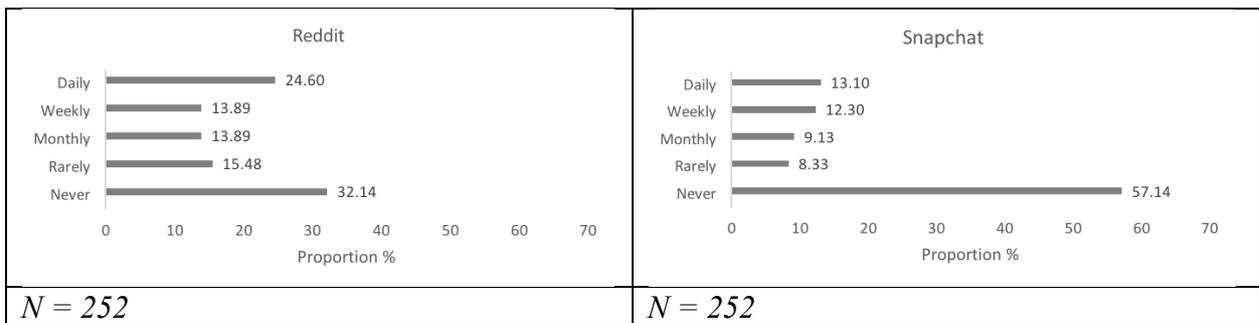
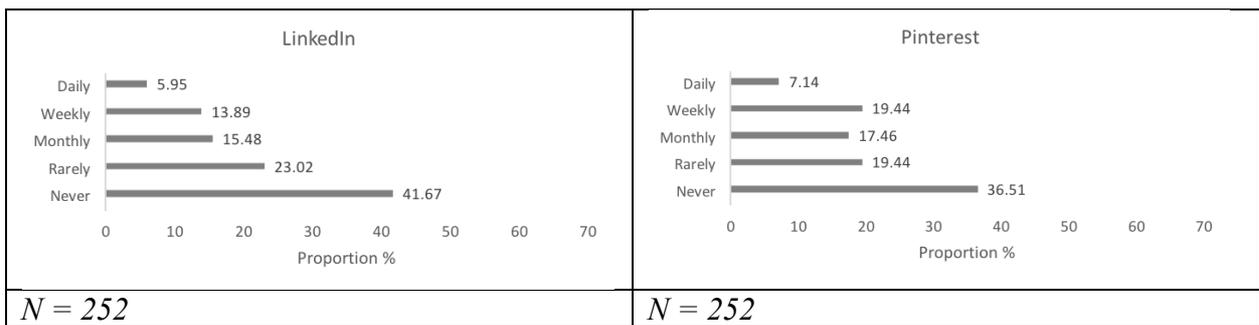
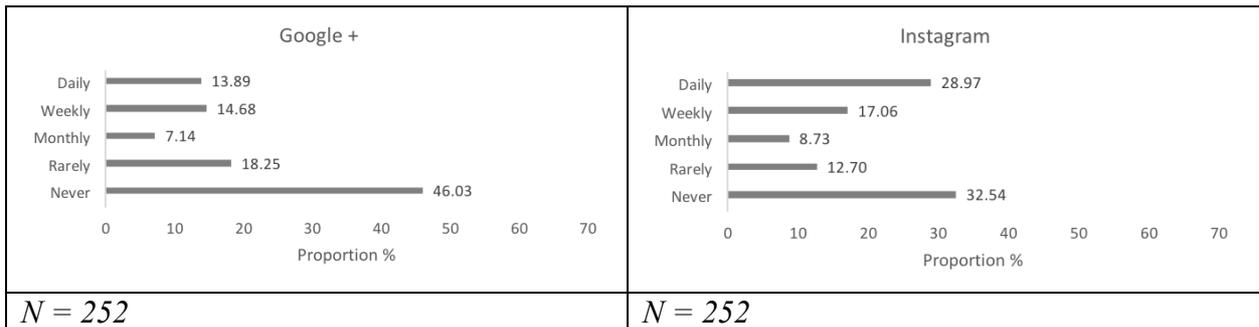
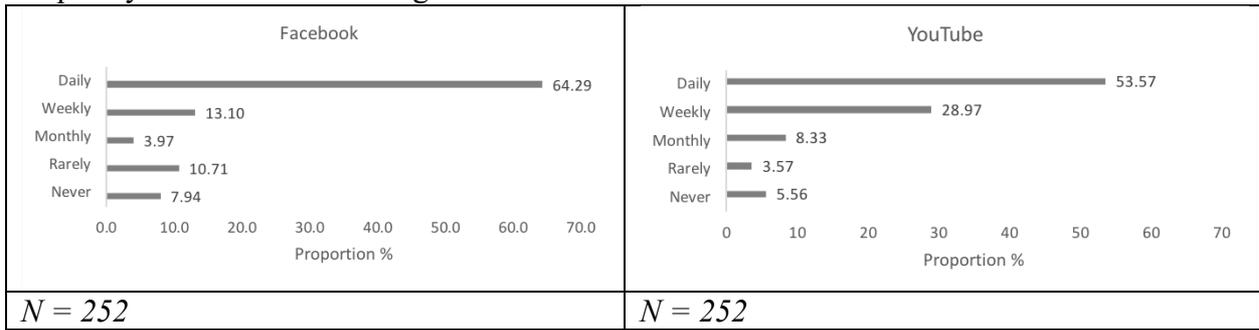
Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

- The rotated component matrix shows that the items associated with each of the five differential emotions loads onto one factor each. The factors explain 19.69%, 19.41%, 17.19%, 15.52%, and 14.77% of the variance, respectively.
- Based on theory, I decided to go for the five factor solution, and composite variables were computed for each of the five differential emotions, using the three items associated with each emotion.

Appendix 7: Descriptive Statistics from Study 2
Frequency of Social Media Usage



Appendix 8: Analyses associated with Study 2

PAIRED SAMPLES T-TESTS of pre- and post-CBBE

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pr_att	5.2513	252	1.63418	0.10294
	po_att	4.3492	252	1.98750	0.12520
Pair 2	pr_des	5.0000	252	1.85747	0.11701
	po_des	4.2302	252	2.07494	0.13071
Pair 3	pr_qua	5.3810	252	1.51740	0.09559
	po_qua	4.4841	252	1.96477	0.12377
Pair 4	pr_pi	4.6111	252	2.23864	0.14102
	po_pi	3.8810	252	2.28840	0.14416
Pair 5	pr_CBBE	5.08	252.00	1.59	0.10
	po_CBBE	4.23	252.00	1.95	0.12

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pr_att & po_att	252	0.653	0.000
Pair 2	pr_des & po_des	252	0.636	0.000
Pair 3	pr_qua & po_qua	252	0.646	0.000
Pair 4	pr_pi & po_pi	252	0.804	0.000
Pair 5	pr_CBBE & po_CBBE	252	0.700	0.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pr_att - po_att	0.90212	1.54242	0.09716	0.71076	1.09348	9.285	251	0.000
Pair 2	pr_des - po_des	0.76984	1.68973	0.10644	0.56021	0.97948	7.232	251	0.000
Pair 3	pr_qua - po_qua	0.89683	1.52053	0.09578	0.70818	1.08547	9.363	251	0.000
Pair 4	pr_pi - po_pi	0.73016	1.41935	0.08941	0.55407	0.90625	8.166	251	0.000
Pair 5	pr_CBBE - po_CBBE	0.85	1.41	0.09	0.67	1.02	9.542	251	0.000

Regressing change in CBBE on the NBRFN dummy variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.002 ^a	0.000	-0.004	1.41251

a. Predictors: (Constant), NBRFN_factor

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.001	1	0.001	0.00	.979 ^b
	Residual	498.793	250	1.995		
	Total	498.795	251			

a. Dependent Variable: CBBE_chg

b. Predictors: (Constant), NBRFN_factor

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.850	0.126		-6.753	0.000		
	NBRFN_factor	0.005	0.178	0.002	0.027	0.979	1.000	1.000

a. Dependent Variable: CBBE_chg

Conclusion: No significant difference between the NBRFN and the NBRTN condition.

SPSS PROCESS MODEL 4: NBRFN → CAD → CBBE_chg

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.00 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 4
 Y : CBBE_chg
 X : NBRFN
 M : CAD

Sample Size: 252

Coding of categorical X variable for analysis:
 NBRFN X1
 .000 .000
 1.000 1.000

OUTCOME VARIABLE:
 CAD

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.0314	.0010	1.6455	.2465	1.0000	250.0000	.6200

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.8510	.1143	42.4483	.0000	4.6259	5.0760
X1	.0802	.1616	.4965	.6200	-.2381	.3985

Covariance matrix of regression parameter estimates:

	constant	X1
constant	.0131	-.0131
X1	-.0131	.0261

OUTCOME VARIABLE:

CBBE_chg

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.4249	.1805	1.6416	27.4241	2.0000	249.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.4197	.3270	4.3415	.0000	.7756	2.0637
X1	.0423	.1615	.2619	.7936	-.2758	.3604
CAD	-.4678	.0632	-7.4059	.0000	-.5922	-.3434

Covariance matrix of regression parameter estimates:

	constant	X1	CAD
constant	.1069	-.0115	-.0194
X1	-.0115	.0261	-.0003
CAD	-.0194	-.0003	.0040

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

CBBE_chg

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.0017	.0000	1.9952	.0007	1.0000	250.0000	.9787

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.8497	.1258	-6.7527	.0000	-1.0976	-.6019
X1	.0048	.1780	.0268	.9787	-.3457	.3553

Covariance matrix of regression parameter estimates:

	constant	X1
constant	.0158	-.0158
X1	-.0158	.0317

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
.0048	.1780	.0268	.9787	-.3457	.3553	.0034

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps
.0423	.1615	.2619	.7936	-.2758	.3604	.0300

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI	
CAD	-.0375	.0770	-.1884	.1134

Partially standardized indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI	
CAD	-.0266	.0545	-.1356	.0795

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

----- END MATRIX -----

Conclusion: NOT SIGNIFICANT, therefore CAD were substituted with Disgust in further analyses.

