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***The Effect of a Photographed Face on Attitude Polarisation
and Self-Awareness***

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Abstract

Attitude polarisation is a frequently discussed topic in relation to social media. As previous research has found indication that the absence of face-to-face contact increases attitude polarisation tendencies – through changing peoples' private and public self-awareness. The present study aims at investigating whether a photographed face could produce a similar result. The study sampled 226 participants, collected via an online survey which randomly assigned them to one out of four groups. The groups consisted of different constellations of an article about metoo, a comment section, and small or large photographs of the people partaking in the comment section. Results of the study were non-significant. The main contributor to the non-significant results is believed to be a failed manipulation in collusion with the topic chosen (metoo), and the scale used to measure self-awareness. The results of the study indicate that seeing another person's photograph does not alter self-awareness when reading a comment section.

Keywords: Attitude polarisation, public and private self-awareness, computer-mediated communication, social networking sites, face-to-face contact.

The Effect of Photographed Face on Attitude Polarisation and Self-Awareness

Before the internet became as interconnected to our life as it is in the present day, a widely held belief was that it would democratise free speech, supporting the development of a more democratised society (Rice & Love, 1987). Whether or not this is the case is up to debate, but with the development of the internet a discussion arose regarding the hostile and polarised discourse that was taking place on several internet forums (Rice & Love, 1987). Even if the internet has provided us with more information and knowledge, giving more people a platform for expression, the belief that the internet would democratise free speech and facilitate sharing of different ideas was to some extent contradicted by the development of so-called echo-chambers. In short, echo-chambers refer to the possibility of designing one's internet feed, the tendency to visit pages and partake in discussions that enforce individuals' initial opinions (Sunstein, 2009). The developing echo-chambers affect the political discourse, as ideological discussions and the exchange of political ideas mostly takes place within these spaces, reinforcing people's initial opinions, limiting interactions with rival political thoughts and ideas and making cross-ideological interactions a rare occurrence (Gruzd & Roy, 2014). While this has been shown to contribute to the extremity of people's attitudes and increase polarisation (Fiorina & Abrams, 2008; Yardi & Boyd, 2010), research has also focused on the difference between communication settings, comparing computer-mediated communication (CMC) and face-to-face interactions (FtF), and the influence they have on attitude polarisation. The main differences between CMC and FtF-interaction has been stated to be the anonymity and lack of eye-contact apparent in CMC (Lapidot-Lefler & Barak, 2012). The lack of eye-contact in CMC seems to evoke more extreme behaviours – both toxic and benign (Suler, 2004). There is also support indicating that the lack of FtF-communication reinforces attitude polarisation, making CMC contexts

more prone to polarised opinions (Sia, Tan, & Wei, 2002; Siegel, Dubrovsky, Kiesler, & McGuire, 1986).

To find antecedents of our internet behaviour, researchers have turned their attention toward the mental state of self-awareness. Different levels of self-awareness have been found in CMC usage compared to FtF-interaction. CMC was found to make its users more privately self-aware – focusing on their own beliefs, thoughts and feelings to a higher extent (Matheson & Zanna, 1989; Sassenberg, Boos, & Rabung, 2005; Joinson, 2001). There are also indications that CMC decreases public self-awareness – caring about how others perceive oneself (Matheson & Zanna, 1989), the conclusion being that the lack of social cues in CMC is responsible for the changes in self-awareness (Joinson, 2001; Matheson & Zanna, 1989).

Previous experiments investigating the differences between CMC and FtF operationalised FtF-contact by using a live video feed of the participants, finding an effect on attitude polarisation (Sia et al., 2002; Siegel et al., 1986), and changes in self-awareness (Sassenberg et al., 2005). Instead of a video-feed this paper will examine what effect a clearly visible photograph of a face has on self-awareness and attitude polarisation. As previous research states that the absence of live eye-contact increases extreme behaviour (Lapidot-Lefler & Barak, 2012; Suler, 2004), this paper aims to investigate whether a photographed face has a similar effect on attitude polarisation and self-awareness as a live video-feed. As the largest Social Networking Site (SNS), Facebook, has a very small picture (40x40 pixels) visible while partaking in comment sections, this paper will also explore the possible effect of increasing the picture to 140x140 pixels, the size of a Facebook profile picture. Thus, this paper aims to further investigate the effect on polarisation elicited through CMC, hoping to bring more clarity to how visual cues affect attitude polarisation and self-awareness. Lastly it could provide more insight on how to decrease or increase attitude polarisation, contributing

to our understanding of current political discourse and how the internet affects political movements.

Attitude Polarisation

The concept of attitude polarisation refers to individuals' attitudes becoming more extreme (Burnstein & Vinokur, 1977). The research on attitude polarisation has stated that there are two major elements contributing to the cause of attitude polarisation, namely Persuasive Argument Theory (PAT) and Social Comparison Theory (SCT) (Sanders & Baron, 1977). PAT states that as people get exposed to an argument, they compare it to their existing pool of arguments relevant to the topic of discussion. The argument holding higher levels of persuasiveness, originality and validity is then perceived as the better argument, polarising the convinced party in that direction (Burnstein & Vinokur, 1973). SCT deals with the social aspect of persuasiveness, stating that people will polarise in a socially desirable direction. The polarisation effect from SCT consists of overestimating others' extremity in a socially desirable opinion, resulting in people being more extreme in their attitudes as they try to seem desirable in the eyes of others (Pruitt, 1971).

As both PAT and SCT affect attitude polarisation, the relationship between the two has been investigated – finding that PAT mediates attitude polarisation, while SCT is responsible for the moderating effect. The mediating effect of PAT is explained by the fact that people still polarise without comparisons to other people, and that without a possibility of arguing no polarisation effects occur, or at least become significantly limited (Burnstein & Vinokur, 1973). The moderating effect from SCT stems from the fact that people are creating more arguments when comparing themselves to others, resulting in a greater likelihood of generating arguments resulting in a polarisation effect (Burnstein & Vinokur, 1973). Together the biggest contributors to attitude polarisation are believed to be the number of arguments

that are available to a person and time spent thinking on the subject and arguments (Sadler & Tesser, 1973).

The research outlined above would thus state that people would always polarise to the best argument and only in the direction of the argument. This is not always the case as people engage in biased assimilation of information. The process of biased assimilation of information is called “polarisation hypothesis”, and states that people’s attitudes could become polarised when exposed to mixed or inconclusive findings contradicting their initial views on stereotype relevant information – highlighting that individuals could dismiss and discount empirical evidence inconsistent with their original views, as it is easier to assimilate information than changing one’s belief system (Lord, Ross, & Lepper, 1979). This phenomenon is further enforced when people possess more extreme attitudes, making them react with stronger emotions and generally rate opposing views as less valid, thus being able to maintain their attitudes when met with evidence that opposes their world view (Munro & Ditto, 1997). Political debate on the internet has generally been described as hostile towards rival opinions. Given the vastness of information available, it is easier than ever to find information that suits one’s existing attitudes, or on the other hand – to find information with low validity from people with rival attitudes. In general, political discussion taking place on the internet has been described in terms of hostility and polarised opinions. Given the internet’s wide usage this phenomenon could be affecting our political discourse (Bennett, 2003; Benkler, 2006).

