

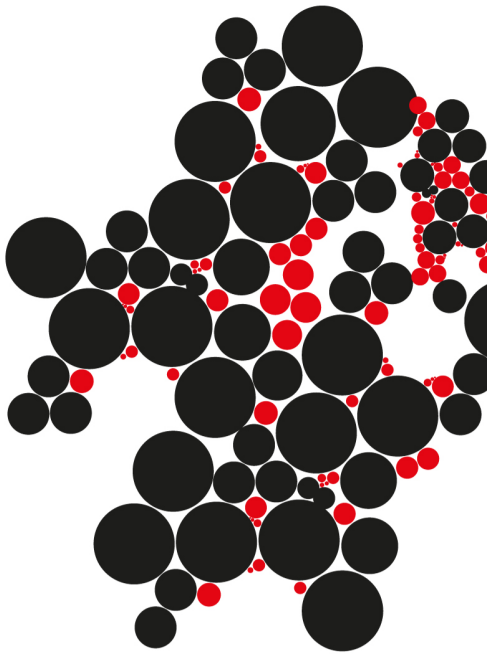
Hate or Forgiveness:

How do Online Firestorms Impact Brand Attitude?

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Abstract

In our connected world, nearly every internet user is using Social Networks. Many companies want to benefit from everybody's commitment in Social Networks by connecting with (potential) customers. Most of these companies forget about the negative impacts a connected online world can have on their reputation: the users' high interest in a company can also change into high negativity. Based on the speed and spread of Social Networks, negative news about a company can grow into something extremely serious within hours. This phenomenon is called an Online Firestorm, with hundreds and thousands of users interacting in a negative way damaging the reputation of the company in question.

The current paper has studied the effects of a fictive Online Firestorm on consumers' brand attitude. The data was collected via an online survey tool among German citizens. A research sample of 411 participants was randomly assigned to four manipulation groups with a Firestorm displayed in different sources (online vs. offline) and different social environments (with vs. without comments of others). Findings indicated that source and social environment seem to be irrelevant. However, severity of a brand's failure seems to be the dominating variable. Furthermore, brand involvement plays an important role as a trigger for an effective Firestorm. People with higher brand involvement seem to forgive a brand and people with lower brand involvement score higher on brand hate. Since the research model was fitting poorly, a new research model was developed. Therefore, future research has to verify its applicability.

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How do Online Firestorms Impact Brand Attitude?

With the growth of Social Networks within the second decennium of the current millennium, companies have to deal with an increasing amount of (negative) user generated content on the Internet (Bloomberg Business, 2010). However, companies often stimulate customers within their advertisements to create content that make their advertisements appear more popular. Word-of-mouth (WOM) plays an important part in effective advertisement, as people trust most in opinions of friends and people they feel connected with (Rosengren, Dahlén, & Okazaki, 2013). Spending on WOM marketing activities grow by 13% each year and it is expected that 18% of the 2019 global marketing budget will be spent on this marketing tool (PQ Media, 2015). Most companies forget that this enforced positive kind of users' commitment can also change into negativity against the company. They underestimate the power of negative user generated content, which can lead to Online Firestorms (Pfeffer, Zorbach, & Carley, 2014).

Online Firestorm (OFS) is described by Pfeffer et al. (2014) as an

“online phenomenon that describes the sudden discharge of large quantities of negative word-of-mouth and complaint behaviour against a person, company, or group in social media networks, often paired with intense indignation that has shifted its focus from an actual point of criticism.”

That means, a great number of Internet users interact over a topic, e.g. a statement or news item of a company or person, in a negative way. Oftentimes, the focus of users' interaction loses connection to the initial topic and is extended by other – non-event based – topics. That makes it an uncontrollable dynamic storm.

Negative WOM can affect the *brand attitude* of a company distinctly, even over a long period (Rosengren, Dahlén, & Okazaki, 2013; Pace, Balboni, & Gistri, 2014). Several studies researched the reasons for OFS and how to overcome it (Masters & Thart, 2012; Kottler, Steul-Fischer, & Burkhardt, 2015; Mochalova & Nanopoulos, 2014; Lamba, Malik, & Pfeffer, 2015). However, little is known about the effects of OFS.

OFS have become more and more common in today's online culture (Pace, Balboni, & Gistri, 2014). Particularly corporations have to face a growing amount of OFS, as they are able to impact people's perception towards companies (Pfeffer, Zorbach, & Carley, 2014). That makes the following question interesting to answer: what impact do OFS have on people's attitude towards a brand? Multiple factors need to be recognized that can have an

impact on *brand attitude* (Gresham & Shimp, 1985): do OFS per definition only occur in online environments, or is it also possible to get into a Firestorm in an offline environment (e.g. newspaper), for example through negative news? Would people *forgive* a brand's failure that led to an OFS or would they fall into *brand hate*? And, do interactions (*social environment*) of other people empower the effect of an OFS? Which influence does *brand involvement* play on the effect of OFS on *brand attitude*?

Examples of Online Firestorms

Many companies already had to deal with OFS based on investigative newspaper articles, poor results of studies about quality of their products or activism by bloggers or famous people, such as McDonald's[®], KLM and HiPP (Pfeffer, Zorbach, & Carley, 2014). These three examples will be described in the following paragraph to illustrate the origin, propagation and aftermath of OFS.

A recent example of OFS is the McDonald's[®] social media campaign in 2012. McDonald's[®] launched the social media hashtag campaign #meetthefarmers, to make consumers aware of the quality and origin of the company's food (Pfeffer, Zorbach, & Carley, 2014). Shortly after the start of the campaign, the social media team recognized positive feedback and changed the hashtag to #McDStories. From that moment on, the hashtag was misused to share negative or funny stories relating to McDonald's[®]. The social media team monitored this change in use and decided two hours later to again use the old hashtag #meetthefarmers. However, it was too late: within these two hours, more than 1000 people had shared their negative experiences with McDonald's[®] (Pfeffer, Zorbach, & Carley, 2014). Although the company reacted immediately and the total number of negative tweets containing the #McDStories hashtag was relatively small compared to the 25,000–30,000 daily mentions of the company, traditional media used this story to publish it in their own social media channels. This made the small Firestorm resulting in broader propagation online (McNaughton, 2011; Pfeffer, Zorbach, & Carley, 2014).

Another recent example of OFS is the case of the Dutch airline KLM's Twitter postings during the world football championship in 2014 (Spiegel Online, 2014) when KLM was accused for editing a photo of an airport information display after the Netherlands' victory over Mexico in the second round of the FIFA World Cup. The post read "adios amigos!" (English: "Goodbye, friends!") and an image of an airport information display usually providing directions to the departure section was altered to include an illustration of a

symbolic Mexican person featuring a hat, moustache and poncho; thus stereotypical elements. As KLM is a Dutch airline company, the post hints at the imminent departure of the Mexican team after the match and subsequent loss against the Dutch team. Many people thought this was racist due to the stereotypes that were used to symbolize Mexicans. It took KLM months, including multiple excuses that were spread over different media channels, to calm down a protesting online crowd as the case was mentioned repeatedly in Social Networks (The Advertiser, 2014).

Another noteworthy OFS is the popular HiPP example, which has been described as one of the most “effective” OFS (Kommunizieren in der Krise, 2014): in 2012, foodwatch, an European “organization that focuses on protecting consumer rights, as they pertain to food quality” (Business Week Magazine, 2008), published the results of their German consumers’ choice award “Goldener Windbeutel”. One of HiPP’s products, a tea for babies, “won” this price as the “most brazen advertising lie of 2012” due to high sugar content (Spiegel Online, 2012). The consequence was that HiPP had to stop the production of this product based on an enormous OFS of parents in many online forums (Spiegel Online, 2012).

Although posting negative content (containing criticism or complaints) about company’s products and actions online in Social Networks is daily business for companies (Zorbach, 2011), it seems logic that the advent of the internet and the growing global connectedness increase the velocity of WOM spread. The level of velocity of spread within Social Networks has recently reached new levels. These changes are of great impact for marketing communications: companies have to cope with new challenges and need to have a closer look at every topic that is spread within their social media channels. It could have taken years before innovations as well as the propagation of opinions were diffused in the time when smartphones and the Internet were not invented yet (Ryan & Gross, 1950). In Social Networks such as Facebook or Twitter, users create negative opinions about companies or their products and share it with thousands of others within a few hours. On a side note, these massive online dynamics are not just limited to corporations or brands, they also affect individuals in popular culture, e.g., Ashton Kutcher (Barker, 2011), or politics, e.g., “Weinergate” (Petri, 2011).

Recent research suggests that OFS are of growing importance for companies (Pace, Balboni, & Gistri, 2014; Pfeffer, Zorbach, & Carley, 2014); they have to face the danger of getting affected by an OFS, especially if they spend on Social Network advertisings. However, there

is a knowledge gap; the effects of OFS on *brand attitude* are uncertain as research has so far only focused on how to overcome an OFS if it has already arisen. The present study will therefore address this issue. The general research question can be formulated as the following:

RQ: *How does an Online Firestorm impact brand attitude?*

Theoretical Background

OFS are a relatively new phenomenon, but the dynamics of them are similar to the way in which rumours spread. A rumour is a piece of information misrepresenting the truth that normally spreads from person to person (Allport & Postman, 1947). However, OFS are not only alike to the definition of (commercial) rumours; there are also some distinctive differences in detail. An important one when searching for differences to rumours is the level of aggression that OFS mostly constitute (Pfeffer, Zorbach, & Carley, 2014). This characteristic makes OFS an own term. Although some OFS are initially based on actual customer criticism, they are not meant to lead to discussion and finding a consensus with the company (Mochalova & Nanopoulos, 2014). Its only aim is to take revenge by damaging the company. That is why companies are often not able to intervene when affected by an OFS, the real content on which the OFS is based on is no longer important for the participating users. Unlike rumours are based on unconfirmed events, OFS can be based on both, unconfirmed (rumour based) or confirmed (event based) events (Pace, Balboni, & Gistri, 2014). The OFS's essential feature is its high affective nature: the message is mainly opinion, and not evidence based fact.

Word-of-mouth marketing (WOMm), i.e. making a brand/product more attractive due to the positive association created by the positive talk of peers, has become a significant driver for today's marketing business. WOMm is of importance for companies to improve brand and product awareness, as well as generating trust for both of them (Solis, 2011; Mason, 2008). In a survey among global marketing decision-makers in 2012, 51% reported that use of WOMm is aimed at "*improving brand awareness or reputation*" (MarketingSherpa, 2012). Furthermore, it is important to make clear that WOMm is not equal in all Social Networks. Services, such as Facebook, Twitter, Pinterest, and YouTube can form the conversations about brands and their reputation (Kerpen, 2011; Pfeffer, Zorbach, &

Carley, 2014). Social media spending is not only the fastest growing marketing investment; it is also more appealing to marketers while they are trying to reach their objectives.

Commercial rumours are public communication, usually embellished by allegations or attributions based on circumstantial, unverified evidence, that reflect consumers' assumptions or suspicions about the marketplace (Kimmel & Audrain-Pontevia, 2010). The same applies to Online Firestorms. The examples of McDonald's®, KLM and HiPP show, that these instant waves of negative statements, that occur without prior warning, can be of great impact on a brand's or a company's reputation.

The current paper will concentrate on the effects of OFS on business measures. Beside the mentioned companies, a lot of others were attracted by OFS, like Pril, Barilla, Nestlé, O2, ING-DiBa and Dell (Axel Springer Verlag, 2016). Not all of them did a good job of handling their OFS, mostly because the companies underestimated the effects an OFS can have on their reputation. Therefore, the author hoped to get insight into the impact of OFS on a company's *brand attitude*. It seemed interesting to uncover the impact of negative user generated content, as – with the growth of the Internet – not only did the possibilities expand for companies' advertisement communication, but also the scope for consumers in discussing and judging products (Wyrwoll, 2014). OFS are unclear and complex dynamics; therefore, many CEOs avoid heavy usage of social media. They fear that their presence could lead to maximum negative impact on the company's reputation, with uncontrollable and unforeseen consequences for their companies and their brand's image, and accompanied by a significant waste of money (Pfeffer, Zorbach, & Carley, 2014). The actual impact of OFS on a company's *brand attitude* needs to be better understood.

When inspecting the relatively new research field of OFS, most of the literature deals with the topic of how OFS develop (technically (Pfeffer, Zorbach, & Carley, 2014) and socially (Folger, 2014)) and how to overcome OFS (Scherg, 2011). Although research over the impact on a *brand's attitude* seems interesting due to the increasing number of OFS on the web, this field is relatively unstudied (Pfeffer, Zorbach, & Carley, 2014; Pace, Balboni, & Gistri, 2014). Therefore, the theoretical framework of the current study will concentrate on issues, which could possibly affect a company's *brand attitude*. As mentioned in the introduction, the evidence of the *source* seems to play an important part to predict whether an OFS arises or not. Next to that, previous studies only researched about OFS in online environments. That seems to be logical due to the naming "Online Firestorm". However, what about negative

news in traditional media environments? Do OFS just perform in an online environment or are they also transferable to traditional media, such as newspapers? As traditional media usually do not offer interaction of users respectively readers, this interaction needs to be researched. In Social Networks, users are not just consuming the sender's message, but are also exposed to the messages and opinions of other users. Traditional media usually has just one sender and therefore one opinion. That raises the question, whether multiple (unilateral) opinions have greater empowerment than one opinion. Thus, does the interaction of others (in the current research called *social environment*) around a message has influence on its impact on *brand attitude*? Next to that, it needs to be discovered whether there are possible influencers between the *source* and *brand attitude*, like forgiving a brand's failure or hating a brand.

Source

The *source* seems to have an important impact on the outcomes of a message (Krishnan, 1998). Source credibility leads to more trust into a source; more trust leads to greater impact of a *source* and therefore is an important factor whether a message of a *source* will be processed or not (Hovland & Weiss, 1951). If a *source* is perceived to have high credibility, it might be processed more effectively among receivers. If high source credibility is perceived, the chance is higher that a person will communicate the *source's* message to other persons with the result that the message is spread more to more people than a message of a *source* with low credibility (Hovland & Weiss, 1951).