SPSS PROCESS MODEL 4: NBRFN → Disgust → CBBE_chg

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.00 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 4
Y : CBBE_chg
X : NBRFN
M : Disgust

Sample
Size: 252

Coding of categorical X variable for analysis:

NBRFN	X1
.000	.000
1.000	1.000

OUTCOME VARIABLE:
Disgust

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.1321	.0174	2.0025	4.4399	1.0000	250.0000	.0361

Model	coeff	se	t	p	LLCI	ULCI
constant	5.4048	.1261	42.8726	.0000	5.1565	5.6530
X1	.3757	.1783	2.1071	.0361	.0245	.7268

Covariance matrix of regression parameter estimates:

	constant	X1
constant	.0159	-.0159
X1	-.0159	.0318

OUTCOME VARIABLE:
CBBE_chg

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.3746	.1403	1.7221	20.3189	2.0000	249.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	1.1710	.3379	3.4660	.0006	.5056	1.8365
X1	.1452	.1668	.8706	.3848	-.1833	.4737
Disgust	-.3739	.0587	-6.3747	.0000	-.4894	-.2584

Covariance matrix of regression parameter estimates:

	constant	X1	Disgust
constant	.1142	-.0067	-.0186
X1	-.0067	.0278	-.0013

Disgust -.0186 -.0013 .0034

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:
CBBE_chg

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.0017	.0000	1.9952	.0007	1.0000	250.0000	.9787

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.8497	.1258	-6.7527	.0000	-1.0976	-.6019
X1	.0048	.1780	.0268	.9787	-.3457	.3553

Covariance matrix of regression parameter estimates:

	constant	X1
constant	.0158	-.0158
X1	-.0158	.0317

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
.0048	.1780	.0268	.9787	-.3457	.3553	.0034

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps
.1452	.1668	.8706	.3848	-.1833	.4737	.1030

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
Disgust	-.1405	.0724	-.2890	-.0065

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
Disgust	-.0996	.0507	-.2031	-.0050

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

----- END MATRIX -----

SPSS PROCESS MODEL 4: NBRFN → Disgust → CBBE_chg (+ Perceived Credibility as covariate)

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.00 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 4
Y : CBBE_chg
X : NBRFN
M : Disgust

Covariates:
PC

Sample
Size: 252

Coding of categorical X variable for analysis:

```
NBREFN    X1
.000      .000
1.000    1.000
```

OUTCOME VARIABLE:

Disgust

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2191	.0480	1.9480	6.2782	2.0000	249.0000	.0022

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.9210	.2115	23.2637	.0000	4.5044	5.3376
X1	.3637	.1759	2.0675	.0397	.0172	.7101
PC	.1418	.0501	2.8271	.0051	.0430	.2405

Covariance matrix of regression parameter estimates:

	constant	X1	PC
constant	.0447	-.0147	-.0086
X1	-.0147	.0309	-.0002
PC	-.0086	-.0002	.0025

OUTCOME VARIABLE:

CBBE_chg

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.4103	.1684	1.6726	16.7377	3.0000	248.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.4752	.3492	4.2248	.0000	.7875	2.1630
X1	.1455	.1644	.8853	.3769	-.1782	.4693
Disgust	-.3439	.0587	-5.8568	.0000	-.4596	-.2283
PC	-.1366	.0472	-2.8934	.0041	-.2296	-.0436

Covariance matrix of regression parameter estimates:

	constant	X1	Disgust	PC
constant	.1219	-.0065	-.0170	-.0050
X1	-.0065	.0270	-.0013	.0000
Disgust	-.0170	-.0013	.0034	-.0005
PC	-.0050	.0000	-.0005	.0022

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

CBBE_chg

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2310	.0534	1.8963	7.0172	2.0000	249.0000	.0011

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.2172	.2087	-1.0408	.2990	-.6283	.1938
X1	.0205	.1735	.1178	.9063	-.3214	.3623
PC	-.1853	.0495	-3.7461	.0002	-.2828	-.0879

Covariance matrix of regression parameter estimates:

	constant	X1	PC
constant	.0436	-.0143	-.0084
X1	-.0143	.0301	-.0002
PC	-.0084	-.0002	.0024

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
--------	----	---	---	------	------	------

```

        .0205      .1735      .1178      .9063      -.3214      .3623      .0145
Direct effect of X on Y
  Effect      se      t      p      LLCI      ULCI      c'_ps
  .1455      .1644      .8853      .3769      -.1782      .4693      .1032

Indirect effect(s) of X on Y:
  Effect      BootSE      BootLLCI      BootULCI
Disgust      -.1251      .0666      -.2694      -.0062

Partially standardized indirect effect(s) of X on Y:
  Effect      BootSE      BootLLCI      BootULCI
Disgust      -.0887      .0465      -.1871      -.0045

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

----- END MATRIX -----

```

SPSS PROCESS MODEL 18: Full model with NBRFN (X), Disgust (M), Source Credibility (W), and Persuasion Knowledge (Z)

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.00 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2018). www.guilford.com/p/hayes3

```

Model   : 18
  Y     : CBBE_chg
  X     : NBRFN
  M     : Disgust
  W     : SC
  Z     : PK

```

Sample
 Size: 252

```

Coding of categorical X variable for analysis:
  NBRFN   X1
    .000   .000
    1.000  1.000

```

```

Coding of categorical W variable for analysis:
  SC     W1
    .000   .000
    1.000  1.000

```

```

Coding of categorical Z variable for analysis:
  PK     Z1
    .000   .000
    1.000  1.000

```

OUTCOME VARIABLE:
 Disgust

```

Model Summary
      R      R-sq      MSE      F      df1      df2      p
    .1321    .0174    2.0025    4.4399    1.0000    250.0000    .0361

```

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.1878	.1261	-1.4899	.1375	-.4361	.0605
X1	.3757	.1783	2.1071	.0361	.0245	.7268

Covariance matrix of regression parameter estimates:

	constant	X1
constant	.0159	-.0159
X1	-.0159	.0318

OUTCOME VARIABLE:

CBBE_chg

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.4214	.1776	1.6882	6.5578	8.0000	243.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.8353	.1860	-4.4914	.0000	-1.2016	-.4689
X1	.0714	.1670	.4276	.6693	-.2575	.4003
Disgust	-.4105	.1171	-3.5047	.0005	-.6412	-.1798
W1	-.3395	.2340	-1.4508	.1481	-.8005	.1214
Int_1	-.0160	.1582	-.1012	.9194	-.3276	.2955
Z1	-.1997	.2366	-.8440	.3995	-.6658	.2664
Int_2	.0251	.1693	.1482	.8823	-.3084	.3585
Int_3	.8679	.3308	2.6233	.0093	.2162	1.5196
Int_4	.1649	.2331	.7072	.4801	-.2943	.6241

Product terms key:

Int_1	:	Disgust	x	W1		
Int_2	:	Disgust	x	Z1		
Int_3	:	W1	x	Z1		
Int_4	:	Disgust	x	W1	x	Z1

Covariance matrix of regression parameter estimates:

	constant	X1	Disgust	W1	Int_1	Z1	Int_2						
Int_3	constant	.0346	-.0144	-.0015	-.0285	.0016	-.0274	.0023					
	Int_4	-.0010											
constant		.0297	-.0144	.0279	-.0011	.0028	.0009	.0006	-.0003				
	X1		-.0049	-.0022									
Disgust			-.0015	-.0011	.0137	.0020	-.0137	.0021	-.0137				
	W1			.0138									
W1				-.0285	.0028	.0020	.0548	-.0033	.0272	-.0021			
	Int_1				.0031								
Int_1					.0016	.0009	-.0137	-.0033	.0250	-.0021	.0137		
	Z1					-.0251							
Z1						-.0274	.0006	.0021	.0272	-.0021	.0560	.0012	
	Int_2						-.0013						
Int_2							.0023	-.0003	-.0137	-.0021	.0137	.0012	.0287
	Int_3							-.0011	-.0286				
Int_3							.0297	-.0049	-.0019	-.0550	.0032	-.0561	-.0011
	Int_4							.1095	.0010				
Int_4							-.0010	-.0022	.0138	.0031	-.0251	-.0013	-.0286
								.0010	.0543				

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
M*W*Z	.0017	.5002	1.0000	243.0000	.4801

Focal predict: Disgust (M)
 Mod var: SC (W)
 Mod var: PK (Z)

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  Disgust SC PK CBBE_chg .
BEGIN DATA.
```

