

We have got company – Bystanders' evaluations of organizational responses to user posts on social media

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by

Xenia Raufeisen, M.Sc.

Email: xenia.raufeisen@tu-dortmund.de

Dissertation Committee:

Prof. Dr. Hartmut H. Holzmüller

Professorship of Marketing

TU Dortmund University

Jun.-Prof. Dr. Eva Böhm

Junior Professorship of Marketing

TU Dortmund University

Jun.-Prof. Dr. Daniela Giménez Jiménez

Junior Professorship of Entrepreneurship

TU Dortmund University

Dortmund, June 2023

to my t-train: Tobi, Tammo & Talia

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Table of Contents

List of Figures.....	V
List of Tables	VI
A. Introduction.....	1
1. Motivation	1
2. Outline of this thesis.....	4
B. Theoretical foundation	8
1. The role of by-standers in social interaction	8
2. General framework of by-stander effects on social media	13
C. Empirical Research Paper 1: Blessing in Disguise? Utilizing humor to cope with complaints on social media.....	16
1. Introduction.....	18
1.1. Motivation.....	18
1.2. The Case of the BVG.....	19
2. Conceptual and Theoretical Background.....	22
2.1. Response Strategies on social media	22
2.2. Humor Use in Marketing.....	25
3. Humor Mechanism and hypothesis development	27
3.1. Main effect of humorous response strategy	27
3.2. Sympathy as mediator	29
3.3. The moderating role of humor type	30
4. Empirical Approach.....	31
4.1. Study 1 a.....	32
4.1.1. Study Design and Sample	32
4.1.2. Results	34
4.2. Study 1b	34
4.2.1. Study design and sample.....	34
4.2.3. Results	35
4.3. Study 1c.....	35
4.3.1. Study design and sample.....	35
4.3.2. Results	35
4.4. Discussion.....	36

4.5. Study 2	36
4.5.1. Study design and sample.....	36
4.5.2. Results	37
4.5.3. Discussion.....	37
4.6. Study 3	37
4.6.1. Study design and sample.....	37
4.6.2. Results	39
4.6.3. Discussion.....	40
5. General discussion.....	40
5.1. Summary and Implications	40
5.2. Limitations and Research Directions.....	42
D. Empirical Research Paper 2: @-Reply: The positive effects of reply messages on by-standers' credibility perception of scientific information	45
1. Introduction.....	47
2. Hypothesis development.....	49
2.1. Past research on credibility perception	49
2.2. Attribution theory	53
2.3. Psychological reactance and credibility.....	55
3. Empirical investigation	58
3.1. Overview of the studies	58
3.2. Study 1: Is a reply post perceived as more credible than a single-stated post and is this effect mediated by authenticity?	59
3.2.1. Study 1a.....	59
3.2.2. Study 1b.....	62
3.2.3. Discussion.....	63
3.3. Study 2: Does reactance toward the organizational post reduce the positive effect of a reply message?.....	64
3.3.1. Study design, measures, and sample	64
3.3.2. Results	64
3.3.3. Discussion.....	66
3.4. Study 3: Does reactance toward the initial post enhance the positive effect of a reply message?.....	66
3.4.1. Study design, measures, and sample.....	67
3.4.2. Results	67
3.4.3. Discussion.....	69
3.5. Study 4: Does reactance toward the initial post or prior attitude enhance the positive effect of a reply message?.....	69

3.5.1. Study design, measures, and sample	69
3.5.2. Results	70
3.5.3. Discussion.....	71
3.6. Additional context related studies.....	71
3.6.1. Study 5: Is a reply post more beneficial in the context of CSR communication?	72
3.6.2. Study 6: Is a reply post more beneficial in the context of communicating other social issues?	73
3.6.3. Study 7: Is the positive effect of a reply message compared to a single-stated post different for distinct formats?.....	74
4. General discussion.....	76
4.1. Summary and implications.....	76
4.2. Limitations and Future Research	79
E. Conclusion	82
1. Summary of findings.....	82
2. Theoretical Contribution	84
3. Implications for the Market Place	86
3.1. Managerial Implications.....	87
3.2. Recommendations for Consumers	88
4. Limitations and Future Research Directions.....	89
References.....	91

List of Figures

Figure 1. Outline of the dissertation	7
Figure 2. General framework of by-stander effects in social media	13
Figure 3. Example of public complaint	20
Figure 4. Conceptual model.....	32
Figure 5. Humorous response	33
Figure 6. Neutral response.....	33
Figure 7. Emoji Scale.....	34
Figure 8. Non aggressive humorous response	38
Figure 9. Aggressive humorous response	38
Figure 10. Neutral response	39
Figure 11. Exemplary reply to misinformation on Twitter	48
Figure 12. Overview of empirical investigation	59
Figure 13. Stimulus single-post condition	60
Figure 14. Stimulus reply post condition	61
Figure 15. Main findings of Studies 1a and 1b.....	63
Figure 16. Main findings of Study 2	66
Figure 17. Main findings of Study 3	68
Figure 18. Main findings of Study 4	71

List of Tables

Table 1. Overview empirical investigation paper 1	5
Table 2. Overview empirical investigation paper 2	6
Table 3. Overview of theories on by-stander effects	8
Table 4. Overview empirical studies on response strategies.....	22
Table 5. Overview empirical studies on humor research in marketing	25
Table 6. Overview of factors affecting credibility	52
Table 7. Overview main findings of paper 1	82
Table 8. Overview main findings of paper 2	83

A. Introduction

1. Motivation

“Social media is the ultimate equalizer. It gives a voice and a platform to anyone willing to engage.”

Amy Jo Martin, Founder and CEO of Digital Royalty

Social media has changed our lives in many ways (Appel et al. 2020). The way we communicate is probably affected the most, since social media platforms turn audiences into communicators (Self and Roberts 2019). Around 4.9 billion people use social media as of 2023 (Statista Research Department 2023). In other words, more than 50% of the worldwide population engages on platforms such as Facebook, Instagram or Twitter. The consumers' primary focus is on receiving information and sharing informational and personal content with others (Appel et al. 2020). This development leads to opportunities and challenges for the marketing place. On the one hand, social media has become a whole marketing intelligence tool for marketers. Firms can track consumers, collect a vast amount of information and predict consumer behavior (Lamberton and Stephen 2016). On the other hand, consumers gained a lot of power since they have the potential to control the marketing communication process by becoming creators and commentators of marketing content (Hamilton et al. 2016). Besides accessibility of consumer data, Li, Larimo and Leonidou (2021) formulated two essential other areas where social media has changed the marketing environment the most. First of all, consumers are connected in a way that was not possible before. Online platforms allow individuals to build social networks based on shared interests and values (Kaplan and Haenlein 2010). It was never that easy to connect with strangers and form alliances with a shared purpose. Social media gives initially resource-poor actors, who were restricted financially or spatially, the means for mass communication (Della Porta and Mosca 2005). In the past years, we have observed that social media can be essential to organize social movements. For

instance, researchers are certain that social media has played a significant role in the revolutions in the Arab world since December 2010. It helped to build and strengthen ties among the protesters, organize events and inform fellow activists and the rest of the world about their doing (Eltantawy and Wiest 2011).

Further, social media gives not only power to individuals, but also the interaction between organizations and consumers has changed. The behavior is highly dependent on the actions and observations of other users. Thus, consumers' choices and behaviors are affected by being target of the observations of others and in turn individuals are influenced by the behavior of other users who they observe (Li et al. 2021). Subsequently, organizations are faced with two new phenomena. Firstly, consumers' voices became louder as compared to before the rise of social media. Traditional marketing communication was rather one-directional. Organizations could communicate with their target consumers through different channels, such as mass media or personal selling and reach, depending on the medium, more or less vast audiences. Consumers could not communicate on the same scale when they talked back to the organization (Grégoire, Salle, and Tripp 2015). Many times, they did not communicate at all. For example, customers perceived the cost of complaining as too high so they did not voice their dissatisfaction altogether (Chebat, Davidow, and Codjovi 2005). Social media has changed that. The most prominent example how powerful social media can be is Dave Carroll's "United breaks guitars" song. In March 2008, United Airlines first lost, then broke Dave's guitar and did not offer a proper compensation. After this negative experience of poor customer service, he posted a music video about the incident on YouTube (Carroll 2012). The video quickly got viral and has as of today more than 22 million views. This is not a single incident, since online communities in general elicit the potential for so called "online firestorms". Firestorms are negative word-of-mouth that receives massive and fast support from other customers (Pfeffer, Zorbach, and Carley 2014). Thus, it is a major marketing objective of firms to address online complaints and unsatisfied customers fast and appropriately, because social media gives them more power than before with the potential to reach a broad audience of fellow consumers (Grégoire et al. 2015).

Secondly, social media makes it possible that any information, true or not, can spread fast (Vosoughi, Roy, and Aral 2018). The rise and fast distribution of misinformation has severe consequences for consumers attitudes and behavior (Lewandowsky and van der Linden 2021). Some, now debunked, claims, such as childhood vaccinations might lead to autism, caused many parents to not immunize their children (DeStefano and Thompson 2004). Just recently, in worldwide COVID-19 pandemic, conspiracy theories and false claims irritated the general public. For example, the belief that 5G technology is associated with COVID-19 led to massive vandalism of cell masts in the UK (Lewandowsky et al. 2020). Further, 29% of the American population think that the virus was created in a laboratory (Schaeffer 2020). These developments are sincere, because they might lead people to not believe in facts altogether (Lewandowsky and van der Linden 2021). Therefore, making sure that organizational communication in social media is perceived as authentic and credible is an essential marketing objective for many institutions (Viviani and Pasi 2017).

By facing these new challenges, organizations have to make sure, not only to satisfy the primary target audience, as it was with mass media before the rise of social media, but also satisfy the online community who observes marketing relevant interactions. The so called by-standers outnumber a single customer with whom the organization interacts with, and therefore they are an important target group (Breitsohl, Khammash, and Griffiths 2010). Thus, when organizations are interacting with online users, it is even more critical to determine how the by-stander evaluates the organizational behavior than the actual interaction partner.

Altogether, the present dissertation aims to address these new developments by deepening the understanding of by-standers' evaluation of organizational responses on social media.

Two empirical research papers respectively address one of the two discussed major challenges for marketers.

1) Paper 1 aims to investigate how companies should reply to complaints on social media to achieve favorable outcomes of by-standers. In particular, I propose that a humorous response strategy might not only limit the damage, but also bring some benefits for the brand.

2) Paper 2 examines if the post type of information is crucial for users to determine credibility. In particular, I investigate the effect, that the information in a reply message is perceived as more credible than a single-stated message containing the same content.

By addressing these distinct areas, the dissertation contributes on a theoretical as well as on a practical level. Firstly, I contribute to the growing literature of online complaint handling in several ways. I offer a communication strategy which can enhance consumer engagement and brand affect. I contribute to theory as I show that not all humor types lead to the same desired outcomes based on signaling theory. My results might be transferable to other marketing domains, where humorous communication is an important objective. Further, I give guidance for marketers, how a humorous response strategy to an unpleasant event, such as a public complaint, might benefit the brand and enhance brand perceptions of the by-standers.

Secondly, I contribute to the ongoing stream of credibility research. Message credibility has been an important research objective in various fields (Wathen and Burkell 2002). By introducing an additional factor, namely post type, which influences credibility of online information I add to the stream of literature which is concerned with credibility perception. Especially, science communicators can take advantage of this insight because science faces major credibility issues among the general public (Jenkins et al. 2020).

2. Outline of this thesis

This dissertation is divided into five parts. After the introduction in part A, part B builds a theoretical foundation to explain and understand by-stander effects in the social media context. So far, although some research papers address by-stander effects in the online context (Hogreve, Bilstein, and Hoerner 2019), to the best of my knowledge, there is no integrated framework of psychological theories that helps to explain how by-standers are influenced by observing social media interaction.

Subsequently, part C and D represent the two empirical research papers. In part C, the focus of paper 1, entitled “Blessing in disguise? Utilizing humor to deal with complaints on social

media”, is to get a deeper understanding of appropriate response strategies to online complaints. In a series of five experiments, I demonstrate that a humorous response strategy leads to more favorable outcomes for silent by-standers than a neutral response. This positive effect is mediated by enhanced sympathy perception. Moreover, non-aggressive humor is more beneficial than aggressive humor. An overview about the studies of paper 1 is provided in Table 1.

Table 1. Overview empirical investigation paper 1

	Sample Size (N)	Method	Context	Research question
Study 1a	133	experiment	Candy brand	Is a humorous response strategy more beneficial than a neutral response strategy to achieve favorable by-stander outcomes?
Study 1b	97	experiment	Pizza brand	
Study 1c	83	experiment	Insurance company	
Study 2	159	experiment	Pizza brand	Is the positive effect of a humorous response mediated by enhanced sympathy?
Study 3	295	experiment	Candy brand	Does the positive effect of humor differ depending on the humor type?

In part D, the focus of paper 2, entitled “@-Reply: The positive effects of reply messages on by-standers’ credibility perception of scientific information” was to deepen the understanding of credibility perception of organizational posts containing scientific information. In a series of eight experiments, I demonstrate that a reply message to another post is perceived as more credible than a single stated post. This effect is moderated by the reactance towards the organizational post. Further, the results implicate that reactance towards the initial post and initial attitude does not affect the positive effect of reply-messages. Finally, with the help of additional analysis I am able to show that the reply effect is also applicable in other communication areas, such as corporate communication. An overview about the studies of paper 2 is provided in Table 2.

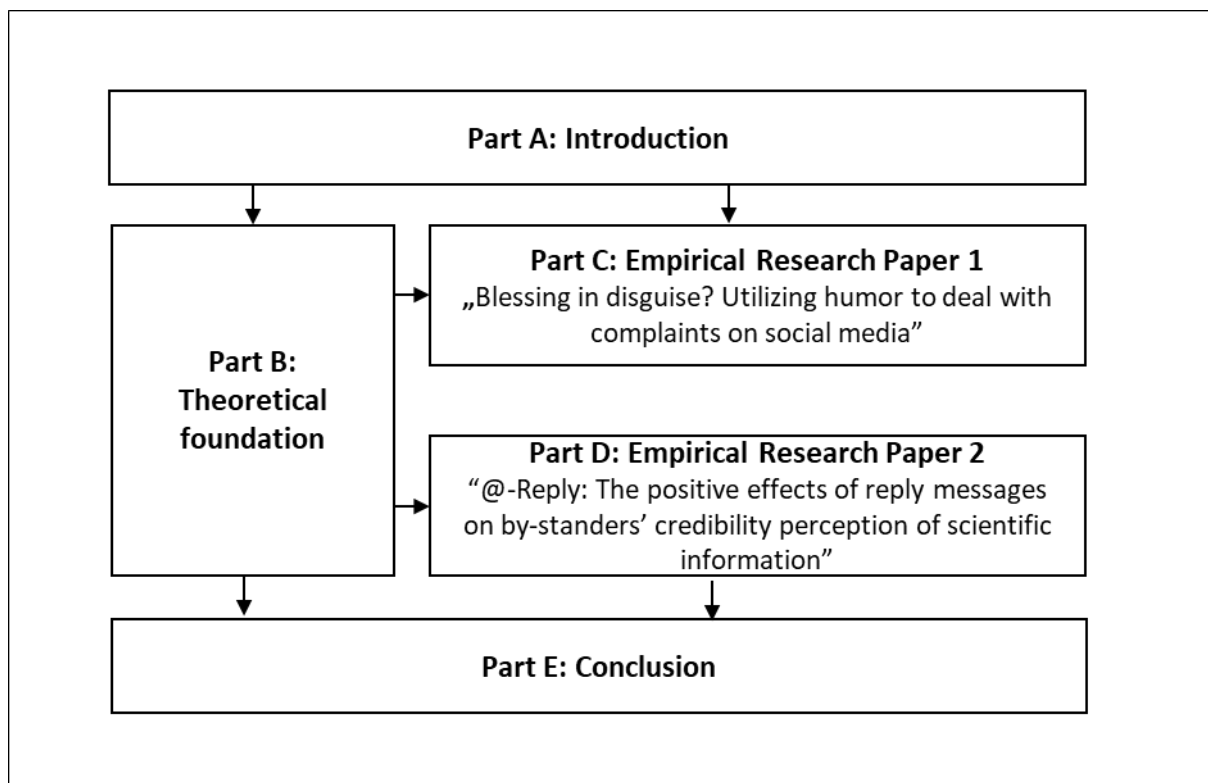
Table 2. Overview empirical investigation paper 2

	Sample Size (N)	Method	Context	Research question(s)
Study 1a	126	experiment	Weather fluctuations and climate	Does a reply message lead to enhanced credibility perception compared to a single stated message? Is this effect mediated by enhanced credibility perception?
Study 1b	136	experiment	Vegan diet and climate	Does reactance towards the organizational message moderate the reply effect?
Study 2	255	experiment	Plastic impact on climate	Does reactance towards the initial message moderate the reply effect?
Study 3	176	experiment	Weather fluctuations and climate	Does prior attitude towards the message moderate the reactance effect?
Study 4	132	experiment	Vegan diet and climate	
Study 5	109	experiment	Coffee company CSR program	
Study 6	122	experiment	Coffee company Effect of gender-neutral language	Is the reply effect also applicable in other contexts and formats?
Study 7	264	experiment	Renewable energy and climate	

Lastly, the concluding part E gives a summary of the major findings across all studies, a discussion of their theoretical contributions to different areas of research, as well as managerial implications for marketers and recommendations for consumers. Furthermore, a review of

limitations that might give directions for future research is discussed. In Figure 1 a summary of the outline of the dissertation is provided.

Figure 1. Outline of the dissertation



B. Theoretical foundation

1. The role of by-standers in social interaction

Because humans are highly social creatures, our feelings, intentions and actions are determined by the presence of others. While research widely acknowledges the importance of others in social interaction, most of the conceptual work focuses on co-presence of others in the service context (e.g., Colm, Ordanini, and Parasuraman 2017; Abboud et al. 2021; Albrecht 2016). In the service domain, many studies focus on how the focal customers are affected by by-standers (e.g., Grove and Fisk 1997; Chen, He, and Alden 2014) while there is very limited research about the effects *on* the by-stander (Abboud et al. 2021). Further, there is no conceptual work that focuses on the important group of by-standers in the social media context. Therefore, this section is concerned with theoretical explanations and concepts used in present research to explain how by-standers evaluate observed interaction on social media, referred to as “by-stander effects”. The following section provides a brief overview of these overarching theories that address the impact of others on individuals’ behavior and integrates the main findings in a social media context. Thus, I complement my typology with an integrated framework useful for future empirical research and theorizing. An overview of the described theories and a summary of social media applications is delivered in Table 3.

Table 3. Overview of theories on by-stander effects

Psychological Theory	Summary of Theory	Application in the Social Media Context	Exemplary Studies
Social Comparison Theory	Individuals tend to compare themselves with others. The outcome of these comparisons affects well-being.	Social Media facilitates upward comparisons which leads to negative outcomes.	Vogel et al. 2014, Tiggemann and Slater 2013; Fardouly et al. 2015
Cognitive and Emotional Empathy	The ability to take the perspective of another individual (cognitive empathy) and to	Social media use and empathy is correlated.	Vossen and Valkenberg 2016; Mayshak et al. 2017

Psychological Theory	Summary of Theory	Application in the Social Media Context	Exemplary Studies
	share another's emotional state (emotional empathy).		
Social Learning	All learning experiences that are based on direct experience can also result solely from observation.	Observing customer-firm interactions affects attitudes towards the firm.	Hogreve et al. 2019
Social Impact Theory	Three social forces (i.e., strength, immediacy, and quantity) affect individual attitudes and behavior.	All social forces are implemented in social media.	Perez-Vega, Waite, and O'Gorman 2016
By-stander effect	The tendency of individuals to be less likely to help or offer assistance when others are present.	By-stander effect contributes to explain the enhanced incivility and online harassment in social media.	Wong et al. 2021; You and Lee 2019

The basic assumption of social comparison theory is that individuals have the natural urge to compare themselves conscientiously or unconscientiously with others (Festinger 1954; Gilbert, Price, and Allan 1995). Hereby, comparisons can happen in different directions and people make inferences about their own status and position based on those evaluations (Festinger 1954). The consequences of comparing oneself have a great impact on wellbeing since they provide information about one's capacities and limitations (Festinger 1954). Therefore, these comparisons can be threatening to the self and lead to negative reactions (Morse and Gergen 1970; Mussweiler and Bodenhausen 2002).

Social media encourages social comparisons and most of the time they are upward, which leads to a biased perception and positioning of oneself. Research shows that people who use social media more often had poorer trait self-esteem which might be due to enhanced upward social comparisons on social media (Vogel et al. 2014). This effect differs depending on the personality, since the tendency of making comparisons to others varies depending on specific traits. Those who have a strong need to compare have a high activation of the self, which means that they have a high level of public and private self-consciousness. Also, they are more

social orientated and have more interest and empathy for others. Moreover, they are described by high uncertainty, low self-esteem and high neuroticism (Buunk and Gibbons 2006). An additional negative outcome is that social media use is associated with loneliness. Instagram interaction was associated with higher loneliness, but only for individuals who compare themselves more with others (Yang 2016). Moreover, body image is affected negatively. Research in the context of Facebook profiles suggests, that exposure to one's own Facebook leads to enhanced body image concerns and mood (Tiggemann and Slater 2013; Fardouly et al. 2015).

When observing others not only comparing plays an important role, but also to understand the emotions and behavior of others. Hereby, empathy is a core construct which explains a variety of psychological outcome variables, such as prosocial behavior (Eisenberg and Strayer 1987). The human ability of empathy is a core fundament of social interaction (Hogan 1969). Empathy refers to two distinct processes. Firstly, the ability to take the perspective of another individual (cognitive empathy) and secondly to share another's emotional state (emotional empathy) (Smith 2006). Theorists assume that empathy evolved, because in a complex social environment empathy enhances social functioning (Jolly 1991). Taking the perspective of others makes it easier to understand and predict their behavior. Moreover, sharing the emotions of others might be a motivation to behave altruistic and not harm others (Smith 2006).

While past research shows mixed results about the relationship of empathy and social media, the majority of findings suggests a positive correlation (Guan et al. 2019). Social media use might facilitate the ability for empathy, because the observing of others interacting, sharing and commenting is enhanced compared to an offline environment where individuals normally are less exposed. In fact, Vossen and Valkenberg (2016) found in a longitudinal study that cognitive and emotional empathy correlates with social media use. Adolescents who more frequently used social media, improved their ability for cognitive and emotional empathy (Vossen and Valkenberg 2016). Moreover, research shows that participants who have high trait empathy (the ability to experience empathy) are associated with more engagement on social media (Mayshak et al. 2017).

Social media not only affects attitudinal outcomes, but also influences behavior. Social learning theory provides a basis for how observing of others might change individual behavior. In its core, social learning theory postulates that all learning experiences that are based on direct experience can also result solely from observation (Bandura 1971). This means that individuals do not have to undergo all experiences by themselves to learn from it. They can develop behavior patterns and emotional responses based on observing the behavior of others (Bandura 1971). Thereby, observers change their behavior in the same way as the individuals whose actions are observed do. According to learning theories behavior is changed based on whether the behavior is being punished or reinforced. Observers are expected to change behavior in the same way (Masia and Chase 1997). In social media individuals can observe many different types of interaction. If they observe, for instance, how companies treat their customers, they do not have to make an own experience with the company, but make inferences solely by observing it. In the context of service recovery on social media, the authors explained the effects on by-stander reaction with social learning theory (Hogreve et al. 2019). They demonstrated that by-standers evaluated the service quality higher, had greater word-of-mouth, and purchase intention only because observing a successful service recovery without experiencing it themselves (Hogreve et al. 2019).

It has to be mentioned that not all observations have the same impact on individuals. To what extent individuals are affected by the observation of others can be explained with social impact theory, which describes how people are influenced by the presence of others. According to social impact theory, others define a so called "social force" which affects one's own attitudes and behavior (Latané 1981). Latané (1981) formulates three factors which determine the social impact. These factors are the number of people contributing to the information source, the closeness (time and space) and the strengths of the information source (i.e., importance of the influence). In social media, behavior is influenced undoubtedly by other users, which can also be explained with social impact theory (Bedard and Tolmie 2018). More precisely, all three factors, namely number of people, closeness and strengths are also represented in a social network (Cialdini and Goldstein 2004). Strength describes the importance and social position

of the influencing source (Latané 1981). In general, it is assumed that individuals trust in-group members more than out-group members (Tajfel, Turner, and Wochel 1979). Close and trusted friends in social media represent closer ties and therefore are more influential (Brown and Reingen 1987). Also, sources with a higher status such as prominent influencers, or sources high in expertise, can be associated with greater tie strength (Gass and Seiter 2011). Moreover, closeness or immediacy drive influence, which might be implemented through time, space and the social closeness in social media (Perez-Vega et al. 2016). This means, that individuals are more influenced by information from sources that are psychically close (e.g., geographic location), temporally close (e.g., posted recently), and highly alike (e.g., same interests) (Perez-Vega et al. 2016). Lastly, the number of people is reflected in the social consensus of the information. The information therefore is more influential in social media when it is associated with a high number of likes and supportive comments (Simon, Brexendorf, and Fassnacht 2015).

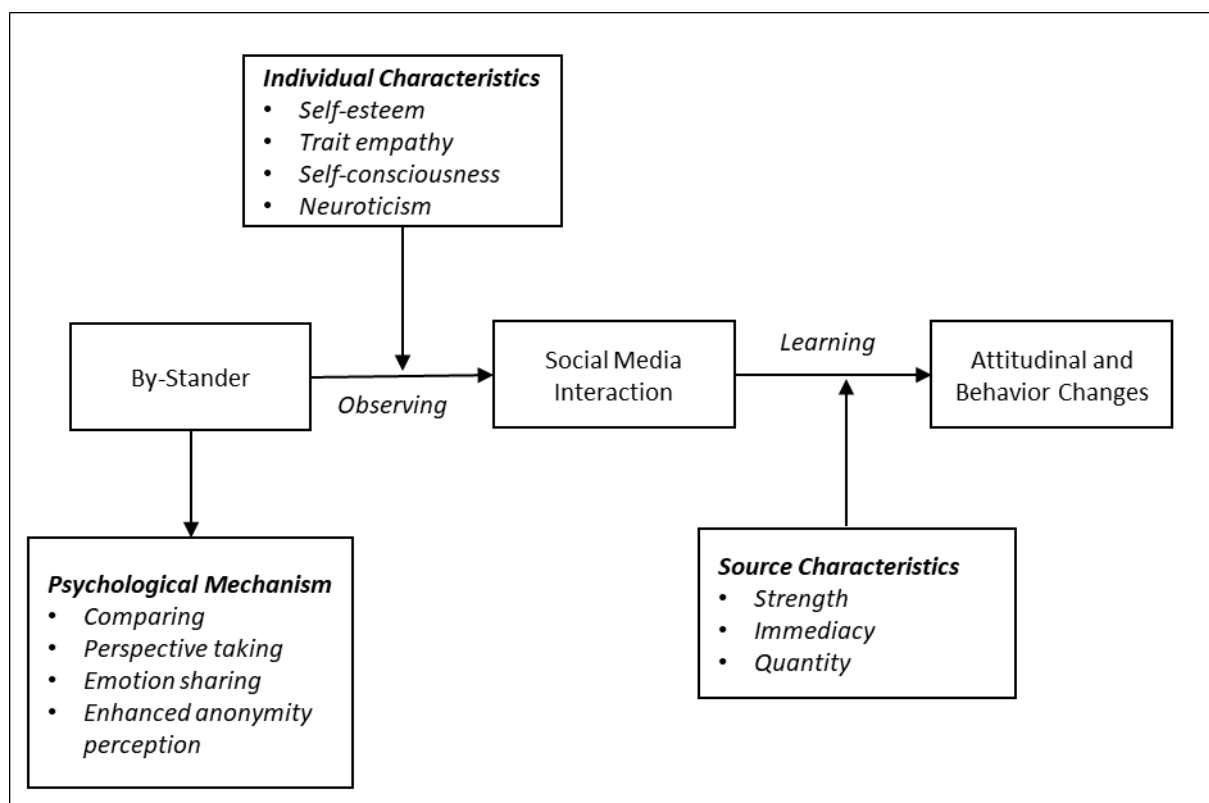
In addition to the described theories above, in social psychology the “by-stander effect” is another special phenomenon. The by-stander effect describes the tendency of individuals who observe an emergency situation to be less likely to help or offer assistance when others are present (Latané and Darley 1970). This phenomenon is well studied and occurs under different occasions (Hudson and Bruckmann 2004). It seems that the effect is not only one psychological effect, but rather different mechanisms operating together which lead to the inhibited behavior. In particular, people do not want to appear inappropriate in front of others, which might lead to a hesitation to act. Further, when no one else is acting as well, this represents a social cue that reinforces the initial hesitations and leads to further inhibition. Moreover, the total responsibility is diffuse and individuals feel only a limited responsibility for the potential negative outcomes because of the presence of others (Latané and Darley 1970). Research shows that the by-stander effect is also present in online environments (Markey 2000). Therefore, it might help to explain the rise of online incivility and online harassment, which is a recent online phenomenon which occurs on social media (Bacile et al. 2018). Online incivility describes uncivil behaviors such as rude or offensive comments towards an individual

or an organization online (Anderson et al. 2014). Social networks' characteristics might particularly facilitate the by-stander effect as users have more confidence in anonymity, less perceived responsibility through the vast number of fellow users, and perceived fewer negative consequences (Wong et al. 2021). This leads to even more inhibition and a reinforced by-stander effect (You and Lee 2019; Suler 2004).