It was found, that articles that were published in Social Networks are of lower credibility among consumers than the same articles published in a traditional medium, such as a newspaper (Kang, 2010). Additionally, the study of Wilcox and Stephen (2012) concluded that Social Network content tends to rather influences positive decisions, but has nearly no influence on negative decisions. Thus, when confronted with negative content in Social Networks, the paper suggests that this might have no impact on a future negative decision, such as to avoid a brand or product. This behaviour is different to newspaper consumers, whose decision-making is influenced for both, positive and negative decisions (Wilcox & Stephen, 2012). The explanation seems to be the intent to use a media: Social Network consumers seem to skip critical content because it does not fit their initial intention to use the media, while newspaper users actually searching for critical content as this fits their initial intention to use it (Wilcox & Stephen, 2012). The Uses and Gratifications Theory by Levy

and Windahl (1985) might give a clear explanation for that: the theory claims that media consumers are goal oriented in their behaviour and have enough self-awareness of their media use, interests, and motives. That being said, media consumers are aware of what and how they consume (*use*) media and have a distinctive goal for their consumptions (*gratification*).

Within the current study, the effect of the *source* might be twofold: firstly, possible differences in impact of Online Firestorms and a Firestorm in traditional media (e.g. newspapers) on *brand attitude* need to be studied. The search for gratification might thus modify the impact of the *source* on *brand attitude* between the two media. Secondly, the credibility of the *source* needs to be researched in order to get to know whether people rate Firestorms in a Social Network differently to Firestorms in newspapers and to get insight whether this potential difference leads to differences in *brand attitude*. Due to its predicted higher credibility, we assume:

- H1. Traditional media *sources* have more powerful influence on *brand attitude* than new media sources.

Forgiveness

The term *forgiveness* is the transliteration of “*forgiving interpersonal transgressions over time and across situations*” and includes “*the replacement of negative unforgiving emotions with positive, other-oriented emotions*” (Worthington, O'Connor, Parrott, Wade, & Berry, 2005). It was found in former studies, that the term *forgiveness* is correlated with the terms anger, hostility, neuroticism, fear, and vengeful rumination in a negative way and was correlated with agreeableness, extraversion, and trait empathy in a positive manner (Worthington, O'Connor, Parrott, Wade, & Berry, 2005; Seybold, Hill, Neumann, & Chi, 2001).

Adapted to the current context, these findings implicate that people scoring high on *forgiveness* seem to not develop *brand hate*, because they will replace negative thoughts about a brand with positive ones. Thus, those customers highly in *forgiveness* will seek to forgive a company when it has made a mistake, because forgiving is the natural disposition of these people. In addition to agreeableness, this trait is expected to make consumers seek peace and no conflict. Therefore, we assume the following hypotheses:

- H2. *Forgiveness* moderates the effect of *source* on *brand hate*.
 H3. *Forgiveness* moderates the effect of *brand hate* on *brand attitude*.

Next to that, Avest (2013) found, that a higher score on Forgiveness is mostly connected to a more positive score on *brand attitude*. Avest states that “*Forgivers tend to like a brand even more compared to the pre-forgiveness time, they develop positive brand attitude*”. According to these findings, the consumers’ behaviour can be explained by the Theory of Planned Behaviour (Avest, 2013): This theory states that attitude, subjective norm, and perceived behavioural control influence an individual’s intention to perform a given behaviour. Within the context of the present study, *forgiveness* would be a behavioural belief, which is responsible for attitude-forming and circumscribes the individual’s belief about consequences of its behaviour (Ajzen, 2001). Consumers try to protect their behavioural beliefs based on their subjective norm to have perceived behavioural control over what they do. To be consistent to its perceived behavioural outcome, consumers tend to rate higher on *brand attitude* when rating higher on *forgiveness*. They thus want to be consistent with their own expected behaviour. Therefore, we assume the following hypothesis:

H4. *Forgiveness mediates the effect of source on brand attitude.*

Brand hate

Brand hate is described by Bryson, Atwal and Hulten (2013) as “*the extreme negative affective component of attitude towards a brand*”. There is an increasing amount of *brand hate* sites on the Internet. People get more and more active to share their opinions over several (producers of) brands with others via specific anti-fan pages on Facebook (e.g. I hate Apple (2015) or I hate Ryanair (2014)) or bloggers and journalists write about their hate of brands and products on their websites (Apple (Wagner, 2010), Microsoft (PCWorld, 2007)). According to a study by Kucuk (2008), this hate phenomenon is more common to greater brands than to smaller ones. On the one hand, they benefit from the so-called “Double Jeopardy phenomenon” (Kucuk, 2008), that the greater a company gets, the more benefits this growth offers to the company. Additionally, it has a higher degree of brand loyalty and a higher potency leading to high repeat purchases. But vice versa, these brands also have to deal with more disadvantages over weaker brands (Negative Double Jeopardy). Thus, more effort in (WOM) marketing also increases the chance to be targeted by an OFS (Pfeffer, Zorbach, & Carley, 2014).

Based on the previous findings, *brand hate* can be defined as “*a strong and long-lasting negative emotion towards a brand that originates from cognitions and often leads to*

hateful action over time” (Avest, 2013). This hate and the resulting hateful behaviour will then not be directed towards people, as in interpersonal hate, but towards the hated brand.

Adapted to the current context, these findings implicate that people scoring high on *brand hate* will not develop *forgiveness*, because they will replace positive thoughts about a brand with negative ones. Thus, those customers scoring high on *brand hate* will seek to hate a company when it has made a mistake, because hating is the natural disposition of these people. Therefore, it can be assumed that consumer that score high on *brand hate* will score lower on *forgiveness*. Next to that, Avest (2013) found, that a higher score on *brand hate* is mostly connected to a lower score on *brand attitude*. Avest says: “*brand haters tend to have even lower brand attitude compared to the pre-brand hate time*”. As well as for *forgiveness*, the consumers’ behaviour can be explained by the Theory of Planned Behaviour (Avest, 2013). Within the context of the present study, *brand hate* would be a behavioural belief, which is responsible for attitude-forming and circumscribes the individual’s belief about consequences of its behaviour (Ajzen, 2001). Consumers try to protect their behavioural beliefs based on their subjective norm to have perceived behavioural control over what they do. To be consistent to its perceived behavioural outcome, consumers tend to score lower on *brand attitude* when scoring higher on *brand hate*. They thus want to be consistent with their own expected behaviour. Therefore, we assume:

H5. *Brand hate mediates the effect of source on brand attitude.*

Severity

The process of *forgiveness* and *brand hate* is highly complex. It may involve the acknowledgement that another party has acted in a way, or failed to act in a way that has caused one hurt (Tsarenko & Tojib, 2015). Individuals are likely to reflect on the action or inaction and decide, either consciously or unconsciously, how one views its severity. There are a number of factors that will influence the ability of one to forgive or to hate and the speed with which they may forgive or end up in hate. It would be impossible to include all of the factors that may foster or inhibit *forgiveness* and *brand hate* (Exline & Baumeister, 2000); this article will focus on the *severity* of a brand’s failure.

From their observations of similar instances, Fincham et al. (2005) posited that “*the relationship between severity and forgiveness is arguably the most robust phenomenon in the forgiveness literature*” (p. 861). Conventional wisdom suggests that the more severe the transgression, the more difficult it is to forgive. Many findings support this relatively

straightforward proposition that the severity of the transgression correlates negatively with the ability of one to forgive a transgressor (McCullough, Fincham, & Tsang, 2003). For *brand hate*, research is rare. Therefore, it will be expected within this paper, that severity has the contrasting effect on *brand hate* than on *forgiveness* as these two constructs are strongly oppositional to each other.

Translated to the topic of the current research, severity seems to be an important factor for people to forgive or to fall into hate against a brand. Therefore, severity could give reasoning for people's decision to forgive or to hate a brand, as their perceived severity of an issue may influence their decision.

Brand involvement

Consumers firstly appraise a corporate crisis' personal relevance when confronted with the event (Ashkanasy, Zerbe, & Härtel, 2005; Weiner, 1985). This relevance is determined through the consumer's perceived *brand involvement* and determines the consumer's level of processing of the crisis message (McDonald & Härtel, 2000)

Involvement is something personal (Zaichkowsky, 1985). It is connected to the individuals' needs, values, and self-concept and it reflects the individuals' thoughts and emotions about an object. The concept of involvement describes the individuals' relation to the object, or how individuals respond to it. The involvement of an object depends on the situation and it could change over time. It is also depending on the individual and the object in question (Zaichkowsky, 1985). In this paper, the focus will lie on an object that functions as a product or a brand (Solomon, Bamossy, Askegaard, & Hogg, 2009).

Involved customers can be interested in having a relationship with a company (Varki & Wong, 2003; Hanzaee, Khoshpanjeh, & Rahnama, 2011; Guthrie & Kim, 2008). According to Varki and Wong (2003), involved customers, that want a relationship, can turn out as a positive thing. It could lead to a chance of creating long-term relationships for companies. At least if it is managed in the right way. This type of relationship demands highly-involved customers (Varki & Wong, 2003).

Research shows a connection between consumer *brand involvement* and how to behave within a corporate crisis situation: Johansson, Mitsell and Lindberg (2012) found that people scoring high on *brand involvement* tend to score higher on *brand attitude* compared to lower brand involved people – especially if a brand is in a crisis. Next to that, the study of Johansson, Mitsell and Lindberg (2012) concluded that there exists a positive relationship

between *brand involvement* and *brand attitude*. Highly involved consumers tend to like a brand more than low-involved consumers and also have higher purchase intentions. Regarding the topic of the current study, previous research on this field would indicate that a highly-involved consumer tends to rather forgive a failure of a brand than low-involved consumers (Aaker, Fournier, & Brasel, 2004; Cheng, White, & Chaplin, 2012).

Based on their high involvement with the brand, these consumers try to keep their “good” relationship with “their” brand alive by downplaying a failure. This behaviour could be explained by the Cognitive Dissonance Theory (Chapanis, Chapanis, & Helson, 1964). Cognitive dissonance occurs when there is a conflict between implicit vs. explicit attitudes. When affected by dissonance, a person has multiple opportunities to cope with it. Because it would cost much effort to actually change behaviour (e.g. buying a car of another brand), “addition” or “subtraction” are common ways to cope with cognitive dissonance (e.g. the old brand was always reliable). Addition means to add a new consonant cognition, subtraction means to delete a dissonant cognition (Chapanis, Chapanis, & Helson, 1964). Having this in mind, highly involved consumers could react less negative than low involved consumers to a Firestorm within this study. They want to erase their dissonance (e.g. “*this brand made a failure, although I liked it*”) by underestimating the failure’s severity. Therefore, we assume:

H6. *Brand involvement moderates the effect of source on brand attitude.*

H7. *Brand involvement moderates forgiveness.*

Social environment

According to Cialdini (2001), people are vulnerable to influence attempts. One of his six heuristics that describes these attempts is called “Social Proof”: people are vulnerable to get influenced especially when they feel uncertain or when there is a strong resemblance between influencer and influencee. Particularly in these two circumstances people search for Social Proof in their environment to learn how to behave (Cialdini, 2001).

As one might think, Social Networks like Facebook frequently lead to Social Proof as it is actually called a Social Network. However, findings of Kwon et al. (2014) indicate that Social Networks especially rarely lead to Social Proof due to its anonymity and therefore low level of triggered uncertainty. Moreover, this anonymity makes it difficult to feel empathy for others and therefore to feel resemblance. Thus, people in Social Networks search less for Social Proof than people in real life (Kwon, Stefanone, & Barnett, 2014).

Compared to comments within Social Networks, emails, and especially letters, are a relatively old medium to communicate and it takes subjectively more time and effort to write an email or a letter than a comment on Facebook (Li & Suh, 2015). Therefore, people tend to rate an author's trustworthiness higher in a more traditional medium than within a Social Network (Invoke Solutions, 2010). The perceived trustworthiness of a writer is based on the reader's expected effort of the author for writing the text. In traditional media, people expect the author to think good about what to write, also because texts that are written in more traditional media subjectively take greater effort to get them published (Li & Suh, 2015).

Translated to the current topic, we expect that people tend to trust less in Social Network comments as users of such media can act anonymously and therefore can more easily tell lies. As people that comment on an off-line newspaper article use email or off-line media to react, these people are seen as more trustful and therefore as more convincing, because they can be identified. Therefore, the following hypothesis was assumed:

H8. *Social environment moderates the effect of source on brand attitude.*

Brand attitude

Brand attitude is the general brand evaluation, based on beliefs or automatic affective reactions (Murphy & Zajonc, 1993; Walla, Brenner, & Koller, 2011). Prior research has found that *brand attitude* is strongly associated with purchase intentions and brand loyalty (Chaudhuri & Holbrook, 2001; Keller, 2003). Therefore, *brand attitude* functions as a predictor for intended (future) behaviour (Sengupta & Johar, 2002). Recognizing this construct's centrality in marketing, researchers have manipulated *brand attitude* for decades through brand-related stimuli (e.g., Hoch, 2002; Labroo, 2006). Initially considered as stable over time (Allport, Attitudes, 1935; Petty, 1981), *brand attitude* appears to fluctuate prior to and/or upon purchase (Krishnan, 1998; Shen, 2007).

From the perspective of a company, the creation of positive *brand attitudes* is of paramount importance (Walla, Brenner, & Koller, 2011). There are two reasons for that. First, the individual's behaviour can be affected by the attitude towards a product/brand (Friedkin, 2010). Therefore, the attitude's positivity towards a brand has presumably a positive influence on brand loyalty and purchase behaviour. Second, it can increase the value of a brand to promote its positive affective response, which in turn is the point of origin for brand profitability and brand equity (Chaudhuri & Holbrook, 2001; Sweldens & Janiszewski, 2010). Over time, consumers' *brand attitudes* can significantly affect a company's economic

performance. Most studies about *brand attitude* were ranked high, which is logical when remembering *brand attitude*'s value for explaining brand-related issues and consumer behaviour. In most of its research, *brand attitude* either served as dependent variable when testing for various effects in advertising (Sweldens & Janiszewski, 2010; Mackay, Ewing, Newton, & Windisch, 2009) or as predictor for purchase intention (Gresham & Shimp, 1985; Batra & Ray, 1986).

Brand attitude combines a strong emotional component (Thompson, Rindfleisch, & Arsel, 2006) as well as cognitive aspects in terms of brand associations (Low & Lamb, 2000). It includes the extent to which a company is able to create emotional connections with the consumer (Lemon, Rust, & Zeithaml, 2001; Walla, Brenner, & Koller, 2011).

Present study

The present study was designed to investigate the impact of an OFS on people's *brand attitude*. Do people forgive a brand's failure or does an OFS result in *brand hate*? How do the level of *forgiveness* and *brand hate* affect *brand attitude*? And what if a person feels especially highly or low *involved* with a brand? What if a Firestorm takes place in a newspaper instead of an online Social Network? And what if people are purely confronted with negative news; does participation of others (*social environment*) change the effectiveness of negative news? Do all these patterns significantly affect the impact of Firestorms on *brand attitude*? Within the current research, these parameters were researched with the help of a true case: a failure of ketchup producer Heinz. In July 2015 it got viral that Heinz downsized its ketchup squeeze bottles in Germany: from that on they contained 400ml instead of 500ml – without changing the price (KraftHeinz, 2015). People got angry about that as they felt misled. Many of them discussed this topic in Social Networks, an Online Firestorm arose.

