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Bachelor Thesis

Are you serious it is just a joke?
The influence of Internet memes on the perception and
interpretation of online communication in social media.

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Abstract

Introduction: Online communication constantly provides new possibilities for interacting with others, such as Internet memes. Internet memes can have many different forms such as images, GIFs and videos. Existing literature expects that Internet memes can influence the perception and interpretation of online communication, so that their presence could make an online message, for example, more likeable, persuasive, and better in conveying emotions.

Purpose: This research aims to investigate the general phenomenon of Internet memes and how they can influence the perception and interpretation of online messages in different contexts, since existing literature mainly focusses on the use of Internet memes in specific contexts, such as politics, and less on how they can influence online communication in general.

Method: For this study, an online experiment was conducted. The 127 participants were randomly assigned to two conditions. All participants were presented with six Facebook posting to which they were asked to rate different statements. Each participant received three postings, including an Internet meme and three without.

Results: The results of the study show that Internet memes increase the likability of an online message. Additionally, the participants perceived the postings with Internet memes as less serious, compared to the same postings with text only. The findings show that the postings, including an Internet meme, are not perceived as better in expressing emotions, more persuasive and cannot facilitate extreme standpoints.

Conclusion: To conclude, Internet memes can influence the perception and interpretation of online messages in different contexts. Messages that include Internet memes are perceived as more likeable and less serious. These findings highlight the need for further research about the topic and its relevance in online communication.

Keywords: Internet memes, online communication, social media, influence, perception, interpretation, functionalities, mechanism

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1. Introduction

During the last several years, many aspects of everyday life have changed, especially due to the development of the Internet. Nowadays, nearly 59% of the global population has access to the Internet and uses it actively (Statista, 2020), so that the Internet has become an important communication medium in today's society (Van den Eijnden, Meerkerk, Vermulst, Spijkerman & Engels, 2008). This communication medium, online communication, continually changes and always provides new possibilities of interactions between people (Thayer, 2006). It can contribute to improving the effectiveness of communication by reducing the effort and costs of communicating (Guenther, Ruhrmann, Bischoff, Penzel & Weber, 2020). People can easily reach out to others regardless of distance and time, which contributes to effortlessly keep in touch with friends, families and other people in their life. It is generally easier to spread a great amount of information to a large audience through the online environment. Online communication can have a great impact on interpersonal communication and human behaviour, positively and negatively (Berger, 2013), especially because the online behaviour, interaction, and communication of people differ of those in real life (Thayer, 2006). These differences are mainly due to aspects such as anonymity, a large audience, as well as indirect and asynchronous communication. People have more time to react and think about what they want to share with others, can spread their information to a larger audience and can be protected by the anonymity of the Internet, which allows them to talk nearly about everything they want (Berger, 2013).

Besides the increase of speed, ease and reach of information, online communication also provides new communication techniques and people on the Internet can easily include visual and audible elements such as images, videos, and GIFs in their daily communication with others (Procházka, 2016). One of these new features are Internet memes. Every person who spends time on the Internet and especially on social media has been confronted with an Internet meme somehow. Their appearance can vary from images and videos to animated GIFs and hashtags or a combination of them (Rintel, 2013). However, the most commonly used type of Internet memes is an image with text (Beskow, Kumar & Carley, 2020). Internet memes can have entertaining, informative, and persuasive purposes (Rieger 2019), and many of them are created by using humour or metaphors (Yus, 2018). Accordingly, when scrolling through social media platforms or other forums, it gets clear that Internet memes can be used to support nearly any topic. By creating Internet memes, people comment or discuss topics, make fun of them, or criticise them. The creation of Internet memes has almost no limits, regarding the type and context in which they are used.

Most existing literature about Internet memes focusses on the definition and appearance of Internet memes and how they can be differentiated from other digital content (Rintel, 2013; Shifman, 2013; Lonnberg, 2020). It is mostly about which elements are used to create an Internet meme and also where they can be found (Rintel, 2013). In general, research about Internet meme is focussing on specific contexts, such as politics, in which Internet memes are used. All findings of this research can only be referred to that specific context and not to the investigation of Internet memes in general (Beskow, 2020). However, it is necessary to investigate the overall impacts of Internet memes on online communication and not only regarding specific contexts. It is important to understand the functionalities and intentions of Internet memes to be able to understand why they are used from a great number of people on the Internet since they are particularly present in today's online communication.

Furthermore, especially the debate about how serious Internet memes should be taken by the public also highlights that it is important to understand and examine how Internet memes in specific contexts can influence the perception of online messages. Some scholars say that Internet memes are just intended to be humorous (Knobel & Lankshear, 2007) and should only be treated as such whether other scholars highlight the need to investigate the seriousness of such Internet memes (Yoon, 2016). Socially controversial messages could be seen as more acceptable when using an Internet meme, because they could play down the overall statement of the message, for example, through humour (Williams, Oliver, Aumer, & Meyers, 2016). Nevertheless, the use of Internet memes in online messages could also support a certain opinion, regardless if it is negative or positive. Therefore, the general lack of knowledge in the topic and the many different opinions highlight the importance to investigate the phenomenon, to be able to understand the value and importance of Internet memes in online communication.

The purpose of this study is to understand and investigate the phenomenon of Internet memes. Therefore, the research will investigate how Internet memes can influence the interpretation and perception of online communication. That means how people tend to perceive a specific online message when the creator of this message has used an Internet meme to support it and how they perceive it when there is no Internet meme included. Thus, in this study, the following research question will be examined:

How do Internet memes affect peoples' interpretations and perceptions of online messages on social media?

In order to do so, the study will focus on investigating the general phenomenon of Internet memes through existing literature and how these Internet memes can support and influence an online message within a certain context.

2. Theoretical Framework

Previous literature about Internet memes shows a wide range of definition of the phenomenon. Thus, the first part of the theoretical framework examines and discusses the different definitions and establishes a general definition that will be used in this study.

Furthermore, existing literature is mainly focussing on the definition and elements of Internet memes. This theoretical framework will use existing literature to investigate not only the different contexts in which Internet memes are used most commonly but also how Internet memes can influence or support these contexts with their presence.

Therefore, mechanisms that are applied to create specific functionalities of Internet memes will be evaluated and discussed. Furthermore, the functionalities of the Internet memes will be explained, and hypotheses are established, regarding how Internet memes can support and influence certain online messages through their functionalities. All established functionalities and mechanisms are equally important for the general topic. However, due to the limited scope of this research, not all functionalities can be considered further within the analyses, and therefore the analyses will only focus on three of them. It is still necessary to evaluate and explain the other functionalities because they are important and can be investigated in further research about the topic.

2.1 Definition and history of Internet memes

It is important to understand the general concept and definition of Internet memes to be able to investigate the phenomenon further. As already mentioned, a wide range of literature and research about the definition of Internet memes exists. Yoon (2016) generally defines Internet memes as "user-generated online contents in the form of image macro, videos, GIF etc." (p. 95). Additionally, Knobel and Lankshear (2007) describe Internet memes as content items that are transmitted from person to person through the Internet. These content items include images, videos, jokes, websites and rumours. Shifman (2013) supports this definition by saying that Internet memes are "information that pass along from person to person, but gradually scale into a shared social phenomenon" (p.18). He adds that Internet memes are "(a) a group of digital items sharing common characteristics of content, form, and/or stance, which (b) were created with awareness of each other, and (c) were circulated, imitated, and/or transformed via the

Internet by many users" (p.41). All these characteristics of Internet memes lead them to compete with each other to gain attention from other people, which make them successful Internet memes (Taecharungroj & Nueangjamnong, 2015).

These definitions make clear that an Internet meme is a digital object that can have different types of appearances such as images, videos, GIFs and such alike, or also a combination of these items. The appearance of the Internet meme has, therefore, generally no limits. Internet memes can be distinguished from other digital items in terms of their transformation, circulation and imitation. That means that Internet memes have the characteristic that other people on the Internet use them to transform them into a different meaning, by deleting different elements and remixing it with others. Therefore, for example, they imitate the characteristics of existing Internet memes, as shown in the example in Figure 1. That example shows that existing elements of Internet memes are used to create a new Internet meme with another meaning or topic.

Figure 1. Juxtaposition of two Success kid memes. The figure shows two Internet memes that use the Success kid Internet meme as support for their statements.
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

However, the history of the term meme did not begin with the creation of the Internet but was already used in the study of cultural change. The scientist Richard Dawkins published his book "The selfish gene" in 1976, in which he coined the term meme (Shifman, 2013). In his book, Dawkins defines the term meme, analogous to genes. That indicates that Internet memes are a version of original memes and can be traced back to earlier concepts and are firmly rooted in societal trades, trends and communication. They can have a great impact and influence on the communication itself and its perception from others. Since then, the term meme has been a

subject of academic research, and when the Internet was invented, it was taken up again as Internet meme (Shifman, 2013).

2.2 Use of Internet memes

When taking a closer look at the literature and the Internet memes that can be found on the Internet, it becomes clear that there are Internet memes in nearly any context. They can be used as stand-alone items or as a supportive element, for example, within an online message (Rintel, 2013). The Internet, and especially Internet memes allow people to express their opinions, share their beliefs and discuss any topic that is on their mind while being critical, humorous, or straightforward (Bury, 2016).

Thus, in the following, the most discussed and studied contexts in which Internet memes are used are elaborated to understand how, when and why Internet memes can be used in a certain context, and how these Internet memes can also influence or support these contexts. In this section, it is generally focused on the most common topics of Internet memes that are investigated within the literature, which includes advertising, politics, and topics about discrimination such as racism and sexism.

Advertising

Since a few years, Internet memes have gained prominence within areas of advertising. On the one hand, it happens more often that companies use Internet memes as a marketing tool to commercialise their products (Bury, 2016). Bury (2016) explains that Internet memes are more common as marketing tools because they can generate the attention of the customers. Bulmer and Buchanan-Oliver (2006) support this statement by stating that especially visual rhetoric in advertising is an effective marketing strategy. Using visuals can evoke the emotions of the customers and effectively engages them with the product (Bulmer & Buchanan-Oliver, 2006). Companies try to use the recognisable characteristics of the Internet meme to achieve customer engagement. Especially humorous Internet memes are good advertising tools and help to effectively engage the customer with the brand (Bury, 2016). Thereby they focus on simple Internet memes with good messages that are understandable to everyone.

On the other hand, Internet memes can be used to map the perceptions and opinions of the customers. Bury (2016) states that "memes have become a type of dialogue between the company and the customers" (p. 34). Companies are trying to focus increasingly on consumers and take their opinions and perceptions into account when developing their products (Csordás, Horváth, Mitev & Markos-Kujbus, 2017). Accordingly, Csordás et al. (2017) explain that

Internet memes about a brand can be seen as a representation of how customers experience the product. Especially because they are created spontaneously and based on the moment, they serve as an authentic presentation of the consumers' opinion (Csordás et al., 2017). Therefore, companies can use Internet memes as a tool to understand the positioning of their products from the customers (Marsden, 2002 as cited by Csordás et al., 2017).

Internet memes in advertisement can be used by both the companies and their consumers. The companies can use them to engage consumers with their products while consumers can create memes to express their perception and opinion about the product. Both can bring advantages, and companies have the opportunity to improve their products according to the requirements of their consumers.

Politics

One of the contexts in which memes appear most often is in political discourse. Internet memes in the context of politics are used to communicate and discuss political events and opinions, especially by using them to support their statements (Kulkarni, 2017). They are not only used by the public, to share beliefs and comment on specific events but also by political actors to communicate their political messages and try to persuade the public to change their beliefs towards their ideas (Beskow et al., 2020). Kulkarni (2017) investigated the use of Internet memes within the media strategy of politicians. They spread and disseminate Internet memes with their opinion through the Internet. She explains that Internet memes in politics "are used for propaganda to reinforce ideologies, identities and stereotypes" (p.14). To accomplish this, they often use humour and satirical elements within the Internet meme (Kulkarni, 2017). Huntington (2019) explains that the use of humour in political memes can change the tone of the message, that might otherwise be too harsh. In other words, Internet memes can wrap a message convincingly and nicely (Peirson, Abel, & Tolunay, 2018 cited by Beskow et al., 2020).

However, Internet memes are also used by the public to comment on political events. Soh (2020) analyses in his study the use of Internet memes by the public in the political debate in Singapore. He explains that Singapore has tightened measures against political expressions by society, but the Singaporeans found a way to criticise the government through Internet memes. Thus, Internet memes in a political context can be seen as a protest or the publics' response to a political event or decision (Soh, 2020; Tay, 2015). Kulkarni (2017) further states that Internet memes increase the engagement of the public to discuss political issues. Through

the use of visuals, the messages of Internet memes can stay longer in the minds of people and can evoke emotions and engagement regarding the topic (Kulkarni, 2017).

All this shows that Internet memes in the political context can help to express and support the opinion of politicians themselves, but also that of the public.

Racism

Another highly discussed topic in the context of Internet memes is racism and discrimination. Nakamura (2008) points out that at the beginning of the Internet, many people thought about the Internet as space where gender, age or race would not matter. As communication and literature about the Internet shows, this perception is utopian (Nakamura, 2008).

Recently the expression of discriminatory statements in face-to-face conversations has decreased (Williams et al., 2016). However, the anonymity of the Internet gives people the freedom to express opinions that are not aligned with accepted social norms of society and tend to express their racist opinions online, rather than in a face-to-face conversation (Williams et al., 2016). Internet memes can replicate and reinforce stereotypes and racism (Moreno-Almeida, 2020). Especially the ability to create their content on their own and disseminate it to a wide range of people all over the Internet reinforced the number of racist Internet memes (Dickerson, 2016). Furthermore, Yoon (2016) explains that even if the creator of the Internet meme uses racism humorously and ironically, it still creates a place where other people can talk about racism, whether negative or positive. Thus, racial humour should generally not be discussed in terms of the speakers' intention but rather how it impacts society because even if the Internet meme is meant as a joke by its creator, it can still be offensive (Yoon, 2016). Thus, jokes and statement on such topics are considered as inappropriate in the real world, while they are accepted as jokes in the online environment. As a result, there is a critical debate between scholars that highlight to investigate the negative impacts of Internet memes that use racist humour and stereotypes and those who are confident that there is no need to treat ethical and racial humour seriously. They are the opinion that these kinds of jokes are accepted by racial minorities (Yoon, 2016). Thus, opinions about this issue are highly controversial.

The other side of racist Internet memes shows that these types of Internet memes can also help to understand racial issues by showing people that racism still exists and by giving them room to discuss such issues (Yoon, 2016). Especially the term colour-blindness plays a crucial role in the topic of racism because it says that race does not influence the experiences and treatment of individuals (Dickerson, 2016). Dickerson (2016) summarises that "within the context of the post-civil rights movement, the way to end racism is by not acknowledging race"

(p. 306). It is even said that racism is a fault of the minor groups perspective on it and not the fault of the social system because minorities often overreact and think something is racist when it is not meant to be. Therefore, Internet memes can be a good channel to discuss such topics to make aware of racism and colour-blindness (Yoon, 2016).

Thus, the overall context of racism and stereotyping within Internet memes has two different perspectives. On the one hand, people that create racist Internet memes support the violation of others, and it can have a negative consequence for them. That shows that it is relevant to discuss the topic of racist Internet memes and that one cannot just say that it has no negative consequences because it is just a joke. On the other hand, Internet memes can help to address the issue of racism that still exists but is ignored by many. People are made more aware of racism and stereotyping through the use and support of Internet memes within online communication and understand that this is still a serious issue in society.

Sexism

Sexism is and remains a present topic in society and the context of Internet memes. A wide range of people tries to stop the sexist thinking of others. However, there is still discrimination and prejudices based on sex and gender of a person. Especially the emergence of the Internet increases the dissemination of sexist messages, jokes and opinions, because of the ability to share content anonymously (Siddiqi, Bains, Mushtaq & Aleem, 2018). These messages are often expressed through Internet memes which frequently using stereotypes of women or men. The most common sexist Internet memes, on the one hand, make fun of stereotypes of a certain gender and on the other hand express sexual violence towards this gender (Drakett, Rickett, Day & Milnes, 2018).

Similar to the issue of racism, sexist messages and opinions are often expressed through humour. Again, spontaneous jokes without any real intention to harm someone can lead to negative consequences for others (Siddiqi et al., 2018). Siddiqi et al. (2018) explain that studies showed that someone who is consistently exposed to sexist humour often tends to make sexist remarks without feeling guilty. In the worst case, it can even lead in increasing the number of rape incidents, because sexist humour leads to the acceptance and beautification of sexism and results in more violence against the opposite sex. Sexist online threats are generally downplayed by humour, Internet memes, emoticons, and jokes (Drakett et al., 2018).

All these findings highlight the importance to take sexist jokes and Internet memes seriously. Even though these Internet memes are not created to harm anyone, they can reinforce

sexism and sexist online communication and promote their tolerance by making it look less harmful (Siddiqi et al., 2018).