```

-1.4247      .0000      .0000      -.2148
.0000        .0000      .0000      -.7996
1.4074      .0000      .0000     -1.3773
-1.4247      .0000      1.0000     -.4502
.0000        .0000      1.0000     -.9993
1.4074      .0000      1.0000    -1.5417
-1.4247      1.0000      .0000     -.5314
.0000        1.0000      .0000    -1.1391
1.4074      1.0000      .0000    -1.7393
-1.4247      1.0000      1.0000     -.1339
.0000        1.0000      1.0000     -.4709
1.4074      1.0000      1.0000     -.8038

```

END DATA.

GRAPH/SCATTERPLOT=

Disgust WITH CBBE_chg BY SC /PANEL ROWVAR= PK .

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.0714	.1670	.4276	.6693	-.2575	.4003

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

NBRFN -> Disgust -> CBBE_chg

SC	PK	Effect	BootSE	BootLLCI	BootULCI
.0000	.0000	-.1542	.0909	-.3642	-.0089
.0000	1.0000	-.1448	.0979	-.3818	-.0063
1.0000	.0000	-.1602	.0849	-.3423	-.0084
1.0000	1.0000	-.0889	.0619	-.2401	-.0023

Index of moderated moderated mediation

Index	BootSE	BootLLCI	BootULCI
.0619	.0965	-.1129	.2913

Indices of conditional moderated mediation by W

PK	Index	BootSE	BootLLCI	BootULCI
.0000	-.0060	.0580	-.1167	.1265
1.0000	.0559	.0779	-.0612	.2499

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

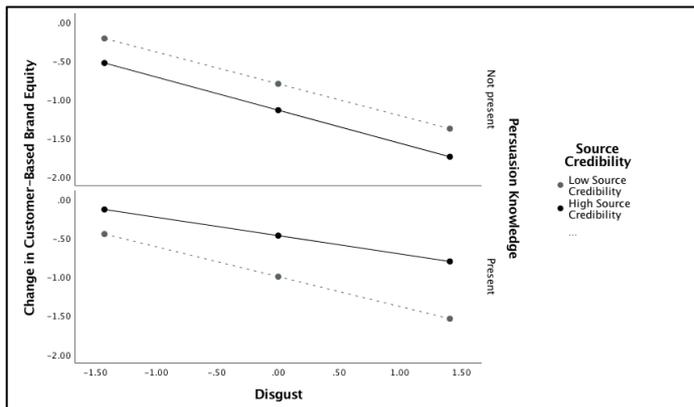
Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

NOTE: The following variables were mean centered prior to analysis:

Disgust

----- END MATRIX -----



SPSS PROCESS MODEL 18: Full model with NBRFN (X), Disgust (M), Source Credibility (W), and Persuasion Knowledge (Z) (+ Perceived Credibility as covariate)

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.00 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 18
Y : CBBE_chg
X : NBRFN
M : Disgust
W : SC
Z : PK

Covariates:
PC

Sample
Size: 252

Coding of categorical X variable for analysis:

NBRFN	X1
.000	.000
1.000	1.000

Coding of categorical W variable for analysis:

SC	W1
.000	.000
1.000	1.000

Coding of categorical Z variable for analysis:

PK	Z1
.000	.000
1.000	1.000

OUTCOME VARIABLE:

Disgust

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2191	.0480	1.9480	6.2782	2.0000	249.0000	.0022

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.6716	.2115	-3.1751	.0017	-1.0882	-.2550
X1	.3637	.1759	2.0675	.0397	.0172	.7101
PC	.1418	.0501	2.8271	.0051	.0430	.2405

Covariance matrix of regression parameter estimates:

	constant	X1	PC
constant	.0447	-.0147	-.0086
X1	-.0147	.0309	-.0002
PC	-.0086	-.0002	.0025

OUTCOME VARIABLE:

CBBE_chg

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4437	.1969	1.6554	6.5911	9.0000	242.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.4392	.2467	-1.7800	.0763	-.9252	.0468

X1	.0812	.1654	.4912	.6238	-.2445	.4070
Disgust	-.3734	.1170	-3.1921	.0016	-.6039	-.1430
W1	-.2405	.2353	-1.0219	.3079	-.7041	.2231
Int_1	-.0487	.1572	-.3095	.7572	-.3583	.2610
Z1	-.2249	.2346	-.9589	.3386	-.6869	.2371
Int_2	.0185	.1676	.1104	.9122	-.3117	.3487
Int_3	.7510	.3312	2.2678	.0242	.0987	1.4034
Int_4	.1921	.2311	.8313	.4066	-.2631	.6474
PC	-.1180	.0489	-2.4118	.0166	-.2143	-.0216

Product terms key:

```

Int_1  :      Disgust  x      W1
Int_2  :      Disgust  x      Z1
Int_3  :      W1      x      Z1
Int_4  :      Disgust  x      W1      x      Z1
    
```

Covariance matrix of regression parameter estimates:

	constant	X1	Disgust	W1	Int_1	Z1	Int_2
Int_3	Int_4	PC					
constant	.0609	-.0135	.0010	-.0213	-.0006	-.0286	.0018
.0211	.0009	-.0080					
X1	-.0135	.0274	-.0011	.0029	.0008	.0006	-.0003
-.0050	-.0021	-.0002					
Disgust	.0010	-.0011	.0137	.0026	-.0136	.0019	-.0134
-.0026	.0137	-.0008					
W1	-.0213	.0029	.0026	.0554	-.0038	.0262	-.0022
-.0559	.0035	-.0020					
Int_1	-.0006	.0008	-.0136	-.0038	.0247	-.0019	.0134
.0038	-.0247	.0007					
Z1	-.0286	.0006	.0019	.0262	-.0019	.0550	.0012
-.0545	-.0013	.0005					
Int_2	.0018	-.0003	-.0134	-.0022	.0134	.0012	.0281
-.0010	-.0281	.0001					
Int_3	.0211	-.0050	-.0026	-.0559	.0038	-.0545	-.0010
.1097	.0005	.0024					
Int_4	.0009	-.0021	.0137	.0035	-.0247	-.0013	-.0281
.0005	.0534	-.0006					
PC	-.0080	-.0002	-.0008	-.0020	.0007	.0005	.0001
.0024	-.0006	.0024					

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
M*W*Z	.0023	.6911	1.0000	242.0000	.4066

```

Focal predict: Disgust (M)
Mod var: SC (W)
Mod var: PK (Z)
    
```

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  Disgust SC PK CBBE_chg .
BEGIN DATA.
  -1.4247 .0000 .0000 -.2741
  .0000 .0000 .0000 -.8061
  1.4074 .0000 .0000 -1.3317
  -1.4247 .0000 1.0000 -.5253
  .0000 .0000 1.0000 -1.0310
  1.4074 .0000 1.0000 -1.5305
  -1.4247 1.0000 .0000 -.4452
  .0000 1.0000 .0000 -1.0466
  1.4074 1.0000 .0000 -1.6406
  -1.4247 1.0000 1.0000 -.2192
  .0000 1.0000 1.0000 -.5205
  1.4074 1.0000 1.0000 -.8181
END DATA.
GRAPH/SCATTERPLOT=
  Disgust WITH CBBE_chg BY SC /PANEL ROWVAR= PK .
***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****
    
```

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.0812	.1654	.4912	.6238	-.2445	.4070

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

NBRFN	->	Disgust	->	CBBE_chg		
	SC	PK	Effect	BootSE	BootLLCI	BootULCI
	.0000	.0000	-.1358	.0829	-.3321	-.0064
	.0000	1.0000	-.1291	.0890	-.3482	-.0036
	1.0000	.0000	-.1535	.0813	-.3315	-.0083
	1.0000	1.0000	-.0769	.0604	-.2329	.0004

Index of moderated moderated mediation

Index	BootSE	BootLLCI	BootULCI
.0699	.0924	-.1053	.2815

Indices of conditional moderated mediation by W

	PK	Index	BootSE	BootLLCI	BootULCI
	.0000	-.0177	.0560	-.1305	.1108
	1.0000	.0522	.0728	-.0627	.2297

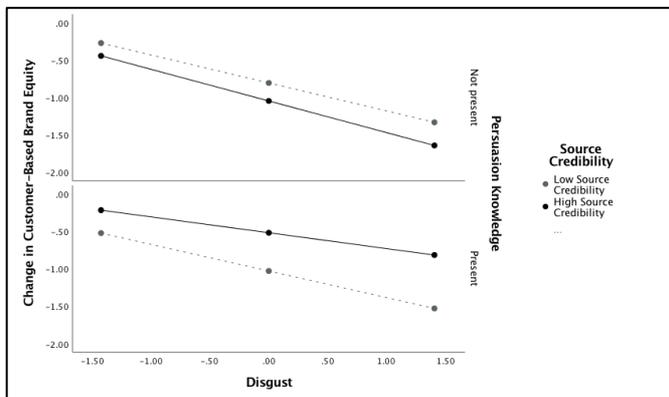
***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

NOTE: The following variables were mean centered prior to analysis:
Disgust

----- END MATRIX -----



SPSS PROCESS MODEL 14: Controlling for the moderation of pre-CBBE on the indirect effect of NBRFN through Disgust on post-CBBE

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.00 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 14
Y : po_CBBE
X : NBRFN
M : Disgust
W : pr_CBBE

Covariates:
PC

Sample
Size: 252

Coding of categorical X variable for analysis:

NBRFN	X1
.000	.000
1.000	1.000

OUTCOME VARIABLE:
Disgust

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2191	.0480	1.9480	6.2782	2.0000	249.0000	.0022

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.6716	.2115	-3.1751	.0017	-1.0882	-.2550
X1	.3637	.1759	2.0675	.0397	.0172	.7101
PC	.1418	.0501	2.8271	.0051	.0430	.2405

Covariance matrix of regression parameter estimates:

	constant	X1	PC
constant	.0447	-.0147	-.0086
X1	-.0147	.0309	-.0002
PC	-.0086	-.0002	.0025