Brand attitude was measured, depending on the *source*. Also *forgiveness*, as well as *brand hate* were measured, to study its influence as a mediator between the *source* and *brand attitude*. *Brand involvement* was measured to study its influence as a moderator on *forgiveness* and on the effect of the *source* on *brand attitude*. *Social environment* was measured as moderator on the effect of the *source* on *brand attitude*.

A research model including all hypotheses was developed, to make clear how the study was constructed.

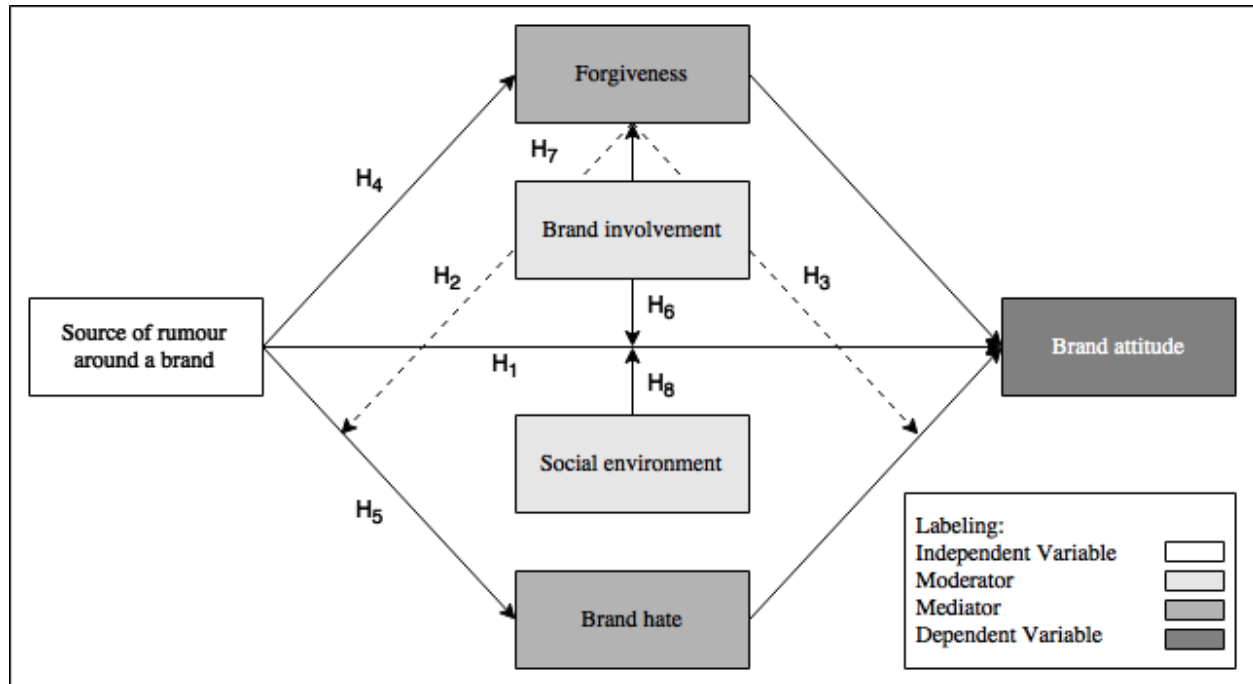


Figure 1. *Research model: Independent variable, Moderators, Mediators and Dependent Variable.*

Next to that, relevant sub questions based on the explained constructs were formulated to get more detailed information about the effects of an OFS on *brand attitude*:

1. *Does the source influence the effect of a Firestorm?*
2. *Does the source credibility influence the effect of a Firestorm?*
3. *Does social environment influence the effect of a Firestorm?*

Method

Experimental design

An online experiment was set up to investigate how the individuals' *brand attitude* is affected by a Firestorm in various environments. The study used a 2 (*source*: Social Network article vs. newspaper article) x 2 (*social environment*: with vs. without) x 2 (*brand involvement*: high vs. low) between-subject design (see table 1). Highly- and low-*brand involved* participants were split by the median score (*Median* = 3.09 on a 7-point scale) on *brand involvement*. Figure 1 gives an overview of the relevant independent and dependent variables, including applied moderators and mediators.

Table 1

Research design with N participants per group.

	Social environment			
	With	Without	With	Without
	High involvement		Low involvement	
Social network article	58	55	48	49
Newspaper article	45	53	52	51

Procedure

Participants accessed the experiment website at their convenience. After reading a brief description of the study and signing the informed consent form by clicking “Agree to participate”, participants were randomly assigned to one of the experimental conditions. Each participant was exposed to a case around the brand Heinz Ketchup and answered a series of questions. All stimuli can be found in Appendix B.

Participants received a negative article, either posted on the Social Network Facebook or printed in the well-known German newspaper *Süddeutsche Zeitung*. Two of the four stimuli consisted of comments of other users (Social Network condition) or letters to the editor (newspaper condition) regarding the article. These stimuli were filled up with user comments (called *social environment*). The other two stimuli were not filled up with any contribution of other readers/users (all stimuli can be found in Appendix B). In table 1, the participant's distribution over the manipulation material is illustrated.

The article consisted of a news item about Heinz Ketchup, which is the bestselling

tomato ketchup brand on the German market (Horizont, 2014), who misled consumers by shrinking its products size, but still asking the same price (Verbraucherzentrale Hamburg, 2016). All items of the following questionnaire are based on this case. After the participants had filled in all questions regarding the stimulus material, they were asked to give information about their demographics. This information included gender, age and educational level. Next to that, they were asked for their Social Network and newspaper usage (five-point scale from “never” to “daily”), as well as the perceived credibility of these two media on a seven-point Likert scale. Participants were then thanked for their participation. Additionally, they were informed that all information was fictitious and that Heinz Ketchup, as well as Facebook and Süddeutsch Zeitung were not involved in this study. Furthermore, they were asked for their interest in the results of the study. Therefore, they could send an email to the researcher.

Participants

Before start recruiting participants for the current study, a power analysis with the computer program G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) was conducted to find out the minimum sample size to determine a medium-sized effect (according to Cohen’s (1977) effect size conventions) for the research design. The G*Power test indicated that a total sample of 250 people would be needed to detect medium-sized effects ($d=.8$) with 80% power using a F test ANOVA with alpha at .05.

Participants were 411 German people from 17 and 70 years old ($M = 30.96$, $Median = 24.00$, $SD = 12.64$) of which 28.5% male and 71.5% female. The mean age within the condition *Social network article with social environment, high involved* is more than two years below the mean age of all participants. Therefore, a test of normality was performed. The Shapiro-Wilk tests showed that age was not normally distributed. As skewness and kurtosis data was within the critical spectrum of -1 to +1, the variance of the Shapiro-Wilk test is assumed not to be an issue. Again, a Shapiro-Wilk test was performed to test the distribution of gender among the conditions. It was found that gender was not normally distributed. As skewness and kurtosis data was not within the critical spectrum of -1 to +1, it has been concluded that gender is not normally distributed among the conditions.

Another Shapiro-Wilk test showed that media usage and overall media credibility were not normally distributed. However, as well as with the distribution of age, skewness and kurtosis data was in all cases within the critical spectrum of -1 to +1. Therefore, the variance of the Shapiro-Wilk test is assumed not to be an issue.

Participants were recruited via Social Networks, E-Mail and Sona Systems (an internal system of the University of Twente where students earn credits for voluntarily participating in studies). See table 2 for an overview of the participant's descriptives.

Table 2

Descriptives.

Respondents (N=411)		M	SD	N	%
Social network article <i>with social environment</i> , high involve.				58	14.1
Age		28.26	11.35		
Gender	Male			20	4.9
	Female			38	9.2
Media usage	Social Networks	4.48	0.78		
	Newspapers	3.53	1.08		
Media credibility	Social Networks	3.68	0.61		
	Newspapers	4.33	0.51		
Social network article <i>with social environment</i> , low involve.				48	11.7
Age		31.88	13.05		
Gender	Male			12	2.9
	Female			36	8.8
Media usage	Social Networks	4.19	1.23		
	Newspapers	3.19	1.27		
Media credibility	Social Networks	3.42	0.79		
	Newspapers	4.33	0.49		
Social network article <i>without social environment</i> , high involve.				55	13.4
Age		30.76	11.66		
Gender	Male			19	4.6
	Female			36	8.8
Media usage	Social Networks	4.33	1.14		
	Newspapers	3.29	1.26		
Media credibility	Social Networks	3.69	0.66		
	Newspapers	4.35	0.64		
Social network article <i>without social environment</i> , low involve.				49	11.9
Age		31.53	12.48		
Gender	Male			15	3.6
	Female			34	8.3
Media usage	Social Networks	3.82	1.33		

	Newspapers	3.47	1.23		
Media credibility	Social Networks	3.39	0.79		
	Newspapers	4.35	0.53		
Newspaper article <i>with social environment</i> , high involve.				45	10.9
Age		31.96	13.63		
Gender	Male			12	2.9
	Female			33	8.0
Media usage	Social Networks	3.84	1.52		
	Newspapers	3.31	1.29		
Media credibility	Social Networks	3.46	0.61		
	Newspapers	4.27	0.61		
Newspaper article <i>with social environment</i> , low involve.				52	12.7
Age		31.48	13.28		
Gender	Male			13	3.2
	Female			39	9.5
Media usage	Social Networks	4.25	1.06		
	Newspapers	3.37	1.22		
Media credibility	Social Networks	3.58	0.87		
	Newspapers	4.30	0.51		
Newspaper article <i>without social environment</i> , high involve.				53	12.9
Age		30.92	13.06		
Gender	Male			13	3.2
	Female			40	9.7
Media usage	Social Networks	4.09	1.28		
	Newspapers	3.49	1.07		
Media credibility	Social Networks	3.53	0.51		
	Newspapers	4.35	0.66		
Newspaper article <i>without social environment</i> , low involve.				51	12.4
Age		31.45	13.24		
Gender	Male			13	3.2
	Female			38	9.2
Media usage	Social Networks	4.20	1.04		
	Newspapers	3.06	1.24		
Media credibility	Social Networks	3.48	0.59		
	Newspapers	4.39	0.67		
Total				411	100
Total Age		30.96	12.64		
Total Gender	Male			117	28.5
	Female			294	71.5

Total Media usage	Social Networks	4.16	1.19
	Newspapers	3.34	1.20
Total Media credibility	Social Networks	3.54	0.69
	Newspapers	4.33	0.58

Experimental manipulations

For the present experiment, *source* (Social Network article vs. newspaper article) was manipulated through a mock Facebook posting, respectively a mock newspaper article of the *Süddeutsche Zeitung*, and through each one condition with *social environment* (user comments) and without *social environment*. In total, there were four stimuli. The comments for the Facebook screenshot and the scanned newspaper article were anonymously adopted from real Facebook postings and adjusted to the current topic. To find the best fitting comments, a pilot was performed.

Pilot 1

The researcher chose ten Facebook postings from former OFS and showed it to five different people. These people had to rate four out of the ten comments which are in their opinion the most convincing ones. These four most rated comments were used as *social environment*. All four comments consisted of negative WOM, whereas one of them goes beyond this parameter as it is rumour based. That means, it spreads rumour by giving non-evidenced information about previous negative news around the brand. A mix of negative WOM and rumour based comments is typically for OFS (Pfeffer, Zorbach, & Carley, 2014).



Figure 2 and 3. *Samples of the manipulation material of the present study. Left: Social Network posting with social environment; right: newspaper article with social environment (find all stimuli in Appendix B).*

To achieve experimental control, the construction of the manipulations *source* was similar to each other in order to be comparable. Figures 2 and 3 illustrate the two *source* manipulations, each with *social environment*. All manipulations can be found in Appendix B.

Measurement

All items were measured using either seven-point Likert Scales (1= strongly disagree to 7= strongly agree) or semantic differentials from 1 to 7 (negative to positive). A questionnaire including seven constructs and demographic variables was assembled. These constructs were *brand attitude*, *brand hate*, *forgiveness*, the severity of the brand's failure, purchase intention, source credibility and *brand involvement*. The entire questionnaire can be found in Appendix B.

To test the overall comprehensibility of the questionnaire and to get a first impression whether participants could be grouped into highly and low *involved* groups, a second pilot was accomplished.

Pilot 2

N=19 participants were recruited from the inner circle of the researcher's acquaintances (*Age* 19-53; *M* = 27,73). All of them were exposed to one out of the four stimuli and filled in the whole questionnaire. Next to that, participants were asked in a short interview whether they had problems in answering it.

Results showed that a classification in highly- and low-involved participants lead to different significant effects on most constructs. These findings gave indication that a classification into different involvement groups within the main study would be possible.

Verbal feedback of the participants revealed that some issues had to be adjusted. First of all, the look and feel of the stimulus material on mobile devices was improved. Next to that, the similarity of some *brand hate*, as well as some *brand involvement* items was confusing for some participants. The scale of Zeki and Romaya (2008) (*brand hate*), and the one of Martensen, Gronholdt, Bendtsen and Jensen (2007) (*brand involvement*) used different groups of items, which made it possible to delete items without losing consistency of the scale. Therefore, three items within the construct *brand hate*, and eight items within the construct *brand involvement* were deleted.

Within the construct *forgiveness*, the term "vergeben" (German for "forgive") was replaced through "verzeihen", as this sounds more common in German. Participants reported that the term was confusing as they anticipate "vergeben" rather as an act to humans and not to brands.

Questionnaire

The first eight statements concerned the participants' *brand attitude* (find the whole questionnaire in Appendix B). The items were taken from a scale by Martensen, Gronholdt, Bendtsen and Jensen (2007). Respondents were asked to indicate in how far they value their attitude towards the given brand. Examples of these statements are "*I think this brand is a good brand.*" or "*I am interested in this brand.*" Participants could rate the statements on a seven-point Likert scale from strongly disagree to strongly agree.

The next group of items dealt with the subject *brand hate* as one of the dependent variables. Items were taken from a scale by Zeki and Romaya (2008) and Salvatori (2007). These items were asked to determine whether consumers tend to fall into *brand hate* after they read about the news concerning the brand. This construct consisted of eleven items. All of these were statements and participants had to rate them on a seven-point Likert scale.

Examples are “*I do not want anything to do with this brand.*” or “*I have kind thoughts about this brand.*” (reversed item). In total, two items were reversed and recoded (item five and seven).