Social Networking Sites and Attitude Polarisation

The internet and the frequently used social networking sites are all characterised by a high designability, enabling its users to filter out things that are not of interest, and follow things that are of interest. This designability has created the so-called echo-chambers, where different clusters of opinions are created and the people within these echo-chambers are

mostly exposed to likeminded opinions and arguments. This impacts the political discourse through attitude polarisation, making the people within the echo-chambers more prone to political polarisation (Lee, Choi, Kim & Kim, 2014). Following the concept of Social Comparison Theory (SCT) discussed by Burnstein & Vinokur (1973), there is a possibility that social media platforms enhance attitude polarisation by increasing our opportunity to partake in political discussion, exposing us to more political arguments which may contribute to political polarisation. There are indications that the political discussions occurring in echo-chambers are characterised by a more polarised language (Conover, Ratkiewicz, Francisco, Gonçalves, Menczer, & Flammini, 2011) and more frequent participation in political debates on social-networking sites contributes to political polarisation (Gilbert & Karahalios, 2009; Lee et al., 2014). Even though the possibility of taking part in different political opinions and cross-ideological debates increased with the internet, politically engaged individuals seem to mostly take part in intra-ideological discussions (Lee et al., 2014; Gruzd & Roy, 2014). When cross-ideological discussions occur through a computer they usually have a more hostile nature, but it highlights that people using SNS are aware of other political movements, and thus do not believe that they are the sole political opinion (Gruzd & Roy, 2014). When measuring the polarising effect that SNS has, Garminella & Weber (2017) looked at individuals' Twitter behaviours in terms of which people they followed, and what "Tweets" they shared. The behaviours were observed between 2009 and 2016, and it was found that people tend to polarise by following more likeminded people and interacting more with likeminded opinions. They found a tendency to retweet and follow opinions from one political direction 10-20% more often at the end of the time span, highlighting a growth in political polarisation (Garminella & Weber, 2017). Changes in magnitudes of the polarisation effect has also been observed during election periods, making individuals partake more in political discussion and subsequently polarise to a higher extent (Yang, Xidao, Wen, Lin & Deng,

2017), which is in line with Persuasive Argument Theory (PAT) stating that the more discussions could provide people with more arguments, subsequently increasing their attitude polarisation. Movements and organisations frequently contribute to increased polarisation through SNS as they activate significant attitudes for discussions, resulting in further polarisation (Bainbridge & Stark, 1981). In line with the concept of SCT, group polarisation would be even more promoted by discussions (Burnstein & Vinokur, 1977). The vastness of information and possibility of designing individual feeds also promotes participatory behaviour (Hardy & Scheufele, 2005). When browsing the internet, the amount of content and information available makes it easy for users to find information that suits their already existing attitudes, reinforcing their opinions and subsequently contributing to the polarisation effect observed on the internet (Lee et al., Parsell, 2008). The echo-chambers do not completely block out opposing voices, but opposing arguments often get ridiculed and rated with a low level of credibility, leading to even more homogenous opinions (Sunstein, 2002). Even though the designing feature explains some of the polarisation occurring on the internet, there is more to it. Being unable to communicate face-to-face with the respondent seems to trigger more extreme behaviour (Lapidot-Lefler & Barak, 2012), which raises the question, how does it affect attitude polarisation?

Computer Mediated Communication

The biggest difference between communicating face-to-face (FtF) compared to computer-mediated communication (CMC) is the fact that CMC users can choose to be anonymous and that the medium is characterised by fewer social cues. The limited number of cues provided by CMC compared to FtF-interaction has several implications. Social status and hierarchies become less important, which in some ways making computer communication a more democratised medium for interaction – as communication is spread more evenly among the participants (Siegel et al., 1986). The limited number of social cues provided by

CMC could also facilitate overattribution; surrendering to stereotypical impressions, based on fewer social cues compared to FtF-interaction (Lea & Spears, 1992). Drawing on the reduced cues in CMC, Culnan & Markus (1987) believed that the medium would be less socially oriented and less personal than interacting face-to-face. This hypothesis has received support as when people are using computers, they are more inclined to write and agree with abusive comments (Sohn, Chung & Park, 2019). However, testing the hypothesis that CMC would be less friendly, Walther (1992) found a different predictor. Time was shown to influence kindness and warmth on CMC, as a comparison between CMC and FtF-interaction measured within the same time interval would differ in actual information exchange. The conclusion being that if CMC is given the appropriate time for relational development, it would be equally friendly as FtF-interaction. There are also indications that CMC is an even more optimised medium for the creation of warm and friendly relationships. Comparing language between CMC and FtF interactions, Zimmerman (1987) found computer-mediated language to consist of more emotional expression, less stress-laden language and more positive evaluations of others and the self. The interactions within CMC also frequently referred to interpersonal issues. The reduction of cues within CMC seems to elicit not only more hostile behaviour (Walther, 1994), but could at the same time work as a medium facilitating friendly behaviour. CMC thus seems to make us more uninhibited – not only leading to more extreme behaviours but also affecting increases in self-disclosure (Joinson, 2001; Schouten, Valkenburg, & Peter, 2009). This raises the question, how could researchers both find support for CMC being more friendly and more aggressive?

Trying to summarise and explain the disinhibited CMC-behaviour Suler (2004) created the theory of “Disinhibition effect”. The theory states that the increased self-disclosure in terms of intensity and frequency on CMC comes from six different factors: dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative

imagination and minimisation of authority. Stating that these factors leads to more toxic and benign behaviours. To investigate which of these factors contributed the most to the disinhibition effect Lapidot-Lefler et al. (2012) compared anonymity, invisibility and lack of eye-contact. Anonymity refers to being unknown to others; e.g. the use of usernames on the internet, invisibility refers to not seeing characteristics of the communication partner, and lack of eye-contact refers to not having eye-contact with the communication partner or not focusing on their face during conversation. The study found that lack of eye-contact is the biggest contributor to disinhibited toxic behaviour, highlighting that enforced eye-contact resulted in fewer self-reported aggressive comments and fewer threats. Being anonymous also lead to more threats and invisibility to others lead to a more negative climate (Lapidot-Lefler & Barak, 2012).

To summarise, the biggest difference between CMC and FtF-communication is the lack of visual cues, in terms of the communication partner's face, while the asynchronous and text-based communication mostly affect social desirability. The absence of a communication partner's face was early observed to affect group polarisation tendencies (Siegel et al., 1986). Trying to explain why group polarisation is affected by the communication media, Matheson and Zanna (1989) believed self-awareness played a significant part, trying to operationalise the differences between CMC and FtF-interaction by changes in our attention.