2.3 Mechanisms and functionalities

To further understand the intention to use Internet memes to support a certain context, how they can be perceived by others and how they influence communication in an online environment, mechanisms to create Internet memes and deriving functionalities that Internet memes can have will be elaborate.

Table 1 shows the elaborated mechanisms and functionalities of Internet memes within a matrix. In this context, the mechanisms refer to elements such as humour, metaphor and aesthetic appeal that contributed to creating Internet memes with a specific intention. These mechanisms are most commonly used regarding existing literature. The functionalities in this section are how Internet memes can contribute to express a specific intention.

Table 1
Theoretical model: Matrix of mechanisms and functionalities of Internet memes

		Functionalities				
		Facilitating extreme standpoints	*Persuasion*	*Convey emotions*	*Expressing identity*	*Promoting virality*
Mechanisms	*Humour*					
	Metaphor					
	Aesthetic appeal					

2.3.1 Mechanisms

In this context, the mechanisms of Internet memes refer to specific instruments of an Internet meme, something that contributes to making it work and are used to create an Internet meme with a specific function or intention. For that, three mechanisms are elaborate, namely: humour, metaphor, and aesthetic. In the following, these mechanisms will be described and explained based on literature and examples.

Humour

One of the most commonly used mechanisms of Internet memes is humour, and even though not all Internet memes include humour or are intended to make a joke, humour is still one of

the key concepts of many Internet memes (Knobel & Lankshear, 2007). Humour can be found in almost every context because it is one of the most frequently used components of human culture. It plays a crucial role in the interactions and everyday life of humans, whether in a virtual or real environment (Pickering & Lockyer, 2005). Yoon (2016) explains that the general topic of humour is discussed in 'multi- and inter-disciplinary fields including but not limited to psychology, philosophy, sociology, literature and linguistics' (p.96), which indicates the wide area of the topic and its relevance. Moreover, Shifman (2014) adds that through the development of the Internet, humour also became an important aspect of online communication. He further explains that Internet humour is mostly based on visual formats that are shared from person to person (Shifman, 2007), such as Internet memes.

Nevertheless, humour can be used in different ways and styles with various intentions and motives. Firstly, Martin, Puhlik-Doris, Larsen, Gray and Weir (2003) argue, that humour can have four styles: self-enhancing (humorous perspective on life), affiliative (make jokes to amuse others), self-defeating (make fun of oneself to amuse others) and aggressive humour (makes fun regardless of others). Besides, Taecharungroj and Nueangjamnong (2015) state that also aspects such as sarcasm, surprise, silliness, and such alike can play a part in the intention of humour. Thus, the sender can make a joke and have a specific intention on it, but the receiver understands the joke differently, which can lead to negative consequences and communicational misunderstandings. Samson and Gross (2012) state further that the different studies about humour show that humour can have mixed results, outcomes, and consequences. They argue that there is negative and positive humour, which means, that for example, humour can have a great positive impact on coping with health issues such as depression. However, they also mention that the use of humour in a specific context and style can reinforce negative emotions of oneself or others (Samson & Gross, 2012).

To make clear how humour can be used in the context of Internet memes, the following figure, Figure 2, shows two Internet memes where humour was used to express a specific statement. The humour of these Internet memes is an interplay between the picture and the text.

Figure 2. Two Internet memes that use the mechanism of humour to express a specific statement.
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

All this shows that the use of humour can vary in its intention. That could lead to the issue that especially in the context of the digital environment and Internet memes, it is hard to distinguish if the Internet meme is meant as a joke or an actual opinion. Thus, if a discussion arises whether an Internet meme is morally acceptable or not, framing the Internet meme just as a joke could be a great issue.

Metaphor

The second mechanism of Internet memes can be defined as metaphor. Generally, Internet memes can be seen as visual rhetoric, especially in the form of strong metaphors used in the online environment (Anurudu & Obi, 2017). These metaphors can appear in the textual part of an Internet meme, but also in its visible part, which indicates the intertextual nature of Internet memes (Soh, 2020). Huntington (2016) explains that a visual itself can function as a metaphor. However, the interplay between visual and text makes the metaphor even stronger and shapes the argument of the Internet meme (Huntington, 2016). Such metaphors can construe a statement or opinion, which is easy to process and can remain longer in memory (Anurudu & Obi, 2017). Thus, Huntington (2016) states that people often use visual rhetoric, such as metaphors within their Internet memes to express and support their opinions. These help them to wrap their messages nicely, which can give them the freedom to express themselves on subjects that they would not express like this without Internet memes and metaphors. A metaphor can also help visualise an opinion or statement so that others are more likely to understand it. Eroukhmanoff (2019) explains this in terms of the extent to which visuals can appeal to the emotions of others and how they influence their way of interpreting something, in a way, language cannot.

To conclude, an Internet meme can be a strong metaphor that can help to support the statement of an online message, especially in the case of Internet memes that include text and visuals. Internet memes as a metaphor can perfectly wrap a message so that others are more likely to be persuaded and engaged with the general statement.

The following two Internet memes, as shown in Figure 3, show how the mechanism metaphor can be used within an Internet meme, to express a specific statement, an opinion, or an emotion.

Figure 3. Two Internet memes that use the mechanism of metaphor to express a specific statement, opinion or emotion.
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Aesthetic appeal

Another important mechanism of Internet memes is aesthetic. Soh (2020) states in his study that one reason why Internet memes are circulating through the Internet is their aesthetic qualities. An Internet meme that looks appealing to one and is perceived as professionally made is more liked by others than Internet memes that look less professional made (Soh, 2020). Thus, the aesthetic of an Internet meme also relies on its creativity. Bury (2016) explains that the creativity of an Internet meme includes the use of unknown and unexpected combinations of ideas and elements and the use of the creator's skills. He also states that an Internet meme has to stand out against others by being unique and creative.

However, familiar aspects also play a crucial role in the perceived aesthetic of an Internet meme. Generally, Internet memes are created to be directly understood by a wide range of people, which is achieved by using familiar elements such as well-known phrases or pictures

(Bury, 2016). Therefore, Internet memes are likely to discuss personal opinions while at the same time, these opinions can also be perceived as universal.

Thus, the aesthetic of an Internet meme refers to three different aspects. The Internet meme has to look appealing to others, use creative and new aspects as well as familiar elements, to be easily understood by a wide range of people. When all these aspects are met, an Internet meme is more likely to be appreciated by the public.

The following two Internet memes, shown in Figure 4, show how the mechanism aesthetic appeal can be used within an Internet meme. Here it is important that the aesthetic appeal of an Internet meme is different for everyone. However, a high-quality picture and a good and easy to understand statement can contribute to that.

Figure 4. Image of two internet memes that have gone viral o the Internet partly because of their aesthetic appeal.
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

2.3.2 Functionalities

The previously elaborated mechanisms participate in creating Internet memes with different functionalities. The functionalities reflect how Internet memes can contribute to express a specific intention. In the following, five functionalities are elaborated and explained, namely: facilitating extreme standpoints, persuasion, conveying emotions, expressing identity and promoting virality.

Persuasion

The first elaborated functionality of Internet memes is the functionality of persuasion. The creation and dissemination of an Internet meme often have its reason in persuading and convincing others of a specific opinion or belief. Samson (2012) says that Internet memes are

often used to comment and discuss a specific topic or public debate. He especially highlights the use of memes to express one's opinion and view critically, for example, in the context of political issues. The intention to express such opinion is not only to position oneself to that particular opinion but rather to try to persuade and convince others of it.

The statement that Internet memes can have a big impact on persuading someone of a certain opinion can be supported by the elaboration likelihood model (ELM) by Petty and Cacioppo from 1980. The ELM states that people are more likely to perceive and process a picture to gather information rather than a complex text because processing information is influenced by the motivation, ability and opportunity of the person to process it (Bulmer & Buchanan-Oliver, 2013). Thus, Internet memes are a good tool to create a persuasive message because they are easy to process. Visuals such as Internet memes are better at evoking emotions in people than using text alone. People feel more engaged with a message when it uses images because people can better understand it (Bulmer & Buchanan-Oliver, 2006).

Thus, it is assumed that Internet memes are a good tool to support a persuasive statement, and it helps to convince and engage people with it. Therefore, an online message that is including an Internet meme with persuasive elements is more likely to be perceived as persuasive from others. This assumption leads to the following hypotheses:

H1: Persuasively intended online messages which contain Internet memes are perceived as more persuasive than the same online messages without Internet memes.

Facilitating extreme standpoints

The second functionality of Internet memes is the functionality of facilitating extreme standpoints. Facilitating extreme standpoints refers to the way someone expresses an opinion. That refers to the lack of knowing the right tone of voice, how to weigh up the consequences and the lack of politeness of a message. In order to examine this functionality, the politeness theory is applied. The politeness theory was developed in the 1970s and 1980s from the researchers Brown and Levinson. It is based on the concept 'face' that was established by Goffman. The politeness theory "assumes that human communication is rational, purposeful, and goal-directed" (Mao, 1994, p. 453). It states that people have two faces, a negative and positive face. These faces refer to the way a person wants to be perceived by others and how he/she acts to achieve it if he/she feels the need of social context or his/her freedom of actions (Universalclass, 2020). During the interaction of two people, one of them may be caught in a face-threatening act by the other person. That means that the person who is threatened has

difficulties in deciding how he/she responds to the other person. That means that in general people weight up how they react and interact with others in terms of their intention, relationship to the other person and their social status.

However, in the context of the Internet, it is nearly impossible to do so. Internet memes are spread to a wide range of people, and the Internets' anonymous character makes people less aware of the consequences of their messages and leads them to talk, discuss and express nearly everything they want. Furthermore, people also tend to use the expression "in real life" (Locher, 2010, p. 1) when talking about communication outside of the online environment. It implicates that some people perceive the online environment as unreal, and they do not see the need to treat it as such.

All this assumes that in a real-life conversation, people weight up how and what they can communicate to others. It indicates that people in a real-life conversation are more likely not to express topics that could threaten others. That cannot be implemented in the online environment. There it is more difficult not to threaten other people with one's opinion, and most of the time, people do not think about the consequences their statements could have for others. It is assumed that using Internet memes can also trivialise a statement so that people do not treat an online message like a real statement and therefore think it is harmless and more acceptable.

Therefore, the following hypotheses are assumed:

H2: Online messages with extreme socially controversial content which contain Internet memes are perceived as more acceptable from others than the same online messages without Internet memes.

H3: Online messages with extreme socially controversial content which contain Internet memes are perceived as less serious from others than the same online messages without Internet memes.

Conveying emotions

Another important functionality of Internet memes is conveying emotions. Akram et al. (2020) state in their research that people that try to express their feelings in an online environment tend to use Internet memes to support their statement. Especially in the case of depression, people are likely to share their feelings by posting Internet memes on their social media. These Internet memes are also known as depressive memes (Akram et al., 2020). On the one hand, people try to cope with their feelings by posting them online because "engaging with media […] is known

to regulate general mood state" (Akram et al., 2020, p. 2). By using Internet memes or other visuals, the message behind the posting gets easier to understand by others and generates that others can emphasise with its meaning. Eroukhmanoff (2019) adds that "visuals appeal to our emotions and affect our bodies more directly than words, partly because what affects us viscerally are things that cannot be represented so easily with language" (p. 171). Therefore, using Internet memes can help the person to better express feelings, because visualisations help to support messages and are more effective than using text only.

Based on that, it is assumed that Internet memes can have a positive effect on social media messages about emotions by supporting them and making them more understandable and accessible to others. Social media messages about emotions that are supported with an Internet meme are therefore more likely to transfer and reinforce a specific emotion than the same message without the support of an Internet meme.

This assumption leads to the following hypotheses:

H4: Emotionally intended online messages that contain Internet memes express the senders' emotions more effectively than the same online messages without Internet memes.

H5: Emotionally intended online messages that contain Internet memes are perceived as more likeable than the same online message without Internet meme.

Expressing identity

Internet memes can also have the functionality of contributing to identity expression. The functionality of identity expression can be referred to as the possibility and intention to express oneself through Internet memes by expressing one's personal identities, but also by creating and joining a collective identity through them. Previous research showed that especially Internet memes contribute to self-expression, and collective identity with others on the Internet, which can shape social identities and connection within society. Thus, Knobel and Lankshear (2007) say that Internet memes can shape mindsets, form behaviours and actions in a social group, which means that they can participate in identity building, social commentary, and public discourse (Huntington, 2016). People tend to easily express their opinion and believes through Internet memes to find other people with shared identities (Gal, Shifman & Kampf, 2016). The study from Gal et al. (2016) addressed the LGBTQ movement and individuals that find acceptance and understanding on the Internet. Through Internet memes, minor groups have the opportunity to express their opinions and to find like-minded people, with whom they can share

their beliefs. Due to the opportunity of the Internet to find people with similar beliefs, norms and opinions, people become more open in what they are expressing on social media and other online platforms (Guenther et al., 2020). To do so, people tend to use Internet memes because they are "consumable in a short period of time" (Tay, 2014, p. 49) and can transmit a message more easily and understandable, which is especially good in an online environment with a lot of information diffusion and distractions (Tay, 2014). Internet memes can generate the participation of several people because they can "be read as a shared common language" (Moreno-Almeida, 2020, p. 1-2).

The Internet and especially Internet memes help people to find like-minded others with whom they can share their beliefs and where they can find acceptance. Internet memes support the identity building and collective identity because, through an Internet meme, one can express and support a certain opinion in an understandable way and in a way that can be spread all over the Internet. They help people to reach others with similar beliefs and opinions.

Promoting virality

The Internet is the perfect place to spread different types of digital content to a large number of people. As a result, certain content is shared, liked and retweeted by others, which can make it go viral (Beskow, 2020). A general definition of the Oxford dictionary states that virality is "the tendency of an image, video, or piece of information to be circulated rapidly and widely from one Internet user to another" (Lexico, 2020). That means that a large number of people on the Internet dismiss that specific digital content. It is then spread through mainly all parts of the Internet in a short time. However, Beskow (2020) states, that the virality of an Internet meme is slightly different from other digital content. As mentioned before, digital content goes viral if a large number of people share, like or retweet the content. Although this can also be applied in the case of Internet memes, Internet memes can also go viral in a different way referred to their characteristic of transformation, imitation and mutation. The virality of an Internet meme can also be achieved when only parts of an Internet meme are spread through the Internet (Beskow, 2020). That means, an Internet meme that is used to create new Internet memes that are widely spread through the Internet can also be perceived as a viral Internet meme, even though only parts of the original Internet meme are used.

Furthermore, the virality of an Internet meme is also based on the characteristic of the Internet meme to be able to display information, opinion and value that is easy to process as well as that it supports or reinforces existing beliefs and attitudes (Huntington, 2019). That means the virality of an Internet meme is also supported by the general appearance of Internet

memes. Huntington (2019) states that people are more likely to share and spread an Internet meme that includes information that supports or reinforces their existing beliefs and opinions. Therefore, when an Internet meme displays a topic that a majority of people can refer to, it is more likely that this Internet meme goes viral. Thus, people often create Internet memes that display topics that are highly discussed within the Internet and that are important for a large number of people.

2.3.3 Hypotheses

Table 2 summarises the hypotheses derived from the theoretical framework of this research. These hypotheses contain the general expectations that were formed through previous literature, about the influence and perception of Internet memes in social media messages.

Table 2

Derived hypotheses of the theoretical framework

Hypotheses
H1: Persuasively intended online messages which contain Internet memes are perceived as more persuasive than the same online messages without Internet memes.
H2: Online messages with extreme socially controversial content which contain Internet memes are perceived as more acceptable from others than the same online messages without Internet memes.
H3: Online messages with extreme socially controversial content which contain Internet memes are perceived as less serious from others than the same online messages without Internet memes.
H4: Emotionally intended online messages that contain Internet memes express the senders' emotions more effectively than the same online messages without Internet memes.
H5: Emotionally intended online messages that contain Internet memes are perceived as more likeable than the same online message without Internet meme.

3. Method

3.1 Research Design

To answer the research question of this study, an experimental research method with Internet memes was established and conducted through the instrument of an online survey. The experimental design of this study was chosen to gain insights into the perceptions and interpretations of the participants towards online messages that include Internet memes and online messages without Internet memes. The focus lies on investigating the Internet meme functionalities conveying emotions, persuasion and facilitating extreme standpoints, as described in the previous section. The instrument of an online survey has been selected since a great amount of data can be collected in a short period. The data can describe and generalise the opinions of the overall population. It can measure the dependent variables of the study, which is necessary to answer the research question and hypotheses of this study (Gelo, Braakmann & Benetka, 2008).

To develop the material of this research, the six Facebook postings, the social media platform Facebook was used to find similar postings to understand the general structure of them. The six postings are equally distributed to measure the three functionalities conveying emotions, persuasion and facilitating extreme standpoints. Therefore, each functionality is measured by two postings.