2. General framework of by-stander effects on social media

The described theories explain different kinds of effects which happen when by-standers observe the interaction of others. In the remainder of this section, I integrate the different approaches into a general framework of by-stander effects on social media (see Figure 2).

Figure 2. General framework of by-stander effects in social media



When by-standers observe social interaction on social media, I suggest several parallel processes might come into play. According to the described theories, individuals compare themselves with others, take their perspective and feel their emotions. Moreover, in the context of social media and the co-presence of other by-standers a feeling of anonymity is enhanced (Gilbert et al. 1995; Wong et al. 2021; Smith 2006). The outcome of these processes might be different depending on what kind of interaction by-standers observe. The result of upward comparisons, for instance, mostly results in negative feelings, lower self-esteem and a biased body image (Tiggemann and Slater 2013; Fardouly et al. 2015). But also observing a company-customer interaction can result in negative feelings. When customers observe a delightful experience of other customers and they perceive that as unjust or unfair, they feel jealous (Ludwig, Barnes, and Gouthier 2017; Steinhoff and Palmatier 2016). Moreover, the emotions of fellow customers can spillover to the by-stander. In the service context it could be demonstrated that positive and negative feelings can get transferred by solely observing other customers experiencing them (Tombs and McColl-Kennedy 2013). Consumers have a variety of sources in social media where they can observe customer-to-company and customer-to-customer interaction where emotions might be displayed (Libai et al. 2010). It has to be noted that positive and negative emotions can be triggered by the same event. When customers observe a service situation, for instance, in which another customer is perceived to have experienced delight, they experience both mutual contrasting feelings: joy and jealousy (Ludwig et al. 2017). Yet, it is not clear which processing and which kind of emotions are more salient in which situations.

Moreover, these processes might differ depending on several individual characteristics. For instance, high trait empathy, low self-esteem and high self-consciousness lead to a higher tendency to compare oneself with others (Buunk and Gibbons 2006). Also, social media can enhance individual empathy ability. It is expected that especially behavior such as sharing emotions and expressing support online enhance empathy (Guan et al. 2019).

The interplay of these psychological mechanisms might result in a learning process which can lead to attitudinal and behavioral changes. Thus, individuals must not experience certain

events by themselves to learn from them, but also can solely observe them and then make inferences about them. By observing a successful online recovery, for instance, by-standers have higher purchase intentions (Hogreve et al. 2019). On the other hand, they might engage in punishing behavior when they observe a company not reacting to injustice on social media (Bacile et al. 2018; Ludwig et al. 2017). Also, observers might attribute responsibility for the behavior of others to the company. In a service context, research suggests that by-standing customers feel that the behavior of fellow customers is in the control of the company (Colm et al. 2017).

How much they might be influenced is also determined by certain characteristics of the source of influence. If they observe an interaction of a highly relevant source (i.e., in terms of strength, immediacy, and quantity) the influence on their own attitudes and behavior is stronger. In social media, trusted sources, such as close friends or individuals high in expertise, are associated with strength (Brown and Reingen 1987; Gass and Seiter 2011). Immediacy might be represented when other users either are physically close (e.g., from the same area) or are close based on other characteristics, such as joined interests, for instance, or being part of the same brand community (Perez-Vega et al. 2016). Further, quantity of social sources is represented with the number of likes, comments or shares of information. This means a source supported by a high number of fellow users is more influencing than sources which gained little attention from the online audience (Simon et al. 2015).

To put it in a nutshell, by-stander evaluations of social interaction on social media are characterized by multiple psychological mechanisms. While observing others, individuals take their perspective, feel their emotions and compare themselves. The result of this process might be learning which can lead to attitudinal and behavioral changes. This process is strongly determined by other variables, such as individual characteristics and characteristics of entities which are observed.

C. Empirical Research Paper 1: Blessing in Disguise? Utilizing humor to cope with complaints on social media

Abstract

Social media platforms, such as Facebook, influence consumer behavior in different marketing domains. In particular, negative experiences with a certain brand or company can easily be shared and reach a broad audience of fellow customers. It is not only crucial to satisfy the complainant, but also maintaining the brand reputation for the online audience, also referred to as observers or by-standers. Because the mass audience can follow the complaint and the company's reaction, it is important to understand which response strategies are appropriate for complaints. In a series of three empirical studies, we show that a humorous response strategy to a complaint leads to greater online engagement, enhanced brand affect and increased purchase intention. Further, we demonstrate that the positive effect of humor on the dependent variables is mediated by sympathy perception.

Additional notes

- This (unpublished) paper is co-authored by Dr. Sören Köcher (Otto-von-Guericke University Magdeburg)

- Parts of this paper were accepted for presentation at academic conferences:
 - “A double-edged sword: Humorous complaint handling on social media” presented as individual paper at SERVSIG Conference 2022, Glasgow, Scotland, June 2022
 - “Using Humor to deal with inappropriate Online Complaints” accepted for presentation as individual paper at 2020 Academy of Marketing Science Annual Conference, Coral Gables, USA, May 2020.
 - “Blessing in Disguise? Utilizing humor to cope with inappropriate complaints on social media” presented as individual paper at 2020 AMA Winter Academic Conference, San Diego, USA, February 2020.

1. Introduction

1.1. Motivation

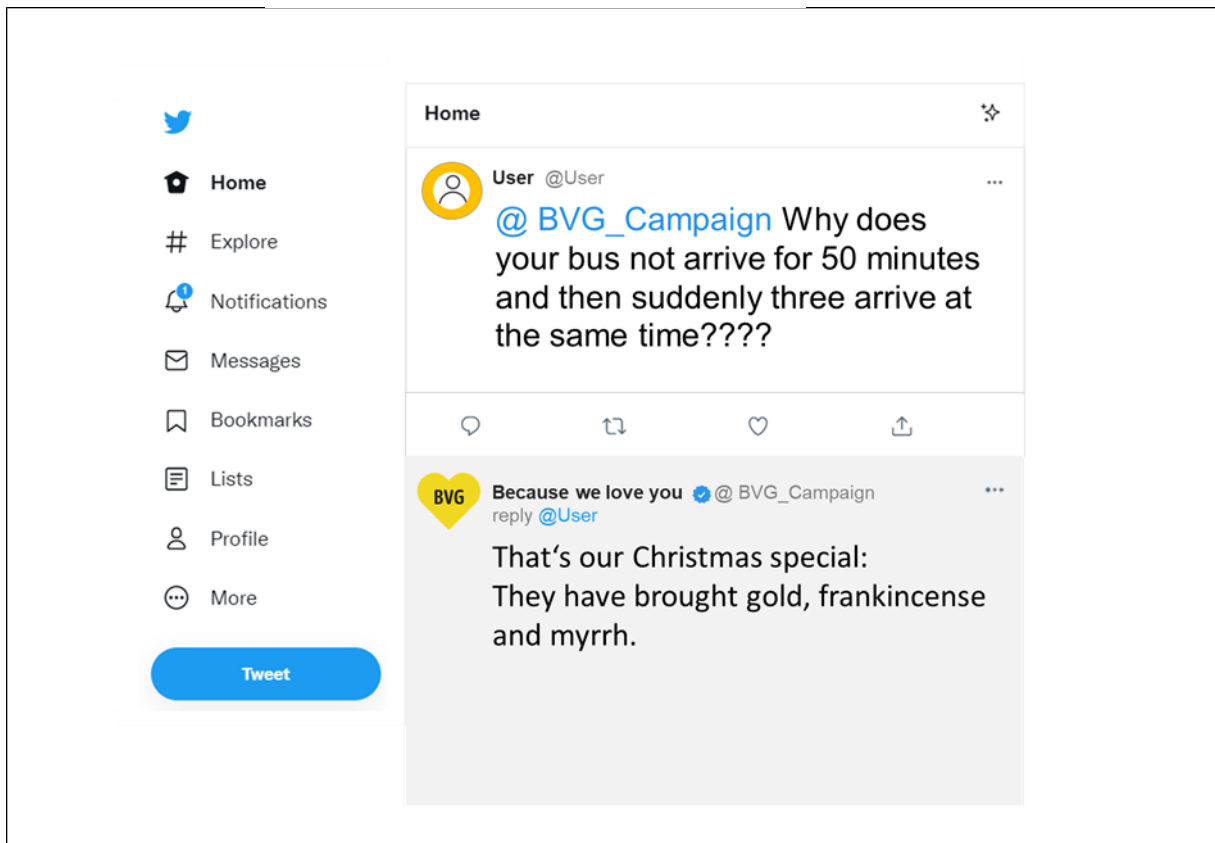
Social media platforms, such as Facebook or Twitter, influence consumer behavior not only in their private life, but also in different marketing domains (Lamberton and Stephen 2016). In fact, 49% of Facebook users like a Facebook page to support a brand they like and there are over 60 million active business pages (Brandwatch 2019). Understandably, academic research has paid much more attention to social networks and online word of mouth over the last decade (Lamberton and Stephen 2016). Although practitioners were experimenting with the use, only little academic work has been done in the domain of social media (Lamberton and Stephen 2016). This is critical, since social media effort, such as firm-generated content is affecting sales (Kumar et al. 2016). The rise of new media allows customers to share their thoughts with a large audience. In particular, negative experiences with a certain brand or company can easily be shared and reach a broad audience of fellow customers (Van Noort and Willemson 2012). Besides general negative WOM, customers can also articulate their complaints on social media and 33% of the customers in the U.S. reported that they used social media to complain about a brand or its customer service (Mazareanu 2019). Traditional complaints are placed in a one-to-one setting, and scholars have studied various response strategies that influence post-complainant customer responses (see Dawidov 2003 for an overview). Compared to traditional complaint handling (one to one), different aspects might be relevant in the social media context. Thus, a study has shown that depending on the channel in which the complaint is voiced, different justice dimensions are important for the customers. The perceived interactional justice is more important for customers who use social media to voice their complaints (Sugathan, Rossmann, and Ranjan 2018). Moreover, in social media, what is crucial, is not only satisfying the complainant but also maintaining the company's reputation for the online audience, also referred to as observers or by-standers, who read the complaint (Breitsohl et al. 2010). By-standers outnumber a single complainant and therefore they are an important target group for marketers to satisfy. Because they can follow the

complaint and the company's response, it is crucial to understand which response strategies are appropriate (Hennig-Thurau, et al. 2010). Scholars have so far focused mainly on the perspective of the complainant and suggest that the presence of others influences general brand evaluation, satisfaction with complaint handling, and purchase intention of the complainant (Naylor, Lamberton, and West 2012; Schaefers and Schamari 2016; Abney et al. 2017; Davidow 2003; Einwiller and Steilen 2015, Grégoire et al. 2018; Sugathan et al. 2018). Only a few studies focus on the by-standers who read the complaint and the potential company response. These studies show that the brand receives a higher evaluation from the community if the company responds to a complaint compared to no response, if the response is credible, and an accommodative response strategy is mostly to favor over a defensive response strategy (Van Noort and Willemsen 2012; Breitsohl et al. 2010; Johnen and Schnittka 2019). Besides these findings, there is little knowledge about how different response strategies affect customer evaluations in the online community. Especially, because negative comments on social media are even more influential than positive comments, it is important to handle complaints in an effective way and learn more about different response strategies (Chevalier and Mayzlin 2006).

1.2. The Case of the BVG

The Berliner Verkehrsbetriebe (BVG), which is the public transportation system of Berlin, launched a new marketing campaign "Weil wir Dich lieben ("Because we love you") in 2015. One part of the communication strategy is the humorous dealing with online complaints. Figure 3 shows an example how the public transportation system of Berlin (BVG) regularly responds to publicly posted complaints on their social media channels.

Figure 3. Example of public complaint



We interviewed two managers involved in the development and implementation of the campaign. One marketing manager from the BVG itself and one creative director who worked for the agency who executed the campaign and was involved with his team in the actual posting on social media right from the beginning. The goal was to get a deeper understanding of the success of this approach and to have a managerial perspective on the topic. The marketing manager reported that initially BVG was suffering under negative image impressions and their customers did not feel attached or had any sympathy towards Berlin's public transport. Hence, the new campaign should reconcile Berlin's citizens with the BVG and with an ironical humorous tone across all communications channels BVG started to tease their customers, but especially themselves in their communication. The idea is that self-irony sometimes can appeal more sincere than a simple apology. Already one year after launching the campaign 40% of the Berliners have a more positive image of the BVG than they had before. Also, the complaint

behavior was affected. In general, they receive less complaints than before and it seems that the Berliners are more forgiving with their public transport.

The creative director stated that handling a complaint in a humorous way, let others see the company very distinct and personal. The company seems to be on eye level rather than a big corporation. Research also supports the idea that being more human as a company might be beneficial. High anthropomorphism perception of a brand with increased social media interaction leads to higher relationship quality (Hudson et al. 2016).

The interviews confirmed our perception that business practitioners see the importance of handling public complaints efficiently, but also practicing a humorous response strategy to achieve favorable brand outcomes.

We propose that a humorous response strategy, such as in our example, might not only limit the damage, but also bring some benefits for the brand. Research has shown that humor influences memory and attention. In this way, research has demonstrated that comedy production is likely to attract attention only toward the humorous aspects of a message and make the audience less critical of the communication (Strick et al. 2009; Warren et al. 2018). Moreover, humor is positively related to certain conflict management strategies (Smith, Harrington, and Neck 2000). These findings let us assume, that humor might have the same effect in the context of a complaint and weaken its severity.

Across five experiments, we demonstrate that humor is an effective response strategy leading the by-standers to engage more, like the brand more and enhance their purchase intention. Moreover, we explain these effects with the signaling theory and the halo effect of humor and show that these positive outcomes are driven by the bystanders' sympathy perception of the brand. We show that the type of humor is a boundary condition and aggressive-humor leads to unfavorable brand outcomes.

Our research contributes to the literature on social media complaint handling and humor research and provides important managerial implications. Because many companies are faced with publicly posted complaints, we aim to improve the effectiveness of response strategies

and give social media managers a tool and concrete advise how humor may be applied to respond appropriately.

2. Conceptual and Theoretical Background

2.1. Response Strategies on social media

Consumers voice their dissatisfaction in various channels, such as rating websites or social networks (Ward and Ostrom 2006). A summary of research on response strategies to an online complaint is provided in Table 4.

Table 4. Overview empirical studies on response strategies

Author(s)	Social media	Observer perspective	Key findings
Abney et al. 2017	1	0	<ul style="list-style-type: none"> • Response to a complaint leads to more favorable brand outcomes than no response • Adaptive response strategies lead to more favorable brand outcomes
Einwiller and Steilen 2015	1	0	<ul style="list-style-type: none"> • Response leads to higher satisfaction than no response • Gratitude and corrective action of the company has a positive effect on satisfaction
Grégoire et al. 2018	0	0	<ul style="list-style-type: none"> • negative affect and revenge desire are higher when company provides a poor explanation no recovery happens
Istanbulluoglu 2017	1	0	<ul style="list-style-type: none"> • customers expect a faster response time on social media than on traditional channels • customers are more satisfied hen the response time is faster
Schaefers and Schamari 2016	1	0	<ul style="list-style-type: none"> • virtual presence of others leads to higher satisfaction and purchase intentions of the complainant when the recovery is successful

Author(s)	Social media	Observer perspective	Key findings
			<ul style="list-style-type: none"> in the case of unsuccessful recovery, the virtual presence of others does not influence satisfaction
Sugathan et al. 2018	1	0	<ul style="list-style-type: none"> the positive effect of interactional and distributive justice is higher in social media than in traditional channels
Van Noort and Willemsen 2012	1	1	<ul style="list-style-type: none"> response to a complaint leads to more favorable outcomes than no response proactive webcare (responding to complainant when company was not directly addressed) leads to greater evaluation in customer generated platforms and has no effect on brand generated
Van Laer and de Ruyter 2010	0	1	<ul style="list-style-type: none"> denials restore integrity to a significantly higher degree than apologies if framed in an analytical format
Bacile et al. 2018	1	1	<ul style="list-style-type: none"> Firm's justice perception is higher when it addresses consumer-2-consumer incivility compared if it only addresses the complaint
Hogreve et al. 2019	1	1	<ul style="list-style-type: none"> For a successful recovery transparency of the complaint handling leads to more favorable brand outcomes In case of a poor recovery transparency leads to negative outcomes
Chang et al. 2015	1	1	<ul style="list-style-type: none"> accommodative response strategies make the firm seen less responsible and therefore lead to better reputation
Johnen and Schnittka 2019	1	1	<ul style="list-style-type: none"> a defensive brand strategy is beneficial if consumers experience a contextual benefit of it (hedonic vs. utilitarian)
Esmark et al. 2018	0	1	<ul style="list-style-type: none"> a company response to a response of another customer leads to more favorable brand outcomes than no response
Herhausen et al. 2019	1	1	<ul style="list-style-type: none"> in the case of high arousal emotion more explanations are more suited than more empathy Consecutive firm responses with varying rather than repeated empathic intensity and

Author(s)	Social media	Observer perspective	Key findings
Béal and Grégoire (2022)	1	1	<p>explanatory intensity are better suited to mitigating evolved online firestorms</p> <ul style="list-style-type: none"> Humorous response strategy is more beneficial for exciting brand than for sincere brands

When companies face an online complaint, they must decide whether they answer to it in the first place and if so, find an appropriate response strategy. Scholars suggest that responding to a complaint achieves more positive outcomes than staying silent (e.g., Ma et al. 2015; Wang and Chaudhry 2018; Jones et al. 2018). Research on how companies should respond to online complaints to achieve favorable outcomes is scarce (Van Noort and Willemsen 2012; Xia 2013; Johnen and Schnittka 2019 for notable exception). Some studies demonstrate that accommodative (i.e., company acknowledges responsibility) response strategies are more favorable than defensive (i.e., company denies responsibility) strategies (Chang et al. 2015; Johnen and Schnittka 2019). Others suggest that it is better to have a human instead of corporate voice and it is important to consider the context when deciding whether to state a more empathy characterized response (Van Noort and Willemsen 2012; Herhausen et al. 2019). Some studies take the perspective of the observer in the social media context into account. Research already shows that the motives to complain and the perception of a company response vary depending on which channel is used (Sugathan et al. 2018). Therefore, distinctive response strategies for the social media context are needed which also address the view point of the silent observer who follow the customer-brand interaction.

Because companies already show and use humorous response strategies, a recent study shed first light on the effects of humor. However, the authors show that a humorous response strategy can be beneficial under certain conditions, with mixed results (Béal and Grégoire 2022). To deepen the understanding of the effects of humor and the theoretical mechanism behind it, more research is needed (Béal and Grégoire 2022).

2.2. Humor Use in Marketing

Except for advertisement research, research on humor in marketing is very limited (for a recent conceptual paper on humor and consumer behavior see Warren et al. 2018). For an overview of the impact of humor beyond the advertisement context see Table 5.

Table 5. Overview empirical studies on humor research in marketing

Author(s)	Context	Online	Business relationship	Key findings
Chiew, Mathies, and Petterson 2019	Service encounter	0	1	<ul style="list-style-type: none"> employees use of humor leads to enjoyable interaction depending on customer sense of humor and leads to encounter satisfaction
van Dolen, de Ruyter, and Streukens 2008	website	1	1	<ul style="list-style-type: none"> favorable functional process mitigates an unfavorable outcome in terms of enjoyment, satisfaction, and behavioral intentions when related humor is included on the website
Ge, Gretzel, and Zhu 2018	Social Media site	1		<ul style="list-style-type: none"> humorous posts lead to more customer engagement (i.e., liking, commenting, reposting)
Kurtzberg, Naquin, and Belkin 2009	Email negotiations	1	0	<ul style="list-style-type: none"> beginning an e-mails transaction with humor results in higher trust and satisfaction outcomes are distributed more equally when humor was initiated
Treger, Sprecher, and Erber 2013	Social interaction	0		<ul style="list-style-type: none"> humor was positively associated with liking and closeness perceived reciprocal liking and enjoyment of the interaction mediated the association between humor and liking
McGraw, Warren, and Kan 2014	Humorous Complaining	1	1	<ul style="list-style-type: none"> humorous complaints benefit people who want to warn, entertain, and make a favorable impression on others.

Author(s)	Context	Online	Business relationship	Key findings
Fraustino and Ma 2015	Social Media and Humor in a Risk Campaign	1	1	<ul style="list-style-type: none"> • humor is harmful of serious content and leads to weaker intent to take protective actions • humorous content spreads faster

In general, the use of humor leads largely to favorable outcomes in an interaction. In social interaction the use of humor leads to more reciprocal liking, enjoyment of the interaction and the outcomes of the interaction are distributed more fairly (Treger et al. 2013; Chiew et al. 2019; Kutzberg, Naquin, and Belkin 2009). In the context of social media humorous posts lead to more consumer engagement, spreads faster and humorous content on a website leads to more enjoyment (Ge et al. 2018; Fraustino and Ma 2015; van Dolen et al. 2008). Besides these positive effects, humor is harmful for serious content and leads to less intention to take action and weakens the strengths and seriousness (Fraustino and Ma 2015; McGraw et al. 2014).

Over the past 40 years research investigates the efficacy of humor in advertisement (for an overview of past research see Eisend 2009). The phenomenon seems to be very complex and there are still no distinct findings if humor has a conclusive positive effect on relevant outcome variables (Weinberger and Gulas 1992; Eisend 2009). Research suggests that certain types of humor contributing to persuasiveness under some conditions but not in others. Hence, focus of research has been studying a variety of moderators which enhance or inhibit the positive effect of humor (Cline, Altsech, and Kellaris 2003). Thus, consumers characteristics like involvement (Zhang und Zinkhan 1991), need for cognition (Zhang 1996), need for humor (Cline et al. 2003), prior brand attitude (Chattopadhyay and Basu 1990) and product characteristics (Weinberger and Gulas 1992) have been identified in determining the effect of humor. But also, the type and strength of humor itself is influencing the impact of humor (Eisend 2009). Regarding outcome variables, research shows that humorous advertisement elicits higher attention than neutral ads (e.g., Madden and Weinberger 1982; Stewart and

Furse 1986; Duncan and Nelson 1985), especially if the humor is product related (Weinberger, et al. 1995). There are no consistent findings if a humorous message is beneficial for the memory of product information, with some studies finding a positive relationship (Zhang and Zinkhan 1991; Steward and Furse 1986; Krishnan and Chakravarti 2003) and others a negative relationship (Cantor and Venus 1980; Gelb and Zinkhan 1986). Moreover, humor influences brand related variables like sympathy, liking, and purchase intention (Weinberger und Gulas 1992; Strick et al. 2009; Eisend 2009).

Overall research suggests that humor distracts attention from other information, has a more positive effect in low involvement situations and does influence affective variables more than cognitive ones.

3. Humor Mechanism and hypothesis development

3.1. Main effect of humorous response strategy

Signaling theory explains the functioning of “signals” as information surrogate in the case of limited information. These signals, defined as “observable characteristics attached to the individual that are subject to manipulation by him” (Spence 1973, p. 357), can be seen as proxy information and convey information about unobservable characteristics such as product quality (Rao, Qu, and Ruekert 1999, p. 259). Those signals are used in marketing related spillover effects, where for example established brand name, use of an expert spokesperson, or reference to regional origin or belongingness are used to transfer positive associations or concrete attributes from the signal to the brand (Raufeisen, et al. 2019). Brands use their advertisement as a signal to convey objective information, but also perceptual and symbolic attributes such as the brand’s personality (Erdem and Swait 2004). We argue that the communication style on social media serves as a signal and influence the general brand evaluation in the same way. Signaling theory postulates that the higher the perceived costs for the signal, the more credible is the signal perceived by the receiver (Connelly et al. 2011).

Since the answer to a public complaint is associated with high costs for the company, because in addition to the complainant a vast audience can follow the firm's response, we postulate that those public responses serve as important signal for other customers about general brand performance.

Scholars propose that the positive effect of humor could be explained with affect regulation mechanisms. Humor creates and enhances a positive mood. Subsequently, individuals try to maintain a positive affective state by two ways. They either ignore information, which would reduce this positive mood, or they perceive negative events as less unpleasant (Strick et al. 2013). Research shows that positive mood in general leads to higher product evaluation (Gorn, Goldberg, and Basu 1993). The spillover of this positive affect to the brand can be explained by evaluative conditioning, where the positive affect evoked by humor gets carried over to the brand (Eisend 2011). Therefore, the pure associations caused by humor already enhance product liking and product choice (Strick et al. 2009). In the context of advertisement research, it could be shown that humorous ads attract attention, entertain consumers, and improve attitudes towards the ad (Eisend 2009; Gulas and Weinberger 2006; Madden and Weinberger 1982). Additionally, humorous posts on social networks lead to more consumer engagement and humorous content spreads faster (Ge et al. 2018; Fraustino and Ma 2015).

Because of the regulative function of humor, we expect a humorous response to an online complaint, to serve as a more effective positive signal for the brand than a neutral response. While a neutral response signals indeed an appropriate reaction to a complaint, the observer's mood does not get enhanced and consumers might focus more on the negative event, namely the complaint, per se. Humorous content leads the audience to be less critical of an information and less likely to produce counter arguments (Unger 1995; Jones 2005). Research shows that subjects in a good mood and high arousal state are less likely to engage in message elaboration and are easily persuaded by weaker arguments than subjects in a bad mood (Fredrickson 2001, Bless et al. 1990; Sanbonmatsu and Kardes 1988). The affective system of judgment and decision making seems to be working with present information and ignores stimuli in the past (Chang and Pham 2013) which may lead to focus more on the humorous

stimuli than on the complaint itself. In line with this, it could be found that humor leads to positive effects for patients when doctors use humor in difficult situations (Locke 1996). In the context of social media affective elaboration significantly supersedes cognitive elaboration in forming attitudes toward the posts and attitudes toward the brand (Chen, Kim, and Lin 2015). Therefore, we argue that the positive affective state triggered by the humorous response gets carried over to the willingness to engage with the brand and serves as positive signal, therefore leading to a better general brand evaluation.