Self-Awareness

Self-awareness draws on the assumption that attention is either directed inwards to our emotions, thoughts and perception – called private self-awareness, or outwards, making us focus on how we are being perceived by our environment – called public self-awareness (Duval & Wicklund, 1972). Different situations elicit different responses of self-awareness. Methods used to elicit private self-awareness are for example priming people with the notion

of themselves or reducing visual cues. As visual cues are reduced, people tend to focus more on their feelings without being distracted or simply by not having other things to focus on (Fenigstein, Scheier & Buss, 1975). Public self-awareness on the other hand, is believed to decrease when there is a reduction in verbal cues, as it makes people less concerned about others' opinions (Joinson, 2001; Schouten et al., 2009). To elicit public self-awareness in people, methods such as referring to situations that remind them of how they are perceived by others are used; often obtained by exposing people to an audience or priming them with the belief that they are under surveillance (Scheier & Carver, 1980). Computer mediated communication (CMC) and social networking sites (SNS) generally have a lower amount of visual and verbal cues. This allows its users to focus on themselves and at the same time feel less observed by others and makes CMC a rich field in which to study self-awareness.

Due to the fewer social cues in CMC it is generally believed to heighten users' private self-awareness, implying that communicating through a computer makes people more attentive to their own personal beliefs and feelings (Sassenberg et al., 2005). How public self-awareness is affected by CMC is less established studies have stated that it becomes marginally lower (Matheson & Zanna, 1988), while others found no difference compared with FtF-interaction (Sassenberg et al., 2005). The relationship between CMC and increased private self-awareness has been confirmed in several studies, finding an increase by removing visual cues (Matheson & Zanna, 1988; Scheier, 1980; Sassenberg et al., 2005; Spears & Lea, 1994; Joinson, 2001). The removal of visual cues could be viewed as just removal of possible distraction, raising the question whether seeing a communication partners face is responsible for the changes in private self-awareness or solely removal of possible distractions. However, Joinson (2001) found a difference in private self-awareness when the control group was exposed to distractions through watching an episode of the Simpsons while interacting with a

communication partner, concluding that its probable that being distracted by another individual limit private self-awareness.

An increase in private self-awareness has several implications that are characteristic of CMC-behaviour. When we become more aware of our own thoughts and feelings, we tend to express ourselves more frequently resulting in greater self-disclosure within a CMC context (Scheier, 1976; Joinson, 2001). Furthermore, this also impacts our perception leading to an overestimation of how much we contribute to discussions (Weisband & Atwater, 1999). Increasing private self-awareness in CMC also affects how susceptible we are to the influence of other people. People higher in private self-awareness are harder to influence (Scheier, 1980), as they focus on their personal values, perceptions and attitudes to a greater extent (Sassenberg et al., 2005). Still, there is some contradicting evidence. Schouten et al. (2009) found no differences between CMC and FtF-conditions. However, the manipulation used in this study could have been affecting the aspects of self-awareness. The article investigated interaction between people of opposite sex and argued that the setting could heighten private and public self-awareness, as the participant became aware of how they behaved and how they looked in the eyes of the conversation partner.

Visual Cues, Self-Awareness and Attitude Polarisation

As mentioned, higher private self-awareness makes us focus more on ourselves, making us more attentive to our own beliefs and emotions (Duval & Wicklund, 1972). Communication through computers with fewer available social cues increases our private self-awareness (Sassenberg et al., 2005). This raises the question – could computer-mediated communication affect attitude polarisation, something frequently occurring on social networking sites (Fiorina & Abrams, 2008; Yardi & Boyd, 2010)?

A problem of previous research is the contradicting evidence found on the influence of computer-mediated communication's on polarisation. On one hand, research regarding visual cues and polarisation states that an absence of visual cues leads to a reduction in social presence which subsequently leads to an increase in attitude polarisation (Sia et al., 2002). The same observation was made from Siegel et al. (1986). On the other hand, Sassenberg et al. (2005) argue that the heightened private self-awareness makes us hold more firmly to our own beliefs, and thus be less susceptible to influence of the group's opinion. These three articles used similar measurements, all measuring the individual attitudes compared to the group's average attitude. Furthermore, their experiments used a similar method, a comparison between face-to-face (FtF) discussion and anonymous computer-mediated discussion. The conclusion made in Sassenberg et al. (2005), that we are less prone to polarisation when communicating through a computer as we disagree more with the group's general opinion, does not answer the question of whether our attitudes are in general more extreme when discussing using a computer. As Sassenberg et al. (2005) only used one measurement, based on one discussion session, they could not draw any conclusions regarding whether this is the case. However, Sia et al. (2002) used several discussion sessions in their experiment. What they found was that in general, groups become more extreme in their opinions after computer-mediated discussions compared to FtF, making the group's average, as well as the individuals' average opinion change more from the initial attitudes when discussions take place on a computer-mediated platform. According to Sia et al. (2002), the conclusion as to why this is occurring was that the reduction in social presence, occurring through the removal of discussion partners' faces, would work to increase group polarisation over time, making people partake in one-upmanship behaviour and thus changing their attitudes to a greater degree.

Building upon the big-data studies (Gruzd & Roy, 2014; Parsell, 2008; Conover et al., 2011; Yang et al., 2017) stating that political polarisation increases on SNS, this paper aims to investigate whether this effect would be increased with the absence of visual cues found to contribute to polarisation (Sia et al., 2002; Siegel et al., 1986). Having the research of Lapidot-Lefler & Barak (2012) in mind, stating that internet behaviour is more extreme in terms of toxic and benign behaviour, I believe that the uninhibited behaviour will also produce an effect on peoples' attitudes, creating more disagreement and perhaps feeling the need to distance themselves – subsequently ascribing themselves to a more polarised position. Lastly, the measurement of polarisation used in both Sia et al. (2002), Sassenberg et al., (2005) and Siegel et al., (1986) might be troublesome labelling as political polarisation. Siegel et al. (1986) measured polarisation on a discussion about career choice problems, Sassenberg et al. (2005) measured polarisation on a survival task and Sia et al. (2002) measured polarisation on deciding a strategy for a sports team. Trying to bridge the big-data studies measuring political polarisation, the present study will measure polarisation from a more political perspective, namely the metoo movement (Metoo, 2019). The movement has been frequently discussed on social media, dealing with the topic of sexual violence (Metoo, 2018), but also turned into a larger discussion regarding ethics of journalism and source criticism (Aftonbladet, 2018, 2018; Sveriges Television, 2018).

The Present Study

Previous studies have measured attitude change and polarisation (Siegel et al., 1986; Sia et al., 2002; Sassenberg et al., 2005) by comparing real live videos or eye-contact while interacting with each other using a computer, to a dispersed CMC-setting where participants could not see each other, highlighting that attitude polarisation is stronger in a dispersed CMC-setting. An explanation of why this occurs has been found by looking at changes in our self-awareness. Several articles have found that a dispersed CMC-setting

increases our private self-awareness, which could in turn be responsible for the mediating effect on attitude polarisation (Joinson, 2001; Sassenberg et al., 2005; Sia et al., 2002).

Regarding public self-awareness, there is more uncertainty, however some articles have found that a decrease in public self-awareness is more common in dispersed CMC-settings, and perhaps also affects attitude polarisation (Sia et al., 2002). As previous studies compared real life videos and text communication to only text communication, the current study investigates whether a similar effect could be found by replacing the video feed with a photograph of a face, ultimately investigating whether seeing a picture of a face attached to a comment decreases attitude polarisation by altering the reader's self-awareness. As there are some uncertainty regarding self-awareness and its effect on attitude polarisation, especially regarding public self-awareness, the study aims to further explore it and will thus not direct the relationship between self-awareness and polarisation.