For each Facebook posting, a suitable Internet meme was selected, that supports the specific message of the postings. To find a related Internet meme for all postings, Google, multiple social media websites as well as the meme page reddit.com were used to collect possible Internet memes for each posting. The whole study only focuses on Internet memes that have the form of an image with text.

Materials that measure the functionality of conveying emotions (posting 1 and 4)

Posting 1

Facebook posting 1 was developed to reflect a negative emotion and deals with the general topic about the current development of the year 2020 and the related emotions, as seen in Figure 7. Therefore, the message "*I just realised today that I have been at home in social distancing for over a month now. This is by far the worst year of my life. Earlier this year I thought about all the things I want to experience and achieve, but now all I can think about is how to postpone all my plans*." was developed. The selected Internet meme of posting 1 shows a picture of a movie scene from the movie "Sex and the City". In the picture, a man gets beaten by his wife with her bouquet. The man on the picture is labelled with the word 'me'. The woman is labelled with the number '2020' (see Figure 5).

Figure 5. Facebook posting 1, measuring the functionality of conveying emotions (negative emotion).

Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Posting 4

The second posting for the functionality conveying emotions is posting 4. It was developed to reflect a positive emotion and deals with the general topic of educational success and achievements (see Figure 6). Thus, the following message was developed: "*Today I received all my grades of the last semester and I passed all my classes in the first attempt. This is one of the best feelings I've ever had. I have put a lot of effort, time and energy into it and it finally pays off.*". The related Internet meme shows a squirrel stretching its arms in the air, such as it is cheering. At the top of the image, the sentence "*When you got good grades*", is written in a big and bold white font (see Figure 6).
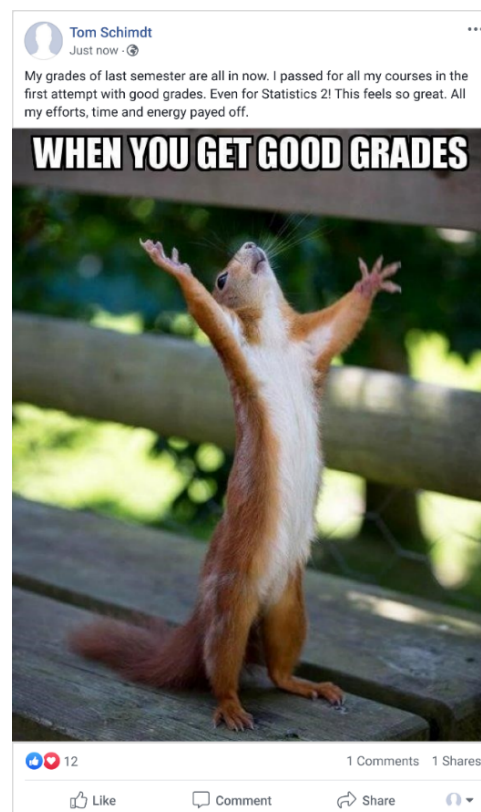
Figure 6. Facebook posting 4, measuring the functionality of conveying emotions (positive emotion).
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Materials that measure the functionality of persuasion (posting 2 and 5)

Posting 2

Facebook posting 2 was developed to reflect an opinion that can be used to create a message that may persuade others. Therefore, the topic of climate change was chosen, as seen in Figure 7. Accordingly, the following message was created: "*I feel very sorry for all the victims of the Australian bushfires and for the damage that it caused the environment. Climate change should be an important topic nowadays and I cannot understand that there are still people who firmly believe that climate change does not exist or that it will not influence our future way of living, even after hearing about such tragic events.*". The corresponding Internet meme shows a polar bear standing on a very small iceberg that can barely hold him. The image is framed with the sentences: "*No such thing as climate change? Oh good.*" (see Figure 8).
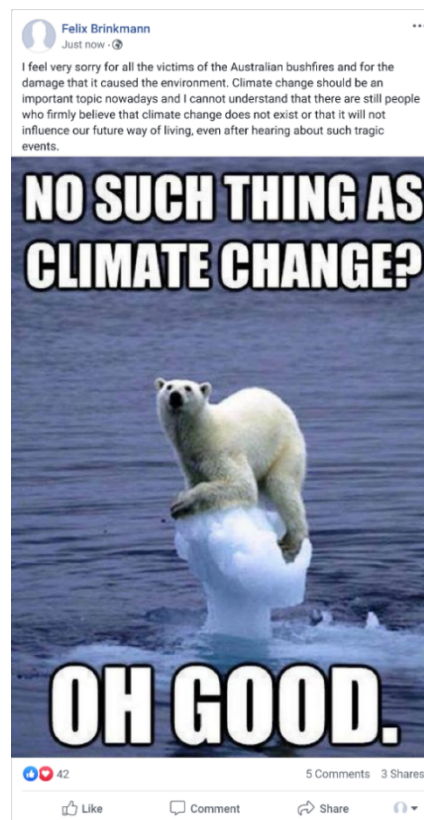
Figure 7. Facebook posting 2, measuring the functionality of persuasion.

Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Posting 5

For the second persuasive posting, posting 5, the general topic about the debate of the legitimisation of cannabis was used. Therefore, the posting focusses on the debate that alcohol is legalised while cannabis is not. The following message was created: "*Yesterday I saw a great documentary about cannabis which is called 'The legend about 420'. The documentary had an objective view on cannabis consumption, its effects, and benefits. The film made me think about how hypocritical the debate on the legalisation of cannabis is. Why is the majority of governments against the legalisation of cannabis but are totally fine with alcohol abuse?*". The related Internet meme is showing six images, with Kermit, the frog from the muppet show. It shows a comparison between situations that could happen when drinking alcohol in comparison to consuming cannabis. Thus, the image shows on its left side the situations where alcohol is consumed and on the right side the situations where cannabis is consumed. The image includes textual elements such as the top sentence "*Alcohol vs Weed*", as well as the words "*Alcohol*" and "*Weed*" to indicate on which side the situations of which drugs are shown. Additionally, at the bottom sides of the image, the words "*legal*" and "*illegal*" are included. All text elements are displayed in a bold and white font (see Figure 8).

Figure 8. Facebook posting 5, measuring the functionality of persuasion.
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Materials that measure the functionality of facilitating extreme standpoints

Posting 3

To measure and develop the postings for the functionality facilitating extreme standpoints, socially controversial and critical opinions were used to create the Facebook postings. Thus, for the first posting, posting 3, the overall debate of the refugees' crisis was incorporated. In order to do so, the following message was developed: "*Everyone talks about the duty of a country to receive refugees and to guarantee them protection, but it is a fact that a large part of these refugees only exploit the countries, steal from them, mistreat their citizens and generally only do what they want without thinking of others.*". The Internet meme for the posting consists of two images that have been merged into one. The image on the top shows US soldiers. It includes the sentence: "*Go to war zone. Leave women and children in safe country.*". The image at the bottom shows a group of male refugees and includes the sentence: "*Go to safe country. Leave women and children in war zone.*". All textual elements are written in a bold and white font (see Figure 9).

Figure 9. Facebook posting 3, measuring the functionality of facilitating extreme standpoints.

Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Posting 6

Facebook posting 6 discusses the topic of the death penalty. The message of that posting is: "*In my opinion, the death penalty should be reintroduced to intimidate criminals, prevent their deeds or punish them fairly for their actions. People who hurt, abuse, torture or even kill other people have no right to live anymore."*. The selected Internet meme for this posting shows a background with a spiral of blue and grey. At the foreground, a dog face with glasses is depicted. The dog face is framed with a sentence that says: "*I'm just saying what everyone's thinking*". All textual elements are written in a bold and white font (see Figure 10).

Figure 10. Facebook posting 6, measuring the functionality of facilitating extreme standpoints.
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

To fit the general context, the online platform figma.com was used to create the Facebook postings. Creating such postings should help the participants better to imagine the context of social media messages on Facebook. In order to avoid biases, each message was posted by different people equally divided in gender, so that each functionality has one message of a male and one of a female user. To further avoid biases, none of the users has a profile picture, and each posting has a balanced number of likes, shares, and comments, which are neither extremely low nor extremely high.

3.2 Manipulation

All Facebook postings of this study were prepared with two conditions. Thus, each posting was developed as text only posting (see Appendix B, Figure B.1 to B.6) and as text including an Internet meme, as seen in the previous section. To compare the postings of both conditions, the questionnaire was also established with two conditions. Both conditions include all six Facebook postings. However, each condition received different postings with Internet meme and text only, depending on the condition of the questionnaire. The participants were randomly assigned to one of the two conditions at the beginning of the survey.

Table 3 shows the distribution of the postings and their condition within the two survey conditions.

Table 3
Explanation of the distribution of the Facebook postings within the two conditions

	Posting 1 (emotion)	Posting 2 (persuasion)	Posting 3 (facilitating extreme standpoint)	Posting 4 (emotion)	Posting 5 (persuasion)	Posting 6 (facilitating extreme standpoint)
Condition 1	Meme	Meme	Meme	Text	Text	Text
Condition 2	Text	Text	Text	Meme	Meme	Meme

Note. The table only shows which survey condition was presented with which condition of the posting and not the sequence in which the postings were displayed during the survey. The survey for each condition starts with the postings that include text only.

3.3 Instrument

A list of the complete survey items and questions of this study can be found in Appendix C, Table C.1. Here it is important to mention that the research was approved by the ethics committee of the University of Twente (see Appendix D, Figure D.1).

At the beginning of the survey, some general demographics of the participants are queried. Thus, questions about gender, age, nationality, and educational level were asked. Since the study focusses on the online communication on social media platforms questions such as "*What kind of social media do you use?*" and "*How many minutes per day do you spend on social media?*" were created, to get insights into the social media usage of the participants.

To guarantee the validity of the items and constructs that are used within this study, for all items of each Facebook posting, a factor analysis was conducted, and valid items were combined into constructs. These analyses can be found in Appendix E, Table E.1 to E.12. However, since the design of the study supposes that two Facebook postings each measure the same functionality, the constructs resulting from the factor analysis were adjusted to be the

same for both related postings. The descriptions and allocation of these constructs can be found in Table 4. Subsequently, all constructs have been tested for their reliability.

Table 4

Description and allocation of constructs used in the study (sorted by posting pairs and memes)

Posting / Meme	Construct	Construct description
Posting 1 and 4	Likability	Likability refers to the participants' perception of generally liking the Facebook posting.
	Emotion	Emotion refers to the extent to which the participant believes the posting can express the emotions of its creator.
Posting 2 and 5	Persuasion	Persuasion refers to the participants' perception of the overall persuasive power of the posting and if it is acceptable and likeable in their opinion.
	Humour	Humour refers to the extent to which the participant believes that the posting is meant as a joke or whether it should be taken seriously.
Posting 3 and 6	Acceptance	Acceptance refers to the participants' perception of the overall acceptance and likability of the postings.
	Humour	Humour refers to the extent to which the participant believes that the posting is meant as a joke or whether it should be taken seriously.
	Facilitating extreme standpoints	Facilitating extreme standpoints refers to what extent the participants perceive the statement of the posting as harsh.
Meme A, B, C, D, E and F	Appreciation	Appreciation refers to the participants' perception of the general likability and suitability of the Internet meme.

Likability

The construct likability includes items such as "*I like this posting*", "*I would give this posting a like*", "*This posting appeals to me*" and "*I would share this posting on my Facebook page*". The scale was found reliable for both postings, with a Cronbach's alpha of .86 for posting 1 and a Cronbach's alpha of .81 for posting 4 (see Appendix F, Table F.1 and F.2).

Emotion

The construct emotion includes items such as "*This posting clearly expresses the emotions of the person*" and "*The person expresses her feelings through the posting*". This scale was found reliable for both postings, with a Cronbach's alpha of .73 for posting 1 and a Cronbach's alpha of .74 for posting 4 (see Appendix F, Table F.3 and F.4).

Persuasion

The construct of persuasion includes items such as "*I would give this posting a like*", "*I think the message is acceptable as a Facebook posting*" and "*There is nothing to criticise in the message*", as well as "*The opinion expressed in the posting convinces me*", "*I have the same*

opinion as this person" and "*The opinion of this person makes sense to me*". This scale was found reliable for both postings with, a Cronbach's alpha of .80 for posting 2 and a Cronbach's alpha of .81 for posting 5 (see Appendix F, Table F.5 and F.6).

Humour

The construct humour includes the items "*This posting is meant as a joke*" and "*This posting is funny*". This scale was also perceived as reliable for all related postings. Therefore, the Cronbach's alpha for posting 2 is .76, and for posting 5 it is .74 (see Appendix F, F.7 and F.8). Additionally, also for posting 3 and 6 the scale was reliable, with a Cronbach's alpha of .79 for posting 3 and a Cronbach's alpha of .74 for posting 6 (see Appendix F, Table F.9 and F.10).

Acceptance

Acceptance includes items such as "I think the message is acceptable as a Facebook posting", "*The message is acceptable in a face-to-face conversation*", "*The message represents a statement that is acceptable to me*" and "*I like this posting*". The scale was found reliable for both postings, with a Cronbach's alpha of .80 for posting 3 and a Cronbach's alpha of .81 for posting 6 (see Appendix F, Table F.11 and F.12).

Facilitating extreme standpoints

Facilitating extreme standpoints includes items such as *"This posting contains a harsh message"*, *"This posting may insult other people"* and *"This posting may offend other people"*. For both postings, the scale was found reliable with a Cronbach's alpha of .77 for posting 3 and a Cronbach's alpha of .76 for posting 6 (see Appendix F, Table F.13 and F.14).

Appreciation

To investigate whether the Internet memes that were used for the postings are appreciated and perceived as overall suitable for the study by the participants, the participants had to rate three Internet memes at the end of the survey. The presented Internet memes depended on the condition in which the participant had performed the survey. Therefore, the participants were presented with the Internet memes that were not included in the postings of their survey condition. These Internet memes were presented as stand-alone items without the text of the postings. The construct appreciation includes the items "*The meme appeals to me*", "*I understand the intention of the meme*" and "*The meme is catchy*". For all six Internet memes the scale was found reliable with a Cronbach's alpha of .64 for meme A, .68 for meme B, .67

for meme C, .72 for meme D, .77 for meme E and .84 for meme F (see Appendix F, Table F.15 to F.20)

3.4 Procedure

Since the study is based on an experimental design in the form of an online survey with two conditions, participants were randomly assigned to one of the two conditions. After that, the participants got informed about the general purpose and topic of the study, how long it would approximately take, how the data will be used and that everything will be treated confidentially and anonymous. They were presented with the information that they can withdraw from the study at any time. Furthermore, the contact details of the researcher were presented for further questions about the study. At the end of this part of the survey, the participants had to give their consent on taking part in the study.

After this general information, the participants were presented with questions about their demographics, such as gender, age, nationality, and highest educational level. Moreover, they were asked about the social media platforms they are using and how many minutes they spend on social media per day.

In the next part of the survey, the participants got further information about the procedure of the research and the online survey. Therefore, they were informed that they would be presented with different Facebook postings. They should imagen that these postings are created and posted by one of their Facebook contacts. The creator of these postings are online contacts only, and the participant has never met them face-to-face.

After that, all participants were presented with six Facebook postings in total, no matter in which condition they performed the survey. The first three Facebook postings were text-only, and the last three, including text and an Internet meme. The participants were presented with the text-only postings at the beginning of this part of the survey because they should not directly know the general topic of the research. If the information about including Internet memes were given at the beginning of the survey, some participants could have been influenced in their answer by that information. All Facebook postings were presented on their own. For each Facebook posting the participants were asked to rate different statements to what extent they agree or disagree with the statement, according to the presented Facebook posting. The statements include topics such as the likability of the posting, the likability of the person who created the posting and the seriousness and acceptance of it. Furthermore, depending on which functionality the posting contains, they were asked to rate statements about emotions within the posting, how persuasive and bluntly it is, in their opinion.

The last part of the survey was an overall assessment of the used Internet memes. Therefore, the participants were presented with three more Internet memes, according to their condition. The participants were only presented with the Internet memes that they have not seen in their study before. Thus, the participants had to rate statements about their appearance and intention. After rating these three Internet memes, the end of the questionnaire was presented, and the participants were thanked once again.

3.5 Sample and participants

For the sample of this research, the participants had to meet some requirements to take part in the online survey. First, the participants had to be at least 18 years old and had to use social media or at least know what social media is. Another requirement was that all participants had to be able to speak English and understand it since the survey was conducted in English.

The survey was sent to friends, family, and fellow students, who did not know the general purpose of the study. These people further sent the questionnaire to other people that met the requirements. To further recruit participants, the survey was published on the scientific research platform SONA. Due to the study's relation to social media, different social media platforms such as Facebook, Instagram, LinkedIn, and WhatsApp were used for marketing the survey. All participants were collected within a timeframe of one week.