OUTCOME VARIABLE:
po_CBBE

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7736	.5985	1.5564	73.3335	5.0000	246.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.6123	.1933	23.8620	.0000	4.2316	4.9931
X1	.1613	.1593	1.0126	.3123	-.1524	.4750
Disgust	-.3771	.0571	-6.6011	.0000	-.4896	-.2646
pr_CBBE	.8337	.0503	16.5601	.0000	.7345	.9328
Int_1	-.0801	.0307	-2.6084	.0097	-.1406	-.0196
PC	-.1398	.0455	-3.0702	.0024	-.2295	-.0501

Product terms key:

Int_1 : Disgust x pr_CBBE

Covariance matrix of regression parameter estimates:

	constant	X1	Disgust	pr_CBBE	Int_1	PC
constant	.0374	-.0127	.0022	-.0003	.0004	-.0072
X1	-.0127	.0254	-.0012	.0004	-.0004	.0000
Disgust	.0022	-.0012	.0033	.0003	.0001	-.0005
pr_CBBE	-.0003	.0004	.0003	.0025	-.0002	.0000
Int_1	.0004	-.0004	.0001	-.0002	.0009	.0000
PC	-.0072	.0000	-.0005	.0000	.0000	.0021

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
M*W	.0111	6.8037	1.0000	246.0000	.0097

Focal predict: Disgust (M)
Mod var: pr_CBBE (W)

Conditional effects of the focal predictor at values of the moderator(s):

pr_CBBE	Effect	se	t	p	LLCI	ULCI
---------	--------	----	---	---	------	------

-1.5923	-.2495	.0728	-3.4268	.0007	-.3930	-.1061
.0000	-.3771	.0571	-6.6011	.0000	-.4896	-.2646
1.5923	-.5046	.0775	-6.5124	.0000	-.6572	-.3520

Moderator value(s) defining Johnson-Neyman significance region(s):

Value	% below	% above
-2.4540	10.3175	89.6825

Conditional effect of focal predictor at values of the moderator:

pr_CBBE	Effect	se	t	p	LLCI	ULCI
-4.0791	-.0504	.1344	-.3750	.7080	-.3150	.2143
-3.7791	-.0744	.1261	-.5902	.5556	-.3227	.1739
-3.4791	-.0984	.1179	-.8346	.4047	-.3307	.1339
-3.1791	-.1225	.1100	-1.1137	.2665	-.3390	.0941
-2.8791	-.1465	.1022	-1.4334	.1530	-.3478	.0548
-2.5791	-.1705	.0947	-1.8007	.0730	-.3570	.0160
-2.4540	-.1805	.0917	-1.9697	.0500	-.3611	.0000
-2.2791	-.1945	.0875	-2.2230	.0271	-.3669	-.0222
-1.9791	-.2186	.0807	-2.7068	.0073	-.3776	-.0595
-1.6791	-.2426	.0745	-3.2559	.0013	-.3893	-.0958
-1.3791	-.2666	.0689	-3.8674	.0001	-.4024	-.1308
-1.0791	-.2906	.0642	-4.5262	.0000	-.4171	-.1642
-.7791	-.3147	.0605	-5.1987	.0000	-.4339	-.1954
-.4791	-.3387	.0581	-5.8310	.0000	-.4531	-.2243
-.1791	-.3627	.0570	-6.3589	.0000	-.4751	-.2504
.1209	-.3867	.0575	-6.7291	.0000	-.4999	-.2735
.4209	-.4108	.0593	-6.9212	.0000	-.5277	-.2939
.7209	-.4348	.0625	-6.9523	.0000	-.5580	-.3116
1.0209	-.4588	.0669	-6.8627	.0000	-.5905	-.3271
1.3209	-.4828	.0721	-6.6971	.0000	-.6249	-.3408
1.6209	-.5069	.0781	-6.4920	.0000	-.6607	-.3531
1.9209	-.5309	.0846	-6.2725	.0000	-.6976	-.3642

Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```

DATA LIST FREE/
  Disgust   pr_CBBE   po_CBBE   .
BEGIN DATA.
  -1.4247   -1.5923   3.2380
   .0000   -1.5923   2.8824
  1.4074   -1.5923   2.5312
  -1.4247   .0000    4.7471
   .0000   .0000    4.2099
  1.4074   .0000    3.6792
  -1.4247   1.5923   6.2562
   .0000   1.5923   5.5373
  1.4074   1.5923   4.8271
END DATA.
GRAPH/SCATTERPLOT=
  Disgust WITH   po_CBBE BY      pr_CBBE .

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y
  Effect      se      t      p      LLCI      ULCI
  .1613      .1593    1.0126  .3123  -.1524    .4750

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
  NBRFN      ->   Disgust      ->   po_CBBE

  pr_CBBE      Effect      BootSE      BootLLCI      BootULCI
  -1.5923      -.0907      .0526      -.2108      -.0060
   .0000      -.1371      .0726      -.2917      -.0100
  1.5923      -.1835      .0955      -.3837      -.0136

Index of moderated mediation:
  Index      BootSE      BootLLCI      BootULCI
pr_CBBE      -.0291      .0164      -.0638      -.0012
    
```

```

---
***** ANALYSIS NOTES AND ERRORS *****
Level of confidence for all confidence intervals in output:
  95.0000
Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000
W values in conditional tables are the mean and +/- SD from the mean.
NOTE: The following variables were mean centered prior to analysis:
      pr_CBBE  Disgust
----- END MATRIX -----

```

SPSS PROCESS MODEL 14: Controlling for the moderation of pre-CBBE on the indirect effect of NBRFN through Disgust on post-CBBE (without mean centering of variables to simplify interpretation of the Johnson Neyman plot)

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 3.00 *****
```

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2018). www.guilford.com/p/hayes3

```
*****
```

```

Model   : 14
Y       : po_CBBE
X       : NBRFN
M       : Disgust
W       : pr_CBBE

```

Covariates:
PC

Sample
Size: 252

Coding of categorical X variable for analysis:

NBRFN	X1
.000	.000
1.000	1.000

```
*****
```

OUTCOME VARIABLE:
Disgust

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.2191	.0480	1.9480	6.2782	2.0000	249.0000	.0022

Model	coeff	se	t	p	LLCI	ULCI
constant	4.9210	.2115	23.2637	.0000	4.5044	5.3376
X1	.3637	.1759	2.0675	.0397	.0172	.7101
PC	.1418	.0501	2.8271	.0051	.0430	.2405

Covariance matrix of regression parameter estimates:

	constant	X1	PC
constant	.0447	-.0147	-.0086
X1	-.0147	.0309	-.0002
PC	-.0086	-.0002	.0025

```
*****
```

OUTCOME VARIABLE:

po_CBBE

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7736	.5985	1.5564	73.3335	5.0000	246.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.2120	1.0046	.2110	.8330	-1.7667	2.1907
X1	.1613	.1593	1.0126	.3123	-.1524	.4750
Disgust	.0297	.1627	.1826	.8553	-.2907	.3501
pr_CBBE	1.2815	.1855	6.9069	.0000	.9161	1.6470
Int_1	-.0801	.0307	-2.6084	.0097	-.1406	-.0196
PC	-.1398	.0455	-3.0702	.0024	-.2295	-.0501

Product terms key:

Int_1 : Disgust x pr_CBBE

Covariance matrix of regression parameter estimates:

	constant	X1	Disgust	pr_CBBE	Int_1	PC
constant	1.0092	-.0201	-.1548	-.1754	.0276	-.0039
X1	-.0201	.0254	.0010	.0028	-.0004	.0000
Disgust	-.1548	.0010	.0265	.0276	-.0047	-.0006
pr_CBBE	-.1754	.0028	.0276	.0344	-.0055	-.0001
Int_1	.0276	-.0004	-.0047	-.0055	.0009	.0000
PC	-.0039	.0000	-.0006	-.0001	.0000	.0021

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
M*W	.0111	6.8037	1.0000	246.0000	.0097

Focal predict: Disgust (M)
Mod var: pr_CBBE (W)

Conditional effects of the focal predictor at values of the moderator(s):

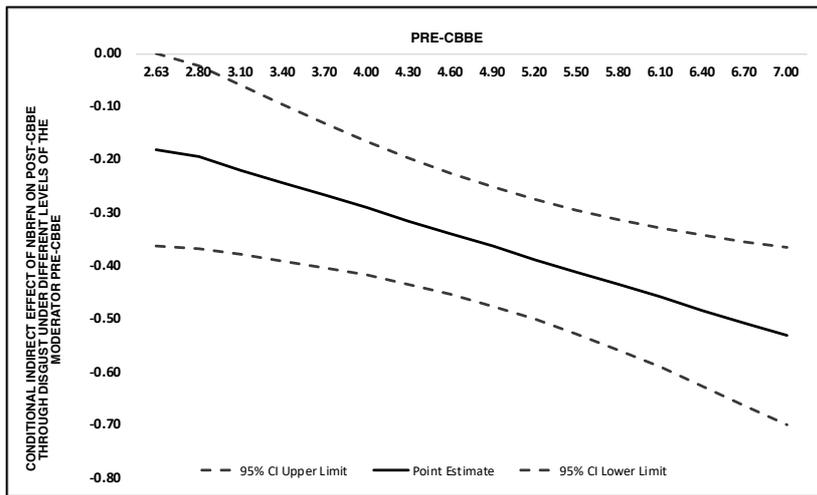
pr_CBBE	Effect	se	t	p	LLCI	ULCI
3.4868	-.2495	.0728	-3.4268	.0007	-.3930	-.1061
5.0791	-.3771	.0571	-6.6011	.0000	-.4896	-.2646
6.6714	-.5046	.0775	-6.5124	.0000	-.6572	-.3520