The scenario of seeing photographs next to comments is also frequently occurring on SNS, making it interesting to investigate whether the photograph affects people exposed to it. As the photograph viewed when participating in comment sections on Facebook, the biggest social networking site to date, is quite small (40x40 pixels) the study will also add an exploratory element investigating whether increasing the size of the picture to the size of the Facebook profile picture (140x140 pixels) will make a difference regarding polarisation. Further, the present study will compare a comment section, rather than chat-based communication, as comment sections are frequently used on SNS. Finally, resulting in four different groups, comparing the effect of a photograph, the effect of the size of the photograph and the effect of a comment section on attitude polarisation.

Hypotheses

Hypothesis 1, 2, 3 and 4 – attitude polarisation. Hypothesis 1 aims at investigating a possible effect on polarisation regarding the Ambivalent Sexism Inventory elicited by being

exposed to photographs and comment sections. Hypothesis 2 aims at investigating a possible effect on polarisation regarding opinion about the metoo movement elicited by being exposed to photographs and comment sections. Hypothesis 3 and 4 are similar to Hypothesis 1 and 2, however, they only concern people participating in the comment section. Regarding the letters; a refers to the difference between Group 1 and 3 (photograph or no photograph), b refers to the difference between Group 1 and 2 (size of photograph), c refers to the difference between Group 3 and 4 (comment section or no comment section).

H1a. Participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme scores on the Ambivalent Sexism Inventory compared to the participants being exposed to the same article with an attached comment section without faces.

H1b. Participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme scores on the Ambivalent Sexism Inventory compared to the participants being exposed to the same article with an attached comment section with small faces.

H1c. Participants being exposed to an article about the metoo movement will have less extreme scores on the Ambivalent Sexism Inventory compared to the participants being exposed to the same article about metoo with an attached comment section.

H2a. Participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme opinions on the metoo movement compared to the participants being exposed to the same article with an attached comment section without faces.

H2b. Participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme opinions on the metoo-

movement compared to the participants being exposed to the same article with an attached comment section with small faces.

H2c. Participants being exposed to an article about the metoo movement will have less extreme opinions on the metoo-movement compared to the participants being exposed to the same article about the metoo movement with an attached comment section.

H3a. For all the participants partaking or indicating participation in the comment section, participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme scores on the Ambivalent Sexism Inventory compared to the participants being exposed to the same article with an attached comment section without faces.

H3b. For all the participants partaking or indicating participation in the comment section, participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme scores on the Ambivalent Sexism Inventory compared to the participants being exposed to the same article with an attached comment section with small faces.

H3c. For all the participants partaking or indicating participation in the comment section, participants being exposed to an article about the metoo movement will have less extreme scores on the Ambivalent Sexism Inventory compared to the participants being exposed to the same article about the metoo movement with an attached comment section.

H4a. For all the participants partaking or indicating participation in the comment section, participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme opinions on the metoo

movement compared to the participants being exposed to the same article with an attached comment section without faces.

H4b. For all the participants partaking or indicating participation in the comment section, participants being exposed to an article about the metoo movement and an attached comment section with large faces will have less extreme opinions on the metoo movement compared to the participants being exposed to the same article with an attached comment section with small faces.

H4c. For all the participants partaking or indicating participation in the comment section, participants being exposed to an article about the metoo movement will have less extreme opinions on the metoo-movement compared to the participants being exposed to the same article about the metoo movement with an attached comment section.

Hypothesis 5 and 6 – self-awareness mediation. Hypothesis 5 aims to investigate whether the relationship between the groups on Ambivalent Sexism Inventory are due to changes in private and public self-awareness. Hypothesis 6 aims to investigate whether the relationship between the groups on opinion about the metoo movement is due to changes in private and public self-awareness.

H5a. Private self-awareness will mediate the relationship between the Ambivalent Sexism Inventory scores and the four different groups.

H5b. Public self-awareness will mediate the relationship between the Ambivalent Sexism Inventory scores and the four different groups.

H6a. Private self-awareness will mediate the relationship between participants' opinions about the metoo movement and the four different groups.

H6b. Public self-awareness will mediate the relationship between participants' opinions about the metoo movement and the four different groups.

The present study is using the common significance value of $p \leq .05$ like previous related studies (Sia et al., 2002; Sassenberg et al., 2005; Siegel et al., 1986). However, as hypothesis 3 and 4 intends to measure the same scores as hypothesis 1 and 2, a Bonferroni correction was conducted dividing the original p-value (.05) of hypothesis 1-4 with the number of measurements (two) resulting in a significant p-value of $p \leq .025$ for hypothesis 1-4, and a significant p-value of $p \leq .05$ for hypothesis 5 and 6.

Method

Design

The experiment is a between-subject design, investigating the independent variables (the four groups) effect on the dependent variable, attitudes regarding the metoo movement and Ambivalent Sexism Inventory. Two mediating variables, private and public self-awareness were measured to investigate if the possible effect from the independent variable on the dependent variable were due to changes in self-awareness.

Participants

The final number of participants eligible for the study were 226, collected by distributing the survey via social media. Acquaintances of the researcher were asked to distribute the survey. Prior to the exclusion criteria 286 participants were collected. People who would recognise the faces in the survey were avoided to the best extent possible. Eighteen participants indicated that they recognised the people in the photographs and hence were removed. Further 23 participants were removed as they rarely or never used social media for news sources. One participant was removed due to being under the age of 18. Participants taking shorter time than seven minutes on the survey were considered individually. Two

participants were removed due to answering the survey considerably faster than the rest. Lastly, participants spending less than one minute reading the article and comment section were removed. One minute was decided as a threshold as it took the author roughly 60 seconds to read the article and comment section as quick as possible. For the control group, participants spending less than 40 seconds reading the article were removed, following the same logic as above. Regarding time spend on manipulation a total of 17 people were removed (four in Group 1, four in Group 2, four in Group 3, five in Group 4).

Of the participants meeting the exclusion criteria 129 were male, 93 female, one other and three preferred not to answer. The occupation of the remaining participants were 53 students, 128 full-time workers, 16 part-time workers, 23 were unemployed and six retired. The average age was 35.4 ($SD=11.13$). The final distribution of participants between the four groups were; 53 participants in Group 1, 54 participants in Group 2, 58 participants in Group 3, 61 participants in Group 4. The sample size was calculated by using G-power (Faul, Erdfelder, Lang, & Buchner, 2007) for ANCOVA, with a medium effect size ($f=.25$), 80% power, two covariates and $\alpha=.025$ resulting in a final sample size of 212. As G-power does not have a calculation for MANCOVA, the alpha value was chosen by dividing the original value of .05 by number of dependent variables (two) to give the best estimate of the required sample size.

Material

Article about the metoo movement. The text regarding the metoo movement was retrieved from a Swedish news agency and translated to English (Sveriges Television, 2018). The names in the text were changed to either indicate supporting the metoo movement (e.g. the supporter) or opposing the metoo movement (e.g. the opposer). After the text was translated final edits and suggestions were received from two independent native English speakers.