The final sample consists of 127 participants. Since there were two conditions of the survey, the participants were randomly assigned to condition 1 or condition 2. In the end, 47% performed the survey in condition 1 (N=59), and 53% performed it in condition 2 (N=68), so it was almost evenly distributed.

The following table, Table 5, shows an overview of the distribution of the demographics of the participants in condition 1, condition 2 and in total.

Table 5

Participants demographics distribution (in percentage) within conditions and total

	Condition 1	Condition 2	Total
Age			
Range	18-29	18-30	18-30
Average	22.85	22.96	22.91
Gender			
Male	34% (N=20)	35% (N=24)	35% (N=44)
Female	63% (N=37)	62% (N=42)	62% (N=79)
Diverse	2% (N=1)	0% (N=0)	1% (N=1)
I'd rather not say	2% (N=1)	3% (N=2)	2% (N=3)
Nationality			
German	86% (N=51)	91% (N=62)	89% (N=113)
Dutch	3% (N=2)	4% (N=3)	4% (N=5)
Other	10% (N=6)	4% (N=3)	7% (N=9)
Highest educational level			
Highschool diploma or equivalent	53% (N=31)	62% (N=42)	58% (N=73)
Bachelor's degree	37% (N=22)	28% (N=19)	32% (N=41)
Master's degree	7% (N=4)	7% (N=5)	7% (N=9)
Other	3% (N=2)	3% (N=2)	3% (N=4)
Used social media platforms			
Facebook	71% (N=42)	77% (N=52)	74% (N=94)
Instagram	97% (N=57)	88% (N=60)	92% (N=117)
Snapchat	56% (N=33)	63% (N=43)	60% (N=76)
TikTok	12% (N=7)	19% (N=13)	16% (N=20)
LinkedIn	24% (N=14)	19% (N=13)	21% (N=27)
Others	36% (N=21)	19% (N=13)	27% (N=34)
Social media use (minutes per day)			
Range	3-300	5-300	3-300
Average	113.16	106.38	109.5

Note. N = total number of cases.

Since the experimental research consists of two conditions, it was tested whether the two participants' groups, condition 1 and condition 2, are significantly different in their demographics or if they can be treated equally. For the variables age as well as for the social media use per day an independent-samples t-test with the grouping variable 'Condition' were conducted in SPSS. There was no statistically significant difference between the two groups in terms of age and social media use, so one can say that the participants of the two conditions can be treated equally in this case (see Appendix G, Table G.1 and G.2). For the demographics of gender, nationality, highest educational level and used social media platforms, a crosstab with Fisher's Exact Test were conducted (see Appendix G, Table G.3 and G.11). Except for one subcategory of used social media platforms, all these tests show that the demographics of the

participants within the two conditions are not statistically significantly different. For used social media platforms, the participant should indicate all social media platforms they are currently using. Therefore, subcategories such as "Facebook", "Instagram", "Snapchat", "TikTok"," LinkedIn" and "Other" were included in this question. The subcategory 'Other' is the only item that is slightly significantly different within the two conditions. However, since this item is not very meaningful for the research, the groups can be treated as equally distributed groups and can, therefore, be perfectly compared with each other.

3.6 Analysis

The first part of the analysis refers to the general perception of the participants towards the Internet memes used in this study. As already mentioned in the instrument and procedure sections of this research, at the end of the survey, the participants were asked to rate three Internet memes, according to their appearance and intention to see if the Internet memes are suitable for the study and its purpose. Therefore, the descriptives of the construct *appreciation* for each of the six Internet memes will be analysed by comparing the means.

Furthermore, to test the five hypotheses that were elaborated in the theoretical framework of this research, three Two-Way Mixed analyses of variance (Two-Way Mixed ANOVA) were conducted using the statistics software SPSS. This type of analyses was selected since it can compare the means of the responses of the participants within different conditions and investigates whether there is a statistically significant difference between these responses regarding the two conditions. Furthermore, it helps to understand if there is an interaction effect between the between-subjects variable and within-subjects variables, so if the effect of the one variable is dependent on the values of the other variable (Leard statistics, 2018).

For all three analyses, the within-subjects factor was called *posting*, because all analyses included two postings with the same measures. Furthermore, the within-subjects factor *posting* was measured by the constructs, as explained in the previous section. The between-subjects factor in this study was *condition*.

Thus, the analyses of this study particularly investigate whether the perceptions of the two groups differ between the two conditions, so if the Facebook postings that include an Internet meme are perceived differently than the same posting without an Internet meme.

4. Results

4.1 General perception of Internet memes

All Internet memes of the study were presented as stand-alone items without text at the end of the survey. Table 6 shows the values of the construct appreciation in means and standard deviation for each of the six postings. The means of all posting show the extent to which the participants agreed with the questionnaire items towards the different Internet memes, so if the participants perceive the Internet memes as generally likeable and suitable for the study. The statements were answered with a 5-point Likert scale from 1, strongly disagree to 5, strongly agree. Table 6 shows that all Internet memes have a mean above 3 and except for meme C and F, the mean scores are above a mean of 4. These results indicate that the participants generally perceived the Internet memes as likeable and suitable for the study and that they agreed with the statements that were asked. That indicates that the Internet memes of the study were favourably selected and appreciated by the participants.

Table 6

Appreciation score of Internet memes without the text message (in means and standard deviation)

Meme	Mean	Standard deviation
Meme A (posting 1)	4.19	.69
Meme B (psoting 2)	4.20	.76
Meme C (posting 3)	3.03	.90
Meme D (posting 4)	4.14	.72
Meme E (posting 5)	4.02	.88
Meme F (posting 6)	3.15	1.05

Note. Items were measured on a 5-point Likert scale from 1, strongly disagree to 5, strongly agree.

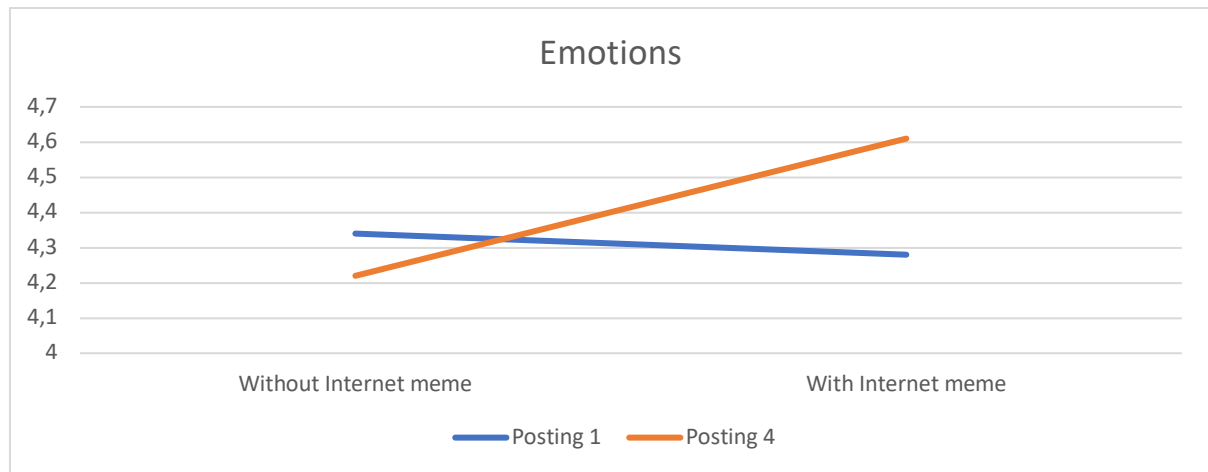### 4.2 The perception of likability and conveying emotions in posting 1 and 4

The subsequent analysis is intended to investigate how the participants perceived the Facebook postings referring to the functionality of conveying emotions. The first step of these analyses is to examine whether the independent variable has an effect on the combined dependent variables, so if there are differences between the conditions on the two postings. In this case, there is a significant effect of the independent variable *condition* on the two different postings that measure the functionality of emotions, Wilks' Lambda = .73, $F(2.00, 124.00) = 23.10$, $p <$ .05, $n^2 = .27$ (see Appendix H). That indicates that the results for the two postings are dependent on the condition the participants received the postings during the survey. The condition, therefore, influences how people perceive the likability and the transmission of emotions of the posting 1 and 4.

For a better understanding of the following results, the related postings are displayed again in Figure 11.
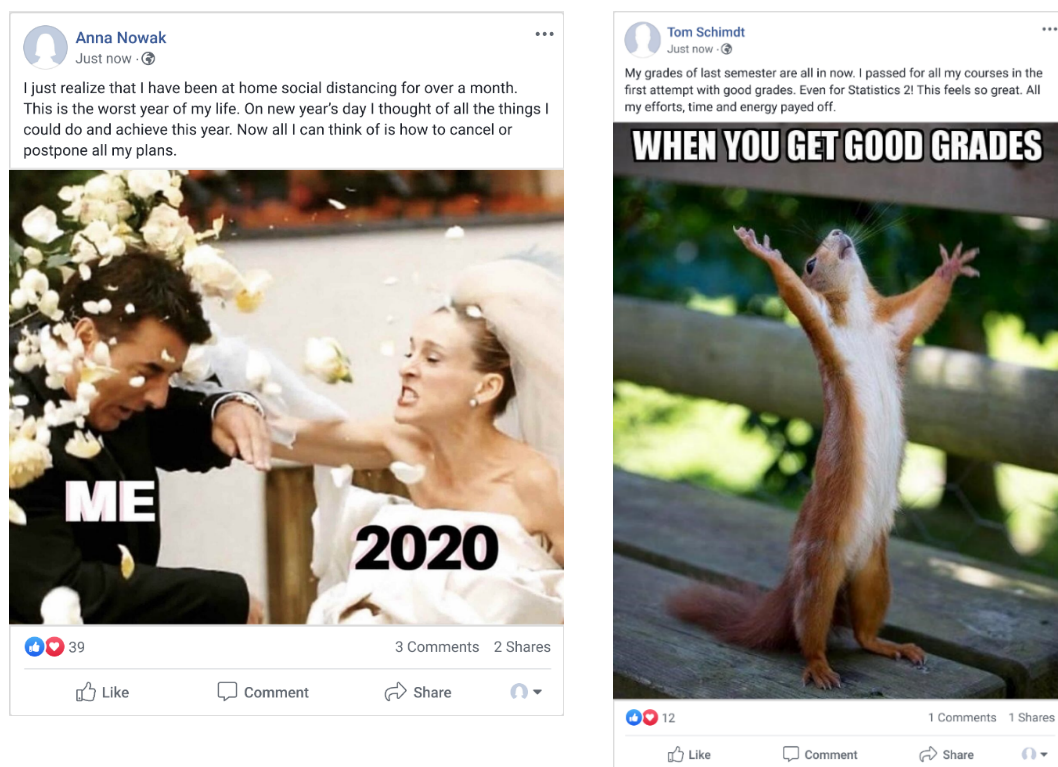
Figure 11. Facebook posting 1 and 4, measuring the functionality of conveying emotions.

Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

The next step of the Two-Way Mixed ANOVA shows that there is also a statistically significant interaction between the condition and posting on likability, $F(1.00, 125.00) = 42,77$, $p < .05$, $n^2 = .26$ and a statistically significant interaction between the condition and posting on emotions, $F(1.00, 125.00) = 8,07$, $p < .05$, $n^2 = .06$, which indicates that there is a difference between the perceptions about the postings within the two conditions, for both, likability and emotion expression. Thus, the posting that includes an Internet meme is differently perceived by the participants than the same posting with text only. This analysis can be found in Appendix H.

Table 7

Measured means and standard deviations of likability and emotions for posting 1 and 4 within the two conditions

	Posting	Condition	Means	Standard deviation
Likability	Posting 1	Condition 1 (with Internet meme)	2.85	1.04
		Condition 2 (without Internet meme)	2.13	.83
	Posting 4	Condition 1 (without Internet meme)	2.49	.79
		Condition 2 (with Internet meme)	3.06	.89
Emotions	Posting 1	Condition 1 (with Internet meme)	4.28	.66
		Condition 2 (without Internet meme)	4.34	.46
	Posting 4	Condition 1 (without Internet meme)	4.22	.65
		Condition 2 (with Internet meme)	4.61	.49

Note. Items were measured on a 5-point Likert scale from 1, strongly disagree to 5, strongly agree.

Besides, Table 7 shows the means and standard deviations of the measurements within the different postings and conditions. The table shows an increase in the means of likability for posting 1 in condition 1 to condition 2, which indicates that posting 1 is perceived as more liked by the participants when including an Internet meme. Moreover, there was also an increase in the means of likability for posting 4 in condition 2 to condition 1, which indicates that also posting 4 is more liked by the participants when including an Internet meme. Therefore, both postings were perceived as more likeable by the participants when including an Internet meme. Subsequently, H5 can be supported, since there is a statistically significant interaction between the condition and posting on likability and also the means for the posting that include an Internet meme are higher than the means for the same posting without an Internet meme. Therefore, Facebook postings that include Internet memes are perceived as more likeable than the same posting with text only. These increases in means can be seen in Figure 12.
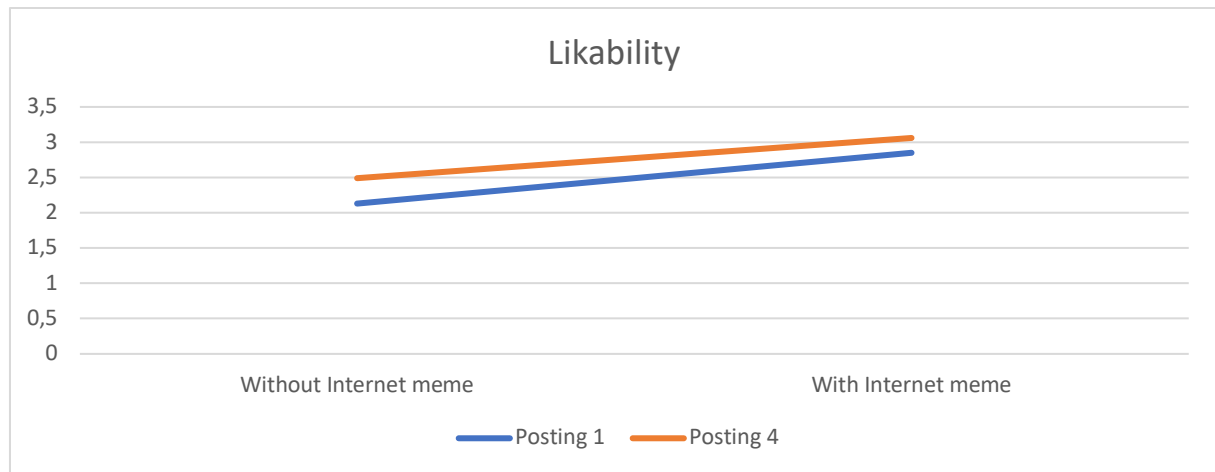
Figure 12. Line chart as a comparison for the means of likability for the postings 1 and 4, and the two conditions, whether an Internet meme is included or not.

Note. The scale is measured with a 5-point Likert Scale from 1, strongly disagree to 5, strongly agree.

For the means of emotions for posting 1, there is a small increase in condition 2 to condition 1, which indicates that posting 1 is perceived as better conveying emotions when the message includes text only rather than an Internet meme. However, there is a greater increase in the means of emotions for posting 4 in condition 2 to condition 1, which indicates the opposite, so that posting 4 is perceived as better conveying emotions when including an Internet meme. Thus, posting 1 is perceived as better conveying emotions without including an Internet meme, while posting 4 is perceived as better conveying emotions when an Internet meme is included. H4 cannot fully be supported since posting 1 is perceived as better conveying emotions when there is text only. There is still a statistically significant interaction between the condition and postings on conveying emotions, as well as a great increase in the means of emotions in posting 2 when the posting was including an Internet meme. However, it cannot be suggested that postings that include Internet memes are better in conveying emotions. Figure 13 highlights these findings.

Figure 13. Line chart as a comparison for the means of emotions for the postings 1 and 2, and the two conditions, whether an Internet meme is included or not.

Note. The scale is measured with a 5-point Likert Scale from 1, strongly disagree to 5, strongly agree.

4.3 The perception of persuasion and humour in posting 2 and 5

This analysis is intended to investigate how the participants perceive the Facebook postings referring to the functionality of persuasion. The results of the second Two-Way Mixed ANOVA show that there is a significant effect of the independent variable *condition* on the two different postings that measure the functionality of persuasion, Wilks' Lambda = .52, $F(2.00, 124.00)$ = 57.78, $p < .05$ (see Appendix I). That indicates that the results for the two postings are dependent on the condition the participants received the postings in. The condition, therefore, influences how people perceive the two postings in terms of persuasion and humour.

For a better understanding of the following results, the related postings are displayed again in Figure 14.