The following three items investigated the participants’ general willingness to forgive the brand’s failure as a dependent variable of the present study. These items were taken from a scale by Mullet, et al. (2003). They are purely focused on *forgiveness* and are attributes which should be assigned to the stimulus materials. They were rated on a seven-point Likert scale. One example of these items is “*I forgive this brand.*”

The following three items were also taken from a scale by Mullet, et al. (2003) and focus on the *severity* of the brand’s failure. They were rated by seven-point semantic differentials. Attributes which were mentioned in the questionnaire were, for example, “*mild – severe*” or “*insignificant – significant*”.

The fifth construct dealt with purchase intention. Three items were an assortment of the study by Martensen, Gronholdt, Bendtsen and Jensen (2007). It can be investigated whether respondents would buy products of the given brand the next time they need products out of this product segment. Participants were given three statements which they could rate on a seven-point Likert scale again. Examples of items belonging to this construct are “*I would recommend this brand to others*” and “*I will buy these brand’s products in the future.*”

The penultimate construct of the questionnaire dealt with source credibility, which was measured by five items. For this, a scale by McCroskey, Holdridge and Toomb (1971) was used. It can be investigated whether participants rate the given stimulus material as reliable or not. The five items were rated by seven-point semantic differentials. Examples are “*unbelievable – believable*” and “*qualified – unqualified*”.

The final construct examined the level of *brand involvement* based on the brand that was given within the stimulus. Again, these items were used from a scale by Martensen, Gronholdt, Bendtsen and Jensen (2007). They were rated by seven-point semantic differentials and consisted of eleven items. Examples of these items are “*means nothing to me – means a lot to me*” or “*uninterested – interested*”.

All items are based on existing English scales. As the survey was done in German language, all items needed to be translated into German and back-translated to English by another person to trace and prevent translation bias.

Data-analysis

Factor and reliability analyses

To check whether measured constructs have uni-dimensional structure, factor-analyses and reliability analyses were performed. Initially, the factorability of the eight *brand attitude* items was examined. Firstly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .88, above the recommended value of .6. Secondly, Bartlett's test of sphericity was significant ($\chi^2(28) = 1605.20, p < .05$). Finally, most communalities were above .3, further confirming that the item shared some common variance with other items. Given these overall indicators, factor analysis was conducted with all eight items (scree plots can be found in appendix A). Two underlying factors were found for the eight-item scale measuring *brand attitude*. In total, these factors accounted for around 67.4% of the variance in the questionnaire data. Factor 1 was called *opinion* and consists of six items (1, 2, 3, 4, 5, 6). Factor 2 was called *interest* and consists of two items (7, 8). An overview of the results of the factor analysis of *brand attitude* can be found in table 3. As evident from the reliability analysis, both factors reached good internal consistency (see table 5).

Table 3

Varimax rotation factor structure of the eight items of brand attitude construct.

		Factor Loadings	
		1	2
1.	I think that "Heinz Ketchup" is a good brand.	.86	
2.	I think that "Heinz Ketchup" has some advantageous characteristics compared to other similar brands within the relevant product category.	.58	
3.	I have a positive attitude toward "Heinz Ketchup".	.84	
4.	I am willing to pay a higher price for "Heinz Ketchup" than for other similar products within the product category.	.65	
5.	"Heinz Ketchup" is better quality than other similar brands within the product category.	.59	
6.	I think that "Heinz Ketchup" is a reliable and credible brand.	.78	
7.	I am interested in "Heinz Ketchup".		.69
8.	I am interested in knowing more about "Heinz Ketchup".		.91

Furthermore, the factorability of the eleven *brand hate* items was examined. Several well-recognised criteria for the factorability of a correlation were used. Firstly, the Kaiser-Meyer-

Olkin measure of sampling adequacy was .87, above the recommended value of .6. Secondly, Bartlett's test of sphericity was significant ($\chi^2(55) = 1671.45, p < .05$). Finally, the communalities were all above .3, further confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was conducted with all eleven items (scree plots can be found in Appendix A). Three underlying factors were found for the eleven-item scale measuring *brand hate*. In total, these factors accounted for around 56.7% of the variance in the questionnaire data. Factor 1 was called *avoidance* and consists of six items (3, 4, 8, 9, 10, 11). Factor 2 was called *dislike* and consists of three items (1, 2, 6). Factor 3 was called *indifferent* and consisted of two items (5, 7). An overview of the results of the factor analysis of *brand hate* can be found in table 4. As evident from the reliability analysis, two of the three factors reached good internal consistency (see table 5). Factor 3 reached an alpha of .45, which is insufficient. Therefore, it would be recommended to delete all items of Factor 3.

A factor analysis with all items out of the construct *brand hate* except the two *indifferent* items still reveals two factors with the same items belonging to *avoidance* and *dislike*. Furthermore, during all analyses within the result section, there were no significant differences found for the two sub dimensions *avoidance* and *dislike*. Therefore, further *brand hate* analyses will be done with all *avoidance* and *dislike* items, but without the *indifferent* items.

Next to the factorability of *brand attitude* and *brand hate*, no more inhomogeneous items could be found within the other constructs.

Table 4

Varimax rotation factor structure of the eleven items of brand hate construct.

		Factor Loadings		
		1	2	3
1.	I don't want anything to do with Heinz Ketchup.		.85	
2.	The world would be a better place without Heinz Ketchup.		.80	
3.	I cannot control my hatred for Heinz Ketchup.	.74		
4.	I would like to do something to hurt Heinz Ketchup.	.78		
5.	I have kind thoughts about Heinz Ketchup.			-.73
6.	I do not like Heinz Ketchup.		.59	
7.	I am indifferent to Heinz Ketchup.			.80
8.	I hate Heinz Ketchup.	.85		
9.	I'm disgusted by Heinz Ketchup.	.84		
10.	I'm totally angry about Heinz Ketchup.	.68		
11.	I'm dissatisfied by Heinz Ketchup.	.54		

To test the scales' reliability, its internal consistency was calculated. Internal consistency refers to the degree to which items of a scale measure the same construct. The most common method to measure internal consistency is Cronbach's alpha (Pallant, 2010). Cronbach's alpha was calculated for all constructs: *brand attitude* (with two underlying dimensions), *brand hate* (with three underlying dimensions), *forgiveness*, *severity*, *purchase intention*, *source credibility* and *brand involvement*. All constructs are reliable, except *brand hate's* sub dimension *indifferent* (see table 5).

Table 5

Cronbach's alpha's of the constructs of the present study.

Construct	Sub dimension	Number of items	α
Brand attitude		8	.88
	Opinion	6	.87
	Interest	2	.71
Brand hate		11	.85
	Avoidance	6	.87
	Dislike	3	.79
	Indifferent	2	.45
Forgiveness		3	.71
Severity		3	.93
Purchase intention		4	.86
Source credibility		5	.88
Brand involvement		11	.96

Results

Analyses were conducted in the context of a 2 (*source*: Social Network vs. newspaper) x 2 (*social environment*: with vs. without) x 2 (*brand involvement*: high vs. low) analysis of variance. Next to that, factor analyses revealed two sub dimensions of *brand attitude* (*opinion* and *interest*) and three sub dimensions of *brand hate* (*avoidance*, *dislike* and *indifferent*), whereby *indifferent* was deleted. Whenever results in these constructs were similar, they were pooled by their major construct and not separately shown. For all results, the level of significance was $\alpha = .05$.

Manipulation Check: Source credibility.

The pattern of source credibility provided an indication of the efficacy of the *source* and *social environment* manipulations. As expected, a main effect of *source* ($F_{(1; 409)} = 79.56$; $p < .05$) was obtained such that the source credibility in the Social Network article condition ($M = 3.93$, $SD = 1.01$) was lower than that in the newspaper article condition ($M = 4.85$, $SD = 1.09$). Also the interaction of the two factors *source* and *social environment* was significant ($F_{(1; 407)} = 4.99$; $p < .05$). It was found that the source credibility in the Social Network article condition *with social environment* ($M = 4.00$, $SD = 0.99$) was higher than that in the Social Network article condition *without social environment* ($M = 3.85$, $SD = 1.03$) (see figure 4). Unexpectedly, the source credibility in the newspaper article condition *with social environment* ($M = 4.69$, $SD = 1.18$) was lower than in the newspaper article condition *without social environment* ($M = 5.00$, $SD = 0.98$) (see figure 4). The opposite was expected.

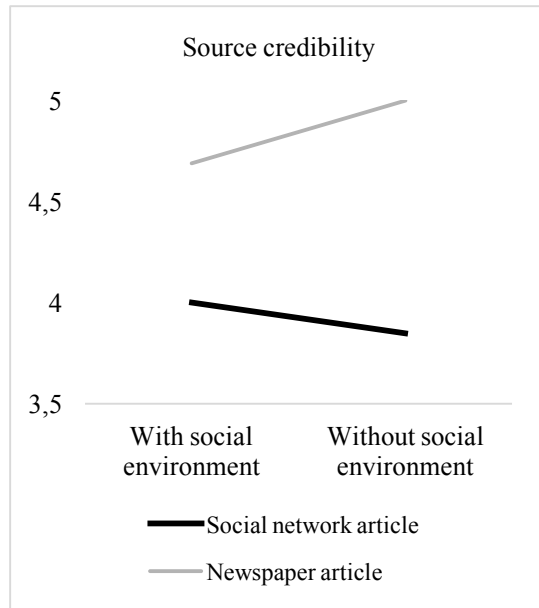


Figure 4. Means of source credibility by *social environment*, per *source* (Social Network article; newspaper article).

ANOVAs

Table 6

Univariate test for main and interaction effects on brand attitude.

Construct	ANOVA's Univariate test		
	Df/Error	F	Sig.
Source (newspaper vs Facebook)	1/409	1.68	.20
Social environment	1/409	0.03	.87
Brand involvement	1/409	279.96	.00***
Source*social environment	3/407	0.81	.49
Source*brand involvement	3/407	94.99	.00***
Social environment*brand involvement	3/407	93.38	.00***
Source*social environment*brand involvement	7/403	40.61	.00***

Note: * $p < .05$, ** $p < .01$ *** $p < .001$

A between-groups analysis of variance (ANOVA) was used to compare the average *brand attitude* score of participants between four groups: (a) participants confronted with a Social Network article, that consisted of *social environment*, (b) participants confronted with a newspaper article, that consisted of *social environment*, (c) participants confronted with a Social Network article, that did not consist of *social environment*, and (d) participants

confronted with a newspaper article, that did not consist of *social environment*. See table 6 for all results.

The main effect of *source* was not statistically significant ($F_{(1; 409)} = 1.68$; $p = .20$), achieving no significant differences in *brand attitude* dependent on the given *source*. Partial eta-squared (η^2) for this effect was .01. This contradicts hypothesis H1. The main effect of *social environment* was not statistically significant ($F_{(1; 409)} = 0.03$; $p = .87$, partial $\eta^2 < .01$), achieving no significant differences in *brand attitude* dependent on whether participants got *social environment* (user comments) or not.

The main effect of *brand involvement* was statistically significant ($F_{(1; 409)} = 279.96$; $p < .001$, partial $\eta^2 = .41$), with participants that were highly involved ($M = 4.76$, $SD = 0.87$) achieving significantly higher scores on *brand attitude* than participants that were low involved ($M = 3.24$, $SD = 0.97$).

There was no interaction effect between *source* and *social environment* ($F_{(3; 407)} = 0.81$; $p = .49$, partial $\eta^2 = .01$), indicating no significant differences in *brand attitude*.

There was a statistically significant interaction effect between *source* and *brand involvement* ($F_{(3; 407)} = 94.99$; $p < .001$, partial $\eta^2 = .41$), with participants that were highly involved and that were confronted with a Social Network article ($M = 4.72$, $SD = 0.85$) or with a newspaper article ($M = 4.80$, $SD = 0.89$) indicating significantly higher scores on *brand attitude* than participants that were low involved, independent from the *source* (see figure 5). For participants that were low involved, the score on *brand attitude* depends on the *source*: the Social Network article has a less negative impact on *brand attitude* ($M = 3.36$, $SD = 0.97$) than the newspaper article ($M = 3.13$, $SD = 0.95$). Therefore, among highly involved participants, the *source* plays no significant role for the *brand attitude* score, whereas among low involved participants, Social Network articles have lower negative impact on *brand attitude* than newspaper articles. See figure 5 for a line plot.

There was a statistically significant interaction effect between *social environment* and *brand involvement* ($F_{(3; 407)} = 93.38$; $p < .001$, partial $\eta^2 = .41$). In figure 6 it can be seen that participants that were low involved and that were confronted with *social environment* ($M = 3.19$, $SD = 0.87$) score only marginally lower on *brand attitude* compared to participants that were low involved and that were not confronted with *social environment* ($M = 3.29$, $SD = 1.05$). Moreover, participants that were highly involved and that were confronted with *social environment* scored nearly equal on *brand attitude* ($M = 4.80$, $SD = 0.84$) compared to those

that were highly involved and that were not confronted with *social environment* ($M = 4.72$, $SD = 0.90$). Thus, although the interaction effect between *social environment* and *brand involvement* is statistically significant, the presence of *social environment* leads to no significant differences in scores on *brand attitude* compared to the absence of *social environment*. Regarding the strong partial $\eta^2 = .41$ of *brand involvement* on *brand attitude*, the interaction effect with *social environment* is not based on the impact of *social environment*, but on the effect size of *brand involvement*. See figure 6.

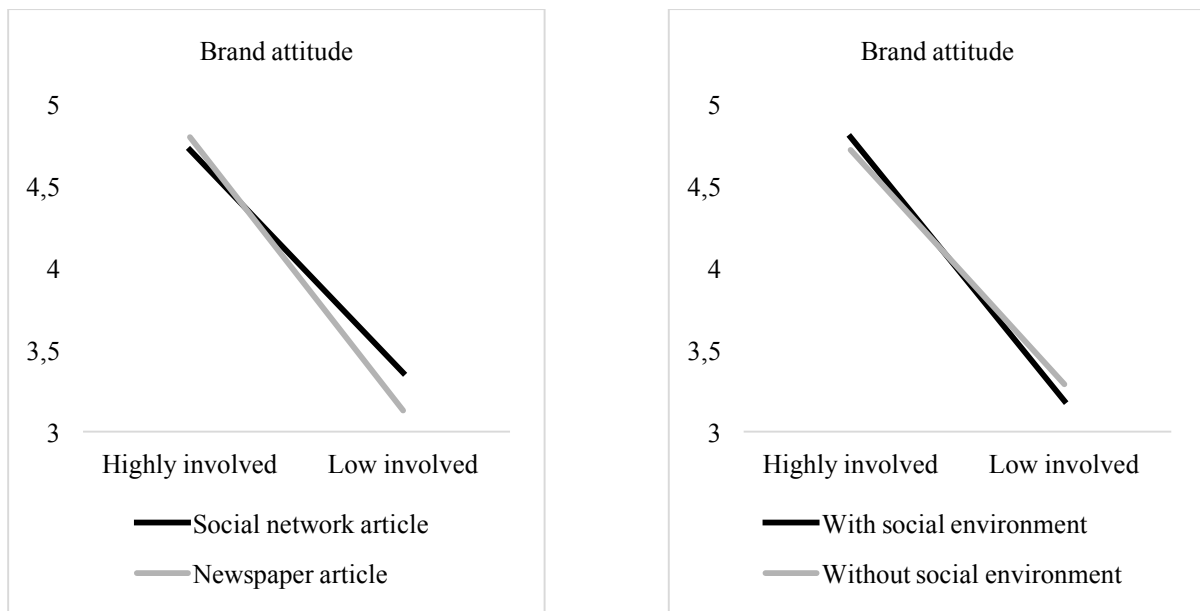


Figure 5 and 6. Means of *brand attitude* by source and *brand involvement* (left) and means of *brand attitude* by *social environment* and *brand involvement* (right).