Moderator value(s) defining Johnson-Neyman significance region(s):

Value	% below	% above
2.6251	10.3175	89.6825

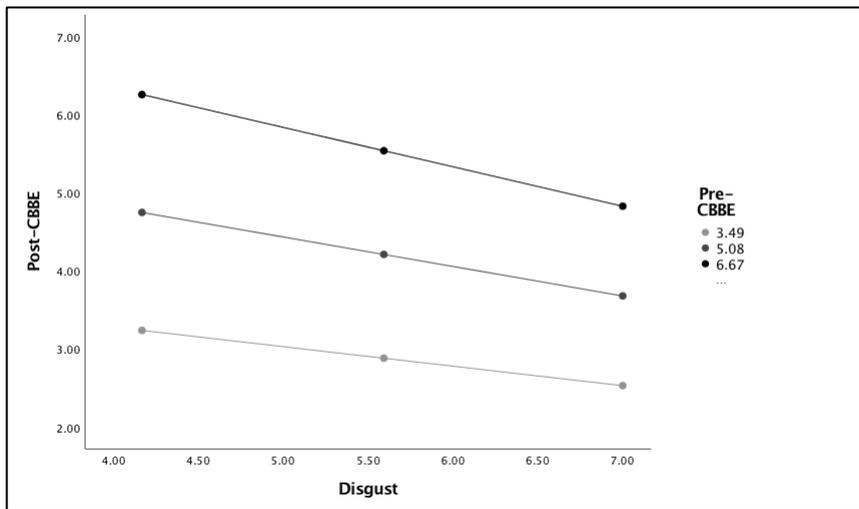
Conditional effect of focal predictor at values of the moderator:

pr_CBBE	Effect	se	t	p	LLCI	ULCI
1.0000	-.0504	.1344	-.3750	.7080	-.3150	.2143
1.3000	-.0744	.1261	-.5902	.5556	-.3227	.1739
1.6000	-.0984	.1179	-.8346	.4047	-.3307	.1339
1.9000	-.1225	.1100	-1.1137	.2665	-.3390	.0941
2.2000	-.1465	.1022	-1.4334	.1530	-.3478	.0548
2.5000	-.1705	.0947	-1.8007	.0730	-.3570	.0160
2.6251	-.1805	.0917	-1.9697	.0500	-.3611	.0000
2.8000	-.1945	.0875	-2.2230	.0271	-.3669	-.0222
3.1000	-.2186	.0807	-2.7068	.0073	-.3776	-.0595
3.4000	-.2426	.0745	-3.2559	.0013	-.3893	-.0958
3.7000	-.2666	.0689	-3.8674	.0001	-.4024	-.1308
4.0000	-.2906	.0642	-4.5262	.0000	-.4171	-.1642
4.3000	-.3147	.0605	-5.1987	.0000	-.4339	-.1954
4.6000	-.3387	.0581	-5.8310	.0000	-.4531	-.2243
4.9000	-.3627	.0570	-6.3589	.0000	-.4751	-.2504
5.2000	-.3867	.0575	-6.7291	.0000	-.4999	-.2735
5.5000	-.4108	.0593	-6.9212	.0000	-.5277	-.2939
5.8000	-.4348	.0625	-6.9523	.0000	-.5580	-.3116
6.1000	-.4588	.0669	-6.8627	.0000	-.5905	-.3271
6.4000	-.4828	.0721	-6.6971	.0000	-.6249	-.3408
6.7000	-.5069	.0781	-6.4920	.0000	-.6607	-.3531
7.0000	-.5309	.0846	-6.2725	.0000	-.6976	-.3642