Figure 14. Facebook posting 2 and 5, measuring the functionality of persuasion.
Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Furthermore, there is no statistically significant interaction between condition and posting on persuasion, $F(1.00, 125.00) = .13$, $p > .05$, but a statistically significant interaction between condition and posting on humour, $F(1.00, 125.00) = 116.34$, $p < .05$, $n^2 = .48$. That indicates that only for the variable humour there is a difference between the perceptions about the postings within the two conditions and that therefore the postings with Internet memes are differently perceived as the same postings with text only. For the variable persuasion, there is no difference in the perception of the postings within the two conditions, which means that the postings with Internet memes were similarly perceived as persuasive such as the same posting with text only. The analysis can be found in Appendix I.

Table 8

Measured means and standard deviations of persuasion and humour for posting 2 and 5 within the two conditions

Measures	Posting	Condition	Means	Standard deviation
Persuasion	Posting 2	Condition 1 (with Internet meme)	4.09	.61
		Condition 2 (without Internet meme)	4.01	.62
	Posting 5	Condition 1 (without Internet meme)	3.37	.85
		Condition 2 (with Internet meme)	3.34	.73
Humour	Posting 2	Condition 1 (with Internet meme)	1.96	1.01
		Condition 2 (without Internet meme)	1.12	.32
	Posting 5	Condition 1 (without Internet meme)	1.53	.68
		Condition 2 (with Internet meme)	2.85	.99

Note. Items were measured on a 5-point Likert scale from 1, strongly disagree to 5, strongly agree.

Table 8 shows that the means for persuasion in posting 2 are similar in condition 1 and condition 2. The same goes for the means for persuasion in posting 5, which are also similar in condition 1 and condition 2. This indicates that the postings, regardless of the condition, so whether they included an Internet meme or not, were similarly perceived by the participants in terms of the persuasiveness. Thus, postings that include Internet memes are perceived as similar persuasive as the same posting with text only. Therefore, H1 cannot be supported, since there is no significant interaction between condition and posting on persuasion, as well as the increase in means of persuasion for both postings, are similar, whether an Internet meme was included or not. Figure 15 visualizes these findings.
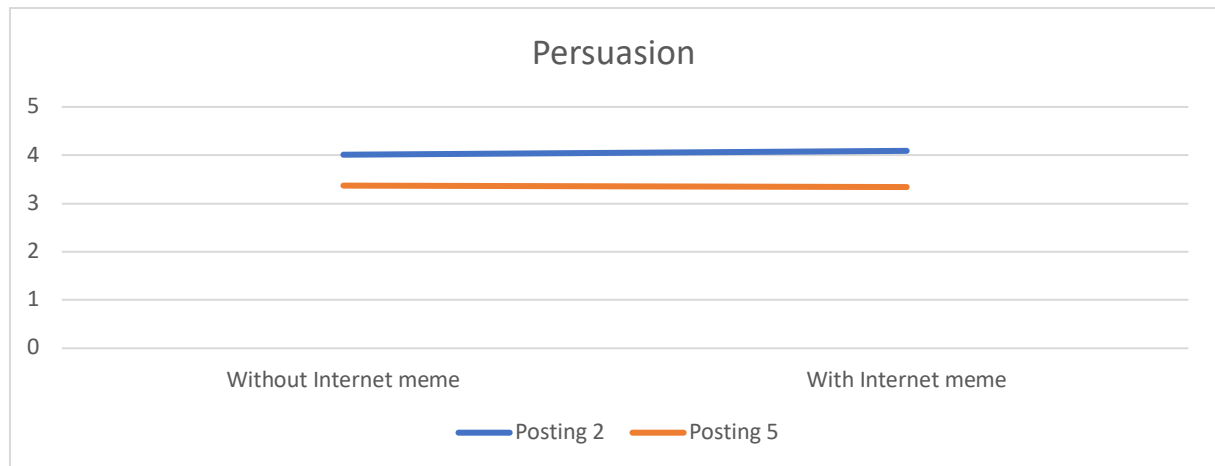
Figure 15. Line chart as a comparison for the means of persuasion for the postings 2 and 5, and the two conditions, whether an Internet meme is included or not.

Note. The scale is measured with a 5-point Likert Scale from 1, strongly disagree to 5, strongly agree.

The means of humour in posting 2 show an increase in condition 2 to condition 1, which indicates that the participants perceive posting 2 as less serious and more humorous when including an Internet meme. For posting 5, the means of humour show an increase in condition 1 to condition 2, which further supports that also posting 5 is perceived as less serious and more humorous from the participants when including an Internet meme. That indicates that the postings that include an Internet meme are generally perceived from the participants as less serious than the same posting with text only. The findings can be seen in Figure 16.
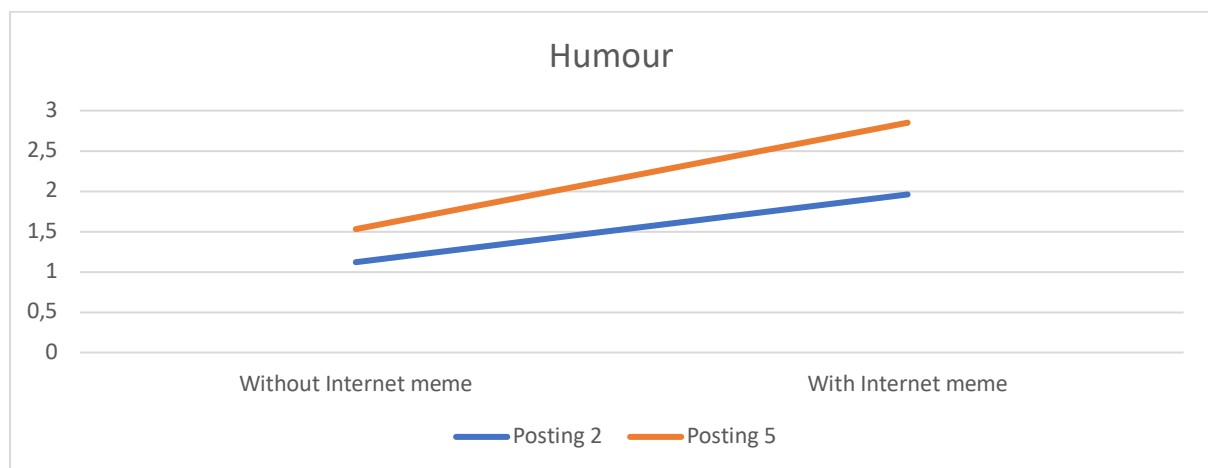
Figure 16. Line chart as a comparison for the means of humour for the postings 2 and 5, and the two conditions, whether an Internet meme is included or not.

Note. The scale is measured with a 5-point Likert Scale from 1, strongly disagree to 5, strongly agree.

4.4 The perception of acceptance, humour and facilitating extreme standpoints in posting 3 and 6

The last analysis is intended to investigate how the participants perceive the Facebook postings referring to the functionality of facilitating extreme standpoints. The results of the third Two-Way Mixed ANOVA show that there is a significant effect of the independent variable *condition* on the two different postings that measure the functionality of facilitating extreme standpoints, Wilks' Lambda $= .85$, $F(3.00, 123.00) = 7.02$, $p < .05$. That indicates that the results for the two postings are dependent on the condition the participants received the postings. The condition, therefore, influences how people perceive the two postings in terms of acceptance, humour and facilitating extreme standpoints (see Appendix J).

For a better understanding of the following results, the related postings are displayed again in Figure 17.

Figure 17. Facebook posting 3 and 6, measuring the functionality of facilitating extreme standpoints.

Note. Source information about the Internet memes used in this study can be found in Appendix A in Table A.1.

Additionally, there is no statistically significant interaction between condition and posting on acceptance, $F_{(1.00, 125.00)} = .95$, $p > .05$, but there is a statistically significant interaction between condition and posting on humour, $F_{(1.00, 125.00)} = 19,22$, $p < .05$, $n^2 = .13$. Moreover, there is also no statistically significant interaction between condition and posting on facilitating extreme standpoints, $F_{(1.00, 125.00)} = .29$, $p > .05$. All this indicates that the perception of the acceptance of the postings do not differ between the two conditions so that the posting that includes an Internet meme is perceived as similar accepted by the participants as the same posting with text only. For the perception of humour, the participants' perceptions between the two conditions differ, so that the postings with Internet memes are perceived differently than the same posting with text only. In terms of facilitating extreme standpoints, there is also no difference in the perception of the participants, so the postings are similarly perceived by them in terms of facilitating extreme standpoints. The analysis can be found in Appendix J.

Table 9

Measured means and standard deviations of acceptance, humour and facilitating extreme standpoints for posting 3 and 6 within the two conditions

Measures	Posting	Condition	Means	Standard deviation
Acceptance	Posting 3	Condition 1 (with Internet meme)	2.09	.82
		Condition 2 (without Internet meme)	2.24	.94
	Posting 6	Condition 1 (without Internet meme)	2.52	.93
		Condition 2 (with Internet meme)	2.52	.95
Humour	Posting 3	Condition 1 (with Internet meme)	1.58	.95
		Condition 2 (without Internet meme)	1.17	.35
	Posting 6	Condition 1 (without Internet meme)	1.26	.49
		Condition 2 (with Internet meme)	1.55	.75
Facilitating extreme standpoints	Posting 3	Condition 1 (with Internet meme)	4.38	.77
		Condition 2 (without Internet meme)	4.49	.60
	Posting 6	Condition 1 (without Internet meme)	4.09	.75
		Condition 2 (with Internet meme)	4.12	.78

Note. Items were measured on a 5-point Likert scale from 1, strongly disagree to 5, strongly agree.

As shown in Table 9, there is a small increase in the means of acceptance in posting 3 for condition 2 to condition 1, which indicates that posting 3 is perceived as less acceptable when including an Internet meme. Besides, the means of acceptance in posting 6 are similar between condition 1 to condition 2. Thus, the participants have a similar perception about the acceptance of posting 6 whether an Internet meme was included or not. Subsequently, H2 cannot be supported, since there is no statistically significant interaction between the condition

and posting on acceptance, as well as the means for posting 3, have a small increase only. In contrast, the means for posting 6 are similar for both conditions (see Figure 18). That indicates that posting 3 is perceived as more acceptable by the respondents when including an Internet meme than when it is text only. However, posting 6 show similar results in both conditions, therefore the acceptance of the posting with Internet meme is similar to the acceptance of the same posting with text only. Thus, it cannot be indicated that an Internet meme can increase the acceptance of an online message.
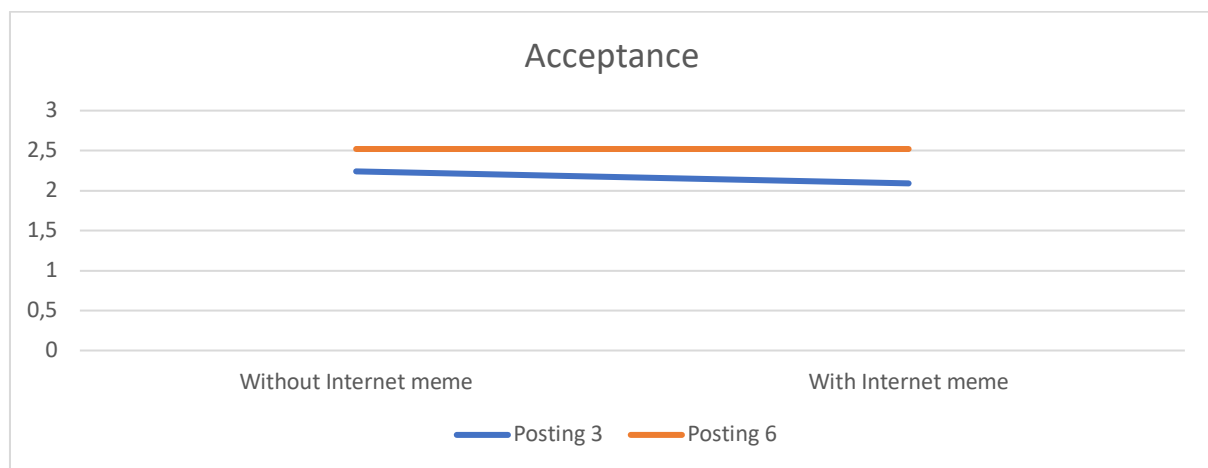
Figure 18. Line chart as a comparison for the means of acceptance for the postings 3 and 6, and the two conditions, whether an Internet meme is included or not.

Note. The scale is measured with a 5-point Likert Scale from 1, strongly disagree to 5, strongly agree.

In posting 3, the means of humour show an increase in condition 1 to condition 2, which indicates that posting 3 is perceived as less serious and more humorous by the participants when including an Internet meme. For posting 6, the means for humour show an increase in condition 2 to condition 1, which indicates that also posting 6 is perceived as less serious and more humorous by the participants when including an Internet meme. Therefore, H3 can be supported, since there is a statistically significant interaction between condition and posting on humour, as well as an increase in the means for humour in posting 3 and 6 when including an Internet meme (see Figure 19). That indicates that both postings are perceived as less serious when including an Internet meme. Therefore, it can be assumed that Internet memes can decrease the perception that the online message has to be taken seriously and increase that it is perceived as more humorous.
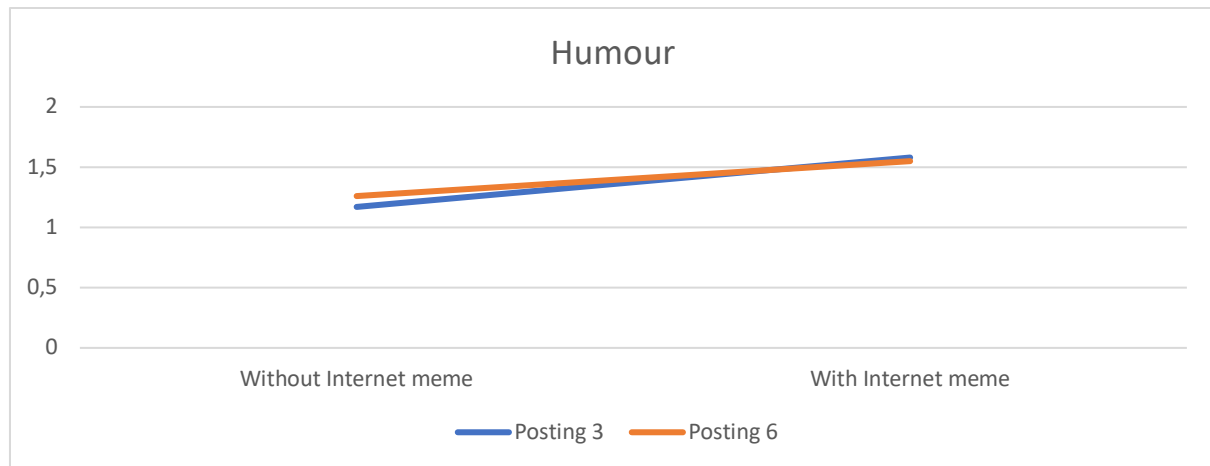
Figure 19. Line chart as a comparison for the means of humour for the postings 3 and 6, and the two conditions, whether an Internet meme is included or not.

Note. The scale is measured with a 5-point Likert Scale from 1, strongly disagree to 5, strongly agree.

The means of facilitating extreme standpoints for posting 3 are nearly similar in condition 1 and condition 2, which is the same for the means of facilitating extreme standpoints for posting 6 in condition 1 and condition 2. Thus, posting 3 and 6 are both perceived as similar in their facilitating extreme standpoints from the participants, whether an Internet meme was included or not. That indicates that including an Internet meme in an online posting do not facilitate the expression of extreme standpoints. These findings are highlighted in Figure 20.
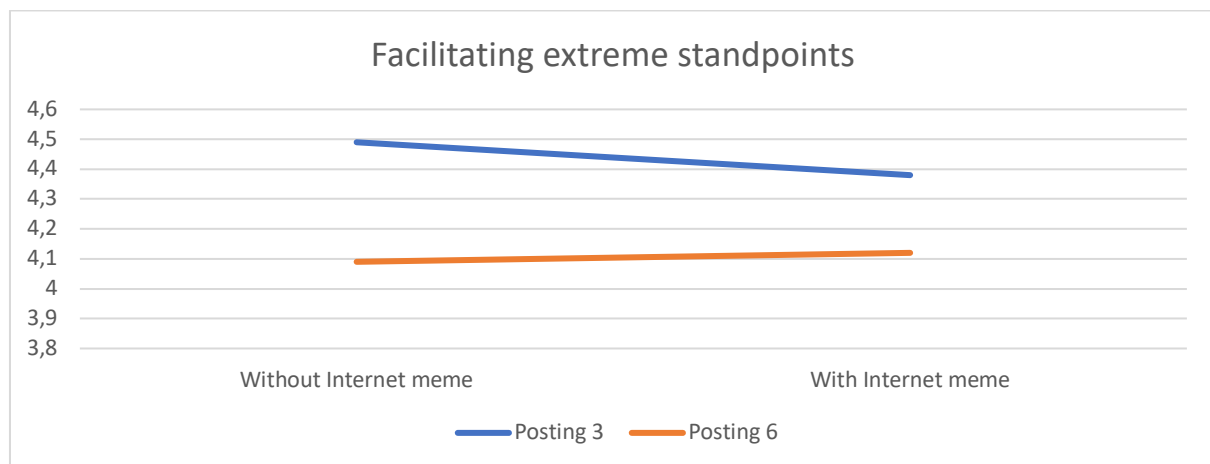
Figure 20. Line chart as a comparison for the means of facilitating extreme standpoints for the postings 3 and 6, and the two conditions, whether an Internet meme is included or not.