There was a statistically significant three-way interaction effect between *source*, *social environment* and *brand involvement* ($F_{(7, 403)} = 40.61$; $p < .001$, partial $\eta^2 = .41$), with participants that were confronted with a Social Network article that consisted of *social environment* scored higher on *brand attitude* among highly involved participants ($M = 4.77$, $SD = 0.86$), compared to participants that were confronted with a Social Network article that did not consist of *social environment* for highly involved participants ($M = 4.66$, $SD = 0.85$). Participants that were confronted with a Social Network article that consisted of *social environment* and that were low involved ($M = 3.35$, $SD = 0.81$) scored lower on *brand attitude* compared to participants that were confronted with a Social Network article that did not consist of *social environment* and that were low involved ($M = 3.38$, $SD = 1.11$). Thus,

among participants that were confronted with a Social Network article and that were highly involved, *social environment* had a significant positive impact on the *brand attitude* score. For those who were low involved, *social environment* had a marginally negative impact on the *brand attitude* score. See figure 7.

Furthermore, participants that were confronted with a newspaper article that consisted of *social environment* and that were highly involved ($M = 4.83$, $SD = 0.81$) scored higher on *brand attitude* compared to those who were confronted with a newspaper article that did not consist of *social environment* and that were highly involved ($M = 4.77$, $SD = 0.96$). Certainly, participants that were confronted with a newspaper article that consisted of *social environment* and that were low involved scored significantly lower on *brand attitude* ($M = 3.05$, $SD = 0.91$) compared to those who were confronted with a newspaper article that did not consist of *social environment* and that were low involved ($M = 3.20$, $SD = 1.00$). Thus, among participants that were confronted with a newspaper article and that were low involved, *social environment* had a significant negative impact on the *brand attitude* score. For those who were highly involved, *social environment* had a marginally positive impact on the *brand attitude* score. See figure 8.

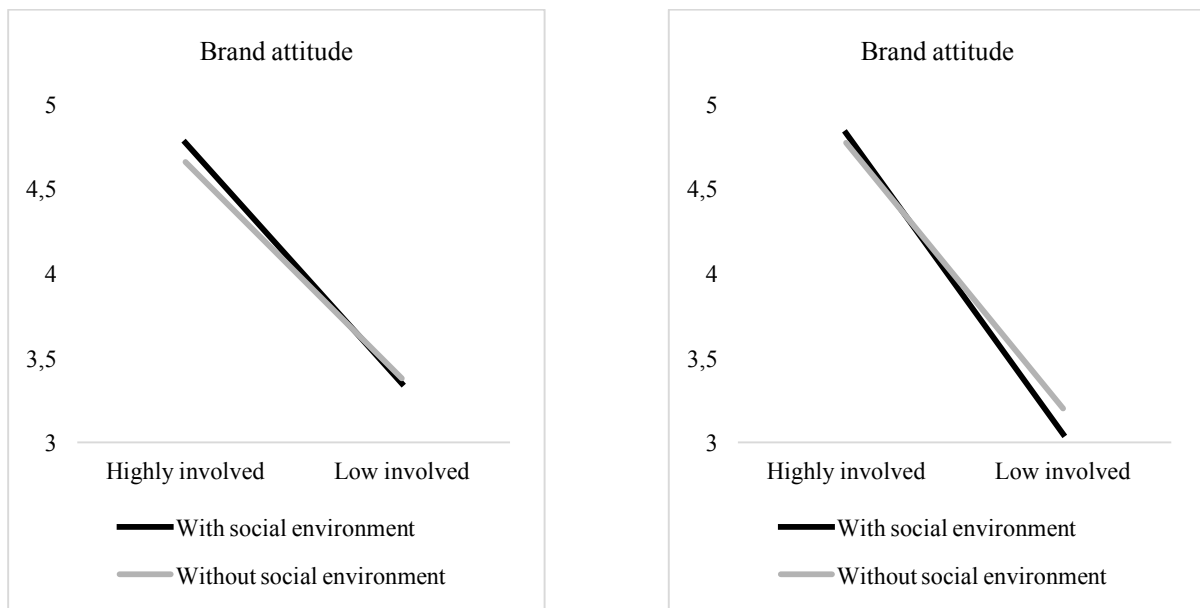


Figure 7 and 8. Means of *brand attitude* by *social environment* and *brand involvement*, per source (Social Network article left; newspaper article right).

As partial eta-squared for *brand involvement* was $\eta_p^2 = .41$, thus a very high effect size on the range from .02 (small effect size) over .13 (medium effect size) to .26 and higher (large effect

size) (Cohen, 1977), and for *source* ($\eta_p^2 < .01$), as well as for the interaction term *source* and *brand involvement* nearly no effect size was found ($\eta_p^2 = .01$), it is likely that *brand involvement* distorted the interaction results. The same applies to the interaction term of *social environment* and *brand involvement*: partial eta-squared for *social environment* was $\eta_p^2 < .01$, thus no effect size. The three-way interaction term of *source*, *social environment* and *brand involvement* revealed a partial eta-squared of $\eta_p^2 = .41$. In all interactions, *brand involvement* had a large effect size and all other factors (*source* and *social environment*) did not even have a small effect size. Therefore, it can be assumed that the factor *brand involvement* is responsible for the significant effect of these interaction terms.

These results contradict hypothesis H8, as a moderating effect of *social environment* is not possible without the expected main effect of *source* on *brand attitude*. Next to that, hypothesis H6 is rejected, although the ANOVA revealed a significant interaction effect of *source* and *brand involvement*. But as partial eta-squared showed that the large effect size of *brand involvement* is responsible for this significant effect, the hypothesized moderating role of *brand involvement* on the *source-brand attitude* link has to be rejected.

Mediation effects

The mediation analysis of Baron and Kenny (1986) was used for testing mediation effects. The mediation analysis assumes that one variable affects a second variable and the second variable affects a third variable. In the proposed research model, the mediators *forgiveness* (M1) and *brand hate* (M1) mediate the relationship between the predictor *source* (X) and the outcome *brand attitude* (Y). The mediation analysis of Baron and Kenny (1986) consists of four steps. Significance is examined using analysis of variance.

In the first step, a multivariate general linear model was conducted to test the direct effect of the *source* on *brand attitude*, ignoring the mediators *forgiveness* and *brand hate*. Table 7 shows that *source* has no significant effect on *brand attitude* ($B = 0.13, p = .20$).

Actually, step one is essential for a mediation effect. Nevertheless, Shrout and Bolger (2002) argue, that one may still have grounds to move to step two. Sometimes there is actually a significant relationship between independent and dependent variables but because of extraneous factors, there could not be enough power to predict the effect that actually exists (Shrout & Bolger, 2002).

In the second step, again a multivariate general linear model was conducted to test whether *source* positively influences *forgiveness* and/or *brand hate*. Table 7 shows that *source* is not a significant predictor of *forgiveness* ($B = 0.12$, $p = .28$). The same applies to the second expected mediator: *source* is not a significant predictor of *brand hate* ($B = 0.00$, $p = .97$) (see table 7).

Table 7

Summary general linear model source.

Independent variable	Dependent variable	Df/Error	F	Sig.	B	t
Source	Brand attitude	1/409	1.68	.20	0.13	1.30
Source	Forgiveness	1/409	1.17	.28	0.12	1.08
Source	Brand hate	1/409	0.00	.97	0.00	0.04

As mediation analysis of Baron and Kenny (1986) says that if no direct effect of the predictor on the dependent variable, and no effect of the predictor on the expected mediators could be found, there is no mediation effect. Thus, mediation analysis revealed that there is no direct effect of *source* on *brand attitude* and there is no effect of *source* on *forgiveness* and/or *brand hate*. Therefore, there is no mediation effect between the predictor *source* (X), the expected mediators *forgiveness* (M1) and/or *brand hate* (M2), and the outcome *brand attitude* (Y). These results contradict hypotheses H2, H3, H4, H5 and H7.

Hypotheses

The following hypotheses were rejected: hypothesis H1 was rejected: no significant effect of *source* on *brand attitude* was obtained. Hypothesis H8 was rejected, too. As *source* has no direct effect on *brand attitude*, *social environment* cannot moderate this effect. Hypothesis H6 was also rejected, although the interaction term of *source* and *brand involvement* was significant. However, *source* was found to have nearly no effect size on *brand attitude*, contradicting to *brand involvement* with a very large effect size. Therefore, it was concluded that the significant effect of the interaction term was based on *brand involvements* very large effect size, which makes the hypothesis untenable.

Hypothesis H4 was rejected as there seems to be no evidence for a mediation of an effect of *source* via *forgiveness* on *brand attitude*. Hypothesis H7 was rejected for the same

reason: as there seems to be no evidence for a mediation of an effect of *source* via a mediation through *forgiveness* on *brand attitude*, *forgiveness* cannot be moderated through *brand involvement*.

As there seems to be no evidence for a mediation of an effect of *source* on *brand attitude* via *brand hate*, hypothesis H5 was rejected. Hypothesis H2 was rejected for the same reason: as there seems to be no evidence for a mediation of an effect of *source* on *brand attitude* through *brand hate*, *forgiveness* cannot moderate the expected effect of *source* on *brand hate*. The same applies to hypothesis H3: as there seems to be no evidence for a mediation of an effect of *source* on *brand attitude* through *brand hate*, *forgiveness* cannot moderate the expected effect of *brand hate* on *brand attitude*. Table 8 lists all hypotheses and their decisions.

Table 8

Hypotheses and their decisions.

	Wording	Decision
H1.	<i>Source</i> influences <i>brand attitude</i> .	Rejected
H2.	<i>Forgiveness</i> moderates the effect of <i>source</i> on <i>brand hate</i> .	Rejected
H3.	<i>Forgiveness</i> moderates the effect of <i>brand hate</i> on <i>brand attitude</i> .	Rejected
H4.	<i>Forgiveness</i> mediates the effect of <i>source</i> on <i>brand attitude</i> .	Rejected
H5.	<i>Brand hate</i> mediates the effect of <i>source</i> on <i>brand attitude</i> .	Rejected
H6.	<i>Brand involvement</i> moderates the effect of <i>source</i> on <i>brand attitude</i> .	Rejected
H7.	<i>Brand involvement</i> moderates <i>forgiveness</i> .	Rejected
H8.	<i>Social environment</i> moderates the effect of <i>source</i> on <i>brand attitude</i> .	Rejected

Post-hoc analyses

Source credibility

As it was expected that source credibility had an important role for the effectiveness of an OFS on *brand attitude*, a one-way between groups analysis of variance was used to investigate the impact that source credibility had on the participants' attitude towards the brand.

The ANOVA was not statistically significant, indicating that the participants' *brand attitude* was not influenced by the source credibility ($F_{(1; 409)} = 0.27$; $p = .60$), $\eta^2 < .01$.

Brand involvement

As brand involvement was the only factor within the research model that had significant effect on *brand attitude*, one-way between groups analysis of variance was used to investigate the impact that *brand involvement* had on the participants' *forgiveness* of the brand's failure and on *brand hate*.

The ANOVA for *forgiveness* was statistically significant, indicating that the participants' *forgiveness* of the brand's failure was influenced by their involvement with the brand ($F_{(1; 409)} = 60.38$; $p < .05$), $\eta^2 = .13$. Participants with higher *brand involvement* ($M = 4.55$, $SD = 1.06$) scored higher on *forgiveness* than participants with lower *brand involvement* ($M = 3.76$, $SD = 1.00$). The global average *forgiveness* score was $M = 4.16$, $SD = 1.10$. That indicates that participants' *forgiveness* was influenced by their involvement with the brand.

The ANOVA for *brand hate* was also statistically significant, indicating that the participants' *brand hate* based on the brand's failure was influenced by their involvement with the brand ($F_{(1; 409)} = 104.48$; $p < .05$), $\eta^2 = .20$. Participants with lower *brand involvement* ($M = 2.82$, $SD = 0.92$) scored higher on *brand hate* than participants with higher *brand involvement* ($M = 1.98$, $SD = 0.74$). That indicates that participants' *brand hate* was influenced by their involvement with the brand.

The role of severity: opportunities for a better model fit

To find out the role of how severe participants perceive the brand's failure in the given stimulus, severity was measured. Participants were grouped into high and low severity, split by the median score ($Median = 5.00$). A one-way between groups analysis of variance was used to investigate the impact that severity had on the participants' attitude towards the brand. It was found that severity has a statistically significant main effect on the dependent variable *brand attitude* ($F_{(1; 409)} = 43.49$; $p < .001$), with a medium effect size ($\eta^2 = .13$), with participants perceiving high severity scoring lower on *brand attitude* ($M = 3.79$, $SD = 1.17$), and participants perceiving low severity scoring higher on *brand attitude* ($M = 4.41$, $SD = 1.12$). That indicates that participants' *brand attitude* was influenced by their perceived severity of the brand's failure.

Second mediation analysis: Severity as IV

As severity seems to be the only variable (next to *brand involvement*) that has statistically significant main effect, a second mediation analysis according to Baron and Kenny (1986)

was used for testing mediation effects with severity replacing *source* within the research model. Therefore, *forgiveness* (M1) and *brand hate* (M2) would mediate the relationship between the predictor severity (X) and the outcome *brand attitude* (Y).

In the first step, a multivariate general linear model was conducted to test the direct effect of the *severity* on *brand attitude*, ignoring the mediators *forgiveness* and *brand hate*. Table 9 shows that severity has significant negative effect on *brand attitude* ($B = -0.62$, $p < .001$). Thus, severity has a significant direct effect on *brand attitude*, with participants perceiving high severity scoring lower on *brand attitude*, and participants perceiving low severity scoring higher on *brand attitude*.