We hypothesize:

H₁ *A humorous response to a complaint as compared to a neutral response enhances the engagement of the observer.*

H₂ *A humorous response to a complaint as compared to a neutral response enhances the perception of brand affect of the observer.*

H₃ *A humorous response to a complaint as compared to a neutral response enhances the purchase intention of the observer.*

3.2. Sympathy as mediator

In line with this, the positive effect of humor can also be seen as halo effect. Grounded in social psychology the halo effect describes the phenomenon of “the influence of a global evaluation on evaluations of individual attributes of a person” (Nisbett and Wilson 1977, p. 250). In a marketing context, the halo effect is exhibited in instances such as high product quality being attributed to a high price (Erickson and Johansson 1985). In a similar fashion a humorous response might lead the observer to infer other brand characteristics which are associated with a humorous individual. In a social context research shows that the halo effect exists in the context of humor and people attribute a variety of personality traits to humorous individuals. Thus, individuals with a high sense of humor are perceived as more intelligent, extravert and more liked (Ruch 2010; Cann and Calhoun 2001; Bressler and Balshine 2006). Further, people

in general feel more attached to humorous individuals (Robert and Wilbanks 2012). We expect that a halo effect is also present in the context of a brand and that the brand is in general more liked if it communicates in a humorous way. Therefore, we argue that the positive effect of humor is mediated by how sympathetic the company is perceived by the observer.

H₄ *A humorous response to a complaint as compared to a neutral response enhances the observer's sympathy towards the company.*

H_{5a} *Sympathy mediates the positive effect of humor on brand affect.*

H_{5b} *Sympathy mediates the positive effect of humor on purchase intention.*

3.3. The moderating role of humor type

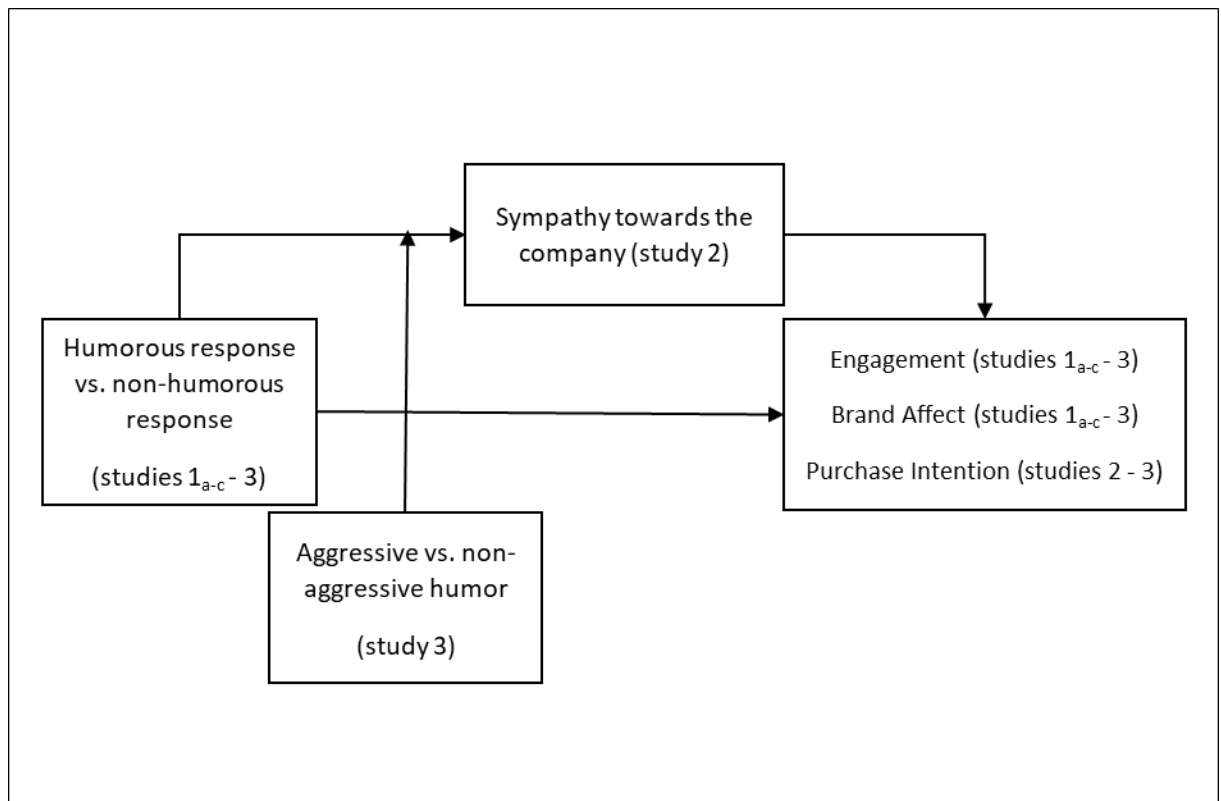
Firms increasingly integrate controversial or provocative comedy in their marketing communication (Blackford, et al. 2011; Swani, Weinberger, and Gulas 2013). Especially, in social media it seems more common to integrate edgy comedy, because marketers hope that humorous content is more likely to be shared (Porter and Golan 2006; Warren and Berger 2011). Research often made no differentiation of humor type in the past (Warren and McGraw 2016). We think that a humorous social media strategy, especially in the context of complaint management, does not always lead to favorable brand outcomes, but is dependent on the humor type which is present. We differentiate humor which is done on the expense of others and humor which is not. This "aggressive" humor is characterized where the self is enhanced by the disparagement of others (Zillmann 1983). In contrast, non-aggressive humor is not directed to another party and is milder in comparison to aggressive humor (Warren and McGraw 2016). Warren and McGraw (2016) demonstrate that aggressive humorous advertisements lead to lower brand evaluation and can harm the brand. Marketing communications that are perceived humorous indeed can hurt brand attitudes by triggering negative reactions in addition to laughter and amusement (Warren and McGraw 2016). The same holds in a social context. When people had to evaluate another person and examples of non-aggressive and aggressive humor were presented as the stranger's preferred humor,

aggressive humor led to more negative impressions (Cann, Cann, and Jordan 2016). A study found that, in conflict situations, maladjusted marital couples were more likely to use aggressive humor compared to well-adjusted couples (Alberts 1990). Although we expect that aggressive humor enhances mood the same way positive non-aggressive humor does, we think that the valence of the perceived signal differs. A recent meta-analysis about different kind of emotions in the marketing context shows that positive emotions show consistently stronger effect sizes than negative emotions do and are more efficient in influencing positive brand outcomes (Kranzbühler et al. 2020). Therefore, we expect that aggressive humor is in the same way associated with negative feelings, which in turn have a negative effect on brand evaluations, and leads to lower sympathy perception compared to non-aggressive humor, which is associated with positive feelings.

H₅ *An aggressive humorous response to a complaint as compared to a non-aggressive response reduces sympathy towards the company of the observer.*

4. Empirical Approach

To test our hypothesis, we performed five online experiments during the time from spring 2019 to January 2020. In studies 1 a-c we tested the basic assumption that a humorous response strategy is more appealing for the observers and enhances online engagement and brand affect (H1-H2a-b). The goal of study 2 was to see if a humorous answer influences behavior intention and if its effect is mediated by sympathy perception towards the brand. In study 3 we introduced two different humor types (non-aggressive vs. aggressive) and show that the positive effect of a humorous response depends on the humor type which is used (see Figure 4 for an overview).

Figure 4. Conceptual model

4.1. Study 1 a

4.1.1. Study Design and Sample

We investigated the hypothesized effects of response strategy by manipulating the response to a complaint (humorous vs. neutral) between subjects in a product setting. Participants were asked to read a short description about a fictitious candy brand, followed by a Facebook post of one customer complaining about the new flavor. We used Facebook as social media platform because of its prominence. Around 80% of the customers prefer Facebook as customer service outlet in the U.S. (Statista Research Department 2015). The candy company answered depending on the condition in a humorous or a neutral way (see Figure 5 for humorous response and Figure 6 for neutral response). In the neutral response the company stated that they wrote a personal message to the complainant and the humorous response stated the same as the neutral one and additionally a humorous comment. Afterwards, the questionnaire collected information about the dependent variables. All participants were

recruited via Facebook and were randomly assigned to the treatment groups. The sample consisted of 133 respondents (57,1% female; 16-63 years old, $M = 28,91$; $SD = 8,18$).

Figure 5. Humorous response

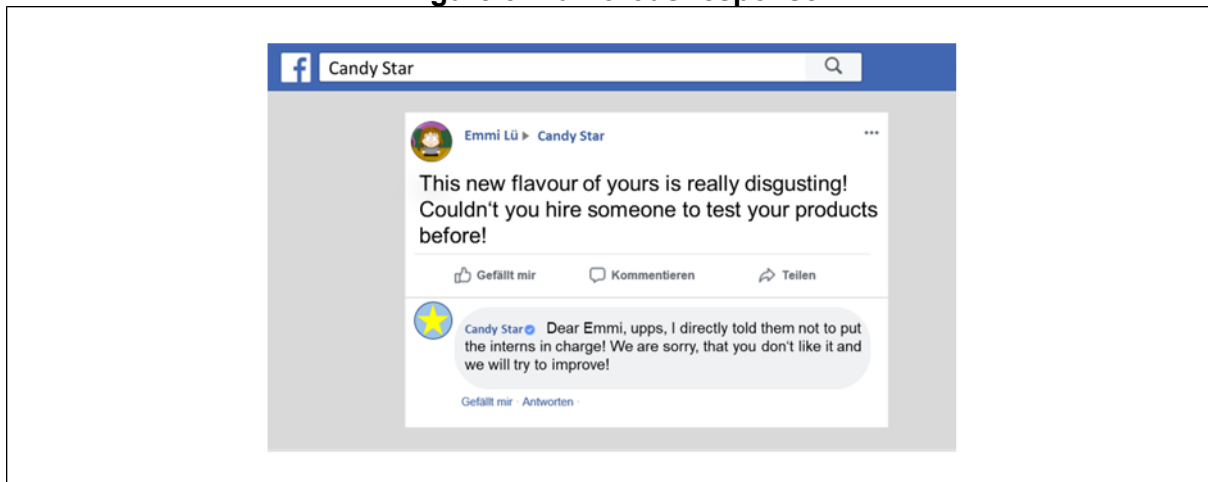
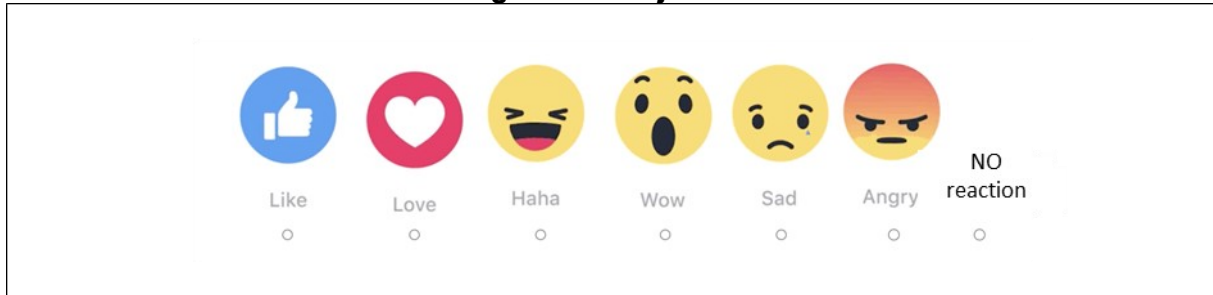


Figure 6. Neutral response



For measuring the reaction in form of emojis, participants could choose an emoji similar as it is depicted on Facebook or could not react at all (see Figure 7 for emoji scale). Later we calculated a dichotomous variable which shows if participants reacted with an emoji or did not react at all (1 = reaction; 0 = no reaction). Brand affect was measured with three items adapted from Sung and Kim (2010).

Figure 7. Emoji Scale

4.1.2. Results

To test if a humorous answer elicited more emoji reactions, we performed a binary logistic regression analysis. In a binary logistic regression, a dichotomous dependent variable Y (i.e. 1 = emoji reaction; 0 = no reaction) follows a Bernoulli probability function that takes a value of 1 with probability π and 0 with probability $1 - \pi$, where it varies over the observations as an inverse logistic function of a constant and the independent variable (i.e. humorous vs. neutral response) (Hennig-Thurau, Henning, and Sattler 2007). In our sample 72,7 % did react with an emoji when they were in the treatment group and only 40,3 % did react when they were in the control group. The binary logistic regression shows that emoji reaction differs significantly in both groups ($\beta = 1.374$; $SE = .372$; $Ex(\beta) = 3.951$; $\chi^2 = 13.636$; $p < .001$) supporting H1.

To test if participants had a higher value for brand affect, we performed an ANOVA, which revealed significant differences in the groups ($M_{\text{humorous}} = 4.08$; $M_{\text{neutral}} = 3.16$; $F = 15.186$; $p < 0.001$) in line with H2 and a humorous response leads to higher evaluation of brand affect.

4.2. Study 1b

4.2.1. Study design and sample

To validate our results, we performed two additional experiments where we varied context and the humorous response. Doing that, we make sure, that our results are not only limited to our chosen context and the specific response. We used the same procedure as we did in study 1a, only this time participants were given information about a fictitious pizza restaurant and

saw again a public posted complaint either followed by a humorous response or a neutral response. All participants were recruited via an introductory business class and were randomly assigned to the treatment groups. The sample consisted of 97 respondents (33% female; 18-38 years old, $M = 21,51$; $SD = 3,28$). This time we measured only brand affect adapted from Sung and Kim (2010).

4.2.3. Results

To test if participants had a higher value for brand affect, we performed an analysis of variance (ANOVA), which revealed significant differences in the groups ($M_{\text{humorous}} = 3.82$; $M_{\text{neutral}} = 3.36$; $F = 3.446$; $p < 0.1$ (0.067)), which replicates our findings from study 1a and further supports H2.

4.3. Study 1c

4.3.1. Study design and sample

Again, we varied the context and participants read a short description about a fictitious insurance company, saw again a public posted complaint either followed by a humorous response or a neutral response. All participants were recruited via an introductory business class and were randomly assigned to the treatment groups. The sample consisted of 83 respondents (37.2% female; 18-34 years old, $M = 21,72$; $SD = 2.77$). We used the same measures as in 1a.

4.3.2. Results

To test if participants had a higher value for brand affect, we performed an ANOVA, which revealed significant differences in the groups ($M_{\text{humorous}} = 3.63$; $M_{\text{neutral}} = 2.99$; $F = 5.135$; $p < 0.05$ (0.026)).

In our sample 83,7 % did react with an emoji when they were in the treatment group and only 47,83 % did react when they were in the control group. The binary logistic regression shows that emoji reaction differs significantly in both groups ($\beta = 1.729$; $SE = .535$; $Ex(\beta) = 5.636$; $\chi^2 = 10.454$; $p < .001$).

4.4. Discussion

To test our assumptions in H1 and H2 we performed three experiments where we implemented a humorous response strategy to a complaint. By varying the context, we make sure that the results are not limited to a specific humorous response and are also not dependent on the company type (e.g., service vs. product). The conducted experiments confirmed that the engagement is enhanced when a humorous response is applied. In total participants chose the option “no reaction” less when the reply was humorous compared to neutral response. Moreover, not only the reaction is enhanced, but also the general attitude towards the company. In support for H2, participants evaluated brand affect higher when they have seen a humorous response (vs. neutral response).

4.5. Study 2

4.5.1. Study design and sample

The goal of study 2 is to investigate if the effect of humor can be explained through enhanced sympathy perception. Moreover, we wanted to test if beside affective measures (i.e., brand affect), also cognitive measures such as purchase intention are influenced by the response strategy. We used the same procedure as in study 1b. All participants were recruited via an introductory business class and were randomly assigned to the treatment groups. The sample consisted of 159 respondents (40.9% female; 18-29 years old, $M = 21,43$; $SD = 2.31$).

We used the same measures for brand affect as in 1b, purchase intention was measured with three items adapted from Johnen and Schnittka (2019) and sympathy was measured with four items adapted from van der Meer and Verhoven (2014).

4.5.2. Results

To test if a humorous response has an effect on our dependent variables, we performed three ANOVAs, which revealed significant differences in the groups for brand affect ($M_{\text{humorous}} = 3.96$; $M_{\text{neutral}} = 3.51$; $F = 4.635$; $p < 0.05$ (0.033)), sympathy ($M_{\text{humorous}} = 4.89$; $M_{\text{neutral}} = 4.12$; $F = 11.408$; $p < 0.001$), and purchase intention ($M_{\text{humorous}} = 4.46$; $M_{\text{neutral}} = 4$; $F = 4.258$; $p < 0.05$ (.041)). This being so, we find support for hypothesis 3 and 4.

To assess if sympathy mediates the effect of a humorous response on brand affect and purchase intention, we performed conditional process analyses (Hayes 2013, model 4). We estimated the model with 95% bias-corrected confidence intervals (CIs) using 10,000 bootstrap samples. Our results show a significant indirect effect of humorous response on brand affect via sympathy ($B = .4782$, $SE = .1432$, $CI: .2040$ to $.7662$) and significant indirect effect of humorous response on purchase intention via sympathy ($B = .4691$, $SE = .1457$, $CI: .2007$ to $.7666$).

4.5.3. Discussion

Goal of this study was, to replicate the findings from study 1 and explore if purchase intention is also affected by the response strategy. Further, we investigated if the positive effect of humor on brand affect and purchase intention is mediated by sympathy towards the company. Our results indicate that sympathy mediates the effect of a humorous response strategy on the dependent variables, which supports hypothesis 5a and 5b.

4.6. Study 3

4.6.1. Study design and sample

The goal of study 3 is to demonstrate that humor type moderates the positive effect of a humorous response on sympathy, brand affect and purchase intention. We used the same procedure as in study 1a with slightly different stimuli and added an aggressive humorous

response as treatment group (see Figure 8 for non-aggressive humorous response, Figure 9 for aggressive humorous response, and Figure 10 for neutral response). All participants were recruited via Facebook and were randomly assigned to the treatment groups. The sample consisted of 295 respondents (80.4% female; 19-59 years old, $M = 28,02$; $SD = 6.44$).

We used the same measures as in study 2.

Figure 8. Non aggressive humorous response

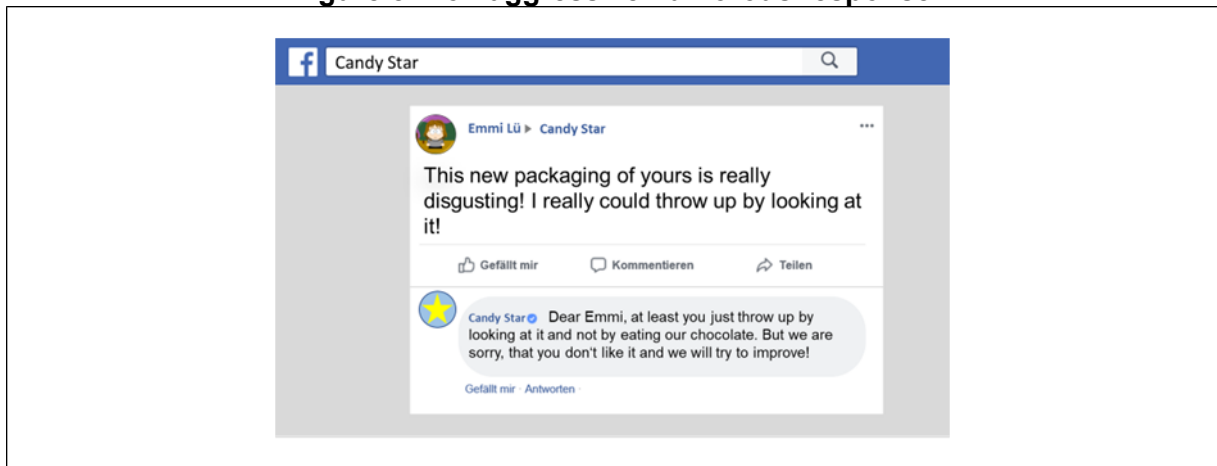


Figure 9. Aggressive humorous response

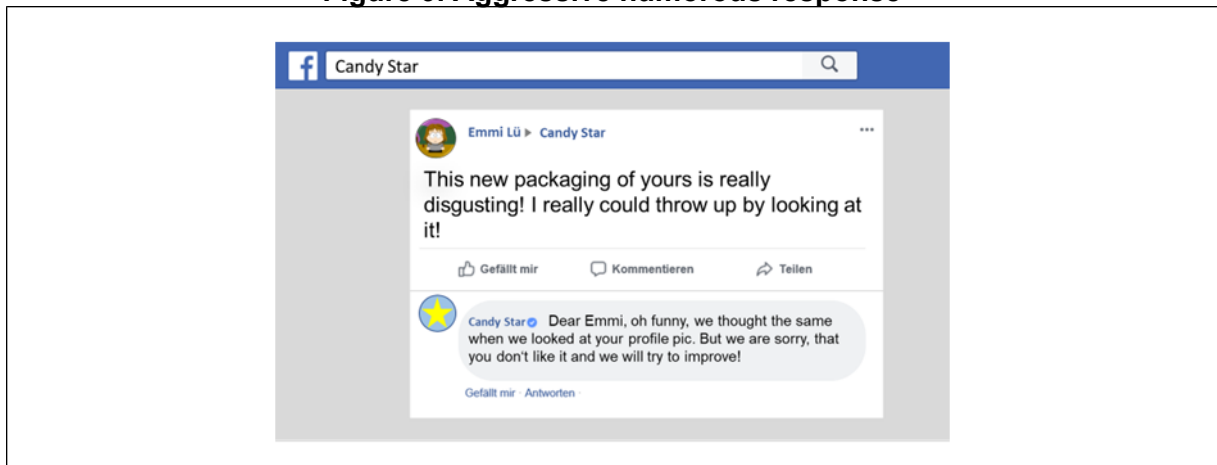
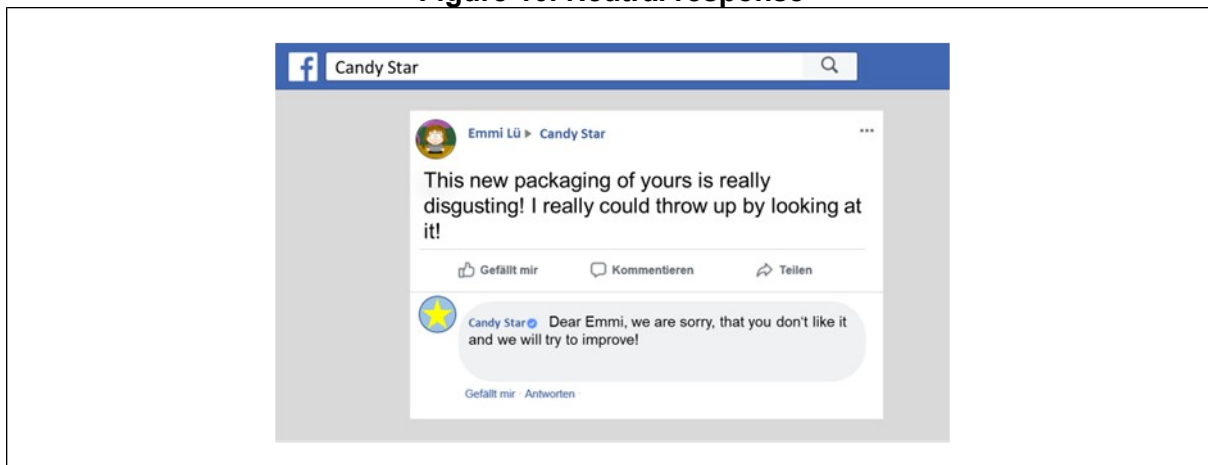


Figure 10. Neutral response

4.6.2. Results

To see if there are significant group differences, we performed three ANOVAs. We find significant effects on sympathy ($F = 75,411$; $p < 0.001$), brand affect ($F = 27,875$; $p < 0.001$), and purchase intention ($F = 24,641$; $p < 0.001$). Follow up contrasts show significant differences between the groups for sympathy, compared to the control ($M = 4.47$, $SD = 1.25$), non-aggressive humor leads to higher sympathy perception ($M = 5.13$, $SD = 1.15$, $F = 11.41$, $p < 0.001$), and aggressive humor leads to lower sympathy perception ($M = 2.8$, $SD = 1.64$, $F = 74.63$, $p < 0.001$). The same pattern holds for brand affect, compared to the control ($M = 3.43$, $SD = 1.3$), non-aggressive humor leads to higher brand affect $M = 3.95$, $SD = 1.39$, $F = 7.01$, $p < 0.01$), and aggressive humor leads to lower brand affect ($M = 2.49$, $SD = 1.47$, $F = 22.93$, $p < 0.01$). For purchase intention follow up contrasts also show compared to the control ($M = 2.99$, $SD = 1.75$), non-aggressive humor leads to purchase intention $M = 4.05$, $SD = 1.66$, $F = 18.81$, $p < 0.01$), and aggressive humor leads to lower purchase intention ($M = 2.35$, $SD = 1.67$, $F = 7.22$, $p < 0.01$). Conditional mediation analyses (Hayes 2013, model 4) reveals significant positive indirect effect of non-aggressive humor ($B = .454$, $SE = .1199$, $CI: .2261$ to $.6960$) and negative indirect effects of aggressive humor ($B = -1.154$, $SE = .1639$, $CI: -1.4919$ to $-.8480$) on brand affect via sympathy. We also find significant positive indirect effect of non-aggressive humor ($B = .4936$, $SE = .1305$, $CI: .2502$ to $.7571$) and negative indirect effects of aggressive humor ($B = -1.256$, $SE = .1976$, $CI: -1.669$ to $-.8913$) on purchase intention via

sympathy. We estimated the model with 95% bias-corrected confidence intervals (CIs) using 10,000 bootstrap samples.

4.6.3. Discussion

In study 3 we wanted to explore if the positive effect of humor varies depending on humor type. Therefore, we added the condition of an aggressive-humorous response and could show that aggressive humor leads to significant lower evaluations of sympathy, brand affect and purchase intention. Hence, we find support for hypothesis 6.

5. General discussion

5.1. Summary and Implications

In the era of social media, companies have to deal with public posted complaints and therefore are forced to maintain and build their reputation among the online community that can read the complaint and follow up the brand response. We are the first to show that a humorous response does elicit positive responses of the observer who reads the interaction between brand and customer. In study 1 we demonstrated that a humorous response affects actual behavior and observers are more likely to react in form of a positive emoji and therefore engage with the brand. Moreover, we show that the positive attitude towards the brand is enhanced and observers are also liking the whole brand more and the positive effects are not limited to Facebook outcomes. We tested our assumption in a product and service context and varied the humorous response. Hence, these results are robust and do not depend on context and the humorous response we chose per se. Our results are in line with past research which suggests that humor in general is very effective in influencing affective responses (Chiew et al. 2019; Ge et al. 2018). In study 2 we explain these positive effects and show that the effect on brand affect is mediated by sympathy towards the company. Additionally, we show the effect goes beyond only influencing affective responses and show purchase intention is higher

when the brand chooses to answer in a humorous way. Yet, study 3 shows that the positive effect of humor is not unconditional. Our findings suggest that a humorous response is only beneficial when non-aggressive humor is used. When an aggressive humorous response is present the positive effects of humor diminish and even have negative effects for the brand. In this case sympathy perception, brand affect and purchase intention are lower than the control group. For a non-aggressive humorous response, we can replicate our findings and show the opposite effect with higher values for sympathy, brand affect and purchase intention than in the control group. Our results are in line with past research on humor use in advertisements and a social context. When using aggressive humor styles companies and persons achieve negative judgments by others (Warren and McGraw 2016; Cann et al. 2016).

Our study contributes to existing research streams in several ways. We extend previous research on social media complaint handling while focusing on the perspective of the observer. In line with previous studies, we argue that because of their majority observers are even the more relevant target group and may have different intentions than the complainant (Johnen and Schnittka 2019). We propose a response strategy which is beneficial for the brand and does not only influence social media variables but also extent to their general attitude towards the brand and their purchase intentions.