Comments regarding the article. Thirty comments were collected by asking acquaintances of the researcher to write comments on the metoo article. The instructions were to write either a pro or against comment on the metoo movement consisting of roughly 50-100 words, resembling a typical comment on a social-networking site. Examples of pro and against comments were included in the instructions to facilitate the writing process. After 30 comments (15 pro and 15 against metoo) were collected, they were pilot tested by 20 participants. The pilot-test consisted of the text about the metoo movement and instructions that participants should rate the comments as input to the text about metoo. The comments were rated on a five-point Likert-scale (completely agree-completely disagree) consisting of the two items; “The comment feels realistic (it could have been written in a comment section)” and “The comment is well argued”. Further, one item concerning direction of the comment was asked; “Is the comment supporting or opposing the metoo movement?” (Supporting, opposing, both and neither). Comments having less than 18 out of 20 answers in the same direction (opposing or supporting) were excluded. Finally, four pro and four against comments were chosen by having the descriptively highest average rating on the two Likert-scale question.

The photographs. Eight photographs of faces were collected by asking acquaintances of the researcher to send a picture of their faces. Four of the pictures were photographs of males and four were photographs of females. The people photographed were all Caucasians. The faces were collected so that they could be attached to the comments, making it resemble the design of a comment section. The instructions were to send a picture that clearly shows your face, resembling a social media profile picture and not showing any extreme facial expressions. The final eight comments were included in the instructions. It was made clear that if one decided to send a picture of themselves it could be attached to any of the eight comments, and that sending a picture was completely optional. Further, the people

who sent photographs were asked for consent and were ensured that the photograph would be deleted after the study, and finally that the last page of the survey would include a text highlighting that the picture and its attached comment were unrelated. The measurement of the photographs was 140x140 pixels for the big-picture group and 40x40 pixels for the small-picture group.

Pictures for control group. The Facebook-neutral pictures (the picture Facebook assign users who does not select a profile picture) were attached to the comments in the control group. Two different pictures, one indicating male and one indicating female were used. The measurements of the pictures were 140x140 pixels.

Measurements

Demographics. The demographic information collected was age, gender, occupation, and usage of news sources. This information was mainly collected to ensure external validity.

Commenting on the material. The possibility of interacting with the stimulus material was provided to the participants in the form of a comment section. In the control group participants were offered the possibility of responding to the article about the metoo movement. In the three other groups the participants were offered to comment on the post and the pre-existing comments. The participants were also given the opportunity to comment without writing an actual comment, and instead just indicate with an “X” that they would partake in the discussion.

Opinion on the metoo movement. One self-constructed question “Society only benefitted from the metoo movement” rated on a 11-point Likert-type-Scale (completely disagree – completely agree). The question was pilot tested to avoid floor and ceiling effects,

and the longer scale was chosen to further reinsure that there would be no floor and ceiling effects (Dawes, 2002).

Self-awareness scale. Fenigstein, et al.'s (1975) scale of Self-consciousness was used. The scale measures private self-awareness, public self-awareness and social anxiety. The original scale consists of 23 items, nine measuring private self-awareness, eight measuring public self-awareness and six measuring social anxiety. The original items are rated on a 5-point Likert-scale. The scale's internal consistency is .8 with some variations (Fenigstein et al., 1975). The scale was transformed by deleting the social anxiety sub scale and deleting the item "One of the last things I do before I leave my house is look in the mirror" from the public self-awareness subscale as it did not fit the study. The final scale consisted of 16 items, where nine measured private self-awareness and seven measured public self-awareness. The scale was also converted into a 7-point Likert-scale (strongly disagree – strongly agree). Before each of the items the text "While reading the article I..." aiming to measure the feeling of the participants while reading the article. The language of the scale was edited to fit the starting sentence.

Ambivalent sexism scale. The Ambivalent Sexism Inventory created by Glick and Fiske (1996) was used to measure attitudes regarding sexism. The scale consists of 22 items, 11 measuring hostile sexism and 11 measuring benevolent sexism. Out of the 11 benevolent sexism items, four measure heterosexual intimacy, four measure protective paternalism and three measure complementary gender differentiations. The original scale was rated on a 6-point Likert-scale. To be able to conduct the analysis a mid-point (neither agree nor disagree) was added, transforming the scale into a 7-point Likert-scale. Adding the mid-point was necessary for our data analysis because if everyone polarises in the same direction a difference regarding polarisation would not be obtained by comparing standard deviations. Conducting comparison of the mean would thus also underestimate the polarisation,

increasing risk of a type 1 error. The scales internal consistency is reported to be between .79 to .91 (Glick & Fiske, 1996).

Control question. At the end of the survey a control question was posed to the groups being exposed to a photograph of a face. The question was “Did you recognise any of the people whose faces were shown in the comment section?”. This question was asked to increase the likelihood that people believed the comments attached to the photographs. People who recognised the participants could be less likely to believe that the person they recognised had uttered the statements. The reason for putting the question in the end was to get the participants answers as quickly as possible after the stimulus occurred. Asking the question earlier could thus have drawn attention from the given stimuli.

Procedure

The survey was created using SoSci Survey (Leiner, 2018). Apart from the pre-made tools available, the questionnaire was coded using php and html-coding. The main operations that were coded were random allocation to groups, order of the comments in response to the article and randomisation of pairing picture and comment. The survey started with informing the participant about expected time, guaranteeing anonymity and informing that the participants could withdraw at any time. After accepting to partake in the study, the participants were asked to fill out demographics. Before the participants were exposed to the stimuli (article and/or comment section) a short text informing them about the forthcoming page, telling them either that they will be exposed to an article or an article with a comment section (depending on which group they were allocated to), was shown.

The participants were randomly allocated to one out of four groups. All four groups were exposed to the article about the metoo movement. The big-picture group was also exposed to a comment section below the article where each comment had a photograph of a

face with the measurement 140x140 pixels attached. The small-picture group was exposed to a comment section below the article where each comment had a photograph of a face with the measurement 40x40 pixels. The comment-only group was exposed to a comment section below the article where each comment had the Facebook neutral profile picture attached with the measurement of 140x140 pixels. The control group was only exposed to the article. In the three experimental groups four comments out of eight were chosen at random. There was no restriction to the ratio of pro or against the metoo movement comments chosen for the article, as it was not within the scope of the study. Four photographs were also drawn at random, and no restriction concerning gender was made. The same procedure was taken with the comment-only group, randomly drawing four pictures of male and female. The placement of the comments and photographs was programmed to be randomly placed for each survey. Further, the layout of the comment section and article was made to look like a Facebook post, by using the font Facebook uses as well as its colour scheme. At the bottom of the page the participants were given the possibility to partake in the comment section by being able to write a reply to the article and each of the four comments. Participants were informed that this step could be ignored. They were also informed that they could just indicate participation by typing "X" where they would have commented, not forcing them to write a full-length comment.