Table 9

Summary general linear model severity on brand attitude.

Dependent variable	Df/Error	F	Sig.	B	t
Brand attitude	1/409	28.05	.00*	-0.62	-5.30

Note: * $p = < .001$

In the second step, simple linear regression was conducted to test whether the severity positively influences *forgiveness* and/or *brand hate*. Table 10 shows that severity is a significant predictor with negatively influencing *forgiveness* ($B = -8.76$, $p < .001$) and positively influencing *brand hate* ($B = 0.50$, $p < .001$). In total, severity explains 15% of the variance of *forgiveness*, and 7% of the variance of *brand hate*.

Table 10

Summary linear regression severity on forgiveness and brand hate.

Dependent variable	B	t	Sig.
Forgiveness	-8.76	-8.39	.00*
Brand hate	0.50	2.36	.00*

Note: * $p = < .001$

Step 3 tests whether the mediators *forgiveness* and *brand hate* are positively influencing the *brand attitude*. The results in table 11 show the outcome of two simple linear regressions. They indicate that *forgiveness* positively influences *brand attitude* ($B = 0.48$, $p < .001$), and *brand hate* negatively influences *brand attitude* ($B = -0.67$, $p < .001$). In total, *forgiveness* explains 20% of the variance of *brand attitude*, while *brand hate* explains 28% of it.

Table 11

Summary linear regression forgiveness and brand hate on brand attitude.

Dependent variable	Parameter	B	t	Sig.
Brand attitude	Forgiveness	0.48	10.00	.00*
	Brand hate	-0.67	-12.47	.00*

Note: * $p < .001$

The last step tests the whole research model all together, as shown in figure 1, but with severity replacing *source*. The model has been tested using a univariate general linear model. It shows that *forgiveness* is still highly significant on *brand attitude* ($B = 0.27, p < .001$). In addition, *brand hate* is still highly significant on *brand attitude* ($B = -0.52, p < .001$) (see table 12). The mediation analysis therefore shows that *forgiveness* and *brand hate* are likely to fully mediate the relationship between severity and *brand attitude*.

Regression analysis with bootstrapping (Efron, 1979) was conducted to further test this full mediation effect. Therefore, regression analysis was used to investigate whether *forgiveness* and *brand hate* mediate the effect between severity and *brand attitude*. Results indicated that severity was a significant predictor of *forgiveness* ($B = -0.87, SE = .10, p < .001$), as well as a significant predictor of *brand hate* ($B = 0.49, SE = .09, p < .001$). Moreover, *forgiveness* ($B = 0.27, SE = .05, p < .001$), and *brand hate* ($B = -0.52, SE = .06, p < .001$) were significant predictors of *brand attitude*. These results support the mediational effects. Severity was no longer a significant predictor of *brand attitude* after controlling for the mediators, consistent with full mediations. Approximately 34% of the variance in *brand attitude* was accounted for by the mediators ($R^2 = .338$).

Table 12

Summary general linear model forgiveness and brand hate on brand attitude.

Dependent variable	Parameter	Df/Error	F	Sig.	B	t
Brand attitude	Severity	1/407	1.47	.23	-0.13	-1.21
	Forgiveness	1/407	28.83	.00*	0.27	5.37
	Brand hate	1/407		.00*	-0.52	-9.03

Note: * $p < .001$

As all these findings seem to indicate, severity could possibly be a better choice as independent variable for the current research model. Its main effect and the mediation effects would be significant if severity was the independent variable instead of *source*.

Discussion

The paper at hand attempted to find what impact OFS have on *brand attitude* and which variables serve best to explain how the OFS translates into bad *brand attitude*. The findings suggest that the proposed model does not explain the effects of an OFS on *brand attitude* well. The *social environment* during an OFS seemed to have altered the perception of severity of the crisis, while the *source* alters the source credibility. However, no effects of the model could be solidly supported by the findings, shedding doubt on the contextual fit of the model.

All hypotheses of the current research were rejected. As all hypotheses concerning the variable *source* were rejected, it seems likely that *source* is not the best predictor of *brand attitude*. Therefore, contradicting to prior expectations, the *source* does not seem to play a significant role in the effect of an OFS on *brand attitude*.

The chosen analysis could have been too small to be detected as interaction effects within the multiple ANOVAs. Thus, the variable *source* does not seem to be the best predictor for all other variables within the current research model. However, it was found that *brand involvement* is one of the strongest predictors of *brand attitude*. No matter with which *source* an OFS was distributed or whether *social environment* was given or not, the involvement with a brand always had a significant effect on *brand attitude*. The findings also suggest, that severity is better suitable for the position of the independent variable, as it is a significant predictor (with medium effect size) of *brand attitude*. Even more important, *forgiveness* and *brand hate* seem to mediate the effect of the predictor severity on the outcome *brand attitude*, with approximately 33% of the variance in *brand attitude* accounting by the mediators.

In the same vein, with severity as independent variable, hypotheses H1, H4, H5 and H7 would be supported. Therefore, severity seems to be the better alternative to *source* as independent variable. Structural-Equation Modelling (SEM) could give further advice on how to use these findings for a better fitting model (Klem, Grimm, & Yarnold, 2000). As the research model is not supported by the present findings, SEM may help to find a better fitting model, possibly with severity as independent variable, as the findings of the regression analysis hint at.

As severity might be the better alternative as independent variable instead of *source*, the following paragraph gives reasoning and solution proposals for a better fitting model that

attempts to answer the research question and its sub questions with severity substituting *source* (see figure 9).

The findings of the current research let us assume, that the severity of an OFS seems to be a relevant predictor of *brand attitude*. Therefore, not the *source* or the source credibility of an OFS seems to be the important factor, but the perceived severity of the brand's failure. In this context, *social environment* could have played an important role as it has significant effect on severity. However, *social environment* seems to be no direct predictor of *brand attitude*. *Forgiveness* and *brand hate* mediate the effect between severity and *brand attitude*, which means that people who perceive low severity of a brand's failure seem to rather forgive this failure. On the other hand, people who perceive a failure as more severe seem to score higher on *brand hate*. However, a direct effect of the *source* and its source credibility on *brand attitude* seem to be non-existent.

Furthermore, findings indicate that *forgiveness* and *brand hate* have significant influence on *brand attitude*. As expected within the theory, people that forgive a brand's failure seem to score higher on *brand attitude* than the ones that do not forgive the failure. The same is mirrored in the negative: people with more *brand hate* seem to score lower on *brand attitude* than people with less *brand hate*.

As *brand involvement* was a relevant predictor of *forgiveness* and *brand hate*, its relevance is one more time evidenced. The involvement that participants have with a brand seems to be of great importance on their decision-making process as already expected within the theoretical background. These findings were expected, as Cognitive Dissonance Theory forecast them (Chapanis, Chapanis, & Helson, 1964): people react more benevolently to a brand's OFS they are highly involved with. Thus, if people are confronted with negative news pertaining to a brand they are highly involved with, they seem to avoid cognitive dissonance through rather forgive the brand's failure, independent from the *source* they got the information from. Otherwise, if people are low involved with a brand, the *source* seems to play an important role, as newspapers lead to a more negative score on *brand attitude* than Social Network articles. This also matches with the following: if people are low involved with a brand, *brand involvement* positively influences *brand hate*.

Furthermore, *social environment* has significant effects in interaction with *brand involvement*: *social environment* had a significant negative impact on the *brand attitude* score among low involved participants, whereas for highly involved participants the presence of

social environment led to an even higher score on *brand attitude*. This lets us assume that an OFS decreases the attitudes towards a brand among low involved consumers, whereas it can have a positive effect on the attitudes towards a brand among highly involved consumers. This was also expected, based on Cognitive Dissonance Theory (Chapanis, Chapanis, & Helson, 1964) with reducing one's dissonance through ignoring or denying any information that conflicts with existing beliefs (“*I always said that I like this brand. I will not change my attitude/behaviour in order to not lose my face.*”) and even enforcing the consumer's will to support a brand if it is blamed by others by justifying behaviour or cognition by changing the conflicting cognition (“*Every brand makes mistakes.*”).

Moreover, the *source* still plays an important part: the interaction of *social environment* and *brand involvement* is influenced by the *source*. Among highly involved participants, *social environment* had a positive impact on the *brand attitude* score – but this impact was higher within the Social Network article condition. Among low involved participants, *social environment* had a negative impact on the *brand attitude* score, with a higher negative impact within the newspaper article condition. Therefore, Social Network article's impact is higher when leading to positive scores on *brand attitude* (among highly involved participants) and newspaper article's impact is higher when leading to negative scores on *brand attitude* (among low involved participants). As this effect is most likely based on the high effect size of *brand involvement*, these findings could be misleading.

This reasoning led to the model given in figure 9. It suggests, that severity functions as the only independent variable. The role of *source* and *social environment* will be minimized to a low level as they are influenced by function as an influencer on *brand involvement*, but have no direct effect on *brand attitude*. In turn, *brand involvement* functions as a strong moderator on *forgiveness* and *brand hate*. All other variables persist as they indicated their effect on *brand attitude*.

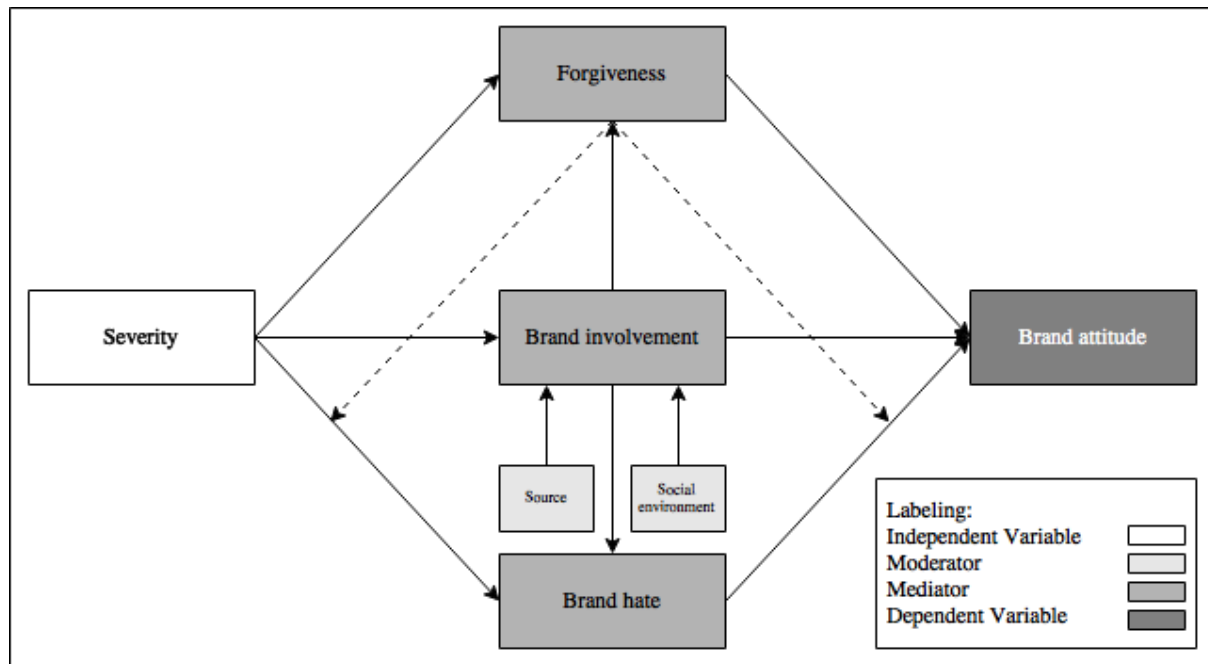


Figure 9. *Conceptual model for future research.*

It seems that a consolidated brand such as Heinz Ketchup is not easy to manipulate. Trust in its products seems to be too high to change people's attitude towards such a brand. Even though severity contributes the hypothesis that the severity of a brand's failure is of great importance for a change in attitude towards a brand, this effect was only medium sized. Therefore, it is assumed that the Double Jeopardy phenomenon (Kucuk, 2008) also applies to OFS: the bigger and (especially) the stronger a brand, the less it has to fear the consequences of an OFS – of course always dependent of the severity of the brand's failure. Here, *brand involvement* seems to be the match-winning variable, as it has significant influence on *forgiveness*, *brand hate* and – last but not least – a strong direct effect on *brand attitude*. Therefore, severity might be the best fitting independent variable, but *brand involvement* as a mediator is the crucial variable. It may be that a smaller and weaker brand, that gets involved in an OFS, may receive significantly more substantial damage than more well-known brands.

Future research could concentrate on two important issues: the role of severity and the role of a brand's strength – expressed in *brand involvement* – in the context of OFS.

Severity seems to be an important factor to describe *brand attitude* – especially through a mediation of *brand involvement*, *forgiveness* and *brand hate*. Future research could deepen this assumption to enlighten the role of severity for the impact of an OFS. Next to

that, the strength of a brand seems to be decisive for the effectiveness of an OFS on the attitude towards a brand. Therefore, future research could concentrate on differences in OFS for known and unknown brands. It seems interesting to measure the consequences of an OFS on the *brand attitude* of a relatively new and well-known brand that is in the main phase of building up its brand image and win consumers' involvement and trust, compared to an older, also well-known brand like Heinz Ketchup that already won consumers' involvement and trust and which customers are already aware of its products' quality.

Therefore, Firestorms, whether online or offline, seem to be a complex and diverse phenomenon that needs to be further researched in the future. This study made up some suggestions that future studies can pick up and research in detail to find more specific conclusions. The challenge will be to use a restructured research model and a greater sample size to get more accurate findings. Next to that, the sample of this study was taken in an online questionnaire. The effects of a newspaper article, that is shown on a computer screen, and not on a tangible newspaper, are unknown and were not measureable within the current study. It is advised, that future research, that also concentrates on the differences of Firestorms in on- and offline environments, uses laboratory sampling methods to strengthen the source conditions' comparability. Moreover, severity was found to be a significant influencer on most constructs. If severity is used as independent variable in future research, the stimuli should consist of cases with high and low severity to better measure the impact of this construct.