Data for visualizing the conditional effect of the focal predictor:
 Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  Disgust pr_CBBE po_CBBE .
BEGIN DATA.
  4.1678 3.4868 3.2380
  5.5926 3.4868 2.8824
  7.0000 3.4868 2.5312
  4.1678 5.0791 4.7471
  5.5926 5.0791 4.2099
  7.0000 5.0791 3.6792
  4.1678 6.6714 6.2562
  5.5926 6.6714 5.5373
  7.0000 6.6714 4.8271
END DATA.
GRAPH/SCATTERPLOT=
  Disgust WITH po_CBBE BY pr_CBBE .
```



***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y					
Effect	se	t	p	LLCI	ULCI
.1613	.1593	1.0126	.3123	-.1524	.4750

Conditional indirect effects of X on Y:

INDIRECT EFFECT:					
NBRFN -> Disgust -> po_CBBE					
pr_CBBE	Effect	BootSE	BootLLCI	BootULCI	
3.4868	-.0907	.0514	-.2117	-.0061	

5.0791	-.1371	.0720	-.2950	-.0094
6.6714	-.1835	.0955	-.3890	-.0126

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
pr_CBBE	-.0291	.0166	-.0657	-.0012

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Questionnaires for the three experimental surveys used

Appendix 9: Questionnaire of Study 1 exported from Qualtrics

Block: Default Question Block (1 Question)

Standard: Pretest (8 Questions)

BlockRandomizer: 1 - Evenly Present Elements

Standard: RighteousAnger (2 Questions)

Block: Core Disgust (2 Questions)

Branch: New Branch If

If Righteousanger 01 miller Is Displayed

EmbeddedData

EmotionalCondition = 1

Branch: New Branch If

If Core disgust 01 miller Is Displayed

EmbeddedData

EmotionalCondition = 2

Standard: AssociationsDescriptive (2 Questions)

BlockRandomizer: 8 -

Standard: EmotionFear (1 Question)

Standard: EmotionAnger (1 Question)

Standard: EmotionDisgust (1 Question)

Standard: EmotionContempt (1 Question)

Standard: EmotionGuilt (1 Question)

Standard: EmotionShame (1 Question)

Standard: EmotionSurprise (1 Question)

Standard: EmotionDistress (1 Question)

Standard: Information (1 Question)

BlockRandomizer: 1 - Evenly Present Elements

Standard: HighCredibility (2 Questions)

Standard: LowCredibility (2 Questions)

Branch: New Branch If

If Highcredibility 01 Is Displayed

EmbeddedData

SourceCredCondition = 2

Branch: New Branch If

If Lowcredibility 01 Is Displayed

EmbeddedData

SourceCredCondition = 1

BlockRandomizer: 2 -

Standard: Trustworthiness (1 Question)

Standard: Expertise (1 Question)

Standard: InformationLastSection (1 Question)

Standard: PostTest (6 Questions)

Standard: Demographics (4 Questions)

Standard: Outro (1 Question)

WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget

Page Break

Start of Block: Default Question Block

Intro

Dear participant,

Thank you for participating in this 5-7-minute experiment to help me graduate. This research about “News in social media” is conducted as part of the Master of Marketing at the Luiss University, Italy.

In this survey you will be showed some news posted in social media, followed by a series of questions about the news you have seen. I kindly ask you to read the questions carefully and indicate to what degree you agree with the statements (one answer per statement). I am interested in your opinion, so there are no right or wrong answers.

This research is designed for academic purposes only in cooperation with the Luiss University. Therefore, you have the guarantee that:

- Your anonymity will be guaranteed, and your answers cannot be traced back on an individual level.
- The answers you provide will not be shared.

Hopefully I have sufficiently informed you. If you have any questions, do not hesitate to contact me by sending an email to: victor.rolfsnes@studenti.luiss.it

Please click on the arrow below to start the study.

End of Block: Default Question Block

Start of Block: Pretest

Q19 First, I want you to consider a few questions about Coca-Cola.

Page Break

PreAtt How will you describe your attitude towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
unfavorable	<input type="radio"/>	favorable						
bad	<input type="radio"/>	good						
negative	<input type="radio"/>	positive						

PreTrust How will you describe your trust towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all trustworthy	<input type="radio"/>	very trustworthy						
not at all dependable	<input type="radio"/>	very dependable						
not at all reliable	<input type="radio"/>	very reliable						

PreQualBr How will you describe the overall quality of the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

PreQualProd How will you describe the overall quality of the products provided by the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

PrePurchase How likely is it that you will purchase a product from the Coca-Cola brand during the next week?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all likely	<input type="radio"/>	very likely						

PreDesire How desirable do you find the Coca-Cola brand to be?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all desirable	<input type="radio"/>	very desirable						

Page Break

Q32 On the next page you will see a recent news story about Coca-Cola. Please read the story carefully, and use at least 10 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

End of Block: Pretest

Start of Block: RighteousAnger

RighteousAngerStimul

IMAGE DISPLAYED IN APPENDIX 1

Q35 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: RighteousAnger

Start of Block: Core Disgust

CoreDisgustStimuli

IMAGE DISPLAYED IN APPENDIX 1

Q34 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: Core Disgust

Start of Block: AssociationsDescriptive



Associations Please write 2-5 sentences that describe your immediate thoughts and feelings associated with the news you just watched.

Q33 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: AssociationsDescriptive

Start of Block: EmotionFear

Fear How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
threatened (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
fearful (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
scared (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionFear

Start of Block: EmotionAnger

Anger How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
mad (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
angry (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
very annoyed (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionAnger

Start of Block: EmotionDisgust

Disgust How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
disgusted (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
feeling distaste (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
feeling revulsion (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionDisgust

Start of Block: EmotionContempt

Contempt How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
contemptious (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
scornful (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
disdaintful (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionContempt

Start of Block: EmotionGuilt

Guilt How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
guilt (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
blameworthy (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
repentant (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionGuilt

Start of Block: EmotionShame

Shame How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (8)	Agree (9)	Somewhat agree (10)	Neither agree nor disagree (11)	Somewhat disagree (12)	Disagree (13)	Strongly disagree (14)
ashamed (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
disgraced (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
humiliated (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionShame

Start of Block: EmotionSurprise

Surprise How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
amazed (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
astonished (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
surprised (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionSurprise

Start of Block: EmotionDistress

Distress How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree (6)	Strongly disagree (7)
discouraged (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
downhearted (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
sad (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: EmotionDistress

Start of Block: Information

Informer On the next page you will be shown a Facebook profile or page. Please read the content carefully, and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

End of Block: Information

Start of Block: HighCredibility

HighCredStimuli

IMAGE DISPLAYED IN APPENDIX 2

HighCredTimer Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: HighCredibility

Start of Block: LowCredibility

LowCredStimuli

IMAGE DISPLAYED IN APPENDIX 2

LowCredTimer Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: LowCredibility

Start of Block: Trustworthiness

Trustworthiness Please consider the source you just viewed, and imagine that you received a consumer advice by it. What is your opinion about the trustworthiness of this source?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
dependable	<input type="radio"/>	undependable						
honest	<input type="radio"/>	dishonest						
reliable	<input type="radio"/>	unreliable						
sincere	<input type="radio"/>	insincere						
trustworthy	<input type="radio"/>	untrustworthy						

End of Block: Trustworthiness

Start of Block: Expertise

Expertise Please consider the source you just viewed, and imagine that you received a consumer advice by it. What is your opinion about the expertise of this source?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
expert	<input type="radio"/>	not an expert						
experienced	<input type="radio"/>	inexperienced						
knowledgeable	<input type="radio"/>	unknowledgeable						
qualified	<input type="radio"/>	unqualified						
skilled	<input type="radio"/>	unskilled						

End of Block: Expertise

Start of Block: InformationLastSection

Info Now, we move to the final part of this survey, which entails a few questions about the Coca-Cola brand, and a few demographic questions.

Page Break

End of Block: InformationLastSection

Start of Block: PostTest

PostTrust How would you describe your trust towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all trustworthy	<input type="radio"/>	very trustworthy						
not at all dependable	<input type="radio"/>	very dependable						
not at all reliable	<input type="radio"/>	very reliable						

PostAttitude How would you describe your attitude towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
unfavorable	<input type="radio"/>	favorable						
bad	<input type="radio"/>	good						
negative	<input type="radio"/>	positive						

PostPurchaseIntent How likely is it that you will purchase a product from the Coca-Cola brand during the next week?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all likely	<input type="radio"/>	very likely						

PostQualProd How would you describe the overall quality of the products provided by the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

PostDesirability How desirable do you find the Coca-Cola brand to be?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all desirable	<input type="radio"/>	very desirable						

PostQualBrand How would you describe the overall quality of the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

Page Break

End of Block: PostTest

Start of Block: Demographics

Age What is your age? (Drag the slider to answer)

15 23 30 38 45 53 60 68 75 83 90

My age is ()	
--------------	--

Gender What is your gender?

- Male (1)
- Female (2)

Persuasion Knowledge To what extent do you agree with the following statements?

	Strongly agree (8)	Agree (9)	Somewhat agree (10)	Neither agree nor disagree (11)	Somewhat disagree (12)	Disagree (13)	Strongly disagree (14)
I must be vigilant about detecting deceptions by companies. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketers are constantly trying to trick me. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I must be vigilant about detecting deceptions in social media. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People and companies are constantly trying to trick me in social media. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SoMeUsage How often do you use the following social media sites?

	Never (1)	Rarely (2)	Monthly (3)	Weekly (16)	Daily (17)
Facebook (1)	<input type="radio"/>				
Twitter (2)	<input type="radio"/>				
Instagram (3)	<input type="radio"/>				
Pinterest (13)	<input type="radio"/>				
Snapchat (14)	<input type="radio"/>				
LinkedIn (15)	<input type="radio"/>				
Reddit (16)	<input type="radio"/>				
YouTube (17)	<input type="radio"/>				
Google+ (18)	<input type="radio"/>				

End of Block: Demographics

Start of Block: Outro

outro**This is the end of the survey:****IMPORTANT NOTICE**

All of the visual compositions (e.g. news-stories, Facebook posts) presented to you in this questionnaire are **completely fictitious** and have been constructed solely for the purpose of this research. I want to stress that **the news presented here never have happened**, and therefore they do not apply to the Coca-Cola company.

Additionally, this is an independent research project, which have not received any funding, and the answers collected will be used exclusively for my Master Thesis in Marketing.

I highly appreciate your contribution to my master thesis, and I thank you for your participation!

Click the red next button below to finish and receive your MTurk Completion Code.

End of Block: Outro

Appendix 10: Questionnaire of Persuasion Knowledge Pretest exported from Qualtrics

Survey Flow

Block: Block: Intro (1 Question)

Block: Block: PK pree chech (1 Question)

BlockRandomizer: 1 - Evenly Present Elements

Standard: Block: Persuasion Knowledge PRESENT (3 Questions)

Standard: Block: Persuasion Kowledge NOT PRESENT (3 Questions)

Branch: New Branch If

If In the wake of the 2016 election, everyone from President Obama to Pope Francis has raised concer... Is Displayed

EmbeddedData

persuasion_knowledge = 1

Branch: New Branch If

If Beyond the fact-checking, interviews, proof-reads and contacts book, a journalist is expected to... Is Displayed

EmbeddedData

persuasion_knowledge = 0

Standard: Block: PK Manipulation check (2 Questions)