After the stimuli the participants were asked to indicate their attitudes regarding the metoo movement. They were later asked to fill out the self-consciousness scale (Fenigstein et al., 1975). On the next page participants were asked to fill out the Ambivalent Sexism Inventory (Glick & Fiske, 1996). The last question of the survey was the control question asking the participants if they recognised any of the faces shown in the comment section. The control question was only shown for the two groups having pictures of faces. Before the final page all participants were told that they might have been exposed to faces,

and it was clarified that the comments were made up and the faces attached to them have never expressed the given statements. The final page thanked the participants for their participation.

Ethics

The study collected sensitive data in the form of political opinions. The political attitudes collected were ambivalent sexism using the Ambivalent Sexism Inventory (Glick & Fiske, 1996). It was decided to measure political attitudes as the political discussion is a frequent topic on Social-Networking Sites (SNS). The study aimed at investigating whether including a picture of a face could decrease attitude polarisation and using political attitudes would thus be of more importance for understanding the political discourse on SNS. Further, the study had two dependent variables; ambivalent sexism and opinions about the metoo movement. As the article concerned the metoo movement, attitudes on the metoo campaign were also measured. The decision to also include ambivalent sexism would allow the researchers to draw further conclusions generalising attitude change to more underlying attitudes such as ambivalent sexism. Regarding collecting political opinion, the measurement, Ambivalent Sexism Inventory, is frequently used in research with over 3500 citations on Google scholar. Given the demographics and the collection method, it would be impossible to identify the participants of the study. The data will never be looked at individually, and comparisons will only be made at a group level.

Consent was asked for the use of each of the photographs collected. The person whose photograph was collected was informed about how their faces would be used, and it was made clear that it was completely voluntary to submit a picture. To be clear that the comments and pictures are unrelated the last page of the survey clarified that they are unrelated to one another, and that the person in the picture has never expressed the statements. There could be a possibility of sharing the faces, however, we believe that this is not any

different to regular scenarios encountered on social media. Lastly, reading comments about a movement such as metoo could be upsetting. However, this topic has been a topic of discussion in everyday life, and the comments chosen for the research are not of a nature that could cause harm to the participants of the study. To conclude, the research is in line with the ethical guidelines stated by the Swedish research council (Vetenskapsrådet, 2017).

Results

The data was analysed with R, version 3.6.0 (RCore Team, 2019). Before the analysis could start the items reversed by design in the Ambivalent Sexism Inventory (ASI) and the Self-Consciousness Scale were considered and hence reversed to measure the same direction as the other items. The participants' scores of ASI were then averaged for each participant, ascribing them a final sexism score. Regarding the Self-consciousness Scale, the items measuring private self-awareness were averaged, giving the participants a score of private self-awareness. The same procedure was conducted for public self-awareness. Higher values of opinion about the metoo movement indicates more affiliation with the movement, higher values on the ASI indicates higher levels of sexism, and higher values of both public and private self-awareness indicates that the participants are more self-aware. For overview of the descriptive statistics see Table 1. For an overview of the differences between the four groups see Table 2.

Table 1.

Descriptive Statistics of Variables.

	Min	Max	<i>M</i>	<i>SD</i>	Kurtosis	Skew
Metoo	1	11	6.53	2.98	-.73	-.41
Sexism	1	7	3.82	1.22	-1.06	-.33
Private SA	1	7	3.72	.88	-.21	-.05
Public SA	1	7	3.17	1.47	-.75	.48

Note. Metoo refers to the item measuring opinion about metoo. Sexism refers to the Ambivalent Sexism Inventory. SA refers to Self-awareness. Min and Max refer to the lowest respectively the highest value of the scale used. *M* and *SD* refers to the mean value and standard deviation of the scales.

Table 2.

Mean and Standard Deviation Scores for the Different Groups

	Group 1	Group 2	Group 3	Group 4
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Metoo	6.53	3.03	6.3	2.88
Sexism	4.1	1.00	3.8	1.23
Private SA	3.68	.92	3.76	.67
Public SA	3.14	1.50	3.38	1.34

Hypothesis 1 – Sexism Polarisation

The first hypotheses aimed at investigating whether including a photograph of a face has any effect on attitude polarisation and whether increasing the size of the face limits attitude polarisation. As hypothesis 1 intended to measure polarisation, the assumptions of heteroscedasticity were believed to be violated. To investigate if the assumption was indeed violated, a Levene's test was conducted by predicting the dependent variable – sexism scores, over the independent variable – the four groups. The Levene's test turned out significant ($F(3, 222)=2.98, p=.032$), indicating that the groups possessed unequal variance. To find out which groups had the more extreme scores on ASI, the residuals were calculated by $R = \sqrt{(X - M)^2}$, where R is the residuals, X the individual sexism score and M the median of the sexism score for each different group. The median was used for residuals calculation as it is less prone to extreme scores. The main analysis was performed by conducting a Kruskal-Wallis h-test, on the dependent variable – ASI residuals, predicted by the independent variable – the different groups. The Kruskal-Wallis h-test turned out non-significant ($\chi^2=8.11, p=.032$). To find out if there were any significant differences a post-hoc analysis was conducted using Dunn's test. The Dunn's test turned out non-significant ($Z=-2.78, \text{adjusted } p=.033$). The p-correction used was Holm's method. The result of the data analysis deemed hypothesis H1a, H1b and H1c non-significant.

Hypothesis 2 – Polarisation Regarding Metoo

The second hypotheses aimed at investigating if less extreme opinions about the metoo movement would be held by participants being exposed to a photograph and whether the size of the photograph would have any effect on polarisation. The same procedure as hypothesis 1 was carried out. The Levene's test, predicting the dependent variable metoo opinion by the independent variable – the different groups, turned out non-significant ($F(3, 222)=1.50, p=0.215$), indicating that heteroscedasticity was present. The residuals were then calculated the same way as in hypothesis one, by taking the absolute value of the difference between the metoo scores and the group median. A Kruskal-Wallis h-test was then performed on the dependent variable – metoo residuals predicted by the independent variable – the different groups. The Kruskal-Wallis h-test confirmed the result of the Levene's test ($\chi^2=.97, p=.808$), arriving at the conclusion that hypotheses H2a, H2b and H2c were non-significant.

Hypothesis 3 and 4 – Partaking in the Discussion

The last two hypotheses investigated differences in polarisation among the participants indicating or partaking in the discussion. The distribution among the groups was 30 in Group 1, 33 in Group 2, 27 in Group 3 and 37 in Group 4. The same procedure was conducted as in the hypothesis test for 1 and 2, using the residuals of both the metoo opinion and ASI as dependent variables and the groups as the independent variable. The Levene's test for the ASI turned out significant ($F(3, 119)=3.08, p=.030$) and the Levene's test on the metoo opinion turned out non-significant ($F(3, 119)=0.22, p=.884$). The residuals were then calculated the same way as hypothesis 1 and 2. Lastly, two Kruskal-Wallis h-tests were conducted on the respective residuals as dependent variable and the groups as independent. The Kruskal-Wallis h-test on the ASI residuals turned out non-significant ($\chi^2=3.61, p=.307$) and the Kruskal-Wallis h-test on the metoo residuals turned out non-significant ($\chi^2=.78, p=.854$). concluding that the hypotheses 3 and 4 were non-significant.