Note. The scale is measured with a 5-point Likert Scale from 1, strongly disagree to 5, strongly agree.

5. Discussion

5.1 Main Findings

The overall aim of this research is to understand and investigate the general phenomenon of Internet memes, especially how Internet memes can influence online communication on social media. Therefore, three previously developed functionalities of Internet memes were tested in an experimental study to answer the research question: *How do Internet memes affect peoples' interpretations and perceptions of online messages on social media?* Overall, it can be said that the research question can be answered through this research.

Firstly, it can be stated that the instruments of the study, the Internet memes, were favourably selected for the study. The participants mostly agreed with the statements for investigating the appreciation of the Internet memes, which means that the participants overall perceived the Internet memes as appealing, catchy and understand the different intentions of them. All this indicates that the Internet memes used in the study are suitable and does not negatively influence the overall findings of the study.

In order to refer to the hypotheses of this study, Table 10 summarizes the derived hypotheses and shows whether they are supported by the research or not.

Table 10

Hypotheses of the theoretical framework with support

Hypotheses	Supported
H1: Persuasively intended online messages which contain Internet memes are perceived as more persuasive than the same online messages without Internet memes.	No
H2: Online messages with extreme socially controversial content which contain Internet memes are perceived as more acceptable from others than the same online messages without Internet memes.	No
H3: Online messages with extreme socially controversial content which contain Internet memes are perceived as less serious from others than the same online messages without Internet memes.	Yes
H4: Emotionally intended online messages that contain Internet memes express the senders' emotions more effectively than the same online messages without Internet memes.	No
H5: Emotionally intended online messages that contain Internet memes are perceived as more likeable than the same online message without Internet meme.	Yes

Literature shows that one purpose of creating online messages is to spread information, opinions, and beliefs to convince others of them. Therefore, in the online environment, people often use Internet memes to support their online message or to dismiss a certain topic (Samson, 2012). Accordingly, to the ELM, people are generally more willing to process information through visuals rather than text. They are also more susceptible to visuals (Bulmer & Buchanan-Oliver, 2013). Therefore, it was expected that Internet memes could help to support the persuasiveness of an online message because people can better process the image and understand the statement more easily. However, against the expectations, H1 cannot be supported by this study, which means that the persuasiveness of an online message is not influenced by using an Internet meme. Internet memes do not support how convincing an online message is perceived by other people. This research shows that there was no difference between the two conditions, and the respondents rated the statements for the persuasive postings similar to each other, regardless if an Internet meme was included to support the persuasive message or not.

Furthermore, previous research indicates that people in an online environment are more willing to express opinions that are controversial and not accepted in social norms and society (Bury, 2016). Accordingly, to the politeness theory, people weight up how and what they can say to other people according to their relationship and how they want to be perceived by them (Mao, 1994). Thus, literature states that controversial and harsh statements within the online environment are perceived as more acceptable from others than the same statement in a real-life conversation because they often treat online messages as unreal (Locher, 2010) and something that should not be treated seriously (Williams e al., 2016). In addition to that, especially Internet memes can increase acceptance because they take away the seriousness of the message. Against these expectations, the study shows that H2 is not supported by the findings of this research. Thus, controversial online messages are equally perceived as acceptable by the respondents, whether it is supported by an Internet meme or not. However, also, in this case, the contradictory findings between existing literature and this study could be due to the limitations of this study, especially because H3 can be supported by the findings as expected. Therefore, the respondents of this study perceive an extreme socially controversial statement as less serious when including an Internet meme, than the same statement without an Internet meme. That could be due to the general assumption that most of the Internet memes are generally perceived as online jokes by others because they include humour (Williams e al., 2016). Therefore, people tend not to take them seriously. Thus, if someone includes such an

Internet meme in an online message, the Internet meme might influence this message by making it seem less serious, even if it is intended to be serious.

Moreover, existing literature shows that people on the Internet often tend to express their emotions on social media (Akram et al., 2020). Thus, to support their statements and to better express their feelings through the online message, people use Internet memes, since visualisations can help to support a message by making it more understandable for others (Akram et al., 2020). Through visuals, others can easier and better process information, and it is stated in the literature that people are also more willing to pay attention to a visual rather than text and that they perceive visuals as more likeable and preferable as only text (Eroukhmanoff, 2019). The findings of the existing literature and the findings of this study are contradictory in terms of emotional expression. Against the expectations of previous research, H4 cannot be supported by the findings of the study. Posting 1 was perceived as better conveying emotions when there was no Internet meme included in the message. However, posting 4, on the contrary, showed that it was considered better to express emotions when an Internet meme was supporting the online message. Thus, it cannot be indicated that Internet memes can support an online message to better express emotions, although existing literature claims the opposite. Nevertheless, the respondents perceived the emotionally intended online messages that include an Internet meme as more likeable than the same message with text-only. Therefore, H5 is supported by this research study as expected. Thus, the respondent perceived the emotionally intended online messages that include an Internet meme as more likeable than the same message without including an Internet meme.

A further remarkable notion of this study is that generally, online messages are perceived as less serious when including an Internet meme, not only in the context of bluntness and extreme socially controversial messages but also in the context of trying to persuade others of a specific opinion or belief. Therefore, it could be generalized that online messages that include Internet memes are perceived as less serious, regardless of their context.

All these findings contribute to answering the research question of this study. The research showed that Internet memes could influence the perception and interpretation of online messages in different terms. Internet memes can contribute to support online messages in terms of expressing emotions by helping the online message to better express a certain feeling so that it is more understandable for others. However, especially the seriousness of online postings is perceived as reduced when using Internet memes. As the literature about racism and sexism shows, the debate about how to treat online messages is justified. Online messages that include Internet memes are perceived as less serious, which can contribute to the dissemination of harsh

and extreme socially controversial messages within the Internet. Some people treat these messages as a joke, which gives the Internet more room for racism, sexism and other discriminations. People could blame a harsh message that includes an Internet meme as 'just a joke' without being charged for that. Therefore, this research shows that the general topic of Internet memes has to be further investigated to better understand the benefits but also the consequences of this online communication feature.

5.2 Theoretical Contribution

Existing literature about the topic Internet meme is still limited in its scope and is little available, especially academic literature about the topic. It is mainly limited to literature about the different types, elements, and contexts of the phenomenon. Therefore, literature about the topic generally explains the definition of Internet memes and how they can be differentiated from other digital items (Rintel, 2013; Shifman, 2013). Thus, most of the research only focuses on the specific contexts and fields Internet memes are used in (Beskow, 2020) and not on the general influence and importance of them within online communication. Therefore, it was important to conduct the study to be able to examine and investigate the phenomenon from a different perspective. Through existing literature, the different functionalities of Internet memes were elaborated. It was important to understand how the phenomenon is generally perceived by Internet users, not only in specific topics but also in general. Even though not all functionalities could be tested within this study, they can serve as a starting point for further research.

5.3 Practical Implications

Currently, the use of the Internet is constantly growing. Increasingly more people use the Internet more actively to consume information (Statista, 2020) and news and to discuss topics with people all over the world (Van den Eijnden et al., 2008). However, while using the Internet, it gets clear that the communication rules and norms are different compared to the real-life communication norms (Thayer, 2006). The anonymity of the Internet supports people to express everything they want to (Berger, 2013). The study indicates that Internet memes can also contribute to these differences between online and real-life communication (Thayer, 2006). The study indicates that online postings that include Internet memes are perceived as less serious compared to the same posting with text only. That along with the existing literature about the debate whether online humour and especially Internet memes have to be taken seriously or not (Yoon, 2016) and also the literature about how Internet memes can trivialize and reinforce discrimination of all kinds (Moreno-Almeida, 2020) highlights that online communication and

Internet memes should be further investigated and treated seriously. The findings of the study generally indicate that Internet memes can have an influence on online messages in various ways. They can change and influence the persons' perception of the Internet meme, especially in terms of the seriousness of the online message. The study showed that people perceive online messages that include Internet memes as less serious and rather as a joke. That could mean that Internet memes could trivialise a statement of an online message and give people the freedom to express socially controversial statements that are generally not acceptable in social norms (Yoon, 2016). They can give people the opportunity to take back their statements by saying that it is just a joke (Williams e al., 2016).

All findings of the study indicate that there is a need to investigate further the influence of Internet memes on social media messages because they highlight that they can influence the perception of social media messages possibly even unconsciously. Therefore, it should be pointed out how important it is to treat communication on the Internet as seriously as real-life communication and that Internet memes also have to be taken seriously, because in many cases they are not just humorous or a joke and they can reinforce discrimination.

5.4 Limitations

This research faced various limitations that restricted its success to a certain extent. The first limitation of this study was the novelty or rather the limited amount of knowledge, literature and research about the topic of Internet memes. As previously discussed, literature and research about the topic Internet memes mostly discusses and investigates the topic in terms of the appearance, definition and contexts of Internet memes, rather than how it can influence the online communication. There is little to no research about the extent to which Internet memes influence online communication and its perception of others, so it was more difficult to have a basis for this study. Moreover, besides some new sources, a lot of research and articles about Internet memes are not currently published and could, therefore, be outdated. Additionally, due to the limited number of sources for the study, the researcher had to include non-scientific literature to examine the phenomenon, which is a limitation to the reliability of the study. However, all this also means that this study can contribute to further investigations of the general topic.

Moreover, there are several limitations regarding the instruments and measurements of this research that has to be mentioned. As explained in the method section of this research, the Internet memes that were used in the Facebook postings were selected by the researcher without testing them before conducting the main study. That means the suitability of the Internet memes

regarding the study was only measured at the end of the main study. However, even if the Internet memes performed overall well in this study, it is recommendable to test the Internet memes before they are used in the study. Therefore, a pre-study about the intention, appearance and suitability of the Internet memes should be included. That also applies to the selection of the Facebook postings that were established by the researcher. These postings were based on similar postings on social media, rather than tested within a pre-study.

One limitation that is important to be acknowledged refers to the questionnaire items of the online survey. The questionnaire items for the study were established by the researcher to measure aspects such as acceptance, humour, likability and the like. However, most of the initially elaborated constructs were not valid as the researcher intended. Therefore, items were combined into different constructs to guarantee the validity of the items. That also required that a great number of questionnaire items that were queried within the study had to be deleted for the analyses because they were invalid and did not measure the aspects that they should have.

Moreover, also, the small aspects of the postings could have influenced or biased the answers of the participants. They should have been tested within a pre-study or examined through existing research about the topic. In this study, the Facebook postings were developed without knowing if aspects such as the profile picture, likes, comments and shares within the postings will influence the answers of the participants. Additionally, also the name or the gender of the person that is displayed within the posting could influence how the participants perceive it. Even if the researcher equally distributed the gender and also did not displayed a profile picture on all six Facebook postings as well as paid attention that the numbers for likes, shares and comments are whether high nor low, these aspects should be somehow tested in a pre-test or an examination of existing literature to see whether it can influence the results of the study or not.

Another limitation of this research is the design of the method. In this case, the participants were randomly assigned to one of the two conditions. However, both conditions included Facebook postings with Internet memes and Facebook postings without Internet memes. Even if the general purpose of the study was not directly revealed to the participants and the posting including Internet memes were presented at the end of the survey, it is still possible that when they saw the first posting including an Internet meme, they were biased in their answers for the rest of the survey. Thus, one should think about establishing two separate conditions were the one condition only displays the Facebook postings with text-only, and the other condition receives the same Facebook postings with Internet memes. The two conditions

could still be compared, and at the same time, it is ensured that neither of the two conditions is biased.

Besides, it was limited to focus on the three functionalities conveying emotions, persuasion and facilitating extreme standpoints, which could not cover the full scope of the elaborated mechanisms and functionalities.

5.5 Suggestions for further research

The limitations in the previous section already mention aspects that should be taken into account for further research. The limitations of this research can help further research to improve their development and process of their research. Therefore, it is necessary to pre-test all materials that will be used in the research to ensure the reliability of the research. Poorly suitable Internet memes and other materials, such as questionnaire items, can bias the outcomes of the study and should, therefore, be carefully selected.

This study can serve as a basis and starting point for further research. Especially the theoretical framework of this study can be favourable for further investigations on the influence of Internet memes on online messages and the perception and interpretation of them from the people using the Internet. It is necessary to investigate the elaborated mechanisms and functionalities that were not tested within this research.

5.6 Conclusion

This research examined the general topic of Internet memes and their influence on online communication. The research question of this study can be answered because the findings support the expectations that Internet memes can influence the perception and interpretation of people on online messages in different ways. With the use of the elaborated mechanisms, that are frequently used to create Internet memes, these Internet memes can have different functionalities to support an online message. Online postings that include Internet memes are perceived as more likeable and less serious by the participants. The study proves that Internet memes can have an influence on the perception and interpretation of other people on online messages and therefore provides a basis for further research. It also emphasises the need for these further investigations of the topic, especially in the context of controversial or serious topics such as racism and other discriminations.

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    113-133. doi: 10.1075/ip.00006.yus

Appendices

Appendix A

Internet meme sources

Table A.1

Sources of Internet memes used in the research

Figure	Date	Meme retrieved from
1	May, 2020	https://www.google.com/search?q=success+kid+meme&source=lnms&tbm=isch&sa=X&ved=2ahUKEwin4pOU_ufpAhWEzqQKHUKiAi0Q_AUoAXoECA0QAw&biw=1368&bih=802&dpr=2#imgrc=b4r2K1CdAsHK_M
	May, 2020	https://www.google.com/search?q=success+kid+meme+puzzle&tbm=isch&ved=2ahUKEwiPh46h_ufpAhWIP-wKHU6TBHsQ2-cCegQIABAA&oq=success+kid+meme+puzzle&gs_lcp=CgNpbWcQAzoCCAA6BAgAEB46BAgAEBNQgP8NWLKODmCjjw5oAXAAeACAAWqIAfEEkgEDNy4xmAEAoAEBqgELZ3dzLXdpei1pbWc&sclient=img&ei=l9HYXs_fNIj_sAfOppLYBw&bih=802&biw=1368#imgrc=RtmujDxOyQ4cFM&imgdii=S-eAspSnd8kpOM
2	May. 2020	https://www.google.com/search?q=chubby+kid+run+leaving+work+&tbm=isch&ved=2ahUKEwiv__Hw_-fpAhUwM-wKHbGbAUQQ2-cCegQIABAA&oq=chubby+kid+run+leaving+work+&gs_lcp=CgNpbWcQA1D-FFiVJGDPJWgAcAB4AIABjQGIAZAKkgEDOS41mAEAoAEBqgELZ3dzLXdpei1pbWc&sclient=img&ei=S9PYXu-tJbDmsAext4agBA&bih=802&biw=1368#imgrc=H-1_BhwHsTHM3M
	May, 2020	https://stackward.com/every-procrastinator-will-totally-relate-funny-deadline-memes/4734
3	April, 2020	https://www.google.com/search?q=everything+alright+meme+parachute&rlz=1C1CHBD_deDE862DE862&source=lnms&tbm=isch&sa=X&ved=2ahUKEwixw6vdgejpAhWIzqQKHa7qCgcQ_AUoAXoECAoQAw&biw=1368&bih=802&dpr=2#imgrc=8N_QBBLioxyQJM
	May, 2020	https://www.google.com/search?q=when+I+think+about+my+life+for+30+seconds+meme&rlz=1C1CHBD_deDE862DE862&sxsrf=ALeKk01RFTUVTqqTPAQ9rhhenIyPLS5few:1592655409633&tbm=isch&source=iu&ictx=1&fir=Gqpu3VS1y7zqfM%253A%252CErhNev-jlj43XM%252C_&vet=1&usg=AI4_-kRYCPWC4dA034II4pYK_TtwasUVuQ&sa=X&ved=2ahUKEwib_MLfr5DqAhVD6qQKHQ1iCRgQ9QEwAXoECAYQEg&cshid=1592655423669049&biw=1368&bih=802&dpr=2#imgrc=Gqpu3VS1y7zqfM:
4	June, 2020	https://www.google.com/search?q=how+about+no+queen+meme&tbm=isch&ved=2ahUKEwjemPmovZDqAhVatqQKHYlcDasQ2-cCegQIABAA&oq=how+about+no+queen+meme&gs_lcp=CgNpbWcQAzoCCAA6BAgAEEM6BAgAEB46BAgAEBM6BAgjECc6BAgAEBg6BggAEAgQHlD3zgFY0oUCYJOHAmgQcAB4AIABswGIAdMRkgEEMjQuM5gBAKABAaoBC2d3cy13aXotaW1n&sclient=img&ei=bQzuXp6uENrskgWJubXYCg&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=_6SftE1xLG8ADM