Conclusion

OFS still are a new and relatively unknown phenomenon in today's increasingly connected world. Former research concentrated on the management of crises that are related to OFS or tried to define the construct "Firestorms" for a better understanding. The current study tried to focus on the most relevant constructs that contribute to a OFS impact on consumers' attitude towards a brand. Furthermore, it was studied whether OFS can also appear in offline traditional media. Moreover, the differences between purely negative news and an OFS were studied to find out whether the impact of an OFS is more intense than the one of bad news. With the help of four stimuli (Social Network vs. newspaper, with and without comments of others) and the categorisation of participants into two groups of *brand involvement* (high vs. low), eight conditions were compared to get an overview of the most relevant influencers on *brand attitude*. *Forgiveness* and *brand hate* were seen as important mediating variables

between the *source* and *brand attitude*. However, it was found that the initial assumption was not applicable: the *source* plays a subordinate role for the effects of an OFS on *brand attitude*. Moreover, the participation of others (*social environment*) has only under certain conditions influence on the impact of an OFS. However, *brand involvement* plays an outstanding role, as it defines whether the *source* and *social environment* are of influence. Unexpectedly, the severity of a brand's failure within an OFS seems to play the directing role for its impact on *brand attitude*. Therefore, *source* and *social environment* are influencers that have to be recognized, but that are not determinative. Contrasting, *severity* and *brand involvement* are highly relevant constructs that have to be considered when studying the impact of an OFS on the attitude towards a brand. Next to that, it was concluded that strong and long lasting brands' attitude is less affected by OFS, based on two points. First, they have a long-lasting and strong image in consumers' awareness that cannot be changed over short time. As an OFS is a short lasting phenomenon, it has nearly no effect for such brands. Secondly, strong brands have more highly involved consumers than less strong brands (Double Jeopardy Phenomenon (Kucuk, 2008)). Their involvement with a brand makes it difficult for OFS to change attitudes towards it. Actually, an OFS can even have a positive effect on *brand attitude* among highly involved consumers as they feel the need to protect their brand by ignoring, denying or downplaying a brand's failure (Cognitive Dissonance Theory (Chapanis, Chapanis, & Helson, 1964)).

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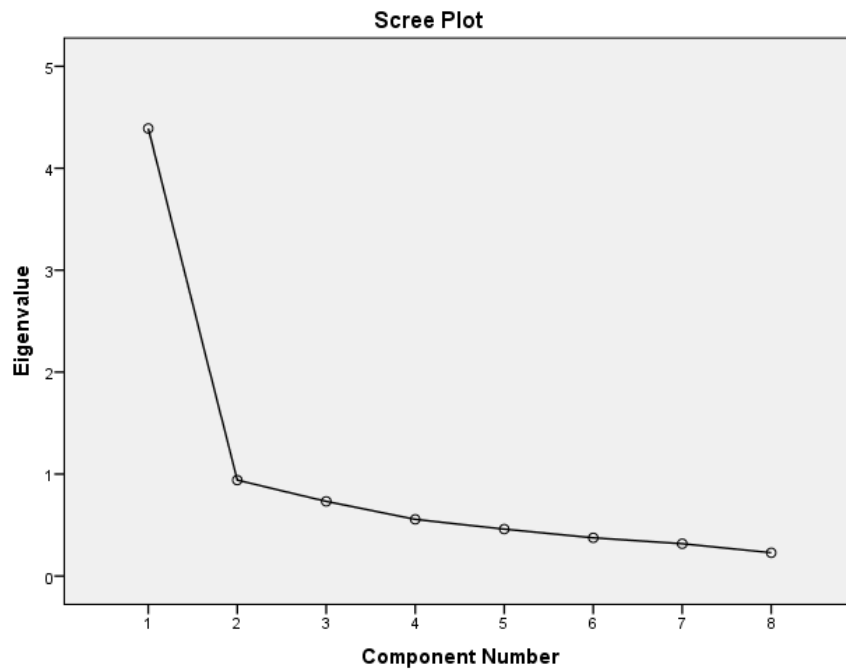
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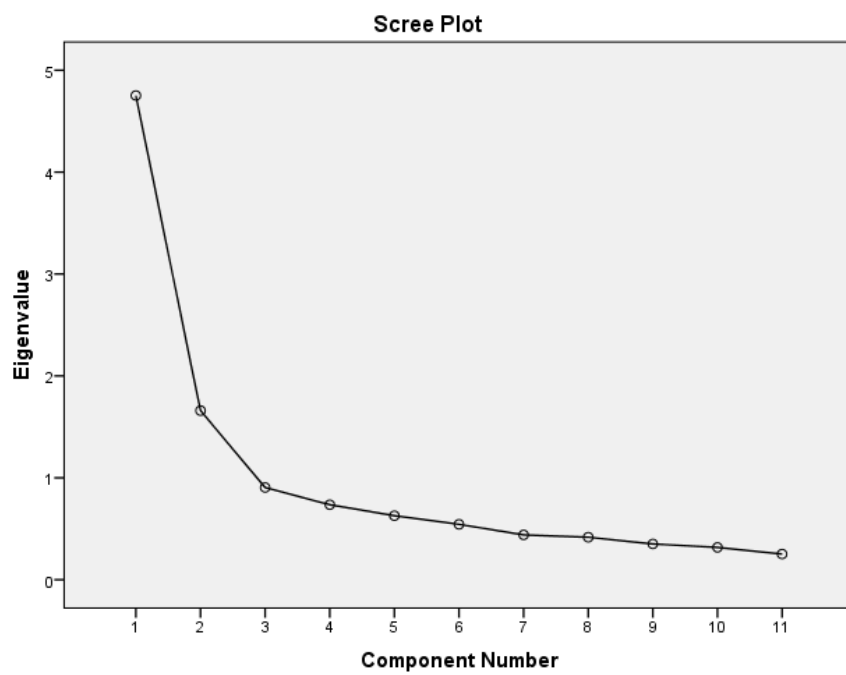
Appendix

Appendix A: factor analyses

Factor analysis brand attitude



Factor analysis brand hate



Appendix B

Manipulation material and online questionnaire

German version

Intro: *Welcome. Liebe/r Teilnehmer/in,*

danke, dass Sie an dieser Umfrage teilnehmen möchten. Diese Umfrage ist Teil einer Masterthese an der University of Twente, Niederlande.

Die These beschäftigt sich mit dem Themen Markenwahrnehmung und wie Menschen zukünftig auf bestimmte Marken reagieren werden. Dafür wird Ihre Hilfe benötigt.

Alle Daten werden anonym verarbeitet und ausgewertet. Wenn Sie an den Ergebnissen der Umfrage interessiert sind, so können Sie dies dem Studienleiter am Ende der Umfrage mitteilen.

Klicken Sie zum Start bitte unten rechts auf den ">>"-Knopf.

Vielen Dank für Ihre Teilnahme. Auf geht's!

Lukas Steiniger
l.steiniger@student.utwente.nl

Marketing Communication Studies
University of Twente
The Netherlands

Preparatio.
Toll, dass Sie dabei sind!

Auf der nächsten Seite werden Sie einen Artikel aus einem bekannten Medium sehen. Daraufhin werden Sie gebeten, einige Fragen zur im Artikel genannten Marke zu beantworten.

Schauen Sie sich bitte darum den Artikel in Ruhe an und beantworten Sie dann die Fragen. Diese sollten Sie aus dem Bauch heraus beantworten, ohne zu viel darüber nachzudenken.

Keine Sorgen, es geht nicht ums Auswendiglernen und es gibt keine falschen Antworten.

An mobile Nutzer: Es empfiehlt sich zur besseren Lesbarkeit des Artikels, das Handy auf der nächsten Seite **quer** zu halten.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

One out of four stimuli was shown:

Social Media
with social
environment:

facebook

SZ

Süddeutsche Zeitung

14 Minuten · 🌐

Verschleierte Preiserhöhung: Verpackungstricks ärgern Verbraucher

Hamburg. Bei der sogenannten Kopfsteher-Squeezeflasche seines Curry Ketchups hat Hersteller Heinz die Füllmenge von 500 auf 400 Milliliter reduziert. Der Preis stieg daraufhin, beispielsweise bei Rewe, sogar leicht, sodass unter dem Strich eine versteckte Preiserhöhung von bis zu 28 Prozent zu Buche schlug. Aber nicht nur Heinz Curry Ketchup, sondern die ganze Palette der diversen Kopfsteherflaschen von Heinz wurde kleiner, darunter auch das normale Tomato Ketchup und die „Light“-Variante, bei der als einzige Sorte nach Angaben von Heinz auch die Rezeptur verändert wurde.

Nur wenige Monate nach der Einführung der neuen „Schrumpfflasche“ bot Heinz seine Kopfsteherflasche mit dem Etikett „+25 % gratis“ an, die wieder 500 Milliliter Ketchup beinhaltete. So werden Verbraucher an der Nase herumgeführt.



 Gefällt mir

 Kommentieren

 Teilen

**Christian Tipper** Einfach unglaublich was sich die deutsche Lebensmittelindustrie raus nimmt! Und wir Verbraucher werden einmal mehr über den Tisch gezogen. Ich gebe zu, mir selbst wäre es ohne diesen Hinweis nicht einmal aufgefallen, man kann ja schlecht jeden Tag alle Produkte bei allen Händlern auf Veränderungen kontrollieren. Umso mehr bin ich dankbar, dass es anscheinend noch aufmerksame Menschen gibt, die die großen Firmen unter Druck setzen.

**Annemarie Schulte** Wie kann man als eine derart große Firma tatsächlich glauben, dass niemand so etwas bemerkt? Ich meine, in der heutigen Zeit braucht es doch nur eine einzige Person, der diese Maßnahme auffällt, die gibt es dann an eine große Zeitung weiter oder postet es auf Facebook und schon sind alle informiert. Ist mir absolut schleierhaft wie man derart weltfremd sein kann, um tatsächlich zu denken, dass niemand die versteckte Preiserhöhung bemerkt.

**Laura Schönlauf** Das ist nicht das einzige! Erst vor zwei Jahre meine ich wurde berichtet, dass Würmer in den Ketchup-Flaschen gefunden wurden. Die machen also nicht nur die Flaschen kleiner, sondern stecken auch noch Würmer in ihre Produkte. Und nennen sich dann „Marken-Produkt“. Lächerlich.

**Paul Glöcker** Das ist echt die Höhe! Sicher kaufe ich nichts mehr von Heinz, auch die anderen Produkte nicht, egal ob dort auch getrickst wurde oder nicht. Wer die Kunden einmal so hintergeht, macht es wieder. Und noch nicht einmal eine vernünftige Entschuldigung kriegen sie über die Lippen, geschweige denn das ganze rückgängig zu machen. Totaler Schwachsinn! Denen glaubt doch jetzt niemand mehr, mich eingeschlossen.

1.231 weitere Kommentare anzeigen

Q35.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

63

facebook

**Süddeutsche Zeitung**
14 Minuten · 

Verschleierte Preiserhöhung: Verpackungstricks ärgern Verbraucher

Hamburg. Bei der sogenannten Kopfsteher-Squeezeflasche seines Curry Ketchups hat Hersteller Heinz die Füllmenge von 500 auf 400 Milliliter reduziert. Der Preis stieg daraufhin, beispielsweise bei Rewe, sogar leicht, sodass unter dem Strich eine versteckte Preiserhöhung von bis zu 28 Prozent zu Buche schlug. Aber nicht nur Heinz Curry Ketchup, sondern die ganze Palette der diversen Kopfsteherflaschen von Heinz wurde kleiner, darunter auch das normale Tomato Ketchup und die „Light“-Variante, bei der als einzige Sorte nach Angaben von Heinz auch die Rezeptur verändert wurde.

Nur wenige Monate nach der Einführung der neuen „Schrumpfflasche“ bot Heinz seine Kopfsteherflasche mit dem Etikett „+25 % gratis“ an, die wieder 500 Milliliter Ketchup beinhaltete. So werden Verbraucher an der Nase herumgeführt.



 **Gefällt mir**  **Kommentieren**  **Teilen**

Q36.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Q37.

Süddeutsche Zeitung

MÜNCHNER NEUESTE NACHRICHTEN AUS POLITIK, KULTUR, WIRTSCHAFT UND SPORT

WWW.SÜDDEUTSCHE.DE

HMG

MÜNCHEN, MONTAG, 3. SEPTEMBER

68. JAHRGANG / 36. WOCHEN / NR. 203 / 2,20 EURO

Gestern berichteten wir:

Verschleierte Preiserhöhung: Verpackungstricks ärgern Verbraucher

Hamburg. Bei der sogenannten Kopfsteher-Squeeze-Flasche seines Curry Ketchups hat Hersteller Heinz die Füllmenge von 500 auf 400 Milliliter reduziert. Der Preis stieg daraufhin, beispielsweise bei Rewe, sogar leicht, sodass unter dem Strich eine versteckte Preiserhöhung von bis zu 28 Prozent zu Buche schlug. Aber nicht nur Heinz Curry Ketchup, sondern die ganze Palette der diversen Kopfsteherflaschen von Heinz wurde kleiner, darunter auch das normale Tomato Ketchup und die „Light“-Variante, bei der als einzige Sorte nach Angaben von Heinz auch die Rezeptur verändert wurde.

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Auszug aus 1.235 Leserkomentaren zum Thema „Verschleierte Preiserhöhung“:

Einfach unglaublich was sich die deutsche Lebensmittelindustrie raus nimmt! Und wir Verbraucher werden einmal mehr über den Tisch gezogen. Ich gebe zu, mir selbst wäre es ohne diesen Hinweis nicht einmal aufgefallen, man kann ja schlecht jeden Tag alle Produkte bei allen Händlern auf Veränderungen kontrollieren. Umso mehr bin ich dankbar, dass es anscheinend noch aufmerksame Menschen gibt, die die großen Firmen unter Druck setzen.

Christian Tipper

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Paul Glöcker

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Q38.

MÜNCHNER NEUESTE NACHRICHTEN AUS POLITIK, KULTUR, WIRTSCHAFT UND SPORT

68. JAHRGANG / 36. WOCHEN / NR. 203 / 2,20 EURO

[illegible]

Bitte geben Sie hier an, wie Sie die Quelle der Information über "Heinz Ketchup" bewerten.

Unglaublich	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Glaubwürdig
Intellektuell	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dumm
Inkompetent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Kompetent
Qualifiziert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unqualifiziert
Unsachkundig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sachkundig

Brand
involv.:

1.

Unwichtig

Wichtig

2.

Habe ich keinen Bezug zu

Habe ich einen Bezug zu

3.

Bedeutet mir nichts

Bedeutet mir viel

4.

Nutzlos

Nützlich

5.

Überflüssig

Lebenswichtig

6.

Egal

Nicht egal

7.

Uninteressant

Interessant

8.

Unwichtig

Wichtig

9.

Langweilig

Interessant

10.

Nicht ansprechend

Ansprechend

11.