Moreover, we contribute to humor research in marketing which goes beyond advertisement research. As we could show in our literature review, findings in regard to the effects of humor outside advertisement research are very scarce. We demonstrate that humor can be integrated in other communication channels and contexts and bring favorable outcomes for the brand. Thus, even if the general communication style is not humorous, brands can benefit in integrating a humorous voice in social media interactions.

Additionally, we contribute to research in conflict situations and resolution. In a social context the use of humor is beneficial in resolving conflicts. Our results indicate that in conflict situations with a company humor also may be an important tool to take the pressure out of the situation and even bring positive consequences.

Furthermore, we contribute to humor research in general by showing that humor per se does not only has positive effects. When talking about humor it is important to consider the humor type.

Further, our findings are highly relevant for managers involved in social media communication and complaint handling. When a public complaint is posted, the online community that reads the brand-customer interaction outnumbers the single complainant and therefore is an important target group to satisfy. We show that companies can use this complaint and enhance their sympathy perception, liking and purchase intention. We demonstrated that independent of the context (product or service) companies can utilize humor to achieve favorable brand outcomes. Especially, because customers tend to reach out to social media to just be entertained (Cotte et al. 2006).

Nevertheless, managers should keep in mind that the humor type is very important in determining if a humorous response strategy should be used. We show that aggressive humor can harm the brand and reduces sympathy towards the brand. Hence, if a response must be fast or there is no affiliative humorous applicable it is more beneficial to answer in neutral way than in aggressive way. If non-aggressive humorous response is applicable, it can be used independently of context factors since our results suggest that the positive effects are not limited to an industry or complaint type.

5.2. Limitations and Research Directions

As every empirical research this research has several limitations that future studies might take into consideration. While our controlled online experiments are characterized by high internal validity, we do not take field data into account and hence external validity might be limited. Since some companies already use humorous response strategies (e.g., Wendy's, BVG) and internal company data from the BVG suggests their "because we love you" campaign increased several key performance measures on an image and a performance level, we are confident that these effects are also present in a real market environment. Nevertheless, future

studies might address this issue and investigate with field data that humorous responses are a beneficial response strategy for brands.

Moreover, we focused only on Facebook as platform, but other social media platforms such as Twitter or Instagram might deliver different results. Dependent on their goal customers use different channels to interact with brand (Frasquet, Ieva, and Ziliani 2019; Toubia and Stephen 2013). While some social media platforms might be used primarily for information search, others are more important for being entertained. Hence, the effect of humor might be more beneficial on platforms like Twitter where the dialogue is more present and hedonistic goals might be more salient.

Also, subsequent studies might determine the effect of humor on other dependent variables. It would be interesting to find out, if besides the investigated positive effects, humor also might elicit unfavorable brand outcomes. A recent study shows that customers perceive service employees who use emoticons as higher in warmth but lower in competence compared to those who do not (Li, Chan, and Kim 2019). In the social context, humorous individuals are indeed more liked, but also perceived less honest and trustworthy (Ruch 2010; Cann and Calhoun 2001; Bressler and Balshine 2006). Therefore, it might be possible that even non-aggressive humor leads to some unfavorable brand outcomes.

Further, other moderators might be relevant in determining the effect of humor. A recent study shows that if observers are hedonistically motivated while reading a public complaint a defensive response strategy is more beneficial than accommodative strategy (Johnen and Schnittka 2019). Also, the positive effects of humor are enhanced when customers have a positive attitude towards the brand beforehand (Chattopadhyay and Basu 1990). People also enjoy aggressive humor against others when they have a prior negative attitude against them (Wyer and Collins 1992). Thus, the observers' motivation and prior attitude towards the brand might also enhance the effect of humor and even an aggressive humor style might be efficient under certain conditions. Additionally, we focused on non-aggressive vs. aggressive humor styles. A more nuanced view and different categorizations (irony, slap stick) or different

medium (e.g., pictures, animated pictures or memes) might also shed more light on the effect of humor in general.

D. Empirical Research Paper 2: @-Reply: The positive effects of reply messages on by-standers' credibility perception of scientific information

Abstract

Evaluating the credibility of content is a fundamental issue for users in various contexts. Through eight experiments, I show how the post type is crucial for social media users to determine credibility. In particular, I investigate the effect in which the information in a reply message is perceived as more credible than a single-stated message containing the same content. This “reply effect” can be explained on a theoretical level using the attribution and reactance theories. Further, I propose the mediating role of authenticity on credibility and the boundary condition of reactance toward the organizational post.

Additional notes

Parts of this unpublished paper entitled "@-Reply: The positive effects of replied messages on bystanders' credibility perception of scientific information" accepted for oral presentation at EUSEA Conference: "Pathfinders on a Mission - Exploring Engagement in a Complex World", 3-4 May 2023, Bolzano, Italy

1. Introduction

Getting valid information is crucial, particularly in times of crisis. In crises like the worldwide pandemic, global warming, and the war in the Ukraine, social media is essential for distributing information. Social media allows information to be shared widely and rapidly (Del Vicario et al. 2017). However, true and false information can spread quickly (Vosoughi et al. 2018). Therefore, evaluating the credibility of content is a fundamental issue for users in various contexts (Viviani and Pasi 2017). Although evaluation of credibility has been important throughout history, the formation of credibility has shifted since the rise of social media as recipients can choose other cues that are meaningful within the context of their social networks (Self and Roberts 2009). Hence, both receivers and senders of social media posts face new challenges. Receivers must evaluate the truthfulness of the information transmitted, while senders must ensure that their posts are perceived as credible. This dynamic is especially relevant for communicating scientific information since scientific research is currently facing several credibility issues from the general public (Jenkins et al. 2020).

Previous research has already identified some significant drivers of perceived credibility, and characteristics of the source, information quality, message-sidedness, and message framing are some examples of these drivers (e.g., Seiler and Kucza 2017; Sui and Zhang 2021; Cheung and Thadani 2012; Bolsen, Palm, and Kingsland 2019). In this research I identified an additional factor that is particularly important in the context of social media: whether the information is embedded in a reply post or a single-stated post. Social media allows private users and organizations not only to create posts but also to reply to others, and these reactions can be seen by a vast online audience. For instance, Donald Trump tweeted incorrect information about the existence of climate change (Paul 2019). One strategy to address this kind of misinformation is, for example, replying to Trump's tweets and stating the correct facts about climate change (see Figure 11 for an example). Therefore, communicators can distribute scientific information either by posting scientific facts on their accounts or *replying* to other

users. Through eight experiments, I investigated whether information in a reply message is perceived as more credible than the same content given in a single-stated message.

Figure 11. Exemplary reply to misinformation on Twitter



In this paper, I first provide an overview of the literature on credibility research and then present the theoretical background and hypothesis development. I argue that consumers will perceive reply posts as more credible than single-stated posts. This “reply effect” can be explained on a theoretical level using the attribution and reactance theories. I propose the mediating role of authenticity on credibility and the boundary condition of reactance toward the organizational post. I also investigate other moderators, such as reactance toward the initial message and attitude toward the issue. Subsequently, I report the results of the experimental studies performed to test the hypotheses. Finally, I conclude with a general discussion highlighting the contribution of this research to the field and practice.

2. Hypothesis development

2.1. Past research on credibility perception

Credibility is an important determinant in the persuasiveness of a message (Petty and Cacioppo 1986). Since message persuasion and, therefore, credibility is important to many fields, various disciplines (including psychology, communications, and marketing) have studied the factors that influence message credibility (Wathen and Burkell 2002). Generally, research has shown that credibility perception is influenced by the characteristics of the source, the recipients, and the message (Wilson and Sherrell 1993). Early studies on persuasion focused on the former; studies on the characteristics of the message were rare (Slater and Rouner 1996). However, a growing body of literature has emerged with a focus on how the message can appear as credible (Krause and Rucker 2020). In this study, I add to this literature by introducing an additional message characteristic that influences credibility: the reply message. I provide a brief overview of the main characteristics affecting credibility perception, with a focus on message characteristics across disciplines, in the following section (see Table 6 for a summary).

Messages are perceived as more credible when the source is perceived as trustworthy, high in expertise, attractive, and possessing values and beliefs similar to the receiver's (e.g., Ismagilova et al. 2020; Wilson and Sherrell 1993; Sui and Zhang 2021; Wathen and Burkell 2002; O'Hara, Netemeyer, and Burton, 1991). Regarding the characteristics of the recipient, issue involvement, motivation, pre-attitude, and knowledge are important factors influencing message credibility (e.g., Sternthal, Dholakia, and Leavitt 1978; Chaiken and Maheswaran 1994; Wathen and Burkell 2002).

Besides the characteristics of the source and the recipient, the characteristics of the message also shape credibility perceptions. When evaluating the message, the quality of information is crucial for determining credibility. Information quality often is operationalized as a multidimensional construct comprising the following dimensions: relevance, timeliness, accuracy, and understandability (Sui and Zhang 2021). Thus, a message is perceived as more

credible when the quality of information is high (Sui and Zhang 2021; Cheung and Thadani 2012; Chu and Kamal 2008; Bryanov and Vziatysheva 2021; Slater and Rouner 1996; Song et al. 2019; Jung et al. 2016).

Moreover, the sidedness of a message — that is, whether it states positive and negative information (two-sided) or only positive information (one-sided) — also affects credibility perception (Cornelis, Heuvinck, and Majmundar. 2020). For example, early research in marketing showed that the believability of product claims and the credibility of the source can be increased when positive and negative features are communicated by the marketer (Settle and Golden 1974). Acknowledging opposing arguments may signal the communicator's honesty and therefore affect credibility perception of the source and message (O'Keefe 1999). A more recent experimental study showed that information on mask wearing was perceived as more credible when it was two-sided (including arguments for and against mask wearing) compared to one-sided messages (including only arguments for mask wearing) (Hendriks, Janssen, and Jucks 2022). Furthermore, in the context of advertisements, stating negative information enhances credibility perception in certain contexts (Eisend 2009). In line with this, also online reviews are perceived as more credible when negative reviews are also present than when only positive reviews are given (Doh and Hwang 2009). While past research has found some mixed results, the overall assumption is that two-sided messages are superior to one-sided messages in terms of credibility perception in the marketing context, as well as other domains of persuasive communication (Eisend 2007; O'Keefe 1999).

Many scholars have studied not only content but also the way the information is framed. The framing theory postulates that the presentation of a message is critical to the recipient's interpretation and, therefore, the credibility perception (Cole and Greer 2013). The frame of a message is an additional visual, written, or verbal message unit that draws attention to certain aspects of the message with the goal of influencing the audience's perception of the message (Cann 2021). Scholars define the "framing effect" as the difference in people's responses to two essentially identical options that are presented differently (Jacobson et al. 2019). One of the most prominent examples of the effect of framing was provided by Kahneman and Tversky

(1984), who discussed gain and loss frames. They showed that people tend to make different decisions depending on whether their losses or gains were highlighted (Kahneman and Tversky 1984). In the context of health promotion messages, gain-framed messages are perceived as more credible than loss-framed messages. In one experiment, people believed a gain-framed message highlighting the benefits of regular exercising more than a loss-framed message outlining the risks of not engaging in exercise (Borah and Xiao 2018). Moreover, consumers' credibility perception of electronic word of mouth can be influenced by whether a message is negatively or positively framed (Hsu and Yang 2021). Additionally, other types of frames also seem to influence credibility perception. In the social media context, social consensus, which can, for instance, be reflected in the number of likes on a post, affects credibility perception (Lewandowsky et al. 2020; Luo, Hancock, and Markowitz 2022). In the context of climate change communication, the way that scientific uncertainty is framed has a significant influence on credibility perception (Gustafson and Rice 2019). Regarding communicating a scientific fact about climate change, one study found that the message was more credible when the sentence "although future research may change this" was used compared to the uncertainty frame of "although some experts disagree" (Gustafson and Rice 2019). Messages in which the frame highlights the objectivity of a message are also perceived as more credible. Thus, statements with an objective tone (vs. subjective), as well as nonopinionated tweets (vs. opinionated), are perceived as more credible (Wasike 2022; Houston et al. 2019).

Credibility is a complex construct; different characteristics of the source, recipients, and message can interact (Self and Roberts 2009). Research has suggested that characteristics of the recipient, such as involvement or knowledge, particularly interact with other factors. An underlying explanation of the interaction is based on dual-process accounts of information processing, such as the elaboration likelihood model (ELM) proposed by Petty and Cacioppo (1986). The basic assumption of this model is that individuals engage in two routes of information processing. The central route (systematic processing) is effortful and requires more elaboration and thinking, whereas the peripheral route (heuristic processing) is quick and relies

on heuristics and peripheral cues when information is processed (Petty and Cacioppo 1986). Research has suggested that when people are highly involved because the issue is relevant to them or because they are knowledgeable, systematic processing determines their thinking, and message content, such as argument quality, becomes of greater importance to them (Chaiken and Maheswaran 1994; Sussman and Siegel 2003). In contrast, when people are less involved, they do not engage in deeper processing and rely more on peripheral cues, such as presentation and message framing (Wilson and Sherrell 1993).

Table 6. Overview of factors affecting credibility

Factors influencing credibility		Exemplary studies
Source characteristics	Appearance (e.g., attractiveness, likability)	Kang and Herr 2006; Sharma 1990; Ismagilova et al. 2020; Patzer 1983; Seiler and Kucza 2017; Chaiken 1979
	Similarity	Brock 1965; Levine and Valle 1975; Kang and Herr 2006; Seiler and Kucza 2017
	Expertise	Gass and Seiter 2011; Thon and Jucks 2017; O'hara, Netemeyer, and Burton 1991; Sui and Zhang 2021; Lewandowsky et al. 2012
Receiver characteristics	Involvement/motivation	Petty and Cacioppo 1979; Crowley and Hoyer 1994; Wilson and Sherrell 1993; Sussman and Siegel 2003
	Prior attitudes/knowledge of the issue	Sternthal et al. 1978; Chaiken and Maheswaran 1994; Ma, Dixon, and Hmielowski 2019
Message characteristics	Information quality (e.g., plausibility, presentation, accuracy)	Sui and Zhang 2021; Cheung and Thadani 2012; Chu and Kamal 2008; Bryanov and Vziatysheva 2021; Slater and Rouner 1996; Song et al. 2019; Jung et al. 2016; Lewandowsky et al. 2012
	Argument strength	Cheung et al. 2009
	Opinion included	Houston et al. 2020
	Language use (technical vs. every day)	Thon and Jucks 2017

Factors influencing credibility	Exemplary studies
Framing (e.g., loss or gain frame; number of likes)	Bolsen et al. 2019; Cole and Greer 2013; Gustafson and Rice 2019; Hsu and Yang 2021; Borah and Xiao 2018; Wasike 2022
Two-sided messages vs. one-sided messages	Cheung and Thadani 2012; Doh and Hwang 2009; Crowley and Hoyer 1994; Hendriks et al. 2022; Eisend 2006, 2007; O'Keefe 1999
Story telling	Krause and Rucker 2020
Reply messages vs. single-stated messages	Present study

I propose that the post type, whether a reply to another message or a single-stated post by the organizational account, is an additional factor that influences credibility perception. This reply effect can be explained by the attribution and reactance theories.

2.2. Attribution theory

Attribution theory postulates that individuals will attribute observable events to their underlying causes (Heider 1958). In brief, the theory describes the human characteristic of making sense of the world. In other words, individuals tend to ask “why” when they make observations and therefore make inferences regarding the cause of events (Jones and Davis 1965; Crowley and Hoyer 1994). Originating in social psychology, attribution theory is not one theory but rather a complex of various theories that all have in common the conception that individuals interpret behavior in terms of its causes and that these interpretations are important in determining reactions to the behavior (Kelley and Michela 1980). Therefore, attribution theory is used to explain the credibility perception of different types of messages (Settle and Golden 1974; Crowley and Hoyer 1994). In the context of advertisements, for instance, the content of the advertised message can be attributed either to the desire of the advertiser to sell his particular brand or the actual characteristics of the brand being advertised. When the advertiser includes negative information about the brand, consumers perceive the advertised message as more

credible (Kelley and Michela 1980). This positive effect of two-sided messages (vs. one-sided messages) on credibility perception is explained by the attribution theory. The inclusion of negative information or contra-arguments in a message leads the receiver of the message to conclude that the sender is more likely telling the truth (Crowley and Hoyer 1994). The attribution theory also explains a key concept affecting credibility: the communicator's bias. When the sender of a message includes statements that have the potential to impede their communication goal, they are perceived as less biased and therefore as more believable (Kelley 1973).

I argue that, similar to two-sided arguments, *reply messages* are perceived as more credible than a *single-stated message*. Communicators do not typically debunk incorrect information or react to other posts; there is no external pressure or expectation to engage with others beyond the communicator's own social media page. Additional effort to engage in a discussion might be attributed by the receiver as certainty about the communicated information and a higher motivation to tell the truth. After all, answering someone else places the organization in a greater position of vulnerability than does staying in the "safe space" of the organization's account. Previous research has shown that facts presented in a story are perceived as more credible than those facts presented alone (Chang 2008; de Wit, Das, and Vet 2008). Krause and Rucker (2020) demonstrated that this effect might be due to reduced processing of information when it is embedded in a story. A reply to another message might also be perceived as greater justification for the post and, moreover, as a sort of story compared to a single-stated post only providing facts. This effect might result in superficial processing, which could lead to better acceptance of the content.

The resulting increased credibility perception can be explained through authenticity. Authenticity can be defined as someone being true to their self; their behavior reflects their true identity (van Leeuwen 2001). Authenticity involves an individual's engagement in intrinsically motivated behaviors, which come from innate desires and passions. A reaction to another post can be seen as a such a behavior because it is more effort for organizations to reply to others than to post facts on their public accounts. Authenticity is associated with

characteristics such as genuineness, reality, fact, actuality, and truthfulness (Alhouti, Johnson and Holloway 2016; Chiu et al. 2012). In other contexts, such as corporate social responsibility (CSR) communication, authenticity is assumed to be a key driver of message credibility (Pérez 2019). When consumers infer that CSR communication is authentic, they also attribute altruistic motives to the communication. In the same way, a reply message could be perceived as more authentic than a single-stated message, thus leading to enhanced credibility perception.

Therefore, I formulate the following hypotheses:

H₁ *A reply message enhances the credibility perception of the receiver compared to a single-stated message.*

H₂ *Authenticity mediates the positive effect of a reply message (vs. a single-stated message) on credibility.*

2.3. Psychological reactance and credibility

A key concept explaining the effect of persuasive messages is reactance. The reactance theory postulates that people believe they can engage in so-called “free behaviors” and strive to maintain this autonomy. When individuals fail to preserve their freedom, they feel threatened and are motivated to restore the lost freedom (Brehm 1966). Thus, reactance refers to the unpleasant motivational arousal that is triggered when freedoms are removed or choices are reduced (Brehm and Brehm 1981). Consequently, people become uncomfortable and angry and apply strategies to restore their freedom (Brehm 1966; Dillard and Shen 2005; Rains 2013). One strategy to restore freedom is engaging in behavior that was previously restricted (Brehm 1966). This “boomerang effect” has been well studied, and it leads people to engage in the opposite behavior intended by the persuasive message. For example, when the drinking age increased from 18 to 21, younger college students, whose drinking was now forbidden, drank more than adult students (Engs and Hanson 1989). The concept of reactance has been well established in communication research and has been applied to different contexts. The

overall assumption is that reactance is particularly triggered after seeing an overtly persuasive message (Dillard and Shen 2005; Petty and Cacioppo 1979). Therefore, messages, that utilize assertive or forceful language or an explicit intent to persuade compared to not forceful and covert intent to persuade, increase reactance the most (Ma et al. 2019; Dillard and Shen 2005). In the context of a reply message (vs. a single-stated message), two parallel processes regarding reactance can happen. First, when an organization replies, the initial message to which it replies possesses the potential to trigger reactance. Second, the organizational message, whether a reply or single-stated message, can itself trigger reactance. As mentioned before, when reactance is triggered, people engage in actions that reduce threats to their freedom. If they feel threatened by the *initial message*, a boomerang effect can occur. In rejecting the initial message, they might be more receptive of the reply message and thus evaluate it as more credible. This effect can also be explained by the attribution theory since individuals might also perceive greater justification and motivation for an organization to reply to a threatening message than a neutral message. Hence, I expect the following:

H₃ *An initial message triggering high reactance (vs. low reactance) enhances the positive effect of a reply message on credibility perception compared to that of a single-stated message.*

In regard to the second point, persuasive messages conveying scientific facts can trigger reactance. In the context of climate change communication, research has shown that communicating information about climate change can be seen as persuasive because recipients feel forced or manipulated into forming a particular set of beliefs (Ma et al. 2019). If the organizational post triggers a high level of reactance, reactance can dominate the information processing, causing other cues to become less important. Because the receiver already feels threatened by the organizational message, they become distracted, and other cues, such as post type, become less important (reply vs. single-stated). To reduce this threat, the receiver might reject the content, which would result in reduced credibility perception and would decrease the positive effect of a reply message. Therefore, the positive effect of a reply

message will likely be greater if the organizational post triggers a low level of reactance, as formally stated in the following hypothesis:

H₄ A message triggering a high level of reactance reduces the positive effect of a reply message on credibility compared to a message triggering a low level of reactance.

As previously explained, the organizational message can trigger a certain level of reactance because it can be seen as a persuasive message. This effect should be reduced in the case of the reply message as the receiver might not feel addressed by the message's persuasive content since the *user of the initial post* is the primary recipient. Because another user is addressed in the reply message, the receiver's freedom may be threatened less than it would be if the general online audience (which includes the recipient) were addressed. A related pattern is observed in two-sided argumentation; two-sided messages (vs. one-sided messages) trigger less reactance. Two-sided messages offer both sides of an issue, leaving more room for individual freedom in thinking and representing less pressure to endorse an advocated view of thinking (Pham et al. 2016; Ahn et al. 2011). Therefore, these messages enhance perceived source and message credibility (Pechmann 1992; O'Keefe 1999; Rosenberg and Siegel 2018). Consequently, I expect the following:

H₅ *A reply message as compared to a single-stated message reduces reactance toward the message.*

How much a message triggers reactance is also determined by the receiver's attitude toward the communicated issue. First, when the communicated facts align with the attitude and set of beliefs, they should trigger less reactance; if they do not align, they should trigger more reactance. In other words, reactance is more likely to be triggered among individuals who hold beliefs contrary to the message content (Nisbet, Cooper and Garrett 2015). If the receiver's attitudes align with the organizational post, they are more likely to reject the information of the

initial post, and their reactance toward the initial post is likely enhanced. Therefore, the positive effect of reply message is enhanced if a high level of reactance is triggered toward the initial message. Moreover, when receivers reject the information of the initial message, they might also think about counter-arguments and information that align with their views. Therefore, the reply message would confirm this processing and might additionally lead to enhanced credibility perception. Thus, I expect the following:

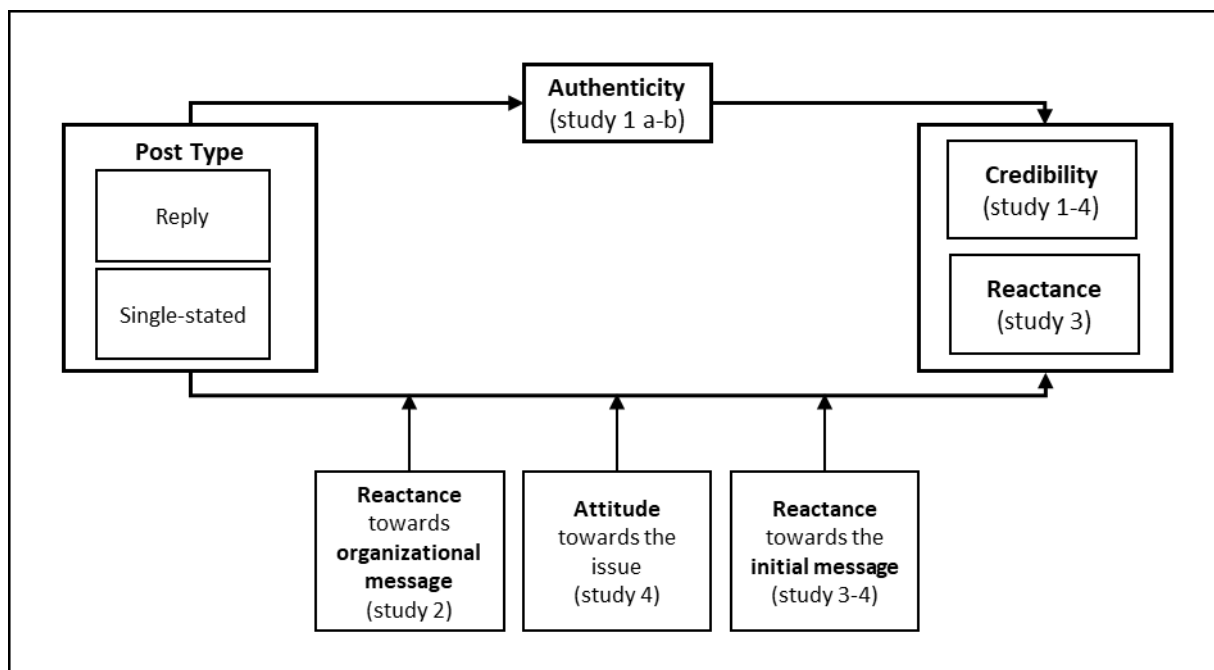
H₆ The prior attitude toward the communicated issue will moderate the effect of a reply message on credibility perception. The positive effect of a reply message is enhanced if the receivers' attitudes align with the communicated facts.

3. Empirical investigation

3.1. Overview of the studies

To test the formulated hypotheses, I explored the effect of a reply post (vs. a single-stated post) on credibility perception in a series of four studies (see Figure 12 for an overview). In Studies 1a and 1b, I examined in two contexts if credibility judgments are positively affected by whether the posts are single-stated or replies, and if these effects are mediated by perceptions of authenticity. Then, in Studies 2–4, I investigated whether these effects were moderated by prior attitude toward the communicated issue, the reactance elicited by the initial post, and the reactance toward the organizational post. Finally, I performed three additional studies (studies 5-7) to explore the applications of the reply effect. Specifically, I investigated whether the type of information source (blog post vs. tweet) affected the relationship of the reply post and credibility perception and whether the effect existed in different contexts, such as the credibility of CSR communication.

Figure 12. Overview of empirical investigation



3.2. Study 1: Is a reply post perceived as more credible than a single-stated post and is this effect mediated by authenticity?

3.2.1. Study 1a

3.2.1.1. Study design, measures, and sample

I investigated the hypothesized effect by manipulating the organizational post (reply post vs. single-stated post) between subjects on Twitter. On Twitter, brief information and facts are shared because of the platform's depersonalized nature and the character limits for each post. Moreover, the platform is interactive, making reactions to other tweets common (Yilmaz and Johnson 2016). I chose a fictitious nongovernmental organization (NGO) to post facts about the nature of climate change. NGOs have always been an essential science communicator; in the context of climate change communication, they have been forefront communicators about global warming, acting as an important medium between scientific knowledge and the public (Doyle 2009; Ladle, Jepson, and Whittaker 2005). Depending on the condition, the study participants saw either the single post (see Figure 13) containing the facts or a reply to another

tweet (referred to as the initial tweet, see Figure 14) doubting the existence of climate change. This reply contained the same facts as the single post. In the single post, I added the comment “many people bring local weather fluctuations as an argument against climate change.” I did so to ensure that all users had read a contra-argument against climate change and that this contra-argument would thus not be responsible for the difference in credibility perception in the reply-post condition.