	June, 2020	https://www.google.com/search?q=grumpy+cat+memes+not+funny&tbm=isch&ved=2ahUKEwjq-8_huJDqAhUcgqQKHaLgBm0Q2-cCegQIABAA&oq=grumpy+cat+memes+not+funny&gs_lcp=CgNpbWcQA1CogwFYqIMBYJeEAWgAcAB4AIABUIgBUJIBATGYAQCgAQGqAQtnd3Mtd2l6LWltZw&sclient=img&ei=pQfuXqqVOpyEkgWiwZvoBg&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=rKsJUcMVQWcmiM
5	April, 2020	https://www.google.com/search?q=meme+2020+me+sex+and+the+city&tbm=isch&ved=2ahUKEwi_v5fYg-jpAhXZu6QKHcJMC7UQ2-cCegQIABAA&oq=meme+2020+me+sex+and+the+city&gs_lcp=CgNpbWcQAzIGCAAQCBAeUPciWI5HYMRJaAFwAHgAgAGPAogBxg2SAQYxNC4zLjGYAQCgAQGqAQtnd3Mtd2l6LWltZw&sclient=img&ei=SdfYXv_2INn3kgXCma2oCw&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=bPPASfrbOBhveM
6	April, 2020	https://www.google.com/search?q=good+grades+squirrel+meme&tbm=isch&ved=2ahUKEwi-0-mdhOjpAhUlMuwKHdT_BFUQ2-cCegQIABAA&oq=good+grades+squirrel+meme&gs_lcp=CgNpbWcQAzoICAAQCBAHEB5Q6RxYlitgiS1oAHAAeACAAYkBiAHyBZIBAzguMZgBAKABAaoBC2d3cy13aXotaW1n&sclient=img&ei=29fYXv75I6XksAfU_5OoBQ&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=Sfmn3WxMC-KIiM
7	April, 2020	https://www.google.com/search?q=no+such+thing+as+climate+change+meme&tbm=isch&ved=2ahUKEwj3jOW_hOjpAhUckaQKHVzbBqUQ2-cCegQIABAA&oq=no+such+thing+as+climate+change+meme&gs_lcp=CgNpbWcQA1C9EFicE2CMFGgAcAB4AIABf4gBjAOSAQM0LjGYAQCgAQGqAQtnd3Mtd2l6LWltZw&sclient=img&ei=ItjYXvfzMZyikgXctpuoCg&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=ZphwJ0huBWFasM
8	April, 2020	https://www.google.com/search?q=alk+vs+weed+kermit+meme&tbm=isch&ved=2ahUKEwiKpqDbhOjpAhXXKuwKHFWFTBi4Q2-cCegQIABAA&oq=alk+vs+weed+kermit+meme&gs_lcp=CgNpbWcQA1CnGViPHmD3HmgAcAB4AIABWogBvQSSAQE3mAEAoAEBqgELZ3dzLXdpei1pbWc&sclient=img&ei=XNjYXoqIGdfVsAfhppnwAg&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=KtqLF6CHfvx-tM
9	April, 2020	https://www.google.com/search?q=refugees+warzone+meme&tbm=isch&ved=2ahUKEwjhq-iFhejpAhWUIMUKHRMLDMgQ2-cCegQIABAA&oq=refugees+warzone+meme&gs_lcp=CgNpbWcQAzoGCAAQBxAeUOF_WO-KAWDsiwFoAHAAeACAAWWIAaAFkgEDNy4xmAEAoAEBqgELZ3dzLXdpei1pbWc&sclient=img&ei=tdjYXqH9KJTBlAaaTlrDADA&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=E_pEFDMBTWwogM
10	April, 2020	https://www.google.com/search?q=im+just+saying+racist+dog&tbm=isch&ved=2ahUKEwjugfHbhejpAhVJP-wKHTReAYkQ2-cCegQIABAA&oq=im+just+saying+racist+dog&gs_lcp=CgNpbWcQAzoCCAA6BAgAEEM6BAgAEB5QrIoCWOOkA2DcqANoA3AAeACAAbgBiAGzGJIBBBDI5LjaYAQCgAQGqAQtnd3Mtd2l6LWltZ7ABAA&sclient=img&ei=atnYXu6kCsn-

		sAe0vIXICA&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc =7FHuyYGmeEj6dM
11	April, 2020	https://www.google.com/search?q=meme+2020+me+sex+and+the+city&tbm =isch&ved=2ahUKEwi_v5fYg-jpAhXZu6QKHcJMC7UQ2-cCegQIABAA&oq=meme+2020+me+sex+and+the+city&gs_lcp=CgNpbWc QAzIGCAAQCBAeUPciWI5HYMRJaAFwAHgAgAGPAogBxg2SAQYxN C4zLjGYAQCgAQGqAQtnd3Mtd2l6LWltZw&sclient=img&ei=SdfYXv_2I Nn3kgXCma2oCw&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862# imgrc=bPPASfrbOBhveM
	April, 2020	https://www.google.com/search?q=good+grades+squirrel+meme&tbm=isch &ved=2ahUKEwi-0-mdhOjpAhUlMuwKHdT_BFUQ2-cCegQIABAA&oq=good+grades+squirrel+meme&gs_lcp=CgNpbWcQAzoI CAAQCBAHEB5Q6RxYlitgiS1oAHAAeACAAYkBiAHyBZIBAzguMZgB AKABAaoBC2d3cy13aXotaW1n&sclient=img&ei=29fYXv75I6XksAfU_5 OoBQ&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=Sfmn 3WxMC-KIiM
14	April, 2020	https://www.google.com/search?q=no+such+thing+as+climate+change+mem e&tbm=isch&ved=2ahUKEwj3jOW_hOjpAhUckaQKHVzbBqUQ2-cCegQIABAA&oq=no+such+thing+as+climate+change+meme&gs_lcp=Cg NpbWcQA1C9EFicE2CMFGgAcAB4AIABf4gBjAOSAQM0LjGYAQCgA QGgqAQtnd3Mtd2l6LWltZw&sclient=img&ei=ItjYXvfzMZyikgXctpuoCg& bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc=ZphwJ0huB WFasM
	April, 2020	https://www.google.com/search?q=alk+vs+weed+kermit+meme&tbm=isch& ved=2ahUKEwiKpqDbhOjpAhXXKuwKHWFTBi4Q2-cCegQIABAA&oq=alk+vs+weed+kermit+meme&gs_lcp=CgNpbWcQA1Cn GViPHmD3HmgAcAB4AIABWogBvQSSAQE3mAEAoAEBqgELZ3dzLX dpei1pbWc&sclient=img&ei=XNjYXoqIGdfVsAfhppnwAg&bih=802&biw =1368&rlz=1C1CHBD_deDE862DE862#imgrc=KtqLF6CHfvx-tM
17	April, 2020	https://www.google.com/search?q=refugees+warzone+meme&tbm=isch&ve d=2ahUKEwjhq-iFhejpAhWUIMUKHRMLDMgQ2-cCegQIABAA&oq=refugees+warzone+meme&gs_lcp=CgNpbWcQAzoGC AAQBxAeUOF_WO-KAWDsiwFoAHAAeACAAWWIAaAFkgEDNy4xmAEAoAEBqgELZ3dzL Xdpei1pbWc&sclient=img&ei=tdjYXqH9KJTBlAaaTlrDADA&bih=802&bi w=1368&rlz=1C1CHBD_deDE862DE862#imgrc=E_pEFDMBTWwogM
	April, 2020	https://www.google.com/search?q=im+just+saying+racist+dog&tbm=isch&v ed=2ahUKEwjugfHbhejpAhVJP-wKHTReAYkQ2-cCegQIABAA&oq=im+just+saying+racist+dog&gs_lcp=CgNpbWcQAzoC CAA6BAgAEEM6BAgAEB5QrIoCWOOkA2DcqANoA3AAeACAAbgBiA GzGJIBBDI5LjaYAQCgAQGqAQtnd3Mtd2l6LWltZ7ABAA&sclient=img &ei=atnYXu6kCsn-sAe0vIXICA&bih=802&biw=1368&rlz=1C1CHBD_deDE862DE862#imgrc =7FHuyYGmeEj6dM

Note. In the case of Internet memes, it is nearly impossible to find the original Internet meme, because Internet memes are created out of elements of other Internet memes. Therefore, the Internet memes do not have an author or name and one can only mention the date and website, the Internet meme was found.

Appendix B
Facebook postings without Internet memes
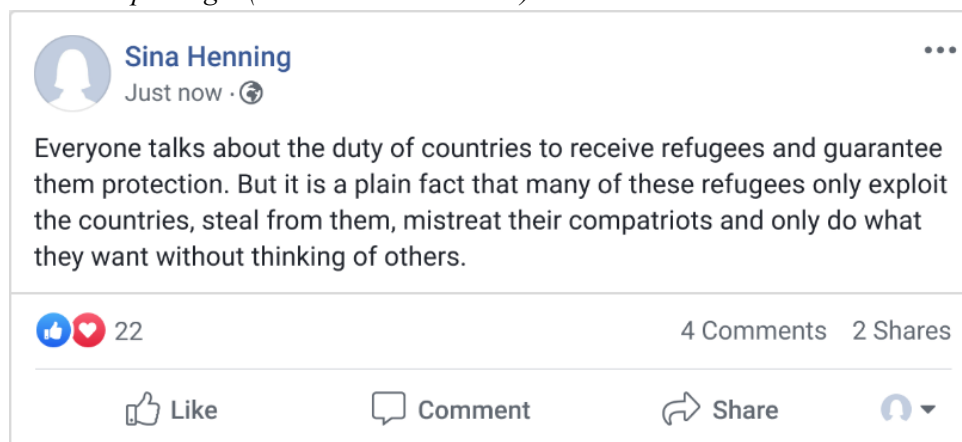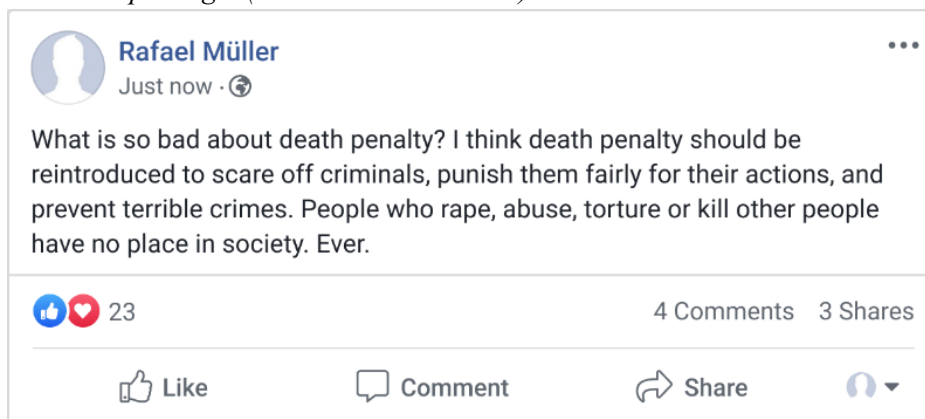
Figure B.1
Facebook posting 1 (without Internet meme)

Anna Nowak
Just now ·

I just realize that I have been at home social distancing for over a month. This is the worst year of my life. On new year's day I thought of all the things I could do and achieve this year. Now all I can think of is how to cancel or postpone all my plans.

👍❤️ 39   3 Comments   2 Shares

👍 Like   💬 Comment   ↪ Share   ⌒ ▾

Figure B.2
Facebook posting 2 (without Internet meme)

Felix Brinkmann
Just now ·

I feel so sorry for the victims of the Australian bushfires and for the damage that caused to the environment. Climate change is the number 1 issue nowadays. I cannot understand that there are still people who deny climate change and act as if it will not influence our way of living, even after hearing about such tragic events.

👍❤️ 42   5 Comments   3 Shares

👍 Like   💬 Comment   ↪ Share   ⌒ ▾

Figure B.3
Facebook posting 3 (without Internet meme)

Sina Henning
Just now ·

Everyone talks about the duty of countries to receive refugees and guarantee them protection. But it is a plain fact that many of these refugees only exploit the countries, steal from them, mistreat their compatriots and only do what they want without thinking of others.

👍❤️ 22   4 Comments   2 Shares

👍 Like   💬 Comment   ↪ Share   ⌒ ▾

Figure B.4
Facebook posting 4 (without Internet meme)

Tom Schmidt
Just now ·

My grades of last semester are all in now. I passed for all my courses in the first attempt with good grades. Even for Statistics 2! This feels so great. All my efforts, time and energy payed off.

👍❤️ 12   1 Comments 1 Shares

👍 Like   💬 Comment   ↷ Share   ○ ▼
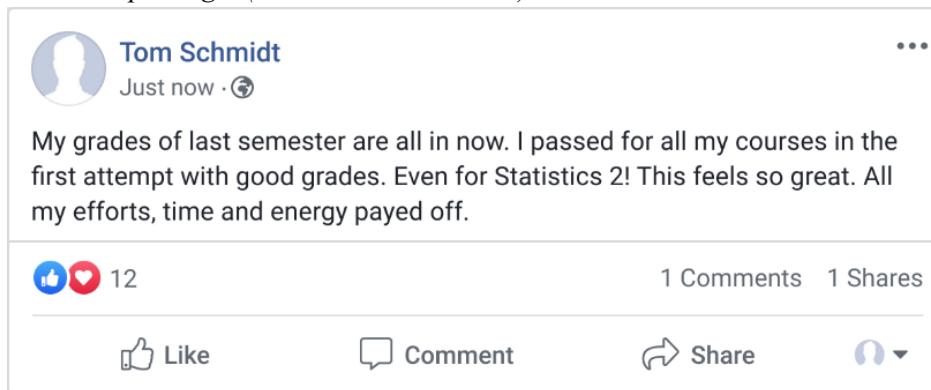
Figure B.5
Facebook posting 5 (without Internet meme)

Antonia Berke
Just now ·

I just finished a great documentary about cannabis called 'The legend about 420'. It had an objective view on cannabis use and its effects and benefits. The film made me think about how hypocritical the debate on the legalization of cannabis is. Why are most governments against legalizing cannabis and totally fine with alcohol abuse?

👍❤️ 9   6 Comments 2 Shares

👍 Like   💬 Comment   ↷ Share   ○ ▼

Figure B.6
Facebook posting 6 (without Internet meme)

Rafael Müller
Just now ·

What is so bad about death penalty? I think death penalty should be reintroduced to scare off criminals, punish them fairly for their actions, and prevent terrible crimes. People who rape, abuse, torture or kill other people have no place in society. Ever.

👍❤️ 23   4 Comments 3 Shares

👍 Like   💬 Comment   ↷ Share   ○ ▼

Table C.1

Complete questionnaire of online survey

Variable	Items
Demographics	What is your gender?
	What is your age?
	What is your nationality?
	What is your highest educational level?
	What kind of social media do you use?
	How many minutes do you spend on social media per day?
Likability	I like this posting.
	I would give this posting a like.
	This posting appeals to me.
	I would share this posting on my Facebook page.
Relationship	I like the person who wrote this posting.
	I understand why the person made this posting.
	I think the person who made the posting is sympathetic.
Humour	I would take the posting seriously.
	This posting is meant as a joke.
	This posting is funny.
Acceptance	I think the message is acceptable as a Facebook posting.
	The message is acceptable in a face-to-face conversation.
	There is nothing to criticise in the message.
	The message represents a statement that is acceptable to me.
Convey emotions	This posting clearly expresses the emotions of the person.
(only for postings 1 and 4)	I can understand the feelings of the person.
	The person expresses her feelings through the posting.
Persuasion	The opinion expressed in the posting convinces me.
(only for postings 2 and 5)	I have the same opinion as this person.
	The opinion of this person makes sense to me.
Facilitating extreme standpoints	This posting contains a harsh message.
(only for postings 3 and 6)	This posting may insult other people.
	This posting may offend other people.
Rating memes	The meme appeals to me.
	I understand the intention of the meme.
	The meme is catchy.
	The meme expresses an emotion.
	The meme is persuasive.
	The meme can be used to support a harsh message.

Appendix D
Approval ethics committee

Figure D.1
E-mail of research approval from the Ethics Committee of the University of Twente

UNIVERSITY OF TWENTE.

Rabea Hecker <r.m.hecker@student.utwente.nl>

Approved BMS EC research project request

ethicscommittee-bms@utwente.nl <ethicscommittee-bms@utwente.nl>
An: r.m.hecker@student.utwente.nl
Cc: m.galetzka@utwente.nl, ethicscommittee-bms@utwente.nl, m.d.t.dejong@utwente.nl

29. April 2020 um 17:26

UNIVERSITY OF TWENTE.