Unerwünscht

Wünschenswert

Demogr
aphics:

Outro. Toll, dass Sie an der Umfrage teilgenommen haben. Zum Schluss werden Sie gebeten, einige kurze Informationen zu Ihrer Person anzugeben. Alles wird selbstverständlich anonym und vertraulich behandelt.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Sex. Bitte geben Sie Ihr Geschlecht an.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Age. Bitte geben Sie hier Ihr Alter an.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Education. Welche ist Ihre höchste abgeschlossene Bildungsform?

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Social
Media
usage +
credibility:

Geben Sie auf dieser Skala bitte an, wie häufig Sie Soziale Netzwerke (Facebook, Instagram, Twitter, Snapchat, etc.) nutzen.

Nie

Selten

Manchmal

Oft

Täglich

Ich nutze Soziale Netzwerke...

Wie schätzen Sie die Vertrauenswürdigkeit von Facebook ein?

Stimme überhaupt nicht zu

Stimme nicht zu

Stimme teilweise nicht zu

Weder noch

Stimme teilweise zu

Stimme zu

Stimme voll zu

Sehr vertrauenswürdig.

Gar nicht vertrauenswürdig.

Vielem kann man vertrauen.

☐☐☐☐☐☐☐

Geben Sie hier bitte an, wie häufig Sie Tageszeitungen (Süddeutsche Zeitung, WAZ, Die Welt, etc.) lesen.

Nie

Selten

Manchmal

Oft

Täglich

Ich lese Tageszeitungen...

☐☐☐☐☐

Wie schätzen Sie die Vertrauenswürdigkeit der Süddeutschen Zeitung ein?

Stimme überhaupt
nicht zu

Stimme nicht zu

Stimme teilweise
nicht zu

Weder noch

Stimme teilweise
zu

Stimme zu

Stimme voll zu

Sehr vertrauenswürdig.

☐☐☐☐☐☐☐

Gar nicht vertrauenswürdig.

☐☐☐☐☐☐☐

Vielem kann man vertrauen.

☐☐☐☐☐☐☐

Manipulation material and online questionnaire

English version

Intro:

Dear participant,

Thank you for participating in this research. This study is part of a Master Thesis at University of Twente, the Netherlands.

The Thesis is about the topics brand awareness and how people will react on distinctive brands in the future. Therefore, we need your help.

All data will be collected and processed anonymously. If you are interested in the results of this study, you can ask the researcher for that at the end of the questionnaire.

Please click on ">>" to start the questionnaire.

Thank you for your participation. Let's go!

Lukas Steiniger
lsteiniger@student.utwente.nl
University of Twente
The Netherlands

Preparation:

Great that you're in!

On the next page, you will see an article out of a well-known media. After that, you will be asked to answer some questions that refer to the brand, which is mentioned in the article.

Therefore, please read the article carefully, then answer the questions. You should answer the questions outright, without hardly thinking about it.

No worries, it's not about memorizing and there are no wrong answers.

For mobile users only: For a better reading experience, please hold your smartphone in landscape mode.

One out of four stimuli was shown:

Social Media
with social
environment:

facebook

**Süddeutsche Zeitung**
14 Minuten · 

Verschleierte Preiserhöhung: Verpackungstricks ärgern Verbraucher

Hamburg. Bei der sogenannten Kopfsteher-Squeezeflasche seines Curry Ketchups hat Hersteller Heinz die Füllmenge von 500 auf 400 Milliliter reduziert. Der Preis stieg daraufhin, beispielsweise bei Rewe, sogar leicht, sodass unter dem Strich eine versteckte Preiserhöhung von bis zu 28 Prozent zu Buche schlug. Aber nicht nur Heinz Curry Ketchup, sondern die ganze Palette der diversen Kopfsteherflaschen von Heinz wurde kleiner, darunter auch das normale Tomato Ketchup und die „Light“-Variante, bei der als einzige Sorte nach Angaben von Heinz auch die Rezeptur verändert wurde.

Nur wenige Monate nach der Einführung der neuen „Schrumpfflasche“ bot Heinz seine Kopfsteherflasche mit dem Etikett „+25 % gratis“ an, die wieder 500 Milliliter Ketchup beinhaltete. So werden Verbraucher an der Nase herumgeführt.



 Gefällt mir

 Kommentieren

 Teilen

**Christian Tipper** Einfach unglaublich was sich die deutsche Lebensmittelindustrie raus nimmt! Und wir Verbraucher werden einmal mehr über den Tisch gezogen. Ich gebe zu, mir selbst wäre es ohne diesen Hinweis nicht einmal aufgefallen, man kann ja schlecht jeden Tag alle Produkte bei allen Händlern auf Veränderungen kontrollieren. Umso mehr bin ich dankbar, dass es anscheinend noch aufmerksame Menschen gibt, die die großen Firmen unter Druck setzen.

**Annemarie Schulte** Wie kann man als eine derart große Firma tatsächlich glauben, dass niemand so etwas bemerkt? Ich meine, in der heutigen Zeit braucht es doch nur eine einzige Person, der diese Maßnahme auffällt, die gibt es dann an eine große Zeitung weiter oder postet es auf Facebook und schon sind alle informiert. Ist mir absolut schleierhaft wie man derart weltfremd sein kann, um tatsächlich zu denken, dass niemand die versteckte Preiserhöhung bemerkt.

**Laura Schönlauf** Das ist nicht das einzige! Erst vor zwei Jahre meine ich wurde berichtet, dass Würmer in den Ketchup-Flaschen gefunden wurden. Die machen also nicht nur die Flaschen kleiner, sondern stecken auch noch Würmer in ihre Produkte. Und nennen sich dann „Marken-Produkt“. Lächerlich.

**Paul Glöcker** Das ist echt die Höhe! Sicher kaufe ich nichts mehr von Heinz, auch die anderen Produkte nicht, egal ob dort auch getrickst wurde oder nicht. Wer die Kunden einmal so hintergeht, macht es wieder. Und noch nicht einmal eine vernünftige Entschuldigung kriegen sie über die Lippen, geschweige denn das ganze rückgängig zu machen. Totaler Schwachsinn! Denen glaubt doch jetzt niemand mehr, mich eingeschlossen.

1.231 weitere Kommentare anzeigen

Q35.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

facebook

**Süddeutsche Zeitung**
14 Minuten · 

Verschleierte Preiserhöhung: Verpackungstricks ärgern Verbraucher

Hamburg. Bei der sogenannten Kopfsteher-Squeezeflasche seines Curry Ketchups hat Hersteller Heinz die Füllmenge von 500 auf 400 Milliliter reduziert. Der Preis stieg daraufhin, beispielsweise bei Rewe, sogar leicht, sodass unter dem Strich eine versteckte Preiserhöhung von bis zu 28 Prozent zu Buche schlug. Aber nicht nur Heinz Curry Ketchup, sondern die ganze Palette der diversen Kopfsteherflaschen von Heinz wurde kleiner, darunter auch das normale Tomato Ketchup und die „Light“-Variante, bei der als einzige Sorte nach Angaben von Heinz auch die Rezeptur verändert wurde.

Nur wenige Monate nach der Einführung der neuen „Schrumpfflasche“ bot Heinz seine Kopfsteherflasche mit dem Etikett „+25 % gratis“ an, die wieder 500 Milliliter Ketchup beinhaltete. So werden Verbraucher an der Nase herumgeführt.



 **Gefällt mir**  **Komentieren**  **Teilen**

Q36.

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Q37.

Süddeutsche Zeitung

MÜNCHNER NEUESTE NACHRICHTEN AUS POLITIK, KULTUR, WIRTSCHAFT UND SPORT

WWW.SÜDDEUTSCHE.DE

HMG

MÜNCHEN, MONTAG, 3. SEPTEMBER

68. JAHRGANG / 36. WOCHEN NR. 203 / 2,20 EURO

Gestern berichteten wir:

Verschleierte Preiserhöhung: Verpackungstricks ärgern Verbraucher

Hamburg. Bei der sogenannten Kopfsteher-Squeeze-Flasche seines Curry Ketchups hat Hersteller Heinz die Füllmenge von 500 auf 400 Milliliter reduziert. Der Preis stieg daraufhin, beispielsweise bei Rewe, sogar leicht, sodass unter dem Strich eine versteckte Preiserhöhung von bis zu 28 Prozent zu Buche schlug. Aber nicht nur Heinz Curry Ketchup, sondern die ganze Palette der diversen Kopfsteherflaschen von Heinz wurde kleiner, darunter auch das normale Tomato Ketchup und die „Light“-Variante, bei der als einzige Sorte nach Angaben von Heinz auch die Rezeptur verändert wurde.

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Auszug aus 1.235 Leserkommentaren zum Thema „Verschleierte Preiserhöhung“:

Einfach unglaublich was sich die deutsche Lebensmittelindustrie raus nimmt! Und wir Verbraucher werden einmal mehr über den Tisch gezogen. Ich gebe zu, mir selbst wäre es ohne diesen Hinweis nicht einmal aufgefallen, man kann ja schlecht jeden Tag alle Produkte bei allen Händlern auf Veränderungen kontrollieren. Umso mehr bin ich dankbar, dass es anscheinend noch aufmerksame Menschen gibt, die die großen Firmen unter Druck setzen.

Christian Tipper

Das ist nicht das einzige! Erst vor zwei Jahre meine ich wurde berichtet, dass Würmer in den Ketchup-Flaschen gefunden wurden. Die machen also nicht nur die Flaschen kleiner, sondern stecken auch noch Würmer in ihre Produkte. Und nennen sich dann „Marken-Produkt“. Lächerlich.

Laura Schönlauf

Wie kann man als eine derart große Firma tatsächlich glauben, dass niemand so etwas bemerkt? Ich meine, in der heutigen Zeit braucht es doch nur eine einzige Person, der diese Maßnahme auffällt, die gibt es dann an eine große Zeitung weiter oder postet es auf Facebook und schon sind alle informiert. Ist mir absolut schleierhaft wie man derart weltfremd sein kann, um tatsächlich zu denken, dass niemand die versteckte Preiserhöhung bemerkt.

Annemarie Schulte

Das ist echt die Höhe! Sicher kaufe ich nichts mehr von Heinz, auch die anderen Produkte nicht, egal ob dort auch getrickst wurde oder nicht. Wer die Kunden einmal so hintergeht, macht es wieder. Und noch nicht einmal eine vernünftige Entschuldigung kriegen sie über die Lippen, geschweige denn das ganze rückgängig zu machen. Totaler Schwachsinn! Denen glaubt doch jetzt niemand mehr, mich eingeschlossen.

Paul Glöcker

Diese Frage wurde dem Teilnehmer nicht angezeigt.

Q38.

MÜNCHNER NEUESTE NACHRICHTEN AUS POLITIK, KULTUR, WIRTSCHAFT UND SPORT

68. JAHRGANG / 36. WOCHEN / NR. 203 / 2,20 EURO

[illegible]

Brand attitude

1. "I think that Heinz Ketchup is a good brand."
2. "I think that Heinz Ketchup has some advantageous characteristics compared to other similar brands within the relevant product category."
3. "I have a positive attitude toward Heinz Ketchup."
4. "I am willing to pay a higher price for Heinz Ketchup than for other similar products within the product category."
5. "Heinz Ketchup is better quality than other similar brands within the product category."
6. "I think that Heinz Ketchup is a reliable and credible brand."
7. "I am interested in Heinz Ketchup."
8. "I am interested in knowing more about Heinz Ketchup."

Brand hate

1. I don't want anything to do with "Heinz Ketchup".
2. The world would be a better place without "Heinz Ketchup".
3. I cannot control my hatred for "Heinz Ketchup".
4. I would like to do something to hurt "Heinz Ketchup".
5. I have kind thoughts about "Heinz Ketchup".
6. I do not like "Heinz Ketchup".
7. "Heinz Ketchup" is indifferent to me.
8. I hate "Heinz Ketchup".
9. "Heinz Ketchup" is scum.
10. "Heinz Ketchup" makes me feel upset.
11. I'm dissatisfied by "Heinz Ketchup".

Forgiveness

1. I forgive this brand.
2. I do not blame this brand for its actions.
3. I cannot forgive this brand.

Severity

The action of the brand "Heinz Ketchup" was a ...

1. Slight fault – Fatal fault
2. Minor fault – Significant fault
3. Unimportant fault – Significant fault

Purchase intention

1. I will buy Heinz Ketchup in the future.
2. I will recommend "Heinz Ketchup".
3. Buying "Heinz Ketchup" is a good decision.

Source credibility

1. Unbelievable – Believable
2. Narrow – Intellectual
3. Competent – Incompetent
4. Unqualified – Qualified
5. Inexpert – Expert

Brand involvement

1. Unimportant – Important
2. Of no concern to me – Of concern to me
3. Means nothing to me – Means a lot to me
4. Useless – Useful
5. Worthless – Valuable
6. Trivial – Fundamental
7. Uninterested – Interested
8. Insignificant – Significant
9. Boring – Interesting
10. Unappealing – Appealing
11. Undesirable – Desirable

Demographics

Please choose your sex:

☐ Female ☐ Male

Please tell us your age:

0.....100 years

What is your highest educational degree?

- Hauptschulabschluss
- Mittlere Reife
- Ausbildung
- Abitur
- Bachelor
- Master (oder höher)

Social media usage and credibility

Please indicate on the following scale your usage of Social networks (Facebook, Instagram, Twitter, Snapchat, etc.).

I use Social networks ...

☐ Never ☐ rarely ☐ Sometimes ☐ Often ☐ Daily

How do you judge the credibility of Facebook?

1. Highly credible
2. Totally not credible
3. Many content is credible

Newspaper usage and credibility

Please indicate on the following scale your newspaper usage (Süddeutsche Zeitung, WAZ, Die Welt, etc.).

I read newspapers ...

☐ Never ☐ rarely ☐ Sometimes ☐ Often ☐ Daily

How do you judge the credibility of newspapers?

1. Highly credible
2. Totally not credible
3. Many content is credible

End of questionnaire.

Participants were thanked for their participation. They got informed that neither Heinz Ketchup, nor Süddeutsche Zeitung were involved in this research. Then they were asked for their interest in results of the study.

Appendix C

Ethics Commission approval

Geachte onderzoeker,

Dit is een bericht vanuit de webapplicatie voor de aanvraag van de boordeling van een voorgenomen onderzoek door de Commissie Ethiek.

Aanvraagnr.	: 16060
Titel van het onderzoek	: Hate or Forgiveness in Online Firestorms
Datum aanvraag	: 01-03-2016
Onderzoeker	: L. Steiniger
Onderzoeksbegeleider	: A.T.H. Pruyn
Lid Commissie Ethiek	: J.F. Gosselt
Gebruik SONA	: Ja

Uw onderzoek is goedgekeurd door de commissie.