Hypothesis 5 and 6 – Self-Awareness Mediation.

Before the hypotheses testing started, differences in private and public self-awareness between the groups were considered. To test whether the groups differed in terms of private and public self-awareness an ANOVA was conducted. The assumptions for ANOVA were checked and were not violated. The ANOVA on the dependent variable private self-awareness predicted by the independent variable, the four groups, turned out non-significant ($F(3, 222)=.82, p=.486$). The ANOVA on the dependent variable public self-awareness predicted by the independent variable, the four groups, turned out non-significant ($F(3, 222)=.54, p=.653$). The results indicate that there are no significant differences in self-awareness between the four groups. Regarding the mediational analysis, the steps from Baron & Kenny (1986) using regression were used to determine whether mediation was possible. The first step regresses the predicting variable on the outcome variable. The second step is to regress the predicting variable on the mediating variable. The third step is regressing the independent variable and the mediating variable on the outcome variable. If one of these steps turns out non-significant mediation is deemed highly unlikely (Baron & Kenny, 1986). As the study contained several groups, Group 1 and Group 4 were used as the predicting variable, as they were deemed having the most notable difference in terms of actual content. The outcome variables used were the residuals of the metoo question and the residuals of the ASI, and the mediating variables were private and public self-awareness. Before the analysis started, Group 1 was dummy coded as 0, and Group 4 was dummy coded as 1. For the first step, the Group 1 and Group 4 were used to predict the residuals of both the dependent variables. The regression on the ASI residuals predicted by Group 1 and Group 4 turned out non-significant ($R^2=.03, F(1, 112)=4.02, p=.057$). The regression on the metoo residuals turned out non-significant ($R^2=.01, F(1, 112)=.57, p=.456$). As all the first three steps proposed by Baron &

Kenny (1986) need to be significant for mediation to be likely, hypothesis 5 and 6 were concluded non-significant.

Discussion

The discussion outlined below will be presented by discussing the two major themes of the paper, attitude polarisation and self-awareness. Hypothesis 1-4, investigating whether a photograph of a face could limit attitude polarisation and whether the size of the photograph matter will start the discussion. The second part of the discussion will deal with hypotheses 5 and 6, investigating whether public and private self-awareness mediated the possible polarisation. Both themes will be discussed through the two themes; influence of manipulation and influence of measurements. Influence of manipulation refers to the material used in the study – namely the pictures, the comment section and the article. Influence of measurement refers to the scales and items used in the study.

Attitude Polarisation

As neither hypothesis 1, 2, 3 nor 4 yielded significant results, indicating that including a photograph with a comment section, or a comment section without photographs affects polarisation considerably, regardless of participation in the comment section. The results indicate that the inclusion of a photograph does not have a similar effect on polarisation as the video-feed used in both Siegel et al. (1986) and Sia et al. (2002). We suspected that a smaller effect would be elicited from a photograph than from an actual live video of the correspondent. To make up for the possibly smaller effect, more participants were collected (226) compared to the 195 in Sia et al. (2002) and 54 in Siegel et al. (1986). There are some vague indications that there could be an effect, as the trend of each group's standard deviations lined up similarly to the hypothesised direction (see Table 2). This could indicate an underpowered study or the need for a different methodology to obtain a possible

effect. However, the trend could just have been obtained by chance, and thus does not necessarily indicate anything of importance.

Influence of manipulation. There are some possible influences on attitude polarisation in the material chosen for the study. First the theme of the article was the metoo movement, and the comments on the article were collected on the premise of being well argued. Previous research on attitude polarisation states that Persuasive Argument Theory (PAT) mediates attitude polarisation through the persuasiveness, originality and validity of the argument provided to the participants (Burnstein & Vinkur, 1977). There is a possibility that, given the widespread nature of the metoo movement, the participants had been exposed to several of the arguments regarding metoo beforehand, limiting the effect of the comments as a contributor to polarisation through lack of originality i.e. not novel enough arguments. This possibility – a lack of polarising effect from the comment section, is supported by the result obtained from the study, as the control group and the group only containing comments did not differ significantly in terms of polarisation. Furthermore, this could have affected the entire study. Burnstein and Vinokur (1973) states that the mediating effect on attitude polarisation comes from PAT. If the arguments provided in our study were not enough polarising on their own, the photographed face would not have an effect. The hypotheses stated in this paper aims at investigating a possible moderating effect from the photographs. These could not possibly be a mediating factor due to that people would not polarise by solely seeing a photograph of a face as there would be no material present that would provide arguments needed for attitude polarisation. The possible effect of a photograph would thus be dependent on the effect of the comments. As the comments provided did not seem to influence polarisation, the possible effect from a photograph of a face would logically not affect the ratings by the participants.

A second possibility is that the pro and con arguments cancelled each other out, resulting in a weaker polarisation effect. Even if this is a possibility, the polarisation hypothesis stated by Lord et al. (1979) argues that participants could become more convinced by the arguments already on their side, making them polarise in the direction they leaned towards. The comments included were also pre-tested, making sure they would be clearly pro or against the metoo movement as well as trying to make them as well argued as possible. I hoped that providing well argued, and clearly pro or con metoo comments would make the participants pick a side, making them more likely to discount the opposing view, as Lord et al. (1979) stated.

Lastly, the photographed faces chosen in the study could have affected the results. All the eight faces photographed were Caucasian and young adults which could have had an impact through the stereotype these characteristics evoke. To counteract this as much as possible by choosing the topic to be gender related rather than e.g. ethnicity, something that was easier to control by having an equal number of males and females. As the photographs were from acquaintances of the researcher, they were not standardised or pre-tested either (as it is beyond the scope of the study). This could affect the result as more noise coming from facial expression, looks and their characteristics. I would argue that the photographs chosen also had some advantages. By choosing acquaintances I had the possibility of asking them to mimic a social media profile picture, thus increasing the resemblance of a social media comment section.

Influence of measurements. The study aimed at investigating attitude polarisation on two different dependent variables namely sexism, measured through the Ambivalent Sexism Inventory (ASI) and metoo affiliation, measured through one self-made item. Regarding the ASI the scale does not necessarily need to be related to the metoo movement. However, as the metoo movement concerns sexual violence towards women we

inferred that people who scored higher on the ASI would be less concerned about the issue. Sexual violence would probably be coined as hostile sexism, something the ASI measures. However, as metoo sparked into a larger discussion covering more areas than just sexual violence it was decided to keep the entire scale.

Like the ASI, the metoo question did not show significant results. The phrasing of the item could have affected the result. The question was constructed so as not to obtain any floor or ceiling effects (as it would jeopardise the analysability of the polarisation), resulting in the phrasing “the metoo movement only benefitted society.” The goal of not obtaining notable floor or ceiling effects was reached (see Table 1). As stated earlier, the question aimed at measuring polarisation in relationship to the article and comments provided. The question was phrased more generally, possibly evoking the participants’ position on the metoo movement as a whole and not specifically in relation to the material provided in the questionnaire (the article and the comments). A rephrasing, more related to the material provided, e.g. “which viewpoint do you agree with the most” making the participants decide with either the opposing or supporting side could have yielded different results, and perhaps would have made the participants focus more on the material provided in the questionnaire.