APPROVED BMS EC RESEARCH PROJECT REQUEST

Dear researcher,

This is a notification from the BMS Ethics Committee concerning the web application form for the ethical review of research projects.

Requestnr. :	200710
Title :	Investigation of the perceptions of social media messages
Date of application :	2020-04-28
Researcher :	Hecker, R.M.
Supervisor :	Jong, M.D.T. de
Commission :	Galetzka, M.
Usage of SONA :	Y

Your research has been approved by the Ethics Committee.

The ethical committee has assessed the ethical aspects of your research project. On the basis of the information you provided, the committee does not have any ethical concerns regarding this research project.

It is your responsibility to ensure that the research is carried out in line with the information provided in the application you submitted for ethical review. If you make changes to the proposal that affect the approach to research on humans, you must resubmit the changed project or grant agreement to the ethical committee with these changes highlighted.

Moreover, novel ethical issues may emerge while carrying out your research. It is important that you re-consider and discuss the ethical aspects and implications of your research regularly, and that you proceed as a responsible scientist.

Finally, your research is subject to regulations such as the EU General Data Protection Regulation (GDPR), the Code of Conduct for the use of personal data in Scientific Research by VSNU (the Association of Universities in the Netherlands), further codes of conduct that are applicable in your field, and the obligation to report a security incident (data breach or otherwise) at the UT.

Hecker, R.M. (29-04-2020 14:49):

Thanks! Yes, I deleted it from the form. Best regards, Rabea.

Galetzka, M. (29-04-2020 13:54):

This is an interesting and fun topic. I have only one (very_ minor question about this sentence in pt. 20: "Especially focussing on students for the closer environment". I am not sure what this means and probably can be deleted from the form? Can you please explain or delete the sentence from the form? Best regards, Mirjam Galetzka

This is an automated e-mail from My University of Twente.

University of Twente, Drienerlolaan 5, 7522NB Enschede, The Netherlands

📄 **request-200710.pdf**
145K

Factor analyses (postings and memes)

Table E.1
Factor analysis posting 1 (Rotated Component Matrix)

	Component	
	1	2
Item 1: I like this posting.	.86	
Item 2: I would give this posting a like.	.91	
Item 3: This posting appeals to me.	.87	
Item 4: I would share this posting on my Facebook page.	.69	
Item 15: This posting clearly expresses the emotions of the person.		.89
Item 17: The person expresses her feelings through the posting.		.87

Table E.2
Factor analysis posting 4 (Rotated Component Matrix)

	Component	
	1	2
Item 1: I like this posting.	.87	
Item 2: I would give this posting a like.	.81	
Item 3: This posting appeals to me.	.88	
Item 4: I would share this posting on my Facebook page.	.59	
Item 15: This posting clearly expresses the emotions of the person.		.87
Item 17: The person expresses his feelings through the posting.		.89

Table E.3
Factor analysis posting 2 *(Rotated Component Matrix)*

	Component	
	1	2
Item 2: I would give this posting a like.	.60	
Item 11: I think the message is acceptable as a Facebook posting.	.60	
Item 12: The message is acceptable in a face-to-face conversation.	.49	
Item 13: There is nothing to criticise in the message.	.69	
Item 15: The opinion expressed in the posting convinces me.	.81	
Item 16: I have the same opinion as this person.	.76	
Item 17: The opinion of this person makes sense to me.	.80	
Item 9: This posting is meant as a joke.		.88
Item 10: This posting is funny.		.89

Table E.4
Factor analysis posting 5 (Rotated Component Matrix)

	Component	
	1	2
Item 2: I would give this posting a like.	.68	
Item 11: I think the message is acceptable as a Facebook posting.	.61	
Item 12: The message is acceptable in a face-to-face conversation.	.55	
Item 13: There is nothing to criticise in the message.	.62	
Item 15: The opinion expressed in the posting convinces me.	.78	
Item 16: I have the same opinion as this person.	.79	

Item 17: The opinion of this person makes sense to me.	.76		
Item 9: This posting is meant as a joke.		.87	
Item 10: This posting is funny.		.87	

Table E.5

Factor analysis posting 3 (Rotated Component Matrix)

	Component		
	1	2	3
Item 1: I like this posting.	.75		
Item 11: I think the message is acceptable as a Facebook posting.	.81		
Item 12: The message is acceptable in a face-to-face conversation.	.77		
Item 14: The message represents a statement that is acceptable to me.	.79		
Item 9: This posting is meant as a joke.			.86
Item 10: This posting is funny.			.91
Item 15: This posting contains a harsh message.		.63	
Item 16: This posting may insult other people.		.91	
Item 17: This posting may offend other people.		.83	

Table E.6

Factor analysis posting 6 (Rotated Component Matrix)

	Component		
	1	2	3
Item 1: I like this posting.	.81		
Item 11: I think the message is acceptable as a Facebook posting.	.78		
Item 12: The message is acceptable in a face-to-face conversation.	.74		
Item 14: The message represents a statement that is acceptable to me.	.81		

Item 9: This posting is meant as a joke.		.88
Item 10: This posting is funny.		.87
Item 15: This posting contains a harsh message.	.54	
Item 16: This posting may insult other people.	.91	
Item 17: This posting may offend other people.	.89	

Table E.7
Factor analysis meme A (Component Matrix)

	Component
	1
Item1: The meme appeals to me.	.84
Item2: I understand the intention of the meme.	.77
Item3: The meme is catchy.	.71

Note: Component matrix is used, since there is only one component.

Table E.8
Factor analysis meme B (Component Matrix)

	Component
	1
Item1: The meme appeals to me.	.84
Item2: I understand the intention of the meme.	.67
Item3: The meme is catchy.	.84

Note: Component matrix is used, since there is only one component.

Table E.9
Factor analysis meme C (Component Matrix)

	Component
	1
Item1: The meme appeals to me.	.76
Item2: I understand the intention of the meme.	.76
Item3: The meme is catchy.	.81

Note: Component matrix is used, since there is only one component.

Table E.10
Factor analysis meme D (Component Matrix)

	Component

	1
Item1: The meme appeals to me.	.83
Item2: I understand the intention of the meme.	.73
Item3: The meme is catchy.	.87

Note: Component matrix is used, since there is only one component.

Table E.11
Factor analysis meme E (Component Matrix)

	Component
	1
Item1: The meme appeals to me.	.88
Item2: I understand the intention of the meme.	.72
Item3: The meme is catchy.	.91

Note: Component matrix is used, since there is only one component.

Table E.12
Factor analysis meme F (Component Matrix)

	Component
	1
Item1: The meme appeals to me.	.87
Item2: I understand the intention of the meme.	.86
Item3: The meme is catchy.	.90

Note: Component matrix is used, since there is only one component.

Appendix F
Reliability test (Cronbach's alpha)

Table F.1

Reliability statistics: Likability (posting 1)

Cronbach's Alpha	N of Items
.86	4

Table F.2

Reliability statistics: Likability (posting 4)

Cronbach's Alpha	N of Items
.81	4

Table F.3

Reliability statistics: Emotions (posting 1)

Cronbach's Alpha	N of Items
.73	2

Table F.4

Reliability statistics: Emotions (posting 4)

Cronbach's Alpha	N of Items
.74	2

Table F.5

Reliability statistics: Acceptance (posting 2)

Cronbach's Alpha	N of Items
.80	7

Table F.6

Reliability statistics: Acceptance (posting 5)

Cronbach's Alpha	N of Items
.81	7

Table F.7

Reliability statistics: Humour (posting 2)

Cronbach's Alpha	N of Items
.76	2

Table F.8

Reliability statistics: Humour (posting 5)

Cronbach's Alpha	N of Items
.74	2

Table F.9

Reliability statistics: Humour (posting 3)

Cronbach's Alpha	N of Items
.82	2

Table F.10
Reliability statistics: Humour (posting 6)

Cronbach's Alpha	N of Items
.74	2

Table F.11
Reliability statistics: Acceptance (posting 3)

Cronbach's Alpha	N of Items
.80	4

Table F.12
Reliability statistics: Acceptance (posting 6)

Cronbach's Alpha	N of Items
.81	4

Table F.13
Reliability statistics: Facilitating extreme standpoints (posting 3)

Cronbach's Alpha	N of Items
.77	3

Table F.14
Reliability statistics: Facilitating extreme standpoints (posting 6)

Cronbach's Alpha	N of Items
.76	3

Table F.15
Reliability statistics: Appreciation (meme A)

Cronbach's Alpha	N of Items
.64	3

Table F.16
Reliability statistics: Appreciation (meme B)

Cronbach's Alpha	N of Items
.68	3

Table F.17
Reliability statistics: Appreciation (meme C)

Cronbach's Alpha	N of Items
.67	3

Table F.18
Reliability statistics: Appreciation (meme D)

Cronbach's Alpha	N of Items
.72	3

Table F.19
Reliability statistics: Appreciation (meme E)

Cronbach's Alpha	N of Items
.77	3

Table F.20
Reliability statistics: Appreciation (meme F)

Cronbach's Alpha	N of Items
.84	3

Appendix G
Comparison of the two conditions (equally distributed)

Table G.1

Test of Equality for age (between two conditions)

		Levene's Test for Equality of Variances		t-test for Equality of Means
		F	Sig.	Sig. (2-tailed)
What's your age?	Equal variances assumed	.84	.36	.82
	Equal variances not assumed			.82

Table G.2

Test of Equality for social media use in minutes per day (between two conditions)

		Levene's Test for Equality of Variances		t-test for Equality of Means
		F	Sig.	Sig. (2-tailed)
How many minutes do you spend on social media per day?	Equal variances assumed	.01	.94	.58
	Equal variances not assumed			.58

Table G.3

Crosstab: Fisher's Exact Test for gender (between two conditions)

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	1.41	.91

Table G.4

Crosstab: Fisher's Exact Test for nationality (between two conditions)

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	1.67	.47

Table G.5

Crosstab: Fisher's Exact Test for education (between two conditions)

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	1.53	.72

Table G.6

Crosstab: Fisher's Exact Test for Facebook use (between two conditions)

	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test	.55	.32

Table G.7
Crosstab: Fisher's Exact Test for Instagram use (between two conditions)

	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test	.10	.08

Table G.8
Crosstab: Fisher's Exact Test for Snapchat use (between two conditions)

	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test	.47	.26

Table G.9
Crosstab: Fisher's Exact Test for TikTok use (between two conditions)

	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test	.33	.19

Table G.10
Crosstab: Fisher's Exact Test for LinkedIn use (between two conditions)

	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test	.66	.34

Table G.11
Crosstab: Fisher's Exact Test for Other social media use (between two conditions)

	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test	.05	.03

Appendix H
Two-Way Mixed ANOVA for posting 1 and posting 4

Table H.1

Multivariate Tests of Within Subjects Posting*Condition (posting 1 and 4)

Effect			Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Within Subjects	Posting*Condition	Wilks' Lambda	.73	23.10	2.00	124.00	.00	.27

Table H.2

Univariate Tests of Posting*Condition for likability and emotions (posting 1 and 4)

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Posting*Condition	likability	Huynh-Feldt	26.62	1.00	26.62	42.78	.00	.26
	emotions	Huynh-Feldt	1.74	1.00	1.74	8.07	.01	.06
Error(Posting)	likability	Huynh-Feldt	77,81	125.00	.62			
	emotions	Huynh-Feldt	26.88	125.00	.22			

Note. The Huynh-Feldt correction was used since the assumption of sphericity was violated, and the p-value of the Mauchly's Sphericity Test is > .75

Two-Way Mixed ANOVA for posting 2 and posting 5

Table I.1

*Multivariate Tests of Within Subjects Posting*Condition (posting 2 and 5)*

Effect			Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Within Subjects	Posting*Condition	Wilks' Lambda	.52	57.78	2.00	124.00	.00	.48

Table I.2

*Univariate Tests of Posting*Condition for persuasion and humour (posting 2 and 5)*

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Posting*Condition	persuasion	Huynh-Feldt	.05	1.00	.05	.13	.72	.00
	humour	Huynh-Feldt	74.21	1.00	74.21	116.34	.00	.48
Error(Posting)	persuasion	Huynh-Feldt	43.39	125.00	.35			
	humour	Huynh-Feldt	79.73	125.00	.64			

Note. The Huynh-Feldt correction was used since the assumption of sphericity was violated, and the p-value of the Mauchly's Sphericity Test is > .75

Appendix J

Two-Way Mixed ANOVA for posting 2 and posting 5

Table J.1

Multivariate Tests of Within Subjects Posting*Condition (posting 3 and 6)

Effect			Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Within Subjects	Posting*Condition	Wilks' Lambda	.85	7.02	3.00	123.00	.00	.15

Table J.2

Univariate Tests of Posting*Condition for acceptance, humour and facilitating extreme standpoints (posting 3 and 6)

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Posting*Condition	acceptance	Huynh-Feldt	.35	1.00	.35	.95	.33	.01
	humour	Huynh-Feldt	7.65	1.00	7.65	19.22	.00	.13
	facilitating extreme standpoints	Huynh-Feldt	.09	1.00	.09	.29	.59	.00
Error(Posting)	acceptance	Huynh-Feldt	46.04	125.00	.37			
	humour	Huynh-Feldt	49.75	125.00	.39			
	facilitating extreme standpoints	Huynh-Feldt	37.80	125.00	.30			

Note. The Huynh-Feldt correction was used since the assumption of sphericity was violated, and the p-value of the Mauchly's Sphericity Test is > .75

1. Research question

Research question: *How do Internet memes affect peoples' interpretations and perceptions of online messages on social media?*

2. Main concepts of the study

Table K.1

General concepts of the research

Concepts	Related terms	Broader terms	Narrower terms
Memes	Meme, Memes, internet jokes, internet meme, captioned image	Digital content, online content	Jokes, critique, satire, humour
Communication	Communication, Communication channels, transmission, exchanging, speaking, writing, listening	Conversation	Communication on the Internet
Social media	Social network, social communication, communication technology, media platform	Networking, exchange	Facebook, Instagram, Twitter

3. Search results and databases

For this study, the databases Google Scholar and Scopus where used to find appropriate literature about the topic. However, the general strategy was to find a few good literatures on the databases and use their reference list to find further articles. Most of the literature are journal articles. Moreover, all sources were searched in the English language.

Table K.2

Search results (for general information about the topic Internet memes)

Date	Source	Search terms and strategies	How many hits?	Notes
09.03.2020	Scopus	"Internet meme"	212 hits (3 relevant)	Too broad, not all sources focus on Internet memes, wrong topic of sources
09.03.2020	Scopus	"Internet meme" AND online communication	26 hits (3 relevant)	The literature focus on specific topics such as politics, maybe too specific

09.03.2020	Scopus	"Internet meme" definition	3 hits (1 relevant)	Too specific, did not found the information I wanted to find
09.03.2020	Google Scholar	Internet memes	About 73.000 results (5)	A little broad, but found literature about the contexts of Internet memes, where they are used etc., these topics can be used for further searching literature that specifically uses the word Internet meme in it, good sources
09.03.2020	Google Scholar	"Internet meme"	About 7.480 hits (5 relevant)	
09.03.2020	Google Scholar	Memes	About 576.000 hits (4 relevant)	Too broad topic, however, some good literature on the first page
09.03.2020	Google Scholar	"Internet memes" AND "social media"	About 4.640 hits (4 relevant)	Many literature that was already found
22.03.2020	Google Scholar	"Internet memes" AND "humour"	About 1.170 hits (7 relevant)	A lot of literature about humour and Internet memes, some really good sources
22.03.2020	Scopus	"Internet memes" AND "humour"	37 hits (3 relevant)	Too broad
22.03.2020	Google Scholar	Humour in online communication	About 77.000 hits (2 relevant)	General literature about online humour, not specifically for Internet memes, but a good basis
22.03.2020	Google Scholar	"humour" AND "online communication"	3.910 hits (2 relevant)	Same hits on the first pages as before

4. Evaluation of search

During the search, it got clear that the topic of Internet memes is not new and there is already literature on the subject, but it is relatively little. Most of the literature that was found during the searching have similar reference lists, and many articles are used in nearly any article about the topic. However, even if it is said that using Google Scholar is not advisable, for this research, it was really helpful. Google

Scholar shows all articles and literature that has any connection to the topic. Furthermore, most of the articles that are presented can be downloaded when signed in on university library. That is often not the case when searching literature on Scopus. Many articles on Scopus are not available. Therefore, a wide range of contexts and topics about Internet memes were found, that were probably not found when it was not suggested via Google Scholar. Nevertheless, on Google Scholar are also a lot of literature that is non-scientific and unreliable. In addition, using literature from reference lists of other sources is a great strategy, especially when the reference list that is used is from a good article.