Standard: Free associations (2 Questions)

Standard: Block: Demographics (3 Questions)

Standard: Block: Outro (1 Question)

WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget

Page Break

Start of Block: Block: Intro

Info 1:

Dear participant,

Thank you for participating in this 5-7-minute experiment to help me graduate. This research about “News and social media” is conducted as part of the Master of Marketing at the LUISS University, Italy.

In this survey you will read an article, followed by a few questions about the article. I kindly ask you to read the questions carefully and indicate to what degree you agree with the statements (one answer per statement). I am interested in your opinion, so there are no right or wrong answers.

This research is designed for academic purposes only in cooperation with the LUISS University. Therefore, you have the guarantee that:

- Your anonymity will be guaranteed, and your answers cannot be traced back on an individual level.
- The answers you provide will not be shared.

Hopefully I have sufficiently informed you. If you have any questions, do not hesitate to contact me by sending an email to: victor.rolfsnes@studenti.luiss.it

Please click on the arrow below to start the study.

Page Break

 End of Block: Block: Intro

 Start of Block: Block: PK pree chech

PK_pree check: To what extent do you agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I must be vigilant about detecting deceptions by authors of news stories online. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Authors of news stories are constantly trying to trick readers. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

 End of Block: Block: PK pree chech

 Start of Block: Block: Persuasion Knowledge PRESENT

info_pk: On the next page you will be shown an article about fake news (i.e. fabricated stories, often appealing to people's emotions). Please read the article carefully and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

 Page Break

Persuasion Knowledge Condition:

In the wake of the 2016 election, everyone from President Obama to Pope Francis has raised concerns about fake news and the potential impact on both political life and innocent individuals and organizations. Some fake news has been widely shared, and so-called “Pizzagate” stories led a North Carolina man to bring a gun into a popular Washington, D.C. pizza restaurant under the impression that it was hiding a child prostitution ring.

Fabricated stories posing as serious journalism from rather unknown publishers are not likely to go away as they have become a means for some writers to make money and potentially influence public opinion. Writers of fake news manipulates, fabricates and frames information to create seemingly extraordinary and relevant stories that often appeal to peoples’ emotions.

Writers of fake news does not just write about politicians but may write about anything they know you care about and that are likely to appeal to your feelings, such as your favorite brand or celebrity. Several examples exist of fake news claiming that famous celebrities are dead, or fake news that claims a well-known brand is closing its stores. These stories are often made to stimulate clicks which in turn generate advertising revenues.

Even as Americans recognize that fake news causes confusion about current issues and events, they continue to circulate it. A December 2016 survey by the Pew Research Center suggests that 23 percent of U.S. adults have shared fake news, knowingly or unknowingly, with friends and others. Thus, Pew Research Center hope that people start to think twice when reading exaggerated stories from unknown sources.

timing_pk Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break

End of Block: Block: Persuasion Knowledge PRESENT

Start of Block: Block: Persuasion Knowledge NOT PRESENT

info_not_pk

On the next page you will be shown an article about the workday and life of the average journalist. Please read the article carefully and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

Not Persiasion Knowledge Condition:

Beyond the fact-checking, interviews, proof-reads and contacts book, a journalist is expected to be on the edge of their culture. They'll have in-depth conversations with an editor about what stories are current and unusual, suggesting a perspective on the world that should be brought to light. This could involve staying on top of political, financial and social developments, or researching celebrity and human-interest stories.

The average journalist might get to work fairly early, perhaps around the 8am mark. They often have a morning print edition to finalize, in which case they'll go over every detail with a team of editors and feature writers, helping to select front page stories, correct mistakes, and generally make sure it reads well.

Then they're off sourcing ideas for their next article, moving at a million miles an hour to do so. This could involve hunting down an address, going to an event, managing email chains. If something big is happening, you'll be swooping on it like a locust, chewing up all the reactions and details you can. As long as you get results, there aren't many activities you can't justify.

In any case, office-based work usually ends around 5.30-6pm, and in the evening you might have dinner or drinks with someone from your contact network.

No two days for a journalist are ever the same. Finding the best material for a story could mean attending a press conference, holding an interview over the phone, trawling through professional contacts, or hammering out paragraphs. The story comes first, and journalists do whatever it takes to make it accurate and thought-provoking.

timing, not pk Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: Block: Persuasion Knowledge NOT PRESENT

Start of Block: Block: PK Manipulation check

Q20:

Indicate the extent to which you agree with the following statement:

I have read the full article.

- Yes (1)
- No (2)

Page Break

pk_check (DV): To what extent do you agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I must be vigilant about detecting deceptions by authors of news stories online. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Authors of news stories are constantly trying to trick readers. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Block: PK Manipulation check

Start of Block: Free associations



Q19 Please write 2-5 sentences that explain the topic of the article you just read, and your immediate thoughts when you read it.

Q21 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

End of Block: Free associations

Start of Block: Block: Demographics

Age: What is your age? (Drag the slider to answer)

15 23 30 38 45 53 60 68 75 83 90

My age is ()



Gender: What is your gender?

- Male (1)
 - Female (2)
-

SoMeFrequency: How often do you use the following social media sites?

	Never (1)	Rarely (2)	Monthly (3)	Weekly (16)	Daily (17)
Facebook (1)	<input type="radio"/>				
Twitter (2)	<input type="radio"/>				
Instagram (3)	<input type="radio"/>				
Pinterest (13)	<input type="radio"/>				
Snapchat (14)	<input type="radio"/>				
LinkedIn (15)	<input type="radio"/>				
Reddit (16)	<input type="radio"/>				
YouTube (17)	<input type="radio"/>				
Google+ (18)	<input type="radio"/>				

End of Block: Block: Demographics

Start of Block: Block: Outro

This is the end of the survey:

I highly appreciate your contribution to my master thesis, and I thank you for your participation!

Click the red button below to finish and receive your MTurk Completion Code.

End of Block: Block: Outro

Appendix 11: Questionnaire of Study 2 exported from Qualtrics

Block: Block 0: Intro and pre-measures of CBBE (8 Questions)

BlockRandomizer: 1 - Evenly Present Elements

Block: Persuasion Knowledge: PRESENT (3 Questions)

Block: Persuasion Knowledge: NOT PRESENT (3 Questions)

Branch: New Branch

If

If In the wake of the 2016 election, everyone from President Obama to Pope Francis has raised concer... Is Displayed

EmbeddedData

persuasion_knowledge = 1

Branch: New Branch

If

If Beyond the fact-checking, interviews, proof-reads and contacts book, a journalist is expected to... Is Displayed

EmbeddedData

persuasion_knowledge = 0

BlockRandomizer: 1 - Evenly Present Elements

Standard: Block 1: HIGH CREDIBILITY (5 Questions)

Standard: Block 2: LOW CREDIBILITY (5 Questions)

Branch: New Branch

If

If HighCredibilityCondition Is Displayed

EmbeddedData

source_credibility = 1

Branch: New Branch

If

If LowCredibilityCondition Is Displayed

EmbeddedData

source_credibility = 0

Branch: New Branch

If

If source_credibility Is Equal to 1

BlockRandomizer: 1 - Evenly Present Elements

Standard: Group 1: NBRFN_HIGH CRED (2 Questions)

Standard: Group 3: NBRTN_HIGH CRED (2 Questions)

Branch: New Branch If

If source_credibility Is Equal to 0

BlockRandomizer: 1 - Evenly Present Elements

Standard: Group 2: NBRFN_LOW CRED (2 Questions)
Standard: Group 4: NBRTN_LOW CRED (2 Questions)

Branch: New Branch If
If Nbrfn highcred Is Displayed

EmbeddedData
brand_related_news = 1

Branch: New Branch If
If Nbrfn lowcred Is Displayed

EmbeddedData
brand_related_news = 1

Branch: New Branch If
If Nbrtn highcred Is Displayed

EmbeddedData
brand_related_news = 0

Branch: New Branch If
If Nbrtn lowcred Is Displayed

EmbeddedData
brand_related_news = 0

BlockRandomizer: 3 - Evenly Present Elements

Standard: Contempt (1 Question)
Standard: Anger (1 Question)
Standard: Disgust (1 Question)

Block: Surprise (1 Question)
Block: Fear (1 Question)
Standard: DV: Post-test of CBBE (6 Questions)
Standard: Block 23: Info (1 Question)
Standard: Perceived Credibility (1 Question)
Standard: Source Credibility Manipulation Check (6 Questions)
Standard: NBRFN vs NBRTN Manipulation Check (1 Question)

Branch: New Branch If
If Do you believe the story you just viewed to be true or false? True Is Selected

Standard: NBRFN vs NBRTN if true (1 Question)

Branch: New Branch If
If Do you believe the story you just viewed to be true or false? False Is Selected

Standard: NBRFN vs NBRTN if false (1 Question)

Standard: BRFN vs NBRFN associations (1 Question)

Standard: PK Manipulation Check (2 Questions)

Standard: Block 24: Info (1 Question)

Standard: Demographics and outro (4 Questions)

WebService: GET - <http://reporting.qualtrics.com/projects/randomNumGen.php> - Fire and Forget

Page Break

Start of Block: Block 0: Intro and pre-measures of CBBE

Intro

Dear participant,

Thank you for participating in this 5-7 minute experiment to help me graduate. This research about “News in social media” is conducted as part of the Master of Marketing at the LUISS University, Italy.

In this survey you will be showed an article, a Facebook account, and a news story posted in social media, followed by a series of questions about the news you have seen. I kindly ask you to read the questions carefully and indicate to what degree you agree with the statements (one answer per statement). I am interested in your opinion, so there are no right or wrong answers.

This research is designed for academic purposes only in cooperation with the LUISS University. Therefore, you have the guarantee that: Your anonymity will be guaranteed and your answers cannot be traced back on an individual level. The answers you provide will not be shared.

Hopefully I have sufficiently informed you. If you have any questions, do not hesitate to contact me by sending an email to: victor.rolfsnes@studenti.luiss.it

Please click on the arrow below to start the study.

Page Break

Info First, I want you to consider a few questions about Coca-Cola.

Page Break

pre_atti How will you describe your attitude towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
unfavorable	<input type="radio"/>	favorable						
bad	<input type="radio"/>	good						
negative	<input type="radio"/>	positive						

pre_desir How desirable do you find the Coca-Cola brand to be?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all desirable	<input type="radio"/>	very desirable						

pre_bqual How will you describe the overall quality of the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

pre_pqual How will you describe the overall quality of the products provided by the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

pre_trust How will you describe your trust towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all trustworthy	<input type="radio"/>	very trustworthy						
not at all dependable	<input type="radio"/>	very dependable						
not at all reliable	<input type="radio"/>	very reliable						

pre_p_int How likely is it that you will purchase a product from the Coca-Cola brand during the next week?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all likely	<input type="radio"/>	very likely						

Page Break

End of Block: Block 0: Intro and pre-measures of CBBE

Start of Block: Persuasion Knowledge: PRESENT

Q59 On the next page you will be shown an article about fake news (i.e. fabricated stories, often appealing to peoples emotions). Please read the article carefully and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

pk_present:

In the wake of the 2016 election, everyone from President Obama to Pope Francis has raised concerns about fake news and the potential impact on both political life and innocent individuals and organizations. Some fake news has been widely shared, and so-called “Pizzagate” stories led a North Carolina man to bring a gun into a popular Washington, D.C. pizza restaurant under the impression that it was hiding a child prostitution ring.

Fabricated stories posing as serious journalism from rather unknown publishers are not likely to go away as they have become a means for some writers to make money and potentially influence public opinion.

Writers of fake news manipulate, fabricate and frame information to create seemingly extraordinary and relevant stories that often appeal to peoples’ emotions. Writers of fake news does not just write about politicians but may write about anything they know you care about and that are likely to appeal to your feelings, such as your favorite brand or celebrity. Several examples exist of fake news claiming that famous celebrities are dead, or fake news that claims a well-known brand is closing its stores. These stories are often made to stimulate clicks which in turn generate advertising revenues.