Self-Awareness

Hypothesis 5 and 6 did not yield any significant results as neither public nor private self-awareness met the criteria for mediation stated in Baron et al (1986). The data analysis conducted on self-awareness could have been viewed as quite harsh, only testing the differences between the Group 1 and Group 4. The main idea with the analysis was that if significance was found, the next step would have been to find out if the significance was due to the pictures (by testing Group 1 and Group 3) or the comments (by testing Group 3 and Group 4) with the same steps as used in the analysis for Group 1 and Group 4. Regarding both

public and private self-awareness, no differences were found between the groups, indicating that self-awareness did not change notably between the four different conditions.

Influence of the manipulation. The assumption checks for mediation further highlighted that there was no relationship between neither public nor private self-awareness to the different conditions. This suggests that self-awareness did not change based on the manipulation the participants received. As this is the case, the results indicate that seeing a picture of a face did not affect the participants' self-awareness. As previous studies on polarisation and self-awareness used a video-feed of the participants, it is possible that a photograph would not produce a similar effect. A main difference would be that in a video-feed the participants could respond directly through changes of facial expression. Previous findings state that providing visual cues increases private self-awareness, as people become less distracted and thus more attentive to their own feelings and beliefs (Fenigstein et al., 1975). If the main contributor to an increase in private self-awareness would be less distraction through not seeing a respondent, the difference in the present study to previous similar studies (see Sia et al., 2002; Sassenberg et al., 2005; Joinson, 2001; Siegel et al., 1986) could be explained through difference in distractions. It is probable that a video-feed that moves would draw more attention to itself than a non-moving photograph of a face, raising the question of whether it is the distraction itself, rather than the distraction of seeing a face that affects changes in private self-awareness. However, considering the result from Joinson (2001), that being distracted by something else than a person evokes higher private self-awareness than solely being distracted by a person, it is probable that being distracted by another individual would raise self-awareness.

The findings on public self-awareness are more in line with previous research, which has also struggled with finding a significant difference of public self-awareness between FtF and CMC settings (Matheson & Zanna, 1988; Sassenberg et al., 2005). In

general, public self-awareness has usually been induced by including an audience or priming the participants with the feeling of being under surveillance, or simply making them identifiable to others (Sia et al., 2002). The study lacked any identifiability cues that are for example present on social media. On social media users are usually presented with their name or a profile picture in the comment section. In Joinson (2001) public self-awareness was manipulated by making the participants more identifiable, producing a significant result. Due to ethical and resource related issues our study did not have any identifiability cues that are usually present on social media (such as name and profile picture of the participants). This could have contributed to lower public self-awareness as there were no cues telling people that they might be under surveillance by others. Further, the asynchronous communication in forums could contribute to the sense of being watched. The participant could leave a comment, but no one would answer it, which could have limited public self-awareness as it could decrease the sense of being monitored as no one reacted instantly to the comments posted by my participants. Previous studies that elicited an effect on public self-awareness managed to elicit a result by comparing synchronous conversation settings to each other or by heightening individuals' identifiability (Matheson & Zanna, 1988; Joinson, 2001). It remains unclear whether asynchronous forum conversations could change public self-awareness as the identifiability traits in the present study were absent.

Influence of the measurement. If self-awareness is everchanging and highly situational, the participants in the study might have had trouble recalling their state of mind while taking part of the manipulation. The use of the entire scale might have played a role, as only a few items were used in previous research (Matheson & Zanna, 1988). The unclarity in previous research made us want to measure it with a more reliable scale, only erasing the specific items that could not fit the given subject. As self-awareness changes from situation to situation, the answers might have been altered when answering the survey, raising the

question of if it measured the self-awareness they felt when taking part in the manipulation. The order of the questionnaire was constructed in a way so the participant would be affected in line with the proposed mediated stages of self-awareness. Sassenberg et al. (2005) states that self-awareness is mediated by communication settings, which could alter attitude polarisation. It was decided to put the metoo question first as it was only one item, and after it the self-awareness scale was placed, making it appear as early as possible in order to get a reliable measurement of the participant's score. Further, it was expected that filling out the scale would then prolong the self-awareness the participants felt while taking part of the manipulation, spilling onto the ASI. But if self-awareness would be highly situational the participants answers could ebb out, making them more similar among the different conditions. Lastly, the way self-awareness is measured in Matheson and Zanna (1988), using only two items for public and private self-awareness respectively may capture the situational characteristics of self-awareness better.

Future Research

As the present study did not produce any significant results partly due to an unsuccessful manipulation, future research could benefit from investigating a similar topic while using a pre-tested manipulation to ensure that attitude polarisation would occur, ultimately investigating whether a photographed face affects the strength of the polarisation. A different methodology could also be used to investigate a similar phenomenon. To investigate whether a photograph moderates the effect of attitude polarisation, a method tailored around moderation could be used, such as a 2x2 design. One variable could thus be the absence or presence of a photograph, while the other uses a polarising or non-polarising discussion topic. This could also be tested through different variations of communication tools used by computers such as more synchronous communication i.e. chat-programs or a similar asynchronous communication setting as in the present study. Further as ratio of pro and

against comments were not controlled for in this study, there is a possibility that the arguments cancelled each other out. Future studies could control for this by not controlling the ratio of comments for or against a certain topic and seeing whether a photograph affects polarisation and self-awareness in such a scenario. Lastly, investigating whether a photograph elicits self-awareness could be done more simply by comparing levels of self-awareness while letting participants communicate through a chat-program, investigating if the participants differ in self-awareness based on the presence of a communicating partners photograph.

Conclusion

The present study aimed at investigating whether attitude polarisation could be reduced by including a picture of a face, and whether private and public self-awareness mediated this difference. The study yielded no significant results. The most apparent contributor to the non-significant results regarding attitude polarisation might have been the fact that the comments used to cause polarisation did not seem to produce an effect. However, the comments were pre-tested on quality and direction regarding the metoo movement, trying to ensure a polarising effect. Thus, the more likely reason that no significance was found could be due to the topic chosen in collusion with the comments provided.

Regarding the self-awareness hypotheses we believe that the measurement might not have captured the emotional state the participant might have been in while taking part of the manipulation to the best possible extent, and perhaps a shorter scale consisting of fewer items would have done a better job. Private self-awareness might not have been altered due to the lack of distraction produced by a picture, and public self-awareness might not have been altered as the study did not provide the participants any identifiability cues.

Even if the study did not produce any significant result, the study still has its strengths. If some minor changes, as shortening the Self-consciousness scale, changing the

topic and finding comments that produce polarisation were carried out, the design closely resembles a social networking site's comment section. Being able to research an area while simultaneously trying to maintain a high external validity could provide the researcher with valuable knowledge about how the phenomenon appears naturally. The present study tried to provide insight on polarisation and provide an easy solution to decrease or increase it by simply having a photograph of a person present by a comment. The main findings of the study indicate that a photograph of a face might not alter self-awareness.

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