Figure 13. Stimulus single-post condition

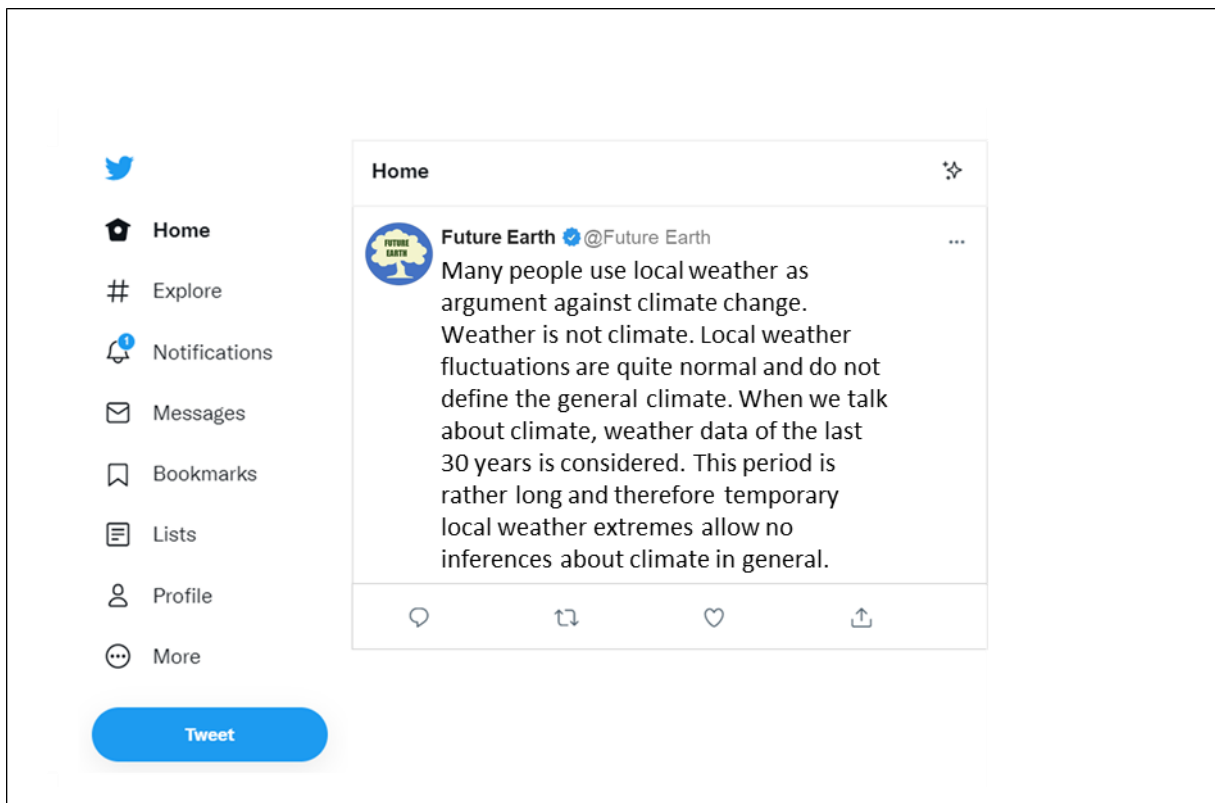
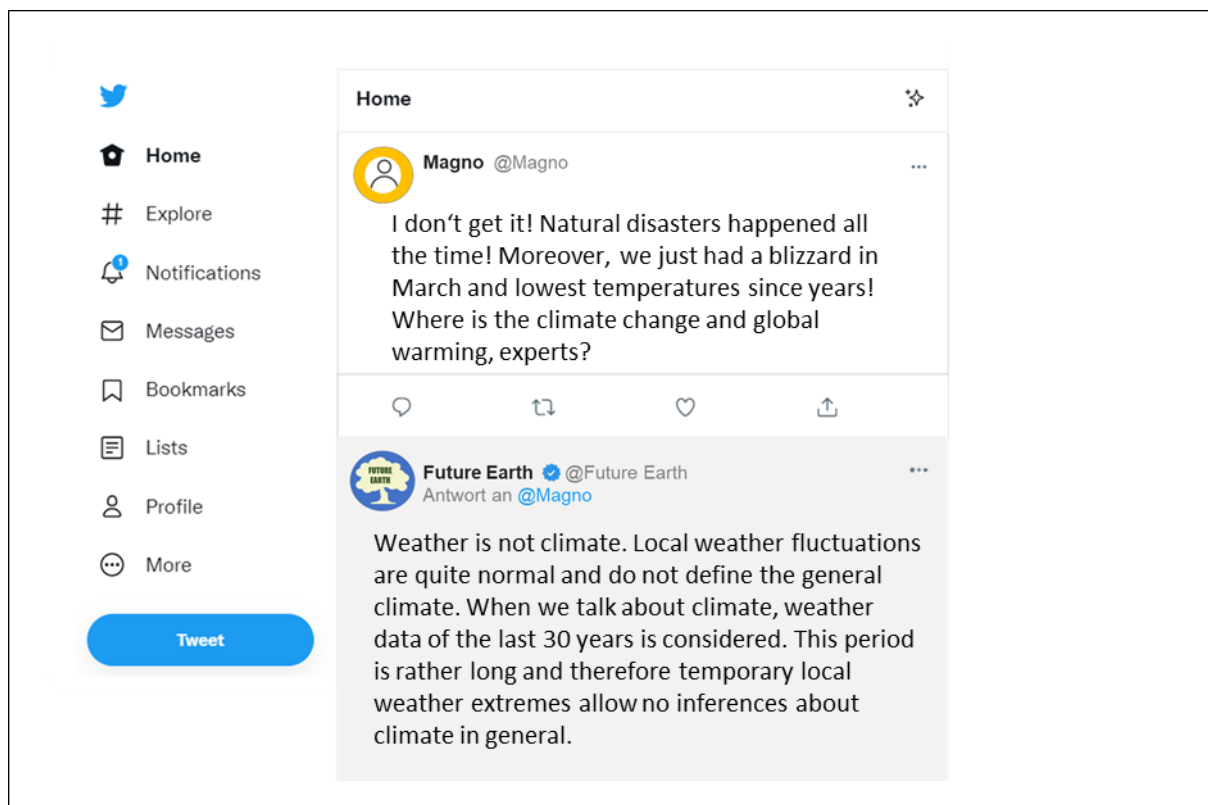


Figure 14. Stimulus reply post condition



After seeing the stimulus, a questionnaire collected information about the dependent variables. Using a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree), I asked participants whether the information in the tweet was credible (i.e., accurate, credible, reliable, reflecting reality; $\alpha = .86$; Hansen et al. 2016) and whether the organization was authentic (i.e., genuine, real, authentic; $\alpha = .80$; Moulard, Garrity, and Rice 2015). All participants were recruited via an introductory business class in exchange for course credit, and the study included 126 respondents (43.7% female; 18–36 years old, $M = 22.01$; $SD = 3.08$).

3.2.1.2. Results

I estimated three single factor analysis of variance (ANOVA) manipulating the post type (reply post vs. single-stated post) as the independent variable. This analysis revealed a significant effect of the post type on credibility ($M_{\text{reply}} = 5.23$, $SD = 1.53$ vs. $M_{\text{single}} = 4.01$, $SD = 1.67$, $F [1,$

126] = 18.46, $p < .001$, $\eta^2 = .13$), authenticity ($M_{\text{reply}} = 4.98$, $SD = 1.30$ vs. $M_{\text{single}} = 4.05$, $SD = 1.62$, $F [1, 126] = 12.68$, $p < .001$, $\eta^2 = .093$), thus supporting H_1 . To assess whether authenticity mediates the effect of reply on credibility, I performed conditional process analyses (Hayes 2013, model 4). I estimated the model with 95% bias-corrected confidence intervals (CIs) using 10,000 bootstrap samples. My results showed a significant indirect effect of reply response on credibility via authenticity ($B = .7612$, $SE = .2102$, $CI: 0.3440$ to 1.175), which supported H_2 .

3.2.2. Study 1b

3.2.2.1. Study design, measures, and sample

The goal of Study 1b was to replicate the findings of Study 1a in a different context. To confirm my results, I performed an additional experiment in which I varied the content of the organizational post. Therefore, I ensured that my results were not limited to the chosen context. I used the same procedure as I did in Study 1a, except that the participants viewed a post with facts about the contribution of a vegan diet to reducing climate change either as reply to a post denying the effects of a vegan diet or as a single-stated post. The sample consisted of 136 respondents (46.3% female; 18–33 years old, $M = 22.29$; $SD = 3.79$) recruited via a marketing class, and I used the same measures for credibility ($\alpha = .95$), authenticity ($\alpha = .91$), and reactance ($\alpha = .86$) as in Study 1a.

3.2.2.2. Results

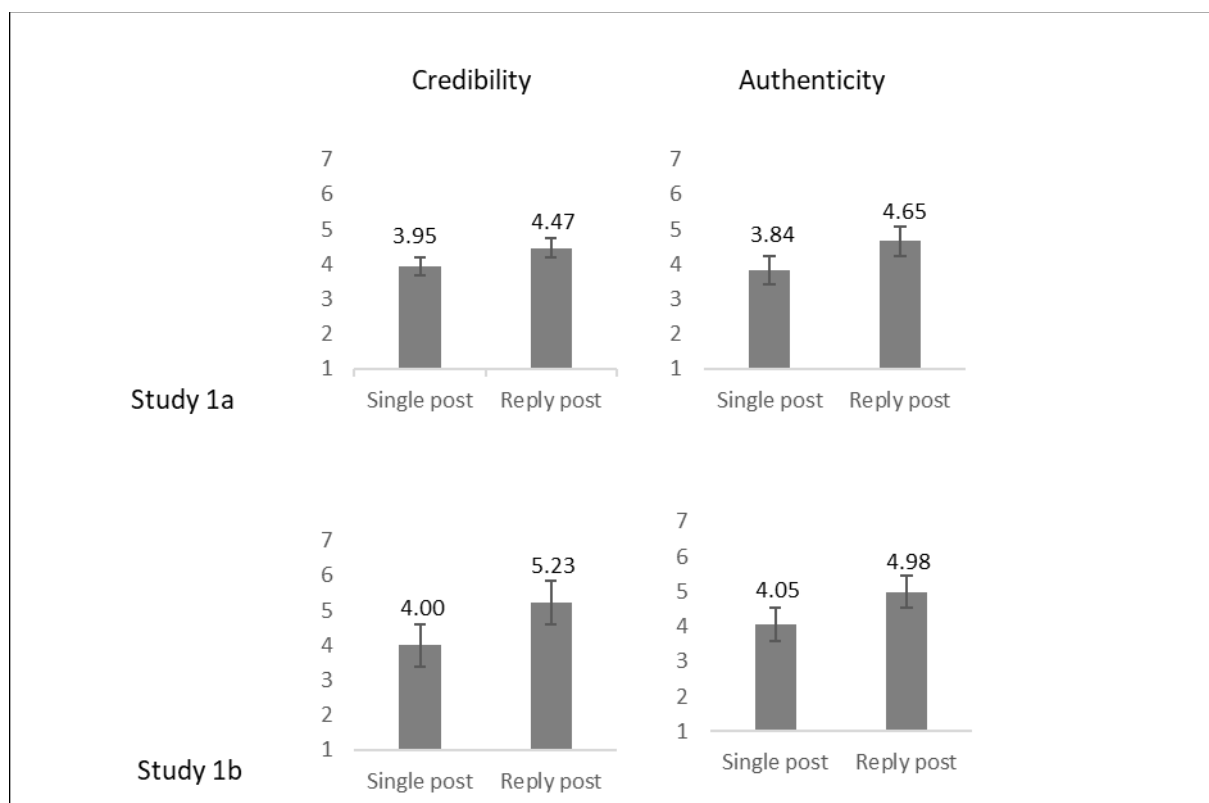
Similar to that of Study 1a, this analysis revealed a significant effect of post type on credibility ($M_{\text{reply}} = 4.48$, $SD = 1.51$ vs. $M_{\text{single}} = 3.95$, $SD = 1.34$, $F [1, 136] = 4.50$, $p = .036$, $\eta^2 = .032$) and authenticity ($M_{\text{reply}} = 4.65$, $SD = 1.43$ vs. $M_{\text{single}} = 3.84$, $SD = 1.18$, $F [1, 136] = 13.13$, $p < .001$, $\eta^2 = .089$). Bootstrapping analyses (model 5; Hayes 2013) based on 10,000 resamples

confirmed that authenticity mediated the effect of post type on credibility ($B = .5332$, $SE = .1649$, $CI: .2335-.8735$).

3.2.3. Discussion

As expected, my results supported hypotheses 1 and 2; the content of a reply post was perceived as more credible than that of a single-stated post due to enhanced perception of the organization's authenticity (see Figure 15 for main findings). In Study 2, I explored whether this effect was affected by reactance toward the organizational post.

Figure 15. Main findings of Studies 1a and 1b



3.3. Study 2: Does reactance toward the organizational post reduce the positive effect of a reply message?

3.3.1. Study design, measures, and sample

The goal of Study 2 was to replicate the findings from Study 1 and investigate the effect of reactance triggered by the organizational post on credibility. I performed an experiment using a 2 X 2 factor (post type: reply vs. single-posted and reactance: high vs. low) between-subjects design. I followed the same procedure as before with slightly different stimuli to manipulate reactance. A fictitious nonprofit organization posted information about plastic and its effect on the environment, along with an appeal to reduce individual plastic. I manipulated reactance using forceful and threatening language including imperatives, exclamation marks, capitalization, and controlling terms, such as “should” and “must”. Alternatively, I used noncontrolling, autonomy-supportive terms, such as “could”, “can”, and “might want to” (Lanceley 1985; Vansteenkiste, Lens, and Deci 2006). I used the same measures for credibility ($\alpha = .92$) and authenticity ($\alpha = .91$) as before, along with an additional measure for reactance. Reactance typically is measured with an affective and cognitive dimension. I adapted a short scale combining both dimensions from Hall et al. 2017. I asked whether the message is trying to manipulate, was overblown, and/or was annoying ($\alpha = .80$). The sample consisted of 255 students who participated for course credit (65.1% female; 18–31 years old, $M = 21.1$; $SD = .17$).

The manipulation check revealed significant differences in the two groups and no interaction between the conditions. Participants perceived higher reactance in the high reactance condition ($M_{\text{high}} = 4.96$; $M_{\text{low}} = 3.38$; $F = 58.86$; $p < .01$; $\eta^2 = .182$).

3.3.2. Results

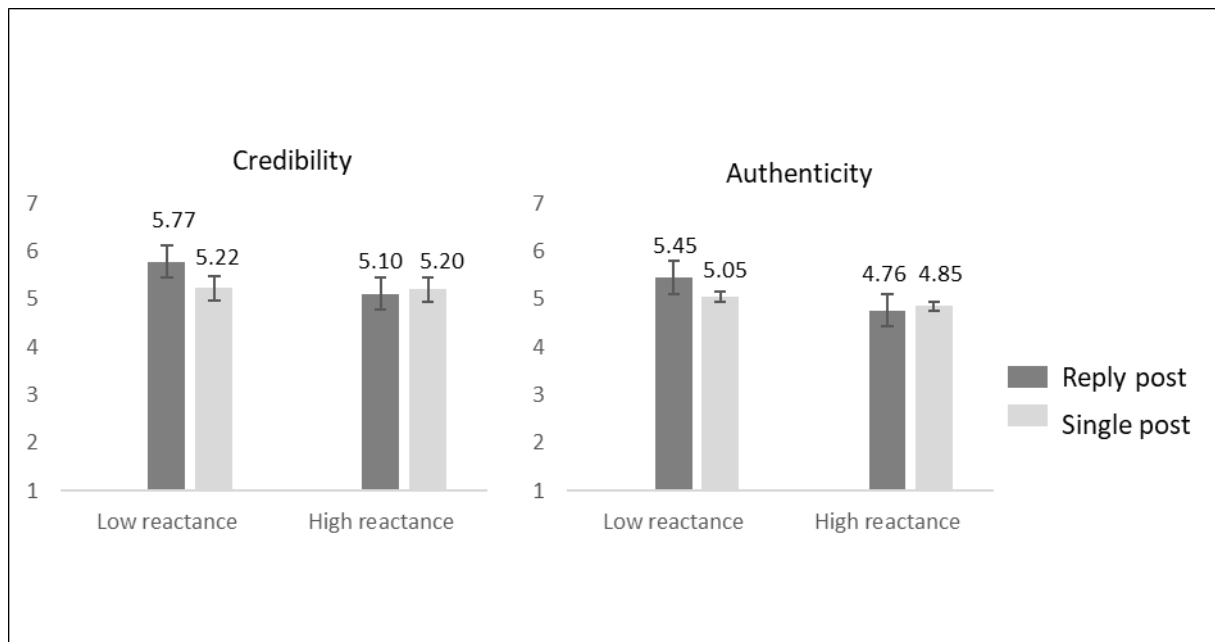
An ANOVA of the participants' perceptions of credibility revealed no significant main effects of reply manipulation ($F [1, 251] = 2.39$, $p = .124$, $\eta^2 = .009$) and a significant main effect of

reactance manipulation ($F [1, 251] = 5.53, p = .019, \eta^2 = .022$) qualified by a significant reply \times reactance interaction ($F [1, 251] = 4.77, p = .030, \eta^2 = .019$).

A follow-up contrast analysis revealed that only in the low reactance condition post type did have a significant positive effect on credibility ($M_{\text{reply}} = 5.77, SD = 1.08$ vs. $M_{\text{single}} = 5.22, SD = 1.28, F [1, 251] = 6.72, p = .01, \eta^2 = .026$). No differences for credibility for the high reactance condition were found ($M_{\text{reply}} = 5.10, SD = 1.16$ vs. $M_{\text{single}} = 5.2, SD = 1.18, F [1, 251] = .23, p = .632, \eta^2 = .0009$).

Therefore, a reply-post had a more positive effect on credibility than a single-stated post only when the message triggered a low level of reactance. If the message triggered a high level of reactance, I found no differences between the conditions, results that supported H₃.

I performed an additional ANOVA to test the effect of post type on authenticity, and this analysis revealed no significant main effects of the reply manipulation ($F [1, 251] = 3.38, p = .144$) and a significant effect of the reactance manipulation ($F [1, 251] = 7.41, p = .007, \eta^2 = .029$). I did not find a significant reply \times reactance interaction ($F [1, 251] = 2.15, p = .144$). Although the interaction was not significant, the planned main contrast showed that, as I predicted, a marginally significant effect of post type on authenticity occurred only in the low reactance condition ($M_{\text{reply}} = 5.45, SD = 1.21$ vs. $M_{\text{single}} = 5.05, SD = 1.27, F [1, 251] = 2.77, p = .097, \eta^2 = .011$). In the high reactance condition, I found no differences of the reply manipulation ($M_{\text{reply}} = 4.76, SD = 1.34$ vs. $M_{\text{single}} = 4.85, SD = 1.37, F [1, 251] = .15, p = .698, \eta^2 = .00$) (see Figure 16 for results).

Figure 16. Main findings of Study 2

3.3.3. Discussion

I expected that the positive effect of a reply message would be reduced when the organizational message triggered a high level of reactance. I found that the level of reactance triggered by the organizational post represents a boundary condition for the reply effect; the positive effect of a reply message on credibility is only present when the organizational message triggers a low level of reactance. In the case of high levels of reactance, I did not find an effect of a reply message. The same pattern was revealed for authenticity. Although I did not find an interaction effect, I showed that the reply message enhances authenticity perception only in the low reactance condition, while no reply effect was found in the high reactance condition.

3.4. Study 3: Does reactance toward the initial post enhance the positive effect of a reply message?

In the previous studies, the initial post could have triggered a certain level of reactance. Therefore, the goal of Study 3 was to investigate how the reactance to the initial post changed

the effect of post type. Moreover, I tested an additional dependent variable and investigated if reactance toward the organizational post decreased for reply messages.

3.4.1. Study design, measures, and sample

I used the same procedure as in Study 1a with additional manipulation of the initial post in the reply condition (single-stated post vs. reply post and high reactance vs. low reactance). As in Study 2, I manipulated the initial post either using forceful and threatening language (high reactance) or neutral language (low reactance). After viewing the organizational post, the participants answered questions about the dependent variables' credibility ($\alpha = .94$), authenticity ($\alpha = .904$), and reactance ($\alpha = .80$) with the same measures used previously. In total, 176 students participated in exchange for course credit (age 14–37; $M = 20.76$, $SD = 2.57$, 36.7% female).

A manipulation check revealed significant differences for reactance toward the organizational reply post ($M_{\text{reac_high}} = 4.32$, $SD = 1.58$ vs. $M_{\text{reac_low}} = 3.16$, $SD = 1.62$, $F [1, 119] = 14.8$, $p < .001$, $\eta^2 = .119$)

3.4.2. Results

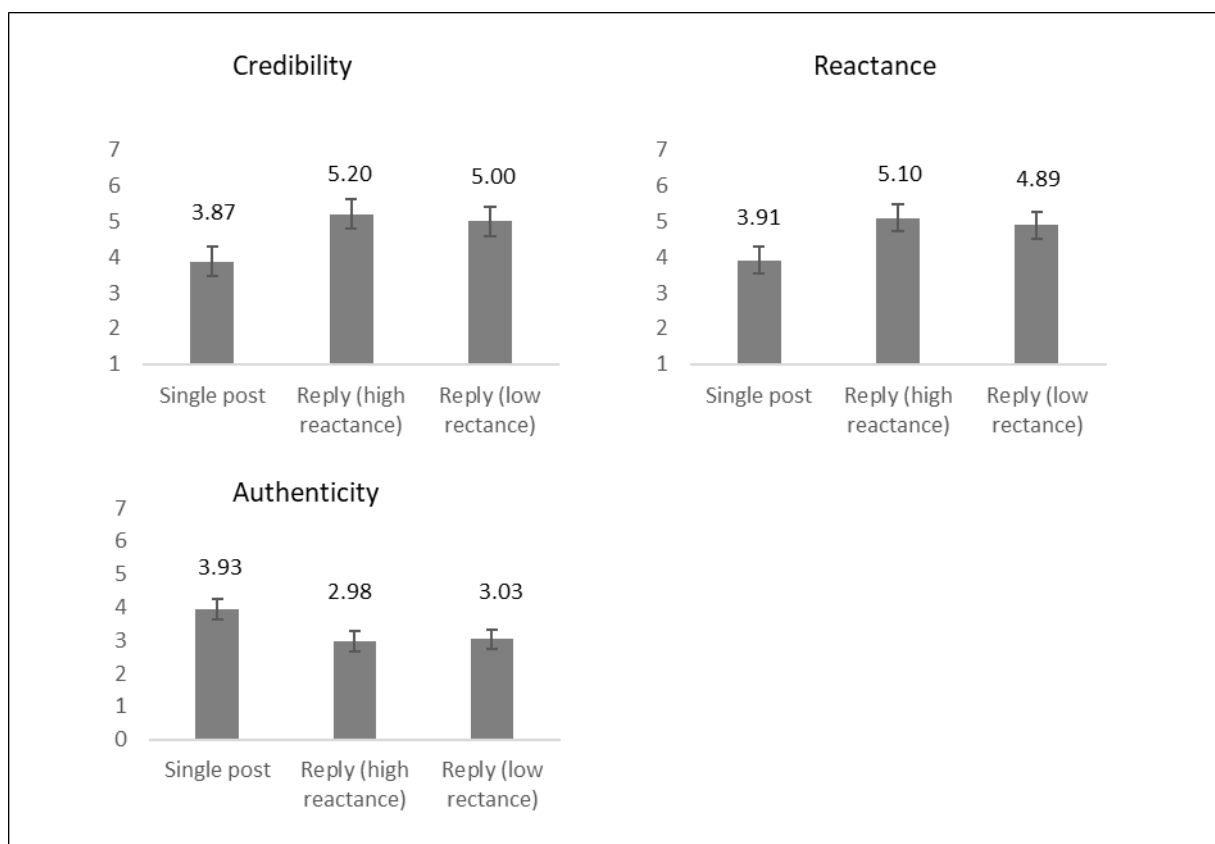
I found significant differences in the groups for credibility ($M_{\text{single post}} = 3.87$, $SD = 1.55$; $M_{\text{reac_high}} = 5.20$, $SD = 1.32$ vs. $M_{\text{reac_low}} = 5.01$, $SD = 1.53$, $F [2, 174] = 14.08$, $p < .001$, $\eta^2 = 0.139$), authenticity ($M_{\text{single post}} = 3.91$, $SD = 1.42$; $M_{\text{reac_high}} = 5.10$, $SD = 1.27$ vs. $M_{\text{reac_low}} = 4.89$, $SD = 1.43$, $F [2, 174] = 12.53$, $p < .001$, $\eta^2 = 0.126$), and reactance ($M_{\text{single post}} = 3.93$, $SD = 1.63$; $M_{\text{reac_high}} = 2.98$, $SD = 1.53$ vs. $M_{\text{reac_low}} = 3.03$, $SD = 1.64$, $F [2, 174] = 6.47$, $p = .002$, $\eta^2 = .069$) (see Figure 17).

Planned main effects contrasts showed that both high reactance ($F [1, 174] = 24.66$, $p < .001$, $\eta^2 = .124$) and low reactance ($F [1, 174] = 17.02$, $p < .001$, $\eta^2 = .089$) reply messages led to significantly higher perception of credibility than a single-stated post. I did not find any differences between the high and low reactance conditions ($F (1, 174) = .56$, $p = .454$, $\eta^2 = .003$).

The same pattern held for authenticity; the main effect contrasts showed that in cases of both high reactance ($F [1, 174] = 22.33, p < .001, \eta^2 = .113$) and low reactance ($F [1, 174] = 14.56, p < .001, \eta^2 = .077$), reply messages led to significantly higher authenticity judgements than a single-stated post. I did not find any differences between the high and low reactance conditions ($F [1, 174] = 0.41, p = .68, \eta^2 = 0.004$).

Regarding reactance toward the organizational post, the main effect contrasts showed that reply messages led to significantly lower reactance ratings than a single-stated post for both high reactance ($F [1, 174] = 10.4, p = .003, \eta^2 = .56$) and low reactance ($F [1, 174] = 9.04, p = .003, \eta^2 = .049$). Again, I did not find any differences between the high and low reactance conditions ($F [1, 174] = .02, p = .877, \eta^2 = .00$).

Figure 17. Main findings of Study 3



3.4.3. Discussion

I hypothesized that reactance toward the initial post would moderate the positive effect of a reply message on credibility. However, I did not find any differences between the reactance conditions, which led me to reject H₄. The level of reactance toward the initial message did not affect the positive effect of a reply message; a reply message was perceived as more credible than a single-stated message despite the level of reactance to the initial message. Moreover, the organization was perceived as more authentic, and the organizational message triggered less reactance in the reply conditions compared to the single-stated post condition, which supported H₅. In Study 4, I explored whether the findings of Study 3 could be replicated in another context and also investigated whether the receiver's attitude toward the communicated issue moderates the positive effect of reply posts.

3.5. Study 4: Does reactance toward the initial post or prior attitude enhance the positive effect of a reply message?

3.5.1. Study design, measures, and sample

I used the same procedure as in Study 3 with the same stimulus from Study 1b. Again, I manipulated the initial post using either forceful and threatening language (high reactance) or neutral language (low reactance). A pretest of the stimuli revealed differences in two groups for reactance manipulation ($M_{\text{reac_high}} = 4.73$, $SD = 1.21$ vs. $M_{\text{reac_low}} = 4.16$, $SD = 1.32$, $F [1, 53] = 2.82$, $p = .09$, $\eta^2 = .051$). The sample comprised 132 respondents (56.3 % female; 19–41 years old, $M = 24.04$, $SD = 3.02$). For credibility ($\alpha = .935$) and authenticity ($\alpha = .955$), the same measures were used as before.

To measure the participants' attitude regarding the influence of a vegan diet on climate change, I adapted a scale from Brouwer et al. (2022). I asked participants how much they would agree to three statements using a 7-point Likert scale ($\alpha = .933$): "A vegan lifestyle would benefit the environment," "Giving up meat and animal products would reduce my carbon footprint on this

planet and serves to protect our environment,” and “A vegan lifestyle will help us immensely to reduce water, air, and earth pollution and therefore protect and save the environment for future generations.”

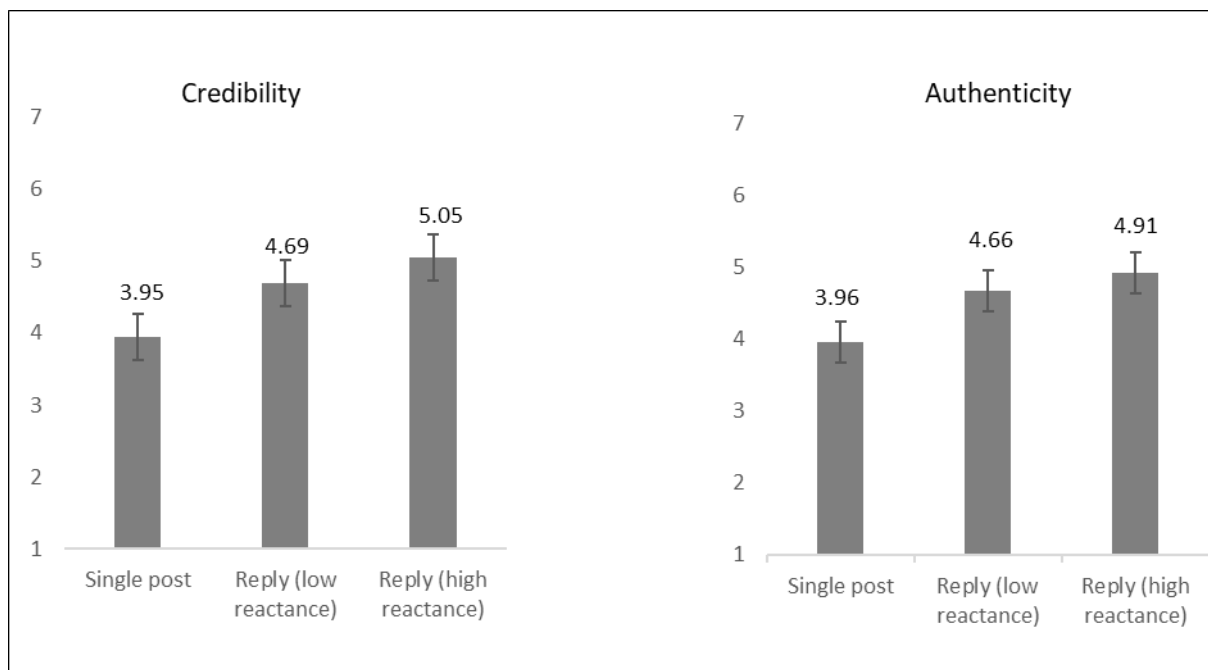
3.5.2. Results

I found significant differences in the groups in terms of credibility ($M_{\text{single post}} = 3.95$, $SD = 1.46$; $M_{\text{reac_high}} = 5.05$, $SD = 1.39$ vs. $M_{\text{reac_low}} = 4.69$, $SD = 1.63$, $F [2, 202] = 9.49$, $p < .001$, $\eta^2 = .087$) and authenticity ($M_{\text{single post}} = 3.96$, $SD = 1.48$; $M_{\text{reac_high}} = 4.91$, $SD = 1.53$ vs. $M_{\text{reac_low}} = 4.66$, $SD = 1.74$, $F [2, 202] = 6.56$, $p = .002$, $\eta^2 = .062$) (see Figure 18).

The planned main effects contrasts showed that both high-reactance ($F [1, 201] = 18.37$, $p < .001$, $\eta^2 = 0.039$) and low-reactance ($F [1, 201] = 8.09$, $p = .005$, $\eta^2 = .009$) reply messages led to higher perceptions of credibility. Further, I did not find any differences between the high and low reactance conditions ($F [1, 201] = 1.96$, $p = .354$, $\eta^2 = .004$), which led me to reject H_4 .

Regarding authenticity, the planned main effects contrasts showed that both high-reactance ($F [1, 201] = 12.32$, $p = .001$, $\eta^2 = .058$) and low-reactance ($F [1, 201] = 6.47$, $p = .012$, $\eta^2 = .032$) reply messages led to higher perceptions of authenticity. Again, I did not find any differences between the high and low reactance conditions ($F [1, 201] = .86$, $p = .163$, $\eta^2 = .084$).

I conducted a bootstrapping analysis (model 1; Hayes 2013) based on 10,000 resamples to test whether attitude moderated the reply effect on credibility. I did not find an interaction between attitude and reply manipulation ($F [2, 196] = 2.167$, $p = .1172$).

Figure 18. Main findings of Study 4

3.5.3. Discussion

Study 4 replicated my findings from Study 3: reactance toward the initial post did not affect the positive effect of the reply message on credibility and authenticity. Moreover, an additional moderator was tested: attitude toward the issue. The results denied an interaction, and individuals' attitudes about the effect of a vegan diet on climate change did not affect the dependent variables, which led me to reject H_6 .

The next section provides further preliminary analysis of the reply effect followed by a general discussion of my main findings.

3.6. Additional context related studies

After Studies 1-4, I performed additional preliminary studies to deepen my understanding of the reply effect and investigate different applications. This additional studies could deliver further evidence of the reply effect and act as a starting point for future research.

3.6.1. Study 5: Is a reply post more beneficial in the context of CSR communication?

3.6.1.1. Study design, measures, and sample

The goal of study 5 was to investigate whether the reply effect was applicable in a different context than NGOs and science communication. Participants had to evaluate the post of a fictional coffee company communicating the company's CSR activities. In the single post condition, a statement about how the company supported local farmers was given. In the reply post condition, the same content was posted as a reply to a tweet criticizing the exploitation of local coffee farmers by the coffee industry. Afterward, I asked about the dependent variables' credibility ($\alpha = .834$), authenticity ($\alpha = .852$), and reactance ($\alpha = .854$) using the same measures as before. In total, 109 participants from an introductory business class participated in the experiment (age $M = 20.97$ $SD = 2.67$; 18–31 years; 41.3% female).

3.6.1.2. Results

An ANOVA of the participants' perceptions of credibility revealed a marginally significant main effect of reply manipulation ($M_{\text{reply}} = 4.16$, $SD = 1.18$ vs. $M_{\text{single}} = 3.80$, $SD = 1.11$; $F [1, 108] = 2.74$, $p = .10$, $\eta^2 = .025$). For authenticity ($M_{\text{reply}} = 4.16$, $SD = 1.147$ vs. $M_{\text{single}} = 3.69$, $SD = 1.10$; $F [1, 108] = 3.39$, $p = .07$, $\eta^2 = .031$) and reactance ($M_{\text{reply}} = 3.05$, $SD = 1.65$ vs. $M_{\text{single}} = 4.08$, $SD = 1.60$; $F [1, 108] = 10.62$, $p = .001$, $\eta^2 = .09$), the analysis revealed (marginally) significant effects of the reply manipulation.

3.6.1.3. Discussion

Study 5 delivered novel evidence that the reply effect is applicable in different contexts, including CSR communication. The results indicated that companies can enhance credibility and authenticity perception when they communicate about their CSR activities in reply to other tweets. This also reduces reactance toward the statements. However, the effect on credibility

and authenticity is only marginally significant. In Studies 1–4, the NGO did not communicate about its activities but instead communicated general facts about climate change. The company may appear more biased when communicating about its own activities, which then could, in turn, reduce the reply effect.

3.6.2. Study 6: Is a reply post more beneficial in the context of communicating other social issues?

3.6.2.1. Study design, measures, and sample

The goal of study 6 was to replicate the findings of study 5 and investigate whether the reply effect was stronger when the company communicated facts that were not associated with its own CSR activities. I used the same fictitious coffee company as in study 5 and this time posted information about the benefits of gender-neutral communication. The coffee company posted the information either as a single post or as a reply to a user who questioned gender-neutral communication. A total of 122 participants from a business class participated for course credit ($M_{\text{age}} = 21.84$, $SD = 2.96$; 17–32, 50% female). Information about the dependent variables' credibility ($\alpha = .845$) and authenticity ($\alpha = .862$) was then collected using the same measures as before.

3.6.2.2. Results

An ANOVA of the participants' perceptions of credibility ($M_{\text{reply}} = 4.40$, $SD = 1.72$ vs. $M_{\text{single}} = 3.69$, $SD = 1.56$; $F [1, 121] = 5.65$, $p = .019$, $\eta^2 = .045$) and authenticity ($M_{\text{reply}} = 4.69$, $SD = 1.59$ vs. $M_{\text{single}} = 4.03$, $SD = 1.46$; $F [1, 121] = 5.61$, $p = .019$, $\eta^2 = .045$) revealed significant main effects of the reply manipulation.

3.6.2.3. Discussion

Study 6 showed that a reply message was more credible than a single-stated message when a company communicated facts. The coffee company communicated information that was not associated with its CSR activities. Therefore, the participants may have perceived the communication as less biased and attributed the company with more altruistic motives. However, further investigations are necessary to confirm the assumption and deepen the understanding of different applications of the reply effect.

3.6.3. Study 7: Is the positive effect of a reply message compared to a single-stated post different for distinct formats?

3.6.3.1. Study design, measures, and sample

Studies 5-6 investigated the application in a different context, while the goal of study 7 was to investigate whether the reply effect was also applicable for different online formats. Consumers can post not only in a micro blog format, such as Twitter, but also in blogs with no restrictions on information length. Therefore, the aim of study 7 was to investigate whether there were differences in the credibility perception of posted content depending on whether it was a blog post or a shorter tweet. For the blog condition, I used an original blog post about the benefits of renewable energies. Because of the character restrictions, the tweet included the same basic information but fewer details. For the tweet manipulation, participants saw the same information either as single tweet posted by a fictitious NGO or as a reply tweet to someone who questioned the benefits of renewable energies. In the blog-post condition, the blog post was either framed as a reply to another article that questioned the benefits of renewable energies or as an informational blog post. After the participants viewed these posts, information about the dependent variables' credibility ($\alpha = .92$) and authenticity ($\alpha = .91$) were collected using the same measures as before. In total, 264 students participated for course credit ($M_{age} = 21.16$; $SD = 3.11$, 17–42; 36.7% female).

3.6.3.2. Results

An ANOVA of the participants' perceptions of credibility revealed significant main effects of reply ($F [1, 260] = 8.51, p = .004, \eta^2 = .032$) and format manipulation ($F [1, 260] = 9.99, p = .002, \eta^2 = .037$). I did not find a reply–format interaction ($F [1, 260] = 0.388, p = .534, \eta^2 = .001$). A reply post lead to significantly higher credibility perception than a single-stated post ($M_{\text{reply}} = 4.47, SD = 1.25$ vs. $M_{\text{single}} = 4.05, SD = 1.13$), and a blog post was perceived as more credible than a tweet ($M_{\text{blog}} = 4.48, SD = 1.14$ vs. $M_{\text{tweet}} = 4.03, SD = 1.24$).

An ANOVA of the perceptions of authenticity showed significant main effects of reply ($F [1, 260] = 6.30, p = .013, \eta^2 = .024$) and format manipulation ($F [1, 260] = 10.15, p = .002, \eta^2 = .038$) qualified by a significant reply–medium interaction ($F [1, 260] = 4.55, p = .034, \eta^2 = .017$).

Using follow-up contrast analysis, I found a significant positive effect of post type on authenticity ($M_{\text{reply}} = 4.50, SD = 1.28$ vs. $M_{\text{single}} = 3.84, SD = 1.20, F [1, 260] = 10.61, p = .001, \eta^2 = .039$) only in the tweet condition, while I found no differences for the blog-post condition ($M_{\text{reply}} = 4.65, SD = 0.99$ vs. $M_{\text{single}} = 4.59, SD = 1.12, F [1, 260] = .06, p = .814, \eta^2 = .00$). Hence, a reply post has a more positive effect on authenticity than a single-stated post only when it is a tweet, while it has no effect if it is a blog post.

An ANOVA of the perceptions of reactance toward the organizational post showed no significant main effects of reply manipulation ($F [1, 260] = 0.814, p = .363, \eta^2 = .003$) and a significant main effect of format manipulation ($F [1, 260] = 4.97, p = .027, \eta^2 = .019$) qualified by a significant reply–medium interaction ($F [1, 260] = 8.214, p = .004, \eta^2 = .031$).

Through follow-up contrast analysis, I found a significant negative effect of post type on reactance ($M_{\text{reply}} = 3.64, SD = 1.62$ vs. $M_{\text{single}} = 4.39, SD = 1.43, F [1, 260] = 6.99, p = .009, \eta^2 = .026$) only in the tweet condition; I found no differences for the blog-post condition ($M_{\text{reply}} = 3.77, SD = 1.74$ vs. $M_{\text{single}} = 3.38, SD = 1.74, F [1, 260] = 2.02, p = .156, \eta^2 = .007$). Hence, a reply post has a more positive effect on authenticity than a single-stated post only when it is a tweet, while it has no effect if it is a blog post.

3.6.3.3. Discussion

Study 7 provided novel evidence that the positive effect of reply messages might be different for distinct formats. The results suggested that a reply message is only superior if it is a tweet; there was no effect if it was a longer blog post. However, these preliminary results must be interpreted with caution. First, the length of the informational content might reduce the positive effect of a reply message. In other contexts, people may give less attention to peripheral cues and be more focused of the quality of arguments when they are more involved (Petty and Cacioppo 1986). Furthermore, in the two blog conditions, the amount of information may have led participants to evaluate the given information more thoroughly, leading them to pay less attention to the frame (reply vs. informational). Moreover, in the blog conditions, the reply post was only framed as reply. Thus, the participants did not actually see the message to which it replied. In contrast, they saw to which tweet was replied. To enhance credibility perception, users may also have to see the initial post to make their own judgements. In summary, study 7 showed that the positive effects might be different in distinct channels and are not unconditional. However, further investigation about the process of credibility perception and additional responsible factors, such as involvement and frames, is necessary.

4. General discussion

4.1. Summary and implications

Message credibility has been an important research objective in various fields (Wathen and Burkell 2002). In times of misinformation, social media platforms, especially Twitter, have become of major interest when exploring factors affecting credibility perception (Broniatowski et al. 2018; Del Vicario et al. 2017). In this study, I contribute to this research by introducing an additional factor - namely, the post type - that influences the credibility of online information. In a series of seven studies, I showed that a reply post is perceived as more credible than a single-stated post and that this effect is mediated by authenticity. This reply effect can be

explained using the attribution theory. It is not normative nor expected for an organization to reply to other messages to advocate its cause, so this additional effort can be interpreted by the receiver as the organization's authenticity and truth-telling. A similar pattern can be observed in two-sided communication. When a communicator highlights positive and negative aspects of an issue, attribution theory suggests that this might reflect the communicator's honesty, resulting in enhanced credibility perception of the message (O'Keefe 1999). In persuasion research, the concept of reactance is also an important determinant of message responses (Dillard and Shen 2005). Based on my research, I propose that reactance delineates a boundary condition for the effect of a reply message on credibility. I found the positive effect of a reply message on credibility only for messages triggering a low level (vs. a high level) of reactance. An overall high level of reactance might reduce the motivation to process further information, leading to peripheral cues being less important (Petty and Caccioppo 1986). Thus, if the organizational post triggers a high level of reactance, it might dominate the information processing in both cases (reply *and* single-stated post), leading to other cues (i.e., post type) being less important and thereby overriding the reply effect. These results aligned with other findings that state, for example, that poorly presented messages can detract from credibility (Slater and Rouner 1996).

I also expected that reactance toward the initial post as well as attitude toward the issue would moderate the reply effect (H₆ and H₇). However, my studies did not support these assumptions. Rather, the positive effect of a reply message did not seem to be affected by these variables. If the initial message triggers a high level of reactance, reactance theory suggests that individuals seek behavior that reduces the perceived threat and restores their freedom. Thus, for persuasive messages, people are more likely to behave in the opposite direction of the intended message and engage in counterproductive behavior (Brehm 1966; Miller et al. 2007; Worchel 1974). I hypothesized that one of these behaviors might be to reject the initial message by believing more in the reply message's content. Previous research has suggested that besides adopting the opposite view of the intended persuasion, derogating the source is another strategy to restore freedom that can be applied (Smith 1977; Rains 2013). Since the

initial message has no direct call to action or appeal, the counterproductive behavior might not be manifested in believing the opposite of the message (i.e., the reply message), but rather in other behaviors, such as degradation of the author of the initial message. This would explain why reactance toward the initial message did not affect the reply effect and could instead be reflected in other behaviors that were not measured.

My results, however, showed that the reply effect was applicable to different post types despite the content and thus can provide some important guidance for practitioners.

NGOs are key communicators of scientific information that advocates their cause, and social media is an important channel for these organizations because they can reach a vast audience (Schäfer 2012). My studies indicated that NGOs can and should engage more actively in the public debate. Especially because the resources of NGOs are often limited, replying to other comments and communicating scientific facts make them seem more authentic and the communicated information more credible. Moreover, they could reach a broader audience; by commenting to other users, those who are not their followers can read their reply posts.

Not only NGOs engage in the public debate. A growing number of companies have taken a stance on sociopolitical issues, which is referred to as corporate social advocacy (CSA). In fact, 59% of people in the U.S. expect companies to take action on climate and environmental issues, and almost two-thirds of consumers expect these companies to have a social purpose and align their actions accordingly (Accenture 2018; Edelman 2018; Sims 2019). A growing stream of research is investigating the potential consequences of CSA and its impact on consumer behavior (Zhou and Dong 2021). The results have been mixed, with some studies implying that CSA effects attitudinal changes toward a controversial issue (e.g., Parcha and Westerman 2020) while other findings have suggested that CSA might be counterproductive. Mukherjee and Althuizen (2020) found not only that the attitude toward the brand decreased among customers with opposing views but also that there was no significant effect attitude towards the brand among customers who supported the brand's stand. CSA stance–action consistency is an important moderator in this context, decreasing potential negative

consequences of CSA (Zhou and Dong 2021). Thus, a brand engaging in the public debate by replying to other posts might benefit and be seen as more consistent since its authenticity is enhanced. Moreover, commenting and replying represent an additional marketing tool in which the brand can wisely choose to which post it wants to reply and therefore partly select its target audience.

In addition to CSA, brands could foster their credibility regarding other communication goals. The preliminary results of my additional analysis revealed that reply messages about companies' CSR activities are more credible than single-stated posts. Although more research is needed, my overall results suggested that brands can benefit from engaging in social media by replying to others, thereby enhancing their authenticity and making their general statements seem more credible.

As for many marketing insights, my findings can be used for good and for bad. The reply effect might also be applicable for fake news as consumers might believe more in false information when it is a reply rather than a single-stated post. With the presence of chat bots that can easily reply to others, false information might spread fast and in vast quantities. Consumers should be made aware of their potential bias in being more likely to believe a reply message and be cautious especially with unknown sources.

4.2. Limitations and Future Research

As all empirical work, my research holds several limitations that leave potential directions for future research.

First, although I varied the post content, the overall topic was always climate change communication. In Germany, approximately 77 % of the population believe in climate change being an emergency (Statista Research Department 2022). Although my additional analysis indicated that the reply effect is present in other contexts, future studies should validate these

preliminary results and consider more controversial topics over which the online audience is more divided.

Second, this study used a fictitious company to eliminate the effects of prior attitudes and perceptions of the company. In the context of CSR research, organizational characteristics, such as reputation, might also influence consumer reactions to the company's activities (Rim, Yang, and Lee 2016). Thus, companies' attributes might function as additional moderators that future research could address.

Third, the majority of my experiments were conducted with student samples. Age and education level could be additional factors that influence trust in scientific information. For example, a survey conducted by "Wissenschaft im Dialog" found that 76% of people with a high level of education have a general trust in science whereas, by contrast, only 44 % of people with a low level of education trust in science (Wissenschaftsbarometer 2022). Additionally, other findings suggest that age moderates the credibility perception of news posts on Twitter (Houston et al. 2020).

Furthermore, the investigation of additional moderators could lead to a deeper understanding of the reply effect. Credibility is a complex concept in which the source, message, and recipient characteristics are interdependent (Self and Roberts 2009). Some ideas for additional moderators come from dual process models of persuasion (e.g., Petty and Cacioppa 1986). In these models, involvement is a key variable driving persuasion outcomes. When people are highly involved, they tend to use the central route of processing, relying less on peripheral cues. In this case, the features of a message, such as argument quality, become more important (Sussman and Siegel 2003; Wilson and Sherrell 1993). Therefore, future studies could explore the moderating role of involvement in the reply effect.

Moreover, the role of reactance to the initial message could be an object of further investigation. Since I did not find an effect of reactance toward the initial message, it could be possible that although reactance manipulation was successful, the effect of reactance is not linear but rather represents a boundary condition. Thus, the overall level of reactance triggered

by the initial message may have been too high. The effect might only have been reduced when the initial message was triggering no reactance or a very low level of it, and in cases of a high level of reactance, no effect of reactance was observed toward the initial message. Moreover, reactance is often operationalized as a two-dimensional construct consisting of affective and cognitive components (Rains 2013). Future studies could consider different measures and manipulate reactance toward the initial post to obtain a deeper understanding of the effect. Additionally, other features, such as framing or prior knowledge, of the initial message and audience might be interesting objects of future research.

Finally, because the novelty of the reply effect it is not clear how the impact is, when it is embedded in online conversations. In this thesis, I looked at one reply to another post. Future research might address the question what happens in the case of multiple reply messages or a reply to another reply message.

E. Conclusion

1. Summary of findings

The aim of this dissertation was to investigate the effect of by-standers' evaluations of organizational posts on social media. The three main parts of the thesis tackled the overall research objective from different angles.

Firstly, a framework of general by-stander effects on social media was provided. The presence of others is important in many different social contexts and a variety of psychological theories try to explain these effects. I identified social comparison theory, cognitive and emotional empathy, social learning, social impact theory, and the by-stander effect as major theoretical approaches which might help to understand and explain by-stander effects on social media.

Further, the empirical research paper 1 addresses the question of how organizations should respond to online complaints to satisfy the by-standers. Overall, the studies suggest that a humorous response strategy is superior to achieve favorable brand outcomes. The positive effect of humor is mediated by enhanced sympathy perception and only beneficial when non-aggressive humor is used. An overview of the studies and main findings of paper 1 is provided in table 7.

Table 7. Overview main findings of paper 1

	Sample Size (N)	Method	Context	Main Finding
Study 1a	133	experiment	Candy Brand	A humorous response strategy leads to more engagement and to an enhancement of brand affect.
Study 1b	97	experiment	Pizza Brand	
Study 1c	83	experiment	Insurance company	

	Sample Size (N)	Method	Context	Main Finding
Study 2	159	experiment	Pizza Brand	The positive effect of humor is mediated by sympathy.
Study 3	295	experiment	Candy	Humor type moderates the positive effect of a humorous response strategy. Only non-aggressive (vs. aggressive) humor enhances that effect of brand affect and purchase intention.

Research paper 2 was concerned with the credibility perception of scientific facts on social media. In seven studies it was demonstrated that a reply message to another post is perceived as more credible than a single-stated message. This effect can be explained with enhanced authenticity perception of the organization. Moreover, reactance towards the organizational represents a boundary condition of the positive effect of reply messages. When the organizational message is triggering a high level of reactance by the receiver a reply message does not leave to higher credibility perception. Further, I could show that the initial message, which is replied to, does not affect the reply effect. Credibility and authenticity perception were higher for reply messages regardless if the initial message is triggering a high or a low level of reactance. An overview of the studies and main findings of paper 2 is provided in table 8.

Table 8. Overview main findings of paper 2

	Sample Size (N)	Method	Context	Main Finding
Study 1a	126	experiment	Weather fluctuations and climate	A reply message compared to a single-stated post leads to enhanced credibility perception.
Study 1b	136	experiment	Vegan diet and climate	This effect is mediated by authenticity.

	Sample Size (N)	Method	Context	Main Finding
Study 2	255	experiment	Plastic impact on climate	Only for organizational messages triggering a low level of reactance a reply message is more credible than a single post message.
Study 3	176	experiment	Weather fluctuations and climate	Reactance towards the initial message does not influence the reply effect.
Study 4	132	experiment	Vegan diet and climate	Prior attitude towards the issue does not influence the reply effect.
Study 5	109	experiment	Coffee company CSR program	A reply message about company's own CSR activities is more credible, authentic, and triggers less reactance than single posted messages.
Study 6	122	experiment	Coffee company Effect of gender-neutral language	A reply message about facts about a controversial topic is more credible and authentic than single posted messages.
Study 7	264	experiment	Renewable energy and climate	A reply message is only more credible when it is embedded in a tweet (vs. blog).

2. Theoretical Contribution

From a theoretical perspective, this dissertation yields several important contributions to research on by-standers' evaluation of organizational posts in different domains.

First of all, it is the first to provide a theoretical framework where several theoretical approaches are integrated in order to explain by-stander mechanisms in social media. While some conceptual papers address the issue of co-presence of other customers or other actors in an offline setting (e.g., Colm et al. 2017), no integration of different theories in the context of social

media has been done so far. Besides the general framework, the two empirical research papers contribute to several streams of literature in different domains where social media is crucial.

In particular, paper 1 contributes to existing research streams on complaint response strategies and humor research. More research is needed to extent findings regarding by-stander effects of online complaint handling (Johnen and Schnittka 2019; Hogleve et al. 2019). Research has shown that humor influences memory and attention. In this way, research has demonstrated that comedy production is likely to attract attention only toward the humorous aspects of a message and makes the audience less critical of the communication (Strick et al. 2009; Warren et al. 2018). I show that a humorous response distracts by-standers from the complaint, enhances mood which spills over to the brand and leads to positive brand outcomes. Therefore, a humorous response strategy is beneficial for the brand and does not only influence social media variables, but also affects general brand evaluation and purchase intentions. The positive effect can also be explained on a theoretical level. Since humor creates and enhances a positive mood, the positive effects of humor might be attributable to affect regulations mechanism. Subsequently, individuals try to maintain a positive affective state by two ways. They either ignore information, which would reduce this positive mood, or they perceive negative events as less unpleasant (Strick et al. 2013), which might lead to a general superiority of a humorous response strategy.

Moreover, the paper contributes to humor research in marketing which goes beyond advertisement research. As it was shown in the literature review, findings in regard to the effects of humor outside advertisement research are very scarce. Hence, paper 1 contributes by demonstrating that humor can be integrated in other communication channels and contexts and bring favorable outcomes for the brand. Thus, even if the general communication style is not humorous, brands can benefit in integrating a humorous voice in social media interactions. It is important to get a deeper understanding of humor in social media in general, because humor is present in a vast number of social media interactions (McGraw et al. 2015). Past research rarely differentiated between different humor types and the findings of positive effects

of humor are mixed (McCraw, Warren and Can 2014; Eisen 2009). That is why showing that humor effects are dependent on the humor type makes an additional contribution.

Further, paper 2 contributes to the field of credibility research. Especially with the rise of fake news in social media, it is important to get a deeper understanding of credibility perception (Pennycook and Rand 2021). Past research often focused on characteristics of the source affecting credibility. Since sources and source information become more and more difficult to evaluate on social media, message characteristics might be the even more important subject to study (Pennycook and Rand 2021). Past research on science communication already demonstrated that how a message is framed is important in influencing credibility perception (Wasike 2022). I introduce an additional message characteristic which is affecting credibility. Paper 2 demonstrates that a reply message is perceived as more credible than a single-stated post and this effect is mediated by authenticity. On a theoretical level, it is proposed that these effects can be explained by attribution and reactance theory. It is not normative for a communicator to reply to other posts. There is, after all, no external pressure or expectation to go the extra mile and engage with others beyond the own social media page. This additional effort might be attributed by the receiver as being really certain about the communicated information and therefore have a higher motivation of telling the truth. Moreover, reactance theory would suggest that reactance is reduced because the message might be seen as less forceful as the sender has a justification to communicate the information when it is a reply compared to a single-stated post. Hence, this dissertation uncovers and examines a so far neglected mechanism when it comes to organizational communication via social media. Establishing the reply effect and its impact on credibility is a major contribution to the existing bodies of social media and credibility research.

3. Implications for the Market Place

Besides the theoretical contributions, this dissertation also yields important implications for the marketing practice.

3.1. Managerial Implications

First of all, both empirical papers show that responding to online users is always more beneficial than staying silent. While handling complaints, companies can actually take advantage of an initially negative event such as a complaint. With a humorous response strategy, brands can enhance engagement and purchase intention. When applying this approach, managers should keep in mind which humor is best to be used. The effects of non-aggressive humor seem to be more beneficial for brand outcomes than aggressive humor. Moreover, implementing humor in their social media communication strategy might be an important opportunity to foster brand engagement, even if humor was not included in the communication strategy before. Social media encourages consumers to share entertaining content, which can enhance brand reach (Barasch and Berger 2014).

Moreover, this research suggests companies can boost credibility perception of their communication by engaging with the community. Additional experiments of paper 2 indicated that CSR communication and communication about non-company related facts are more credible and authentic when it is a reply to another user (vs. single post). Credibility and authenticity are key drivers of successful CSR communication (Pérez 2019). By replying to other users, companies can not only enhance these variables, but can also grow their online communities. Afterall, companies can choose to which tweets they reply to and by reaching out they might generate a greater online audience.

Further, paper 2 can provide advice for science communicators. By replying to others, scientific facts are perceived as more credible and the communicator as more authentic. As for companies, science communicators might also reach a larger audience by replying to other tweets. When NGOs and other science communicators only post on their own social media page, they might stay in their bubble of fellow users who anyways might not question scientific information. Social media gives misinformation and fake news a big platform (Del Vicario et al.

2019). By correcting false information, communicators might reach a more skeptical audience and affect their attitudes towards the communicated issues.

3.2. Recommendations for Consumers

Alongside the discussed implications for managers, the thesis also offers insights which might be beneficial for consumers.

As highlighted before, a humorous response strategy leads to positive brand outcomes. In a social context, it could be shown that humor elicits a halo effect. When someone is being perceived as humorous, other not correlated positive characteristics, such as being smart for instance, are associated with the same person (Ruch 2010; Cann and Calhoun 2001). In a marketing context, consumers should be cautious not to be deceived by funny brand communication and perceive them as more reliable for instance, when they are actually not. The interview of the BVG managers who implemented the humorous communication strategy for the public transport system in Berlin revealed that although their performance indices (e.g., punctuality, cancellations) stayed the same, customers perceived them more reliable after the launch of the campaign. Thus, although humor provides an entertainment factor, consumers must be careful not to overly trust a brand and let themselves be distracted from the actual performance and characteristics that matter to them, only because it is humorous.

Moreover, it was shown that the content of a post is perceived as more credible when it is a reply to another tweet compared to being single posted. This effect might occur for any type of information, no matter if it is true or not. Thus, consumers should be aware of this potential bias when they are comprehending reply-posts. Moreover, they can use the effect for their own social media communication. When they want to communicate scientific facts and they observe other posts which deny scientific information, it is beneficial to correct them. In this way, the scientific information might be seen as more credible and a different audience might be reached.

4. Limitations and Future Research Directions

This thesis is not without limitations and offers opportunities for future research.

First of all, in all experiments fictitious organizations were used. Although this eliminates the effects of prior attitudes and perceptions of the organization, attributes of the information source might be an important factor to include. In persuasion research, it is widely acknowledged, that in persuasive communication, source, message and individual factors interact with each other (Petty and Cacioppo 1986). The brand personality and also the prior perceived authenticity might be factors which future studies could investigate.

Secondly, the majority of my experiments was conducted with samples composed of students. Age and education level might also be additional factors that influence trusting in scientific information and humor appreciation. Over 50% of the Twitter users in the USA are over 29 years old (Rabe 2022). They are an important target group for marketers and therefore future studies might address if age and education level might affect the effect of humor and reply messages.

Thirdly, my studies did not take into account potential long-term effects. Especially the influence of humor might vary over time. In other contexts, it could be shown that spill-over effects of brands vary in the long term (Raufeisen et al. 2019). It could be the case that because of the mood spillover after being exposed to a humorous stimulus, brands attitudes are even more enhanced unconsciously in the long run.

Additionally, especially paper 2 gives more opportunities for future research. Since my research suggests that reactance to the initial message does not influence the reply effect, other characteristics of the initial message might be important factors. Future research might investigate if the reply is beneficial to any type of initial messages or if boundary conditions exist. Another interesting angle to investigate could a different direction of the initial post to examine the differences between initial posts that either support or contradict the message the

organization wants to communicate. Moreover, most of the studies focus on scientific facts about climate change. Although preliminary results indicate that a reply message is also superior in other contexts, such as CSR communication, more research is needed to explore in which potential other areas and platforms the reply effect is applicable, e.g., for the communication of product features.

References

- Abney, Alexandra. K., Mark J. Pelletier, Toni-Rochelle S. Ford, and Alisha B. Horky (2017), "#Ihateyourbrand: Adaptive Service Recovery Strategies on Twitter," *Journal of Services Marketing*, 31 (3), 281–294.
- Abboud, Liliane, Nabila As'ad, Nicola Bilstein, Annelies Costers, Bieke Henkens, and Katrien Verleye (2021), "From Third Party to Significant Other for Service Encounters: A Systematic Review on Third-Party Roles and Their Implications," *Journal of Service Management*, 32 (4), 533–559.
- Accenture (2018), "To Affinity and Beyond: From Me to We, The Rise of The Purpose-Led Brand," (Accessed January 26, 2023), <https://www.accenture.com/us-en/insights/strategy/brand-purpose>.
- Ahn, Ho-Young, Lei Wu, Stephanie Kelly, and Eric Haley (2011), "A Qualitative Study of College Student Responses to Conflicting Messages in Advertising: Anti-Binge Drinking Public Service Announcements Versus Wine Promotion Health Messages," *International Journal of Public Health*, 56 (3), 271-279.
- Alberts, Janet K. (1990), "The Use of Humor in Managing Couples' Conflict Interactions," in *Intimates in Conflict: A Communication Perspective*, Vol. 1, ed. Dudley D. Cahn, NY: Taylor and Francis, 105–120.
- Albrecht, Kathrin (2016), "Understanding the Effects of the Presence of Others in the Service Environment: A Literature Review," *Journal of Business Market Management*, 9 (1), 541–563.
- Alhouti, Sarah, Catherine M. Johnson, and Betsy Bugg Holloway (2016), "Corporate Social Responsibility Authenticity: Investigating Its Antecedents and Outcomes," *Journal of Business Research*, 69 (3), 1242–1249.
- Anderson, Ashley A., Dominique Brossard, Dietram A. Scheufele, Michael A. Xenos, and Peter Ladwig (2014), "The 'Nasty Effect': Online Incivility and Risk Perceptions of Emerging Technologies," *Journal of Computer Mediated Communication*, 3 (19), 373–87.

- Appel, Gil, Lauren Grewal, Rhonda Hadi, and Andre T. Stephen (2020), "The Future of Social Media in Marketing," *Journal of the Academy of Marketing Science*, 48 (1), 79–95.
- Bacile, Todd. J., Jeremy. S. Wolter, Alexis M. Allen, and Pei Xu (2018), "The Effects of Online Incivility and Consumer-to-Consumer Interactional Justice on Complainants, Observers, and Service Providers During Social Media Service Recovery," *Journal of Interactive Marketing*, 44 (1), 60–81.
- Barasch, Alixandra, and Jonah Berger (2014), "Broadcasting and Narrowcasting: How Audience Size Affects What People Share," *Journal of Marketing Research*, 51 (3), 286–299.
- Bedard, Stephanie A. N., and Carri R. Tolmie (2018), "Millennials' Green Consumption Behaviour: Exploring the Role of Social Media," *Corporate Social Responsibility and Environmental Management*, 25 (6), 1388–1396.
- Blackford, Benjamin, J., James W. Gentry, Robert L. Harrison, and Les Carlson (2011), "The Prevalence and Influence of the Combination of Humor and Violence in Super Bowl Commercials," *Journal of Advertising*, 40 (4), 123–134.
- Bless, Herbert, Gerd Bohner, Norbert Schwarz, and Fritz Strack (1990), "Mood and Persuasion: A Cognitive Response Analysis," *Personality and Social Psychology Bulletin*, 16 (2), 331–345.
- Bolsen, Toby, Risa Palm, and Justin T. Kingsland (2019), "Counteracting Climate Science Politicization with Effective Frames and Imagery," *Science Communication*, 41 (2), 147–171.
- Borah, Porismita, and Xizhu Xiao (2018), "The Importance of 'Likes': The Interplay of Message Framing, Source, and Social Endorsement on Credibility Perceptions of Health Information on Facebook," *Journal of Health Communication*, 23 (4), 399–411.
- Brandwatch (2019), "53 Incredible Facebook Statistics and Facts," (Accessed October 04, 2020), <https://www.brandwatch.com/blog/facebook-statistics/>.

- Breitsohl, Jan, Marwan Khammash, and Gareth Griffiths (2010), "E-Business Complaint Management: Perceptions and Perspectives of Online Credibility," *Journal of Enterprise Information Management*, 23 (5), 653–660.
- Brehm, Jack W. (1966), *A Theory of Psychological Reactance*, New York: Academic Press.
- Brehm, Sharon S., and Jack W. Brehm (1981), *Psychological Reactance: A Theory of Freedom and Control*, New York: Academic Press.
- Bressler, Eric. R., and Sigal Balshine (2006), "The Influence of Humor on Desirability," *Evolution and Human Behavior*, 27 (1), 29–9.
- Brock, Timothy C. (1965), "Communicator-Recipient Similarity and Decision Change," *Journal of Personality and Social Psychology*, 1 (6), 650–654.
- Brown, Jacqueline J., and Peter H. Reingen (1987), "Social Ties and Word-Of-Mouth Referral Behavior," *Journal of Consumer Research*, 14 (3), 350–362.
- Brouwer, Anne R., Clare D'Souza, Stephen Singaraju, and Luis A. Arango-Soler (2022), "Value Attitude Behaviour and Social Stigma in the Adoption of Veganism: An Integrated Model," *Food Quality and Preference*, 97 (April), 104479.
- Broniatowski, David A., Daniel Kerchner, Fouzia Farooq, Xiaolei Huang, Amelia M. Jamison, Mark Dredze, Sandra C. Quinn, and John W. Ayers (2022), "Twitter and Facebook Posts About COVID-19 Are Less Likely to Spread Misinformation Compared to Other Health Topics" *Plos One*, 17 (1), E0261768.
- Bryanov, Kiril, and Victoria Vziatysheva (2021), "Determinants of Individuals' Belief in Fake News: A Scoping Review Determinants of Belief in Fake News," *Plos One*, 16 (6), E0253717.
- Buunk, Abraham P., and Frederick X. Gibbons (2007), "Social Comparison: The End of a Theory and the Emergence of a Field," *Organizational Behavior and Human Decision Processes*, 102 (1), 3–21.
- Cann, Arnie, Adam T. Cann, and Jennifer A. Jordan (2016), "Understanding the Effects of Exposure to Humor Expressing Affiliative and Aggressive Motivations," *Motivation and Emotion*, 40 (2), 258–267.

- Cann, Arnie, and Lawrence G. Calhoun (2001), "Perceived Personality Associations with Differences in Sense of Humor: Stereotypes of Hypothetical Others with High or Low Senses of Humor," *Humor—International Journal of Humor Research*, 14 (2), 117–130.
- Cann, Heather W. (2021), "Policy or Scientific Messaging? Strategic Framing in a Case of Subnational Climate Change Conflict," *Review of Policy Research*, 38 (5), 570–595.
- Cantor, Joanne, and Pat Venus (1980), "The Effect of Humor on Recall of a Radio Advertisement," *Journal of Broadcasting & Electronic Media*, 24 (1), 13–22.
- Carroll, Dave (2012), *United Breaks Guitars: The Power of One Voice in the Age of Social Media*, Vista, CA: Hay House Inc.
- Chaiken, Shelly (1979), "Communicator Physical Attractiveness and Persuasion," *Journal of Personality and Social Psychology*, 37 (8), 1387–1397.
- Chaiken, Shelly, and Durairaj Maheswaran (1994), "Heuristic Processing Can Bias Systematic Processing: Effects of Source Credibility, Argument Ambiguity, and Task Importance on Attitude Judgment," *Journal of Personality and Social Psychology*, 66 (3), 460–473.
- Chang, Chingching (2008), "Increasing Mental Health Literacy Via Narrative Advertising," *Journal of Health Communication*, 13 (1), 37–55.
- Chang, Hannah H., and Michel Tuan Pham (2013), "Affect as a Decision-Making System of the Present," *Journal of Consumer Research*, 40 (1), 42–63.
- Chang, Hsin Hsin, Yao-Chuan Tsai, Kit Hong Wong, Jian Wei Wang, and Fang Ju Cho (2015), "The Effects of Response Strategies and Severity of Failure on Consumer Attribution with Regard to Negative Word-Of-Mouth," *Decision Support Systems*, 71 (March), 48–61.
- Chattopadhyay, Amitava, and Kunal Basu (1990), "Humor in Advertising: The Moderating Role of Prior Brand Evaluation," *Journal of Marketing Research*, 27 (4), 466–476.
- Chebat, Jean C., Moshe Davidow, and Isabelle Codjovi (2005), "Silent Voices: Why Some Dissatisfied Consumers Fail to Complain," *Journal of Service Research*, 7 (4), 328–342.

- Chen, Kuan-Ju, Jooyoung Kim, and Jhih-Syuan Lin (2015), "The Effects of Affective and Cognitive Elaborations from Facebook Posts on Consumer Attitude Formation," *Journal of Consumer Behaviour*, 14 (3), 208–218.
- Chen, Qimei, Yi He, and Dana L. Alden (2014), "Social Presence in Service Failure: Why It Might Not Be a Bad Thing," *Customer Needs and Solutions*, 1 (4), 288–297.
- Cheung, Christy M. K., and Dimple R. Thadani (2012), "The Impact of Electronic Word-Of-Mouth Communication: A Literature Analysis and Integrative Model," *Decision Support Systems*, 54 (1), 461–470.
- Cheung, Man Yee, Chuan Luo, Choon Ling Sia, and Huaping Chen (2009), "Credibility of Electronic Word-Of-Mouth: Informational and Normative Determinants of online Consumer Recommendations," *International Journal of Electronic Commerce*, 13 (4), 9–38.
- Chevalier, Judith A., and Dina Mayzlin (2006), "The Effect of Word of Mouth on Sales: Online Book Reviews," *Journal of Marketing Research*, 43 (3), 345–354.
- Chiew, Tung Moi, Christine Mathies, and Paul Patterson (2019), "The Effect of Humour Usage on Customer's Service Experiences," *Australian Journal of Management*, 44 (1), 109–127.
- Chiu, Hung-Chang, Yi-Ching Hsieh, and Yi-Chu Kuo (2012), "How to Align Your Brand Stories with Your Products," *Journal of Retailing*, 88 (2), 262–275.
- Chu, Shu-Chuan, and Sara Kamal (2008), "The Effect of Perceived Blogger Credibility and Argument Quality on Message Elaboration and Brand Attitudes: An Exploratory Study," *Journal of Interactive Advertising*, 8 (2), 26–37.
- Cialdini, Robert B., and Noah J. Goldstein (2004), "Social influence: Compliance and conformity." *Annu. Rev. Psychol.* 55; 591-621.
- Cline, Thomas, W., Moses B. Altsech, and James J. Kellaris (2003), "When Does Humor Enhance or Inhibit Ad Responses? The Moderating Role of the Need for Humor," *Journal of Advertising*, 32 (3), 31–45.

- Cole, James T., and Jennifer D. Greer (2013), "Audience Response to Brand Journalism: The Effect of Frame, Source, and Involvement," *Journalism & Mass Communication Quarterly*, 90 (4), 673–690.
- Colm, Laura, Andrea Ordanini, and A. Parasuraman (2017), "When Service Customers Do Not Consume in Isolation: A Typology of Customer Copresence Influence Modes (Ccims)" *Journal of Service Research*, 20 (3), 223–239.
- Connelly, Brian L., S. Trevis Certo, R. Duane Ireland, and Christopher R. Reutzel (2011), "Signaling Theory: A Review and Assessment," *Journal of Management*, 37 (1), 39–51.
- Cornelis, Erlinde, Nico Heuvinck, and Anuja Majmundar (2020), "The Ambivalence Story: Using Refutation to Counter the Negative Effects of Ambivalence in Two-Sided Messages," *International Journal of Advertising*, 39 (3), 410–432.
- Cotte, June, Tilottama G. Chowdhury, S. Ratneshwar, and Lisa M. Ricci (2006), "Pleasure or Utility? Time Planning Style and Web Usage Behaviors," *Journal of Interactive Marketing*, 20 (1), 45–57.
- Crowley, Ayn E., and Wayne D. Hoyer (1994), "An Integrative Framework for Understanding Two-Sided Persuasion," *Journal of Consumer Research*, 20 (4), 561–574.
- Davidow, Moshe (2003), "Organizational Responses to Customer Complaints: What Works and What Doesn't," *Journal of Service Research*, 5 (3), 225–250.
- Della Porta, Donatella, and Lorenzo Mosca (2005), "Global-Net for Global Movements? A Network of Networks for a Movement of Movements," *Journal of Public Policy*, 25 (1), 165–190.
- Del Vicario, Michela, Antonio Scala, Guido Caldarelli, H. Eugene Stanley, and Walter Quattrociocchi (2017), "Modeling Confirmation Bias and Polarization," *Scientific Reports*, 7 (1), 1–9.
- Del Vicario, Michela, Walter Quattrociocchi, Antonio Scala, and Fabiano Zollo (2019), "Polarization and Fake News: Early Warning of Potential Misinformation Targets," *ACM Transactions on the Web (TWEB)*, 13 (2), 1–22.

- De Wit, John B. F., Enny Das, and Raymond Vet (2008), "What Works Best: Objective Statistics or a Personal Testimonial? An Assessment of the Persuasive Effects of Different Types of Message Evidence on Risk Perception," *Health Psychology*, 27 (1), 110–115.
- Dillard, James P., and Lijiang Shen (2005), "On the Nature of Reactance and Its Role in Persuasive Health Communication," *Communication Monographs*, 72 (2), 144–168.
- Doh, Sun-Jae, and Jang Sun Hwang (2009), "How Consumers Evaluate Ewom (Electronic Word-Of-Mouth) Messages," *Cyberpsychology & Behavior*, 12 (2), 193–197.
- Doyle, Julie (2009), *Climate Action and Environmental Activism: The Role of Environmental Ngos and Grassroots Movements in the Global Politics of Climate Change*. in *Climate Change and the Media*, Vol. 1, ed. Benedetta Brevini and Justin Lewis, NY: Peter Lang, 103–116.
- Duncan, Calvin P., and James E. Nelson (1985), "Effects of Humor in a Radio Advertising Experiment," *Journal of Advertising*, 14 (2), 33–64.
- Edelman, Richard (2018), "The New Brand Democracy," (Accessed January 26, 2023), <https://www.edelman.com/post/the-newbrand-democracy>.
- Einwiller, Sabine. A., and Sarah Steilen (2015), "Handling Complaints on Social Network Sites—An Analysis of Complaints and Complaint Responses on Facebook and Twitter Pages of Large US Companies," *Public Relations Review*, 41 (2), 195–204.
- Eisenberg, Nancy, and Janet Strayer (1987), "Critical Issues in the Study of Empathy," *Empathy and Its Development*, 3–13.
- Eisend, Martin (2006), "Two-Sided Advertising: A Meta-Analysis," *International Journal of Research in Marketing*, 23 (2), 187–198.
- Eisend, Martin (2007), "Understanding Two-Sided Persuasion: An Empirical Assessment of Theoretical Approaches," *Psychology & Marketing*, 24 (7), 615–640.
- Eisend, Martin (2009), "A Meta-Analysis of Humor in Advertising," *Journal of the Academy of Marketing Science*, 37 (2), 191–203.

- Eisend, Martin (2011), "How Humor in Advertising Works: A Meta-Analytic Test of Alternative Models," *Marketing Letters*, 22 (2), 115–132.
- Engs, Ruth, and David J. Hanson (1989), "Reactance Theory: A Test with Collegiate Drinking," *Psychological Reports*, 64(3_Suppl), 1083–1086.
- Erdem, Tülin, and Joffre Swait (2004), "Brand Credibility, Brand Consideration, and Choice," *Journal of Consumer Research*, 31 (1), 191–198
- Erickson, Gary, M., and Johny K. Johansson (1985), "The Role of Price in Multi-Attribute Product Evaluations," *Journal of Consumer Research*, 12 (2), 195–199.
- Fardouly, Jasmine, Philippa C. Diedrichs, Lenny R. Vartanian, and Emma Halliwell (2015), "Social Comparisons on Social Media: The Impact of Facebook on Young Women's Body Image Concerns and Mood," *Body Image*, 13 (March), 38–45.
- Festinger, Leon (1954), "A Theory of Social Comparison Processes," *Human Relations*, 7 (2), 117–140.
- Frasquet, Marta, Marco Ieva, and Christina Ziliani (2019), "Understanding Complaint Channel Usage in Multichannel Retailing," *Journal of Retailing and Consumer Services*, 47 (March), 94–103.
- Fraustino, Julia Daisy, and Liang Ma (2015), "CDC's Use of Social Media and Humor in A Risk Campaign 'Preparedness 101: Zombie Apocalypse'," *Journal of Applied Communication Research*, 43 (2), 222–241.
- Fredrickson, Barbara L. (2001), "The Role of Positive Emotions in Positive Psychology: The Broaden-And-Build Theory of Positive Emotions," *American Psychologist*, 56 (3), 218–226.
- Gass, Robert H., and John S. Seiter (2011), "Credibility," in *Persuasion: Social Influence and Compliance Gaining*, Vol. 4, ed. K. Bowers, J. Zalesky, and M. Lentz, New York, NY: Pearson, 72–90.
- Ge, Jing, Ulrike Gretzel, and Yunxia Zhu (2018), "Humour in Firm-Initiated Social Media Conversations: A Conceptual Model," *International Journal of Digital Culture and Electronic Tourism*, 2 (4), 273–293.

- Gelb, Betsy. D., and George M. Zinkhan (1986), "Humor and Advertising Effectiveness After Repeated Exposures to a Radio Commercial," *Journal of Advertising*, 15 (2), 15–34.
- Gelbrich, Katja, and Holger Roschk (2011), "A Meta-Analysis of Organizational Complaint Handling and Customer Responses," *Journal of Service Research*, 14 (1), 24–43.
- Gilbert, Paul, John Price, and Steven Allan (1995), "Social Comparison, Social Attractiveness and Evolution: How Might They Be Related?," *New Ideas in Psychology*, 13 (2), 149–165.
- Gorn, Gerald J., Marvin E. Goldberg, and Kunal Basu (1993), "Mood, Awareness, and Product Evaluation," *Journal of Consumer Psychology*, 2 (3), 237–256.
- Grégoire, Yany, Fateme Ghadami, Sandra Laporte, Sylvain Sénécal, and Denis Larocque (2018), "How Can Firms Stop Customer Revenge? The Effects of Direct and Indirect Revenge on Post-Complaint Responses," *Journal of the Academy of Marketing Science*, 46 (6), 1052–1071.
- Grégoire, Yany, Audrey Salle, and Thomas M. Tripp (2015), "Managing Social Media Crises with Your Customers: The Good, the Bad, and the Ugly," *Business Horizons*, 58 (2), 173–182.
- Grove, Stephen J., and Raymond P. Fisk (1997), "The Impact of Other Customers on Service Experiences: A Critical Incident Examination of 'Getting Along'," *Journal of Retailing*, 73 (1), 63–85.
- Guan, Shu-Sha Angie, Sophia Hain, Jennifer Cabrera, and Andrea Rodarte (2019), "Social Media Use and Empathy: A Mini Meta-Analysis," *Social Networking*, 8 (4), 147–157.
- Gulas, Charles S., and Marc G. Weinberger (2006), *Humor in Advertising: A Comprehensive Analysis*, Armonk, NY: ME Sharpe.
- Gustafson, Abel, and Ronald E. Rice (2019), "The Effects of Uncertainty Frames in Three Science Communication Topics," *Science Communication*, 41 (6), 679–706.
- Hall, Marissa G., Paschal Sheeran, Seth M. Noar, Kurt M. Ribisl, Marcella H. Boynton, and Noel T. Brewer (2017), "A Brief Measure of Reactance to Health Warnings," *Journal of Behavioral Medicine*, 40 (3), 520–529.

- Hansen, Karolina, Cindy Littwitz, and Sabine Sczesny (2016), "The Social Perception of Heroes and Murderers: Effects of Gender-Inclusive Language in Media Reports," *Frontiers in Psychology*, 7 (March), 369.
- Heider, Fritz (1958), *The Psychology of Interpersonal Relations*, New York: Wiley.
- Hendriks, Friederike, Inse Janssen, and Regina Jucks (2022), "Balance as Credibility? How Presenting One-Vs. Two-Sided Messages Affects Ratings of Scientists' and Politicians' Trustworthiness," *Health Communication*, 1–8.
- Hennig-Thurau, Thorsten, Bernd Skieram, Edward Malthouse, and Christian Friege (2010), "The Impact of New Media on Customer Relationships," *Journal of Service Research*, 13 (3), 311–330.
- Hennig-Thurau, Thorsten, Victor Henning, and Henrik Sattler (2007), "Consumer File Sharing of Motion Pictures," *Journal of Marketing*, 71 (4), 1–18.
- Herhausen, Dennis, Stephan Ludwig, Dhruv Grewal, Jochen Wulf, and Marcus Schoegel (2019), "Detecting, Preventing, and Mitigating Online Firestorms in Brand Communities," *Journal of Marketing*, 83 (3), 1–21.
- Hogreve, Jens, Nicola Bilstein, and Kathrin Hoerner (2019), "Service Recovery on Stage: Effects of Social Media Recovery on Virtually Present Others," *Journal of Service Research*, 22 (4), 421–439.
- Houston, J. Brian, Mitchell S. McKinney, Esther Thorson, Joshua Hawthorne, J. David Wolfgang, and Alecia Swasy (2020), "The Twitterization of Journalism: User Perceptions of News Tweets," *Journalism*, 21 (5), 614–632.
- Hsu, Tzu-Fan, and Chao-Ming Yang (2021), "Effects of Message Framing and Consumers' Regulatory Focus on Perceived Credibility of Electronic Word-Of-Mouth and Purchase Intention," *Social Behavior and Personality: An International Journal*, 49 (11), 1–14.
- Hudson, James M., and Amy S. Bruckman (2004), "The Bystander Effect: A Lens for Understanding Patterns of Participation," *The Journal of the Learning Sciences*, 13 (2), 165–195.

- Hudson, Simon, Li Huang, Martin S. Roth, and Thomas J. Madden (2016), "The Influence of Social Media Interactions on Consumer–Brand Relationships: A Three-Country Study of Brand Perceptions and Marketing Behaviors," *International Journal of Research in Marketing*, 33 (1), 27–41.
- Ismagilova, Elvira, Emma Slade, Nripendra P. Rana, and Yogesh K. Dwivedi (2020), "The Effect of Characteristics of Source Credibility on Consumer Behaviour: A Meta-Analysis," *Journal of Retailing and Consumer Services*, 53 (March), 101736.
- Istanbulluoglu, Doga (2017), "Complaint Handling on Social Media: The Impact of Multiple Response Times on Consumer Satisfaction," *Computers in Human Behavior*, 74 (September), 72–82.
- Jacobson, Susan K., Nia A. Morales, Beide Chen, Rebecca Soodeen, Michael P. Moulton, and Ehta Jain (2019), "Love or Loss: Effective Message Framing to Promote Environmental Conservation," *Applied Environmental Education & Communication*, 18 (3), 252–265.
- Jenkins, Eva L., Jasmina Ilicic, Amy M. Barklamb, and Tracy A. Mccaffrey (2020), "Assessing the Credibility and Authenticity of Social Media Content for Applications in Health Communication: Scoping Review," *Journal of Medical Internet Research*, 22 (7), E17296.
- Johnen, Marius, and Oliver Schnittka (2019), "When Pushing Back Is Good: The Effectiveness of Brand Responses to Social Media Complaints," *Journal of the Academy of Marketing Science*, 47 (5), 858–878.
- Jolly, Alison (1991), "Modern Shamans," *Nature*, 350 (6318), 534–534.
- Jones, Edward E., and Keith E. Davis (1965), "From Acts to Dispositions the Attribution Process in Person Perception," *Advances in Experimental Social Psychology*, 2, 219–266.
- Jones, Esmark, Carol L., Jennifer L. Stevens, Michael Breazeale, and Brian I. Spaid (2018), "Tell It Like It Is: The Effects of Differing Responses to Negative Online Reviews," *Psychology & Marketing*, 35 (12), 891–901.
- Jones, John A. (2005), "The Masking Effects of Humor on Audience Perception of Message Organization," *Humor: International Journal of Humor Research*, 18 (4), 405–417.

- Jung, Eun Hwa, Kim Walsh-Childers, and Hyang-Sook Kim (2016), "Factors Influencing the Perceived Credibility of Diet-Nutrition Information Web Sites," *Computers in Human Behavior*, 58 (May), 37–47.
- Kahneman, Daniel, and Amos Tversky (1984), "Choices, Values, and Frames," *American Psychologist*, 39 (4), 341.
- Kang, Yang-Soon, and Paul M. Herr (2006), "Beauty and the Beholder: Toward An Integrative Model of Communication Source Effects," *Journal of Consumer Research*, 33 (1), 123–130.
- Kaplan, Andreas M., and Michael Haenlein (2010), "Users of the World, Unite! The Challenges and Opportunities of Social Media," *Business Horizons*, 53 (1), 59–68.
- Kelley, Harold H. (1973), "The Process of Causal Attribution," *American Psychologist*, 28, 107–128.
- Kranzbühler, Anne-Madeleine, Alfred Zerres, Mirella H. P. Kleijnen, and Peeter W. J. Verlegh (2020), "Beyond Valence: A Meta-Analysis of Discrete Emotions in Firm-Customer Encounters," *Journal of the Academy of Marketing Science*, 48 (3), 478–498.
- Krause, Rebecca J., and Derek D. Rucker (2020), "Strategic Storytelling: When Narratives Help Versus Hurt the Persuasive Power of Facts," *Personality and Social Psychology Bulletin*, 46 (2), 216–227.
- Krishnan, H. Shanker, and Dipankar Chakravarti (2003), "A Process Analysis of the Effects of Humorous Advertising Executions on Brand Claims Memory," *Journal of Consumer Psychology*, 13 (3), 230–245.
- Kumar, Ashish, Ram Bezawada, Rishika Rishika, Ramkumar Janakiraman, and P. K. Kannan (2016), "From Social to Sale: The Effects of Firm-Generated Content in Social Media on Customer Behavior," *Journal of Marketing*, 80 (1), 7–25.
- Kurtzberg, Terri R., Charles E. Naquin, and Liuba Y. Belkin (2009), "Humor as a Relationship-Building Tool in Online Negotiations," *International Journal of Conflict Management*, 20 (4), 377–397.

- Ladle, Richard J., Paul Jepson, and Robert J. Whittaker (2005), "Scientists and the Media: The Struggle for Legitimacy in Climate Change and Conservation Science," *Interdisciplinary Science Reviews*, 30 (3), 231–240.
- Lamberton, Cait, and Andrew T. Stephen (2016), "A Thematic Exploration of Digital, Social Media, and Mobile Marketing: Research Evolution from 2000 to 2015 and An Agenda for Future Inquiry," *Journal of Marketing*, 80 (6), 146–172.
- Lanceley, Anne (1985), "Use of Controlling Language in the Rehabilitation of the Elderly," *Journal of Advanced Nursing*, 10 (2), 125–135.
- Latané, Bibb (1981), "The Psychology of Social Impact," *American Psychologist*, 36 (4), 343.
- Latané, Bibb, and John M. Darley (1970), *The Unresponsive Bystander: Why Doesn't He Help?* New York, NY:Appleton-Century Crofts.
- Levine, John M., and Ronald S. Valle (1975), "The Convert as a Credible Communicator," *Social Behavior and Personality: An International Journal*, 3, 81–90.
- Lewandowsky, Stephan, and Sander van der Linden (2021), "Countering Misinformation and Fake News Through Inoculation and Prebunking," *European Review of Social Psychology*, 32 (2), 348–384.
- Lewandowsky, Stephan, John Cook, Nicolas Fay, and Gikus E. Gignac (2020), "Correction To: Science by Social Media: Attitudes Towards Climate Change Are Mediated By Perceived Social Consensus," *Memory & Cognition*, 48 (1), 171.
- Lewandowsky, Stephan, Ulrich K. H. Ecker, Coken M. Seifert, Norbert Schwarz, and John Cook (2012), "Misinformation and Its Correction: Continued Influence and Successful Debiasing," *Psychological Science in the Public Interest*, 13 (3), 106–131.
- Li, Xueni, Kimmy Wa Chan, and Sara Kim (2019), "Service with Emoticons: How Customers Interpret Employee Use of Emoticons in Online Service Encounters," *Journal of Consumer Research*, 45 (5), 973–987.
- Li, Fangfang, Jorma Larimo, and Leonidas C. Leonidou (2021), "Social Media Marketing Strategy: Definition, Conceptualization, Taxonomy, Validation, and Future Agenda," *Journal of the Academy of Marketing Science*, 49 (1), 51–70.

- Libai, Barak, Ruth Bolton, Marnix S. Bügel, Ko De Ruyter, Oliver Götz, Hans Risselada, and Andrew T. Stephen (2010), "Customer-To-Customer Interactions: Broadening the Scope of Word of Mouth Research," *Journal of Service Research*, 13 (August), 267–282.
- Locke, Karen (1996), "A Funny Thing Happened! The Management of Consumer Emotions in Service Encounters," *Organization Science*, 7 (1), 40–59.
- Ludwig, Nadine L., Donald C. Barnes, and Matthias Gouthier (2017), "Observing Delightful Experiences of Other Customers: The Double-Edged Sword of Jealousy and Joy," *Journal of Service Theory and Practice*, 27 (1), 145–163.
- Luo, Mufan, Jeffrey T. Hancock, and David M. Markowitz (2022), "Credibility Perceptions and Detection Accuracy of Fake News Headlines on Social Media: Effects of Truth-Bias and Endorsement Cues," *Communication Research*, 49 (2), 17–195.
- Ma, Yanni, Graham Dixon, and Jay D. Hmielowski (2019), "Psychological Reactance from Reading Basic Facts on Climate Change: The Role of Prior Views and Political Identification," *Environmental Communication*, 13 (1), 71–86.
- Madden, Thomas J., and Marc G. Weinberger (1982), "The Effects of Humor on Attention in Magazine Advertising," *Journal of Advertising*, 11 (3), 8–14.
- Markey, Patrick M. (2000), "Bystander Intervention in Computer-Mediated Communication," *Computers in Human Behavior*, 16 (2), 183–188.
- Mayshak, Richelle, Stefanie J. Sharman, Lucy Zinkiewicz, and Alexa Hayley (2017), "The Influence of Empathy and Self-Presentation on Engagement with Social Networking Website Posts," *Computers in Human Behavior*, 71 (June), 362–377.
- Mcgraw, A. Peter, Caleb Warren, and Christina Kan (2015), "Humorous Complaining," *Journal of Consumer Research*, 41 (5), 1153–1171.
- Miller, Claude H., Lindsay T. Lane, Leslie M. Deatrck, Alice M. Young, and Kimberly A. Potts (2007), "Psychological Reactance and Promotional Health Messages: The Effects of Controlling Language, Lexical Concreteness, and the Restoration of Freedom," *Human Communication Research*, 33 (2), 219–240.

- Moulard, Julie G., Carolyn Garrity, and Dan H. Rice (2015), "What Makes a Human Brand Authentic? Identifying the Antecedents of Celebrity Authenticity," *Psychology & Marketing*, 32 (2), 173–186.
- Morse, Stan, and Kenneth J. Gergen (1970), "Social Comparison, Self-Consistency, and the Concept of Self," *Journal of Personality and Social Psychology*, 16 (1), 148–156.
- Mukherjee, Sourjo, and Nick Althuizen (2020), "Brand Activism: Does Courting Controversy Help or Hurt a Brand?" *International Journal of Research in Marketing*, 37 (4), 772–788.
- Mussweiler, Thomas, and Galen V. Bodenhausen (2002), "I Know You Are, But What Am I? Self-Evaluative Consequences of Judging In-Group and Out-Group Members," *Journal of Personality and Social Psychology*, 82 (1), 19–32.
- Naylor, Rebecca W., Cait P. Lamberton, and Patricia M. West (2012), "Beyond the "Like" Button: The Impact of Mere Virtual Presence on Brand Evaluations and Purchase Intentions in Social Media Settings," *Journal of Marketing*, 76 (6), 105–120.
- Nisbett, Richard E., and Timothy D. Wilson (1977), "The Halo Effect: Evidence for Unconscious Alteration of Judgments," *Journal of Personality and Social Psychology*, 35 (4), 250–256.
- Nisbet, Eric C., Kathryn E. Cooper, and R. Kelly Garrett (2015), "The Partisan Brain: How Dissonant Science Messages Lead Conservatives and Liberals to (Dis) Trust Science," *The ANNALS of the American Academy of Political and Social Science*, 658 (1), 36–66.
- O'hara, Bradley S., Richard G. Netemeyer, and Scot Burton (1991), "An Examination of the Relative Effects of Source Expertise, Trustworthiness, and Likability," *Social Behavior & Personality: An International Journal*, 19 (4), 305–314.
- O'Keefe, Daniel J. (1999), "How to Handle Opposing Arguments in Persuasive Messages: A Meta-Analytic Review of the Effects of One-Sided and Two-Sided Messages," *Annals of the International Communication Association*, 22 (1), 209–249.

- Parcha, Joshua M. and Catherine Y. Kingsley Westerman (2020), "How Corporate Social Advocacy Affects Attitude Change Toward Controversial Social Issues," *Management Communication Quarterly*, 34 (3), 350–383.
- Patzer, Gordan L. (1983), "Source Credibility as a Function of Communicator Physical Attractiveness," *Journal of Business Research*, 11 (2), 229–241.
- Paul, Denna (2019), „Dear Mr. President That’s Not How Global Warming Works,” *The Washington Post*, <https://www.washingtonpost.com/weather/2019/01/20/dear-mr-president-thats-not-how-global-warming-workspetty>.
- Pennycook, Gordon, and David G. Rand (2021), "The Psychology of Fake News," *Trends in Cognitive Sciences*, 25 (5), 388–402.
- Pérez, Andrea (2019), "Building a Theoretical Framework of Message Authenticity in CSR Communication," *Corporate Communications: An International Journal*, 24 (2), 334–350.
- Perez-Vega, Rodrigo, Kathryn Waite, and Kevin O’Gorman (2016), "Social Impact Theory: An Examination of How Immediacy Operates as An Influence Upon Social Media Interaction in Facebook Fan Pages," *The Marketing Review*, 16 (3), 299–321.
- Pechmann, Cornelia (1992), "Predicting When Two-Sided Ads Will Be More Effective Than One-Sided Ads: The Role of Correlational and Correspondent Inferences," *Journal of Marketing Research*, 29 (4), 441–453.
- Petty, Richard E., and John T. Cacioppo (1979), "Effects of Forwarning of Persuasive Intent and Involvement on Cognitive Responses and Persuasion," *Personality and Social Psychology Bulletin*, 5 (2), 173–176.
- Petty, Richard E., and John T. Cacioppo (1986), "The Elaboration Likelihood Model of Persuasion," in *Communication and Persuasion*, Vol. 19, ed. Leonard Berkowitz, New York: Springer, 1–24.
- Pfeffer, Juergen, T. Zorbach, and Kathleen M. Carley (2014), "Understanding Online Firestorms: Negative Word-Of-Mouth Dynamics in Social Media Networks," *Journal of Marketing Communications*, 20 (1–2), 117–128.

- Pham, Nguyen, Naomi Mandel, and Andrea C. Morales (2016), "Messages from the Food Police: How Food-Related Warnings Backfire Among Dieters," *Journal of the Association for Consumer Research*, 1 (1), 175–190.
- Porter, Lance, and Guy J. Golan (2006), "From Subservient Chickens to Brawny Men: A Comparison of Viral Advertising to Television Advertising," *Journal of Interactive Advertising*, 6 (2), 4–33.
- Rabe, L. (2022), „Umfrage Zur Nutzung Von Twitter Nach Altersgruppen in Den USA 2021,“ (Accessed January 26, 2023),
- Rains, Stephen A. (2013), "The Nature of Psychological Reactance Revisited: A Meta-Analytic Review," *Human Communication Research*, 39 (1), 47–73.
- Rao, Akshay R., Lu Qu, and Robert W. Ruekert (1999), "Signaling Unobservable Product Quality Through a Brand Ally," *Journal of Marketing Research*, 36 (2), 258–268.
- Raufeisen, Xenia, Linda Wulf, Sören Köcher, Ulya Faupel, and Hartmut H. Holzmüller (2019), "Spillover Effects in Marketing: Integrating Core Research Domains," *AMS Review*, 9 (3–4), 249–267.
- Rim, Hyejoon, Sung-Un Yang, and Jaejin Lee (2016), "Strategic Partnerships with Nonprofits in Corporate Social Responsibility (CSR): The Mediating Role of Perceived Altruism and Organizational Identification," *Journal of Business Research*, 69 (9), 3213–3219.
- Robert, Christopher, and James E. Wilbanks (2012), "The Wheel Model of Humor: Humor Events and Affect in Organizations," *Human Relations*, 65 (9), 1071–1099.
- Rosenberg, Benjamin D., and Jason Siegel (2018), "A 50-Year Review of Psychological Reactance Theory: Do Not Read This Article," *Motivation Science*, 4 (4), 281–300.
- Ruch, Willibald (2010), *The Sense of Humor: Explorations of a Personality Characteristic*, Vol. 3, Berlin: Walter De Gruyter.
- Sanbonmatsu, David M., and Frank R. Kardes (1988), "The Effects of Physiological Arousal on Information Processing and Persuasion," *Journal of Consumer Research*, 15 (3), 379–385.

- Schaefer, Tobias, and Julia Schamari (2016), "Service Recovery Via Social Media: The Social Influence Effects of Virtual Presence," *Journal of Service Research*, 19 (2), 192–208.
- Schamari, Julia, and Tobias Schaefer (2015), "Leaving the Home Turf: How Brands Can Use Webcare on Consumer-Generated Platforms to Increase Positive Consumer Engagement," *Journal of Interactive Marketing*, 30 (1), 20–33.
- Schaeffer, Katherine (2020). Nearly Three-In-Ten Americans Believe COVID-19 Was Made in a Lab. Pew Research Center. <https://www.pewresearch.org/fact-tank/2020/04/08/nearly-three-in-ten-americans-believe-covid-19-was-made-in-a-lab/>.
- Seiler, Roger, and Gunther Kucza (2017), "Source Credibility Model, Source Attractiveness Model and Match-Up-Hypothesis: An Integrated Model," *Journal of International Scientific Publications: Economy & Business*, 11.
- Settle, Robert B., and Lindon L. Golden (1974), "Attribution Theory and Advertiser Credibility," *Journal of Marketing Research*, 11 (2), 181–185
- Sharma, Aran (1990), "The Persuasive Effect of Salesperson Credibility: Conceptual and Empirical Examination," *Journal of Personal Selling & Sales Management*, 10 (4), 71–80.
- Simon, Carina, Tim Oliver Brexendorf, and Martin Fassnacht (2015), "The Impact of External Social and Internal Personal Forces on Consumers' Brand Community Engagement on Facebook", *Journal of Product and Brand Management*, 25 (5), 409–423.
- Sims, Maja Pawinska (2019), "Study: Consumers Expect Brands to Take a Stand on Climate Change and Data Security," (Accessed 19 July 2021), <https://www.provokemedia.com/latest/article/study-cyber-security-dataprivacy-climate-change-top-issues-where-consumers-expect-brands-to-take-a-stand>.
- Slater, Michael D., and Donna Rouner (1996), "How Message Evaluation and Source Attributes May Influence Credibility Assessment and Belief Change," *Journalism & Mass Communication Quarterly*, 73 (4), 974–991.
- Smith, Adam (2006), "Cognitive Empathy and Emotional Empathy in Human Behavior and Evolution," *The Psychological Record*, 56 (1), 3–21.

- Smith, Mary John (1977), "The Effects of Threats to Attitudinal Freedom as a Function of Message Quality and Initial Receiver Attitude," *Communications Monographs*, 44 (3), 196–206.
- Smith, Wanda J., K. Vernard Harrington, and Christopher P. Neck (2000), "Resolving Conflict with Humor in a Diversity Context," *Journal of Managerial Psychology*, 15 (6), 606–625.
- Sussman, Stephanie W., and Wendy S. Siegal (2003), "Informational Influence in Organizations: An Integrated Approach to Knowledge Adoption," *Information Systems Research*, 14 (1), 47–65.
- Song, Changhe, Cheng Yang, H. Chen, Cunchao Tu, Zhiylian Liu, and Maosong Sun (2019), "CED: Credible Early Detection of Social Media Rumors," *IEEE Transactions on Knowledge and Data Engineering*, 33 (8), 3035–3047.
- Spence, Michael (1973), "Job Market Signaling," *The Quarterly Journal of Economics*, 87 (3), 355–374.
- Statista Research Department (2015), "Customer Service: Using Social Media to Complain About a Brand U.S.& Worldwide 2017," (Accessed October 04, 2020), <https://www.statista.com/statistics/808548/customers-opinion-on-using-social-media-to-complain-about-a-brand/>.
- Statista Research Department (2022), "Public belief in the climate emergency worldwide 2020" (Accessed February 04, 2023), <https://www.statista.com/topics/8403/climate-change-awareness-in-germany/#topicOverview>.
- Statista Research Department (2023), "Number of global social network users 2017-2027," (Accessed February 04, 2023), <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>.
- Steinhoff, Lena, and Robert W. Palmatier (2016), "Understanding Loyalty Program Effectiveness: Managing Target and Bystander Effects," *Journal of the Academy of Marketing Science*, 44 (1), 88–107.
- Stephen, Andrew T. (2016), "The Role of Digital and Social Media Marketing in Consumer Behavior," *Current Opinion in Psychology*, 10 (August), 17–21.

- Sternthal, Brian, Ruby Dholakia, and Clark Leavitt (1978), "The Persuasive Effect of Source Credibility: Tests of Cognitive Response," *Journal of Consumer Research*, 4 (4), 252–260.
- Stewart, David W., and David H. Furse (1986). *Effective Television Advertising: A Study of 1000 Commercials*, Lexington (Mass.): Lexington Books.
- Strick, Madelijn, Rick B. Van Baaren, Rob W. Holland, and Ad Van Knippenberg (2009), "Humor in Advertisements Enhances Product Liking By Mere Association," *Journal of Experimental Psychology: Applied*, 15 (1), 35–45.
- Strick, Madelijn, Rob W. Holland, Rick B. Van Baaren, and Ad Van Knippenberg (2009), "Finding Comfort in a Joke: Consolatory Effects of Humor Through Cognitive Distraction," *Emotion*, 9 (4), 574–578.
- Strick, Madelijn., Rob W. Holland, Rick B. Van Baaren, Ad Van Knippenberg, and Ap Dijksterhuis, (2013), "Humour in Advertising: An Associative Processing Model," *European Review of Social Psychology*, 24 (1), 32–69.
- Sugathan, Praveen, Alexander Rossmann, and Kumar R. Ranjan (2018), "Toward a Conceptualization of Perceived Complaint Handling Quality in Social Media and Traditional Service Channels," *European Journal of Marketing*, 52 (5/6), 973–1006.
- Sui, Yujia, and Bin Zhang (2021), "Determinants of the Perceived Credibility of Rebuttals Concerning Health Misinformation," *International Journal of Environmental Research and Public Health*, 18 (3), 1345.
- Suler, John (2004), "The Online Disinhibition Effect," *Cyberpsychology & Behavior*, 7 (3), 321–326.
- Sung, Yongjun, and Jooyoung Kim (2010), "Effects of Brand Personality on Brand Trust and Brand Affect," *Psychology & Marketing*, 27 (7), 639–661.
- Swani, Kunal, Marc G. Weinberger, and Charles S. Gulas (2013), "The Impact of Violent Humor on Advertising Success: A Gender Perspective," *Journal of Advertising*, 42 (4), 308–319.

- Thon, Franziska M., and Regina Jucks (2017), "Believing in Expertise: How Authors' Credentials and Language Use Influence the Credibility of Online Health Information," *Health Communication*, 32 (7), 828–836.
- Tiggemann, Marika, and Amy Slater (2013), "Netgirls: The Internet, Facebook, and Body Image Concern in Adolescent Girls," *International Journal of Eating Disorders*, 46 (6), 630–633.
- Tombs, Alastair G., and Janet R. Mccoll-Kennedy (2013), "Third Party Customers Infecting Other Customers for Better or for Worse," *Psychology & Marketing*, 30 (3), 277–292.
- Toubia, Olivier, and Andrew T. Stephen (2013), "Intrinsic Vs. Image-Related Utility in Social Media: Why Do People Contribute Content to Twitter?," *Marketing Science*, 32 (3), 368–392.
- Treger, Stanislav, Susan Sprecher, and Ralph Erber (2013), "Laughing and Liking: Exploring the Interpersonal Effects of Humor Use in Initial Social Interactions," *European Journal of Social Psychology*, 43 (6), 532–543.
- Unger, Lynette S. (1995), "Observations: A Cross-Cultural Study on the Affect-Based Model of Humor in Advertising," *Journal of Advertising Research*, 35 (1), 66–66.
- Vansteenkiste, Maarten, Willy Lens, and Edward L. Deci (2006), "Intrinsic Versus Extrinsic Goal Contents in Self-Determination Theory: Another Look At the Quality of Academic Motivation," *Educational Psychologist*, 41 (1), 19–31.
- Van Der Meer, Toni G., and Joost W. M. Verhoeven (2014), "Emotional Crisis Communication," *Public Relations Review*, 40 (3), 526–536.
- Van Dolen, Willemijn, Ko De Ruyter, and Sandra Streukens (2008), "The Effect of Humor in Electronic Service Encounters," *Journal of Economic Psychology*, 29 (2), 160–179.
- Van Laer, Tom, and Ko De Ruyter (2010), "In Stories We Trust: How Narrative Apologies Provide Cover for Competitive Vulnerability After Integrity-Violating Blog Posts," *International Journal of Research in Marketing*, 27 (2), 164–174.
- Van Leeuwen, Theo (2001), "What Is Authenticity?," *Discourse Studies*, 3 (4), 392–397.

- Van Noort, Guda, and Lotte M. Willemsen (2012), "Online Damage Control: the Effects of Proactive Versus Reactive Webcare Interventions in Consumer-Generated and Brand-Generated Platforms," *Journal of Interactive Marketing*, 26 (3), 131–140.
- Viviani, Marco, and Gabriella Pasi (2017), "Credibility in Social Media: Opinions, News, and Health Information – A Survey," *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, 7 (5), E1209.
- Vogel, Erin A., Jason P. Rose, Lindsay Roberts, and Katheryn Eckles (2014), "Social Comparison, Social Media, and Self-Esteem," *Psychology of Popular Media Culture*, 3 (4), 206.
- Vossen, Helen G., and Patti M. Valkenburg (2016), "Do Social Media Foster or Curtail Adolescents' Empathy? A Longitudinal Study," *Computers in Human Behavior*, 63, 118–124.
- Vosoughi, Soroush, Deb Roy, and Sinan Aral (2018), "The Spread of True and False News Online," *Science*, 359 (6380), 1146–1151.
- Wang, Yang, and Alexander Chaudhry (2018), "When and How Managers' Responses to Online Reviews Affect Subsequent Reviews," *Journal of Marketing Research*, 55 (2), 163–177.
- Ward, James C., and Amy L. Ostrom (2006), "Complaining to the Masses: The Role of Protest Framing in Customer-Created Complaint Web Sites," *Journal of Consumer Research*, 33 (2), 220–230.
- Warren, Caleb, and A. Peter McGraw (2016), "When Does Humorous Marketing Hurt Brands?," *Journal of Marketing Behavior*, 2 (1), 39–67.
- Warren, Caleb, Adam Barsky, A. Peter McGraw, and Deborah Macinnis (2018), "Humor, Comedy, and Consumer Behavior," *Journal of Consumer Research*, 45 (3), 529–552.
- Warren, Caleb, and Jonah Berger (2011), "The Influence of Humor on Sharing," *ACR North American Advances*, 39, 712–713.

- Wasike, Ben (2022), "Memes, Memes, Everywhere, Nor Any Meme to Trust: Examining the Credibility and Persuasiveness of COVID-19-Related Memes," *Journal of Computer-Mediated Communication*, 27 (2), Zmab024.
- Wathen, C. Nadine, and Jacquelyn Burkell (2002), "Believe It or Not: Factors Influencing Credibility on the Web," *Journal of the American Society for Information Science and Technology*, 53 (2), 134–144.
- Weinberger, Marc G., and Charles S. Gulas (1992), "The Impact of Humor in Advertising: A Review," *Journal of Advertising*, 21 (4), 35–59.
- Wilson, Elizabeth J., and Daniel L. Sherrell (1993), "Source Effects in Communication and Persuasion Research: A Meta-Analysis of Effect Size," *Journal of the Academy of Marketing Science*, 21 (2), 101–112.
- Wong, Randy Yee Man, Christy M. K. Cheung, Bo Xiao, and Jason Bennett Thatcher (2021), "Standing Up or Standing By: Understanding Bystanders' Proactive Reporting Responses to Social Media Harassment," *Information Systems Research*, 32 (2), 561–581.
- Worchel, Stephen (1974), "The Effect of Three Types of Arbitrary Thwarting on the Instigation to Aggression," *Journal of Personality*, 42 (2), 300–318.
- Wissenschaftsbarometer (2022), „Vertrauen in Wissenschaft und Forschung nach formalem Bildungsniveau“ (Accessed February 12, 2023), <https://www.wissenschaft-im-dialog.de/projekte/wissenschaftsbarometer/wissenschaftsbarometer-2022/>
- Wyer, Robert, S., and James E. Collins (1992), "A Theory of Humor Elicitation," *Psychological Review*, 99 (4), 663–688.
- Xia, Lan (2013), "Effects of Companies' Responses to Consumer Criticism in Social Media," *International Journal of Electronic Commerce*, 17 (4), 73–100.
- Yang, Chia-Chen (2016), "Instagram Use, Loneliness, and Social Comparison Orientation: Interact and Browse on Social Media, But Don't Compare," *Cyberpsychology, Behavior, and Social Networking*, 19 (12), 703–708.

- You, Leping, and Yu-Hau Lee (2019), "The Bystander Effect in Cyberbullying on Social Network Sites: Anonymity, Group Size, and Intervention Intentions," *Telematics and Informatics*, 45, 101284
- Zhang, Yong (1996), "The Effect of Humor in Advertising: An Individual-Difference Perspective," *Psychology & Marketing*, 13 (6), 531–545.
- Zhou, Zhou, and Chuqing Dong (2021), "Matching Words with Actions: Understanding the Effects of CSA Stance-Action Consistency on Negative Consumer Responses," *Corporate Communications: An International Journal*, 27 (1), 167–187.
- Zillmann, Dolf (1983), "Disparagement Humor," in *Handbook of Humor Research*, ed. Paul E. McGhee, Jeffrey H. Goldstein, New York: Springer, 85–107.