Even as Americans recognize that fake news causes confusion about current issues and events, they continue to circulate it. A December 2016 survey by the Pew Research Center suggests that 23 percent of U.S. adults have shared fake news, knowingly or unknowingly, with friends and others. Thus, Pew Research Center hope that people start to think twice when reading exaggerated stories from unknown sources.

timer_pk_present Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: Persuasion Knowledge: PRESENT

Start of Block: Persuasion Knowledge: NOT PRESENT

Q57

On the next page you will be shown an article about the workday and life of the average journalist. Please read the article carefully and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

pk_not_present Beyond the fact-checking, interviews, proof-reads and contacts book, a journalist is expected to be on the edge of their culture. They'll have in-depth conversations with an editor about what stories are current and unusual, suggesting a perspective on the world that should be brought to light. This could involve staying on top of political, financial and social developments, or researching celebrity and human-interest stories.

The average journalist might get to work fairly early, perhaps around the 8am mark. They often have a morning print edition to finalize, in which case they'll go over every detail with a team of editors and feature writers, helping to select front page stories, correct mistakes, and generally make sure it reads well.

Then they're off sourcing ideas for their next article, moving at a million miles an hour to do so. This could involve hunting down an address, going to an event, managing email chains. If something big is happening, you'll be swooping on it like a locust, chewing up all the reactions and details you can. As long as you get results, there aren't many activities you can't justify.

In any case, office-based work usually ends around 5.30-6pm, and in the evening you might have dinner or drinks with someone from your contact network.

No two days for a journalist are ever the same. Finding the best material for a story could mean attending a press conference, holding an interview over the phone, trawling through professional contacts, or hammering out paragraphs. The story comes first, and journalists do whatever it takes to make it accurate and thought-provoking.

timer_pk_notpresent Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: Persuasion Knowledge: NOT PRESENT

Start of Block: Block 1: HIGH CREDIBILITY

Info_high_cred On the next page you will be shown a Facebook page. Please read the content carefully and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

cred_high

IMAGE DISPLAYED IN APPENDIX 2

timecount_highcred Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

attention_highcred What is the name of the organization you just viewed the Facebook page of?

Consumer Supreme (1)

Consumer Services (2)

Consumer Support (3)

Page Break

info_highcred On the next page you will see a recent news story about Coca-Cola that were shared by Consumer Support on Facebook. Please read the story carefully and use at least 10 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

End of Block: Block 1: HIGH CREDIBILITY

Start of Block: Block 2: LOW CREDIBILITY

info_low_cred On the next page you will be shown a Facebook profile. Please read the content carefully and use minimum 15 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

cred_low

IMAGE DISPLAYED IN APPENDIX 2

timecount_lowcred Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

attention_lowcred What is the name of the owner of the Facebook profile you just viewed?

Martha Williams (1)

Mia Williams (2)

Mary Williams (3)

Page Break

Info_Low Cred On the next page you will see a recent news story about Coca-Cola that were shared by Mary Williams on Facebook. Please read the story carefully and use at least 10 seconds on the page before you click on the next button and proceed to the subsequent questions. The time will be recorded, and participants that do not meet this requirement will not receive payment.

Page Break

End of Block: Block 2: LOW CREDIBILITY

Start of Block: Group 1: NBRFN_HIGH CRED

nbrfn_hcred

IMAGE DISPLAYED IN APPENDIX 4

timer_nbrfn_hcred Timing

First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break

End of Block: Group 1: NBRFN_HIGH CRED

Start of Block: Group 3: NBRTN_HIGH CRED

nbrtn_hcred

IMAGE DISPLAYED IN APPENDIX 4

timer_nbrtn_hcred Timing

First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break

End of Block: Group 3: NBRTN_HIGH CRED

Start of Block: Group 2: NBRFN_LOW CRED

nbrfn_lcred

IMAGE DISPLAYED IN APPENDIX 4

timer_nbrfn_lcred Timing

First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break

End of Block: Group 2: NBRFN_LOW CRED

Start of Block: Group 4: NBRTN_LOW CRED

nbrtn_lcred

IMAGE DISPLAYED IN APPENDIX 4

timer_nbrtn_lcred Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break

End of Block: Group 4: NBRTN_LOW CRED

Start of Block: Contempt

contempt How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
contemptuous (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
scornful (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
disdaintful (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Contempt

Start of Block: Anger

anger How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
mad (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
angry (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
very annoyed (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Anger

Start of Block: Disgust

disgust How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
disgusted (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
feeling distaste (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
feeling revulsion (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Disgust

Start of Block: Surprise

surprise How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
amazed (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
astonished (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
surprised (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Surprise

Start of Block: Fear

fear How did this post make you feel? Please indicate the extent to which you agree with the following emotions.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
threatened (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
fearful (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
scared (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Fear

Start of Block: DV: Post-test of CBBE

pos_atti How would you describe your attitude towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
unfavorable	<input type="radio"/>	favorable						
bad	<input type="radio"/>	good						
negative	<input type="radio"/>	positive						

pos_desir How desirable do you find the Coca-Cola brand to be?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all desirable	<input type="radio"/>	very desirable						

pos_bqual How would you describe the overall quality of the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

pos_pqual How would you describe the overall quality of the products provided by the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
low quality	<input type="radio"/>	high quality						

pos_trust How would you describe your trust towards the Coca-Cola brand?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all trustworthy	<input type="radio"/>	very trustworthy						
not at all dependable	<input type="radio"/>	very dependable						
not at all reliable	<input type="radio"/>	very reliable						

pos_p_int How likely is it that you will purchase a product from the Coca-Cola brand during the next week?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
not at all likely	<input type="radio"/>	very likely						

End of Block: DV: Post-test of CBBE

Start of Block: Block 23: Info

Q69 Now, I want you to answer some questions about the news story you just watched, and the source that shared it.

End of Block: Block 23: Info

Start of Block: Perceived Credibility

perc_cred Consider the story you just viewed, and indicate how credible you perceive the story to be?

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
unconvincing	<input type="radio"/>	convincing						
unbelievable	<input type="radio"/>	believable						
biased	<input type="radio"/>	unbiased						

End of Block: Perceived Credibility

Start of Block: Source Credibility Manipulation Check

Display This Question:

If source_credibility = 0

low_scred Consider the source you just viewed, namely Mary Williams. What is your opinion about the trustworthiness of this source?

Display This Question:

If source_credibility = 1

high_scred Consider the source you just viewed, namely Consumer Support. What is your opinion about the trustworthiness of this source?

trustworthiness

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
dependable	<input type="radio"/>	undependable						
honest	<input type="radio"/>	dishonest						
reliable	<input type="radio"/>	unreliable						
sincere	<input type="radio"/>	insincere						
trustworthy	<input type="radio"/>	untrustworthy						

Page Break

Display This Question:

If source_credibility = 0

low_scred Consider the source you just viewed, namely Mary Williams. What is your opinion about the expertise of this source?

Display This Question:

If source_credibility = 1

high_scred

Consider the source you just viewed, namely Consumer Support. What is your opinion about the expertise of this source?

expertise

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
expert	<input type="radio"/>	not an expert						
experienced	<input type="radio"/>	inexperienced						
knowledgeable	<input type="radio"/>	unknowledgeable						
qualified	<input type="radio"/>	unqualified						
skilled	<input type="radio"/>	unskilled						

End of Block: Source Credibility Manipulation Check

Start of Block: NBRFN vs NBRTN Manipulation Check

true/false Do you believe the story you just viewed to be true or false?

True (1)

False (2)

End of Block: NBRFN vs NBRTN Manipulation Check

Start of Block: NBRFN vs NBRTN if true

certain_true How certain are you that the story you just viewed is true?

- Very uncertain (1)
- Uncertain (2)
- Somewhat uncertain (3)
- Neither certain nor uncertain (4)
- Somewhat certain (5)
- Certain (6)
- Very certain (7)

End of Block: NBRFN vs NBRTN if true

Start of Block: NBRFN vs NBRTN if false

certain_false How certain are you that the story you just viewed is false?

- Very uncertain (1)
- Uncertain (2)
- Somewhat uncertain (3)
- Neither certain nor uncertain (4)
- Somewhat certain (5)
- Certain (6)
- Very certain (7)

End of Block: NBRFN vs NBRTN if false

Start of Block: BRFN vs NBRFN associations



associations Please, write 2-5 sentences that describe your immediate thoughts and feelings associated with the news you just watched.

End of Block: BRFN vs NBRFN associations

Start of Block: PK Manipulation Check

PK_gen To what extent do you agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I must be vigilant about detecting deceptions by authors of fake news stories online. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Authors of fake news stories are constantly trying to trick readers. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

IMI Please consider the particular story you just viewed, and answer to what extent do you agree with each of the following six statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
The way this news story tries to persuade people seems acceptable to me. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The news story tried to manipulate the audience in ways that I don't like. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was annoyed by this news story because the author seemed to be trying to inappropriately manage or control the consumer audience. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't mind this news story; the author tried to be persuasive without being excessively manipulative. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This news story was fair in what was said and shown. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that this news story is fair. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

End of Block: PK Manipulation Check

Start of Block: Block 24: Info

Q70 You are now close to the end of the survey. The only thing that remains is to answer a few questions about your age, gender and social media usage.

Page Break

End of Block: Block 24: Info

Start of Block: Demographics and outro

age What is your age? (Drag the slider to answer)

15 23 30 38 45 53 60 68 75 83 90

My age is ()



gender What is your gender?

Male (1)

Female (2)

some How often do you use the following social media sites?

	Never (1)	Rarely (2)	Monthly (3)	Weekly (16)	Daily (17)
Facebook (1)	<input type="radio"/>				
Twitter (2)	<input type="radio"/>				
Instagram (3)	<input type="radio"/>				
Pinterest (13)	<input type="radio"/>				
Snapchat (14)	<input type="radio"/>				
LinkedIn (15)	<input type="radio"/>				
Reddit (16)	<input type="radio"/>				
YouTube (17)	<input type="radio"/>				
Google+ (18)	<input type="radio"/>				

Page Break

outro

This is the end of the survey:

IMPORTANT NOTICE

All of the visual compositions (e.g. news-stories, Facebook posts, Facebook profiles, and Facebook pages) presented to you in this questionnaire are **completely fictitious** and have been constructed solely for the purpose of this research. I want to stress that **the news presented here never have happened**, and therefore they do not apply to the Coca-Cola company.

Additionally, this is an independent research project, which have not received any funding, and the answers collected will be used exclusively for my Master Thesis in Marketing.

I highly appreciate your contribution to my master thesis, and I thank you for your participation!

Click the red next button below to finish and receive your MTurk Completion Code.

End of Block: Demographics and outro