Faced with exclusion:
Perceived facial warmth and competence influence moral judgments of social exclusion

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Abstract

The current research investigates how facial appearance can act as a cue that guides observers' feelings and moral judgments about social exclusion episodes. In three studies, we manipulated facial portraits of allegedly ostracized persons to appear more or less warm and competent. Participants perceived it as least morally acceptable to exclude a person that appeared warm-and-incompetent. Moreover, participants perceived it as most acceptable to exclude a cold-and-incompetent looking person. In Study 2, we also varied the faces of the excluding group (i.e., the ostracizers). Results indicate that typical ostracizers are imagined as cold-and-incompetent looking. Study 3 suggests that the effect of a target's facial appearance on moral judgment is mediated by feelings of disgust. In sum, people's moral judgment about social exclusion can be influenced by facial appearance, which has many implications in intergroup research, such as for bystander intervention.

Keywords: social exclusion, ostracism, faces, stereotype content model

Introduction

Social exclusion, bullying, and ostracism are ubiquitous phenomena. Most people can easily remember one or many occurrences when they observed someone being excluded from a group, be it at school, at the workplace, on an Internet platform, or on a TV reality show. How individuals judge such a situation of social exclusion, however, highly depends on how they understand the respective situation (Wesselmann, Wirth, Pryor, Reeder, & Williams, 2013; Rudert & Greifeneder, in press): Do they assume, for instance, that the guy from the other department is being excluded from all social activities for no reason, or that he behaved in a cold and selfish way before and is now being "rightfully" punished by his colleagues? Making such a moral judgment can be difficult and time-consuming, which is why people may revert to heuristics or stereotypes that help them to make quick judgments (Brewer, 1988; Fiske & Neuberg, 1990). In doing so, individuals rely on easily available and particularly salient cues, such as a person's face (Hassin & Trope, 2000). Even though most people might agree that it is neither fair nor justified to exclude a person for no other reason than his or her face, facial cues have been shown to influence a variety of judgments as well as emotional and behavioral responses (Berry & Zebrowitz-McArthur, 1988; Keating, Randall, Kendrick, & Gutshall, 2003).

Building on this evidence, we investigate three central research questions: (a) whether a person's facial appearance influences an observer's judgment on how acceptable it seems to exclude that person from a group, and (b) which facial characteristics increase or decrease the acceptability of exclusion. Particularly, we focus on differences in acceptance of social exclusion as a response to specific combinations of perceived warmth and competence. Finally, we investigate (c) whether these differences in moral judgment are the result of emotional reactions triggered by the facial appearance of the target of exclusion. We build our predictions on research about social exclusion, facial appearance, and the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002).

Acceptability of Social Exclusion

Social exclusion, bullying, and ostracism are common phenomena in society: According to the 2010 National Health Interview Survey, about 8% of U.S. employees reported being bullied or harassed at work (Alterman, Luckhaupt, Dahlhamer, Ward, & Calvert, 2013), while among school children aged 12 - 18, the percentage rises to 27% (U.S. Department of Education, 2013). The consequences of social exclusion can be highly detrimental for victims, leading to feelings of depression, passivity, detachment, and learned helplessness in the long run, which can subsequently result in extreme behavioral consequences such as suicidal attempts (Williams, 2009).

The powerful effects of social exclusion are not limited to its victims, however. In fact, most individuals seem to be aware that social exclusion is not to be taken lightly. Studies investigating the role of third-party observers have usually found evidence for vicarious ostracism, that is, people tend to empathize with the targets of social exclusion and try to support them (Masten, Morelli, & Eisenberger, 2011; Wesselmann, Bagg, & Williams, 2009; Will, Crone, van den Bos, & Güroğlu, 2013; for an overview see also Wesselmann, Williams, & Hales, 2013). In general, results indicate that social exclusion is seen as morally unacceptable and is strongly disliked by individuals.

Wesselmann, Wirth, and colleagues (2013) demonstrated in a set of studies that if participants watch another person being ostracized in an online ball-tossing game (Cyberball) without any additional information, they will express sympathy for the ostracized target and try to compensate by directing more throws towards that person. However, results were different when the ostracized target seemed to be throwing the ball deliberately slowly. In that case, participants interpreted ostracism as a punishment that was self-inflicted by the target because he or she slowed down the game. As a result, participants perceived social exclusion as acceptable and even joined other ostensible players in ostracizing the target person from the game (see also Wesselmann, Williams, & Wirth, 2014). Similarily, Hales, Kassner,

Williams and Graziano (2016) showed that individuals are more inclined to exclude and ostracize a person who has failed to help a friend before and is therefore perceived as disagreeable. In sum, the studies indicate that individuals who display a disagreeable, uncooperative, and cold attitude are perceived as burdensome and expendable, and thus, excluding them appears morally acceptable.

In the abovementioned studies, participants knew or even experienced the reason for the ostracism first hand. However, such obvious clues might often be missing in real life, especially when the observer is not a part of the group but merely watches a previously unknown group excluding one of its members. Think for instance of a teacher who is confronted with an ostracism situation in the schoolyard, or a new employee who observes one team at work deliberately excluding one of its members from social activities. How can these previously uninvolved observers come to a conclusion about whether ostracism is justified and acceptable or whether they should step in and assist the excluded target?

If observers have an adequate amount of time and motivation, they might engage in further inquiries such as trying to understand the situation and the events that resulted in the exclusion. However, especially when time, motivation, or cognitive capacity are limited, observers might instead rely on simple heuristics and cues as well as categorization processes and stereotypes to form an impression (Brewer, 1988; Fiske & Neuberg, 1990; Fiske, Neuberg, Beattie, & Milberg, 1987; Macrae, Milne, & Bodenhausen, 1994). An impression based on cues and heuristics is swiftly formed and can be very pervasive, though not necessarily valid. Here we focus on facial cues, as further discussed below.

Facial Appearance and First Impressions

When asked whether a person should be excluded due to his or her facial appearance alone, most people may find this an insufficient or even cruel reason. However, even though individuals did not choose their facial characteristics and even though people usually agree that “a book should not be judged by its cover,“ research has repeatedly demonstrated that

facial cues nevertheless strongly influence people's judgment. In fact, individuals intuitively and very swiftly draw inferences about others' personality traits based merely on the appearance of their faces (Ballew & Todorov, 2007; Bar, Neta, & Linz, 2006; Willis & Todorov, 2006). Moreover, there is a high overlap in people's expectancies of what a person with a certain personality might look like. For instance, there is a high agreement regarding which faces look nice, sincere, and trustworthy or powerful, agentic, and dominant, (Berry & McArthur, 1985; Oosterhof & Todorov, 2008; Todorov & Oosterhof, 2011; Walker & Vetter, 2016, 2009; Zebrowitz, Voinescu, & Collins, 1996), which can be observed even cross-culturally (Walker, Jiang, Vetter, & Sczesny, 2011).

Here we investigate whether individuals use certain cues derived from a person's facial appearance in order to judge how acceptable it is to exclude this person. What makes this research question especially intriguing is that this easily available cue is not necessarily a good one: Research has repeatedly demonstrated that cues derived from facial appearance may lack objective validity, and using faces as sources of information can result in overconfidence effects and lower judgmental accuracy (Hassin & Trope, 2000; Olivola & Todorov, 2010). Still, the effects of facial appearance are rather robust because individuals are often not aware that they are using facial cues for impression formation and are unable to ignore them (Bindemann, Burton, Hooge, Jenkins, & De Haan, 2005; Hassin & Trope, 2000; Ro, Russell, & Lavie, 2001). Accordingly, information that is derived from faces can influence subsequent judgments and behavior that should objectively be unrelated to facial appearance. For example, research on the babyface overgeneralization effect has shown that individuals with babyfaces are more likely to receive help from others and are less likely to be found guilty for intentional criminal behavior (Berry & Zebrowitz-McArthur, 1988; Keating, et al., 2003; Zebrowitz & Montepare, 2008). In addition, sustaining processes such as the confirmation bias or self-fulfilling prophecies might uphold the effect of a first impression even if additional, contradicting information becomes available, for instance, when evaluating

candidates for a job application (Hassin & Trope, 2000; Kelley, 1950; Rabin & Schrag, 1999; Rule, 2014).

In sum, there is strong evidence that a target person's facial appearance is a very salient cue that can have a strong and long-lasting effect on other people's judgment and behavior towards that target person. In the following, we will argue which dimensions of facial appearance may become relevant when individuals judge how acceptable it is to exclude a target person.

Perceived Warmth, Competence, and Moral Judgment

One possibility regarding how individuals could form judgments based on facial appearance would be to use a simple division by means of valence, so that individuals would favor excluding "bad"-looking individuals over "good"-looking individuals. However, previous research has suggested that a two dimensional model is more suitable to explain the process of facial evaluation (Oosterhof & Todorov, 2008). Typically, an individual's evaluations reflect both whether the evaluated person appears to have benevolent or hostile intentions, and whether he or she appears to have the capacity to fulfill these intentions. The idea that valence is not the only relevant dimension when making judgments is also a fundamental tenet of the stereotype content model (SCM; Fiske, Cuddy, & Glick, 2007; Fiske, et al., 2002), which states that individuals evaluate other groups and their members by means of the abovementioned two universal, independent dimensions. These dimensions are called warmth and competence in the SCM. Warm groups and their members are seen as good-natured, trustworthy, tolerant, friendly, and sincere, whereas competent groups and their members are characterized as capable, skillful, intelligent, and confident (Cuddy, Fiske, & Glick, 2008).

Regarding social exclusion, the warmth/competence distinction has been shown to be of importance when individuals make attributions about why they were excluded *themselves.* Çelik, Lammers, van Beest, Bekker, and Vonk (2013) demonstrated that participants who

believed that they were being excluded because they lacked competence reacted with anger, which is an emotional response motivated by the desire to compete and to restore one's status. Individuals who believed they were being excluded due to a lack of warmth, on the other hand, reacted with sadness, supposedly because demonstrating sadness evokes the sympathy of others.

In contrast, the present research focuses on the effects of warmth and competence perceptions when individuals judge the exclusion of *others*. But do individuals actually base their judgment of whether it is acceptable or not to exclude a person on perceptions of warmth and competence? The SCM predicts that an observer's emotional reactions towards others differ, depending on how the object of one's attention is rated on both dimensions (Fiske, et al., 2002). We will first elaborate on the different combinations of warmth and competence and their related emotions and then explain how these emotional responses may influence subsequent moral judgments.

First, individuals seen as both cold and incompetent usually evoke feelings of disgust and contempt, since they are seen as exploitative and "openly parasitic" (Cuddy, et al., 2008, p. 78). This is due to two reasons: a) their goals are seen as being incompatible with others, and b) they are unable to contribute to the group in a meaningful way. Accordingly, they tie up resources and therefore are most likely to be a burden for any group. Consequently, members of stereotypically cold and incompetent groups (e.g., homeless people) are most likely to be met with active harm. This goes so far that they are often excluded from normal societal life and exist at the edge of society or even beyond (Cuddy, et al., 2008)

Second, individuals who are seen as incompetent, but warm, are typically well liked, and evoke feelings of pity and sympathy (Fiske, et al., 2007). They represent no competition and their goals are compatible with the goals of the perceiver, even though they may not have the capacity to contribute meaningfully to a group. Because these individuals are perceived as friendly and likeable but also helpless, they are also most likely to receive active help when in

need (Fiske, et al., 2007). In other words, society strives to protect these individuals from harm and exclusion.

Finally, individuals who are perceived as competent are usually met with respect, because they are seen as able, intelligent, skillful, and efficient. More specifically, individuals high in both warmth and competence evoke feelings of admiration, while individuals seen as competent, but cold, typically evoke envy and jealousy.

Here we propose that inferences about the warmth and competence of a target person and the related emotional response will affect an individual's moral judgment about how acceptable exclusion of this person is. Combining research on group stereotypes with research on facial cues, we investigate two specific predictions regarding the interplay of the two dimensions: First, a systematic bias against cold-and-incompetent looking persons and, second, a bias in favor of warm-and-incompetent looking individuals. These specific predictions will be elaborated in the following:

We propose that individuals will judge it as most acceptable to exclude a *cold-and-incompetent* looking person. The SCM predicts that people that are perceived as low in both competence and warmth are most likely to be recipients of active attacks and passive neglect (Fiske, et al., 2007), which might go so far that they are sometimes not even granted a part in societal life (e.g., homeless people). In an adaption of the trolley track problem, Cikara and colleagues (2010) demonstrated that participants found it to be most acceptable to kill targets perceived as both cold and incompetent in order to save others. In the authors' own words, these persons become "targets of relative moral exclusion" (p. 410). Building on these results, we hypothesize that individuals would also judge it as most acceptable if a group *socially* excludes a cold-and-incompetent looking person.

Moral judgment about exclusion might further depend on considerations such as the capability of the excluded targets to get along on their own. This might be particularly hard for *warm-and-incompetent* persons, which is why we further predict that it will be perceived

as least acceptable to exclude a person who looks warm but incompetent. Moreover, the primary emotions evoked by a warm-and-incompetent person are sympathy and pity, which are also the central emotions that (innocent) victims of ostracism are typically met with (Wesselmann, Wirth, et al., 2013). For this reason, excluding a warm-and-incompetent looking member from a group might be perceived as especially cruel and should be judged as least acceptable.

We further expect that the acceptance for excluding *competent*-looking individuals (both low and high in warmth) would fall somewhere in the middle between the acceptability of excluding cold-and-incompetent-looking targets and warm-and-incompetent looking targets. Different from incompetent persons, competent persons generally have high value to a group, so it might be a mistake to exclude them. However, competent people might get along alone as well or have no trouble finding a new group, so it is also not necessarily as cruel to exclude them.

Taken together, we investigate three primary hypotheses: First, we predict that faces matter when individuals make judgments about how acceptable social exclusion is. Second, we predict that acceptability of social exclusion varies based on how warm and competent the target of social exclusion looks. More specifically, we propose that individuals will perceive it as most acceptable to exclude a person who is cold-and-incompetent looking and least acceptable to exclude a person who is warm-and-incompetent looking (Studies 1 - 3). Third, we predict that the effect of facial appearance on moral judgment is mediated by the emotional response that individuals have to these faces. Specifically, we assume that the higher acceptability regarding the exclusion of cold-and-incompetent looking individuals will be mediated by feelings of disgust, whereas lower acceptability regarding the exclusion of warm-and-incompetent looking individuals will be mediated by feelings of pity (Study 3). Additionally, we investigate boundary conditions, particularly whether ostracism depends on how the excluding group is typically imagined (Studies 1 and 2).

Face Manipulation

Faces were manipulated using the Basel Face Model (BFM), a multidimensional statistical face space derived from 200 3D scans of real faces (Paysan, Knothe, Amberg, Romdhani, & Vetter, 2009). Every face scan is represented as a point in this space (Blanz & Vetter, 1999), the dimensions of which correspond to the characteristics that are used to discriminate between faces. Using previously collected warmth and competence judgments regarding most of the 200 3D scans, we were able to identify the dimensions (i.e., vectors) in the face space with maximum variability regarding perceived warmth and competence (Walker & Vetter, 2016). These vectors were then simultaneously applied to sixteen male faces from the Radboud Faces Database (Langner et al., 2010) using an analysis-by-synthesis approach (for details and validation data regarding this method, see Walker & Vetter, 2016). The manipulated faces are perceived as more or less competent as well as more or less warm, resulting in four combinations for every face (warm-and-competent, warm-and-incompetent, cold-and-competent, cold-and-incompetent; see *Figure 1*).

Based on our experience with independent studies using the same method of subtle face manipulation, we opted for an initial sample size of 160 participants in Study 1. Because this guess turned out to be adequate, we decided not to reduce sample size in Studies 2 and 3.

Pilot Study

To ensure that participants would accurately observe the warmth and competence manipulation in the different faces, the material was validated in a pilot test (Reutner, Stutz, & Walker, 2016). One hundred fifteen participants on Amazon Mechanical Turk (M_{age} = 33.51, *SD* = 11.04; 54 women, 59 men, 2 other) were presented with two versions of the same face, differing both in warmth and competence (see *Figure 1* for an illustration). Participants then indicated which of the "twin" portraits seemed more competent or warmer. In total, participants were shown 32 manipulated "twin pair" faces in random order. The pilot test was originally conducted for a different set of studies (Reutner, et al., 2016) and included both

male and female faces (no interaction between participant and target gender, $F < 1$). In the present studies, however, we used male faces only for reasons of test efficiency; the following analyses are therefore confined to male faces.

The overall percentage of correct judgments was calculated and tested against chance-level (50% correct judgments). On average, participants were able to correctly detect which face was manipulated to appear more competent or warmer than its "twin"; $t(114) = 16.10$, $p < .001$, $d = 3.02$. On a more fine-grained level, this was true for both warmth judgments, $t(114) = 16.18$, $p < .001$, $d = 3.03$, and competence judgments, $t(114) = 3.34$, $p = .001$, $d = 0.63$.

Study 1

Study 1 aimed to investigate whether participants' judgment on how acceptable it is to exclude a person from a group depends on how warm and competent this person looks. To do so, we presented participants with the 16 pre-tested male faces that were manipulated on the dimensions "warmth" and "competence." We predicted that individuals would perceive it as most acceptable to exclude a person who is cold-and-incompetent looking and least acceptable to exclude a person who is warm-and-incompetent looking.

Implicit to this prediction is that *those who exclude* (henceforth referred to as the *sources* of ostracism) are perceived in a negative way, which corresponds to research showing that observers tend to dislike it when individuals are ostracized without an apparent reason (Wesselmann, Wirth, et al., 2013). What happens, however, if those sources are high in both warmth and competence, such as members of one's ingroup (Cikara, et al., 2010; Fiske, et al., 2002)? In this situation, stereotypical perceptions of ostracizers (low in both warmth and competence) and of ingroup members (high in both warmth and competence) are in conflict. One prediction could be that inferences based on group membership trump inferences based on behavior, so that acceptability judgments should vary as a function of group membership. Alternatively, one could argue that inferences based on behavior are dominant, and hence that

ingroup/outgroup assignment has little effect. We tested these competing speculations in an exploratory manner by labeling the excluding group as either ingroup or outgroup.

Participants

We recruited 160 participants (M_{age} = 34.51, *SD* = 12.67) from Amazon Mechanical Turk (93 male, 65 female, 2 not specified). All participants were U.S. citizens. They were randomly assigned to either the ingroup or the outgroup condition, which resulted in a 2 (target warmth: high vs. low) x 2 (target competence: high vs. low) x 2 (group: ingroup vs. outgroup) mixed factorial design with the first two factors as repeated measures.

Materials and Procedure

All participants were instructed to imagine a group that has decided to exclude one of its members. Instructions varied in whether participants were supposed to imagine themselves as a part of the group (ingroup condition) or not (outgroup condition). Participants were told that they would be presented with face portraits of persons who had been excluded from the/their group and that their task would be to judge how acceptable the exclusion of each person was (see *Appendix 1* for the exact instructions).

To get accustomed to the speed of the task, participants were first exposed to three practice trials with unmanipulated portraits. Subsequently, participants were presented with 16 manipulated faces in total, with four faces each representing one of the four possible combinations of warmth and competence. We counterbalanced between participants which face represented which combination.

For each trial, participants were shown the face of the excluded person for 2 seconds. After that, participants had 4 seconds to decide how acceptable the group's action had been (1 = not at all, 4 = very). To reinforce the ingroup/outgroup manipulation, we varied between groups whether the question referred to "your group" (ingroup condition) or "the group" (outgroup condition). Subsequently, the next picture was presented. After participants had completed all 16 trials, they were asked as a manipulation check whether they had been a

member of the group themselves in the situation they had imagined. Finally, participants provided demographics and were thanked and paid for participation.

Results

Manipulation check. Seventy-eight percent of the participants answered the question of whether they had been a member of the group themselves correctly. Most individuals who gave a wrong answer were members of the outgroup condition who had instead thought about an ingroup. Running the analysis without participants who failed to answer the manipulation check correctly as well as running the analysis according to perceived group membership rather than the manipulated group membership neither changed the significance levels nor the pattern of results, which is why the analyses reported in what follows are based on the full sample of participants.

Moral judgments. We fitted a mixed linear model with acceptability as the dependent variable using the *lme4* (Bates, Maechler, Bolker, & Walker, 2015) and the *lmerTest* package (Kuznetsova, Brockhoff , & Christensen, 2016) in *R* (R Core Team, 2014). Group membership, warmth, competence and the respective interactions were included into the model as fixed effects, while both participants and faces were treated as random effects. This procedure is advantageous because it accounts for sampling variability of both stimuli and participants (Judd, Westfall, & Kenny, 2012). Aiming for a maximal linear mixed model (Barr, Levy, Scheepers, & Tily, 2013), we included both random intercepts for participants and faces as well as random slopes for warmth, competence, and the warmth x competence interaction based on participants and faces in the model (see *Appendix 2*).

An ANOVA revealed a significant effect for warmth, $F(1, 17.54) = 27.97$, $p < .001$. More crucial to our hypothesis, the warmth x competence interaction was significant, $F(1, 121.55) = 22.82$, $p < .001$, suggesting that the perceived acceptability to exclude a target differs due to the perceived warmth and competence of the target's face. Competence and group membership, and all other statistically possible interactions were not significant, *p*

> .227. Moreover, post-hoc analyses yielded no effect of or interactions with participants' gender.

In order to decompose the predicted interaction, we defined two contrasts to test our specific prediction that the exclusion of warm-and-incompetent looking individuals would be judged as least acceptable (contrast weights: 0 1 0 0) and the exclusion of cold-and-incompetent looking individuals would be perceived as most acceptable (contrast weights: 0 0 0 1). Both contrasts were significant, b = -.21, $t(106.58)$ = - 6.71, $p < .001$ and b = .23, $t(16.91) = 5.97$, $p < .001$. Participants judged it to be less acceptable to exclude a warm-and-incompetent looking person ($M_{warm/incompetent}$ = 2.13, SD = 1.05) and more acceptable to exclude a cold-and-incompetent looking person ($M_{cold/incompetent}$ = 2.47, SD = 1.12); in each case compared to the average of the three respective other combinations ($M_{warm/competent}$ = 2.25, SD = 1.06; $M_{cold/competent}$ = 2.32, SD = 1.11). The results are displayed in *Figure 2a*.

Discussion

The results of Study 1 support our first hypothesis that participants make use of facial features and derive information about a person's perceived warmth and competence in order to determine whether it is acceptable to exclude this person from a group. Moreover, supporting the second hypothesis, participants judged it as most acceptable to exclude a cold-and-incompetent looking person and as least acceptable to exclude a warm-and-incompetent looking person. These findings are in line with the SCM, which predicts that cold-and-incompetent persons evoke feelings of disgust and contempt and are therefore expendable for a group. In contrast, warm-and-incompetent persons evoke feelings of sympathy and pity, which is why it might be perceived as exceptionally cruel to exclude them from a group they depend on.

There was no effect of whether participants imagined the group to be their outgroup or ingroup. Though we tested group assignment in an exploratory manner only, we briefly discuss potential reasons for this null effect. First, the chosen manipulation may have been too

subtle and created a "minimal group" at best. Possibly, different results might be found for a more significant group distinction, such as cultural background. Second, differentiating between ingroup and outgroup may not be enough, because impression formation might go beyond pure valence evaluations on a good-bad or ingroup-outgroup distinction (Fiske, et al., 2002). Moral decisions in particular may depend on other considerations than mere liking, and “may be more complicated than simply benefitting the ingroup at the expense of the outgroup” (Cikara, et al., 2010, p. 405; see also Cuddy, et al., 2008). Finally, it is possible that participants in the ingroup-condition did not identify with their group (Tajfel & Turner, 1979), and therefore perceived the group in a similarly negative way as the outgroup, namely low on both the warmth and the competence dimension. This is especially likely because individuals might wish to distance themselves from a group that excludes others.

Taken together, there are several methodological and theoretical reasons for why labeling the sources as ingroup/outgroup did not change the pattern of acceptability ratings. Nevertheless, the question remains whether acceptability ratings towards the targets depends on the sources of exclusion. Study 2 investigates this question in a more direct way, namely by presenting the sources and manipulating their faces in the same way as the targets’.

Study 2

Study 2 seeks to further investigate whether not only the face of the excluded target, but also the excluding sources matter. Whereas Study 1 used a subtle designation of ingroup/outgroup membership, Study 2 directly manipulates facial characteristics of those who exclude. Assuming that participants in Study 1 imagined the excluding sources as both low in competence and warmth irrespective of group membership, the pattern found in Study 1 should replicate best when the sources are manipulated to look low in both warmth and competence. Among others, such a finding would allow for conclusions about the stereotypical facial characteristics of those who exclude.

To test this proposition, in Study 2 we presented participants with both manipulated faces of the excluded targets as well as manipulated faces of the excluding sources. We predicted that the interaction effect of target's warmth and competence that we found in Study 1 would be qualified by the sources' appearance.

Participants and Design

We recruited 160 U.S. participants (M_{age} = 36.86, *SD* = 11.54) from Amazon Mechanical Turk (76 male, 82 female, 2 not specified). All participants were randomly assigned to a 2 (target warmth: high vs. low) x 2 (target competence: high vs. low) x 4 (sources: warm/competent vs. warm/incompetent vs. cold/competent vs. warm/incompetent) within-subject design.

Material and Procedure

As in Study 1, participants were presented with four target faces per warmth/competence combination, resulting in a total of 16 presented target faces. In addition, the faces of the excluding group (i.e., the sources of ostracism) were manipulated and shown as well. The sources consisted of three different faces that were manipulated with the same warmth/competence combination. In total, this resulted in 16 possible target/source combinations (e.g., a cold-and-incompetent looking group excluding a warm-and-incompetent looking target).

In order to prevent random judgments due to fatigue of participants, we opted to restrict the number of judgments to the same number as in Study 1, that is, 16 judgments in total. Consequently, in Study 2 each possible target/source combination was represented by a single judgment per participant. Because the 16 faces served both as targets and as sources (but never in the same trial), participants saw each stimulus person face four times during the study. Each of the four times it was manipulated with a different warmth/competence combination. Assignment of stimulus faces to the sources and targets as well as to the manipulations were counterbalanced between participants.

Because the subject (who is excluding) logically precedes the object (who is being excluded), in each trial we presented the group first and then the excluded individual. Specifically, in each of the 16 trials, participants were first presented with the faces of the excluding group for 2 seconds. After that, participants were presented with the face of the excluded person for 2 seconds and had to decide within 4 seconds how acceptable the group's action had been.

Results

Similar to Study 1, we fitted a mixed linear model with acceptability as the dependent variable, target warmth, target competence, the sources and all possible interactions as fixed effects, and participants and faces as random effects. Subsequently, we tested our predictions with several specified contrasts as detailed below. Note that sources were entered into the analysis as one factor with four levels instead of two factors with two levels. This choice was made to test for general differences between the sources before investigating in which of the four groups of sources the predicted target warmth x competence interaction would show. We included random intercepts for participants, target faces and each of the three source faces as well as random slopes for target warmth x competence and the sources based on participants and the respective faces (see *Appendix 2*).

The analysis revealed a main effect of the target's warmth, $F(1, 36.74) = 13.38$, $p < .001$. Neither the main effect of competence, $F(1, 46.80) = 0.92$, $p = .343$, nor of the sources were significant, $F(3, 6.85) = 1.93$, $p = .215$. The two-way target warmth x competence interaction $F(1, 12.74) = 4.29$, $p = .059$ was consistent with Study 1, even though it did not reach the conventional level of significance. Crucially, however, the analysis revealed the predicted significant three-way sources x target warmth x target competence interaction $F(3, 40.28) = 4.34$, $p = .010$. This indicated that the pattern of target warmth and competence differed depending on what the sources of ostracism looked like. All other possible interactions were not significant, $F < 1$.

Target's warmth x competence. Because the pattern of means in Study 2 matches the one found in Study 1**,** we decomposed the target warmth x competence interaction with the same two two pre-defined contrasts as in Study 1, testing high warmth / low competence (0 1 0 0) and low warmth / low competence (0 0 0 1) against the average of the three respective other combinations. Both contrasts were significant, b = -.15, $t(18.42)$ = - 3.61, p = .002, and $t(15.34)$ = 2.42, p = .003, respectively. Replicating Study 1, excluding a cold-and-incompetent looking person was considered to be more acceptable (M = 2.12, SD = 1.15) and excluding a warm-and-incompetent looking person to be less acceptable (M = 1.93, SD = 1.09); in each case compared to the average of the other three combinations ($M_{warm/competent}$ = 2.02, SD = 1.10, $M_{cold/competent}$ = 2.07, SD = 1.13).

Sources x target warmth x target competence. Because we were interested in how participants construe an excluding group without prior information, we decided to compare the pattern observed in Study 1 to the pattern obtained in each of the four source groups that represent stereotypical group members according to the SCM (Fiske, et al., 2002). To this end, we specified one contrast, using the z-standardized means from Study 1 as contrast weights (-.04 -.17 .03 .18), and tested this contrast separately in each of the four groups of sources (warm/competent, warm/incompetent, cold/competent, cold/incompetent), applying Bonferroni-corrections. The contrast was significant for cold/incompetent sources, b = .06, $t(462.52)$ = 4.17, p < .001, but not for any other group (warm/competent: b = .01, $t(8.03)$ = 0.64, p = 1.000, warm/incompetent, b = .03, $t(26.61)$ = 1.69, p = 1.000, cold/competent sources, b = .04, $t(10.00)$ = 2.06, p = .264. In line with our assumptions, the interaction pattern thus replicated best for the cold-and-incompetent looking sources. This suggests that the image of the sources of ostracism that participants in Study 1 had in mind was one of a cold and incompetent group. For the descriptive results, see *Figure 2 b - e*.

Discussion

Study 2 replicates and extends the results of Study 1. Again, in line with our first and second hypothesis, we found that participants judged it as less acceptable to exclude a warm-and-incompetent looking person and more acceptable to exclude a cold-and-incompetent-looking person from a group than other persons. Moreover, appearance of the excluding group moderates the effect of the target's looks on the acceptance rating. Specifically, the target warmth x competence interaction pattern observed in Study 1 replicated best when the sources were cold-and-incompetent looking. These results support the assumption that the stereotypical image of excluding groups is inherently negative. In particular, cold-and-incompetent individuals might represent the "stereotypical" group of ostracizers that individuals have in mind when judging the acceptability of social exclusion. This is especially the case when these cold-and-incompetent looking persons (that is, the stereotypical mean bullies) exclude a warm-and-incompetent looking person (that is, a helpless victim) from the group. Such a combination might represent the "stereotypical" unfair and morally wrong social exclusion situation, which evokes feelings of injustice and anger in observers. Supporting this assumption, the above-mentioned combination (sources: cold-and-incompetent, target: warm-and-incompetent) received the lowest acceptance rating of all 16 possible combinations ($M = 1.78$, $SD = 1.04$).

When the excluding group was warm and competent, there was no influence of the target's facial appearance on moral judgment. Possibly, warm-and-competent looking sources do not match the default stereotype of an ostracizing group. Indeed, the subjective construals of a warm and competent group (normally met with admiration, Fiske, et al., 2002) and a despicable act such as excluding someone are likely incongruent and might thus interrupt or impede the automatic processing that is typical for the use of stereotypes (Blair & Banaji, 1996). As a result, the use of the target's facial appearance as a cue might be impeded and observers may be less likely to rely on the target's facial appearance for moral judgment.

We conducted Study 2 to investigate participants' mental image of stereotypical social excluders. Our results suggest that cold and incompetent sources possibly match the image of a stereotypical excluder best. Next, we turn to a different question, namely the underlying process that mediates the effect of facial appearance on moral judgment.

Study 3

Studies 1 and 2 provide support for the hypothesis that the moral acceptability of social exclusion depends on the appearance of the excluded person's face, but do not reveal much about the underlying process. Building on SCM literature (Cuddy, et al., 2008; Fiske, et al., 2007), we hypothesized that certain facial appearances elicit different emotions in observers and that these emotions affect moral judgment. Specifically, we assumed that warm-and-incompetent faces would evoke feelings of pity, which would result in low acceptability ratings. In contrast, cold-and-incompetent faces should evoke feelings of disgust, and therefore excluding these persons should be perceived as more acceptable. In statistical terms, both pity as well as disgust are hypothesized to act as mediators of the relation between warmth/competence and acceptability. We test this meditation hypothesis in Study 3.

Participants and Design

We recruited 160 US participants from Amazon Mechanical Turk. Two participants indicated that they did not want their data to be analyzed, which is why the final sample consisted of 158 participants (92 male, 66 female; M_{age} = 33.87, *SD* = 9.37). All participants were assigned to a 2 (target warmth: high vs. low) x 2 (target competence: high vs. low) within-subject design.

Material and Procedure

We used the same 16 faces as in Studies 1 and 2. First, participants were shown each of the 16 faces and told to indicate how often they thought that the respective person evoked the following feelings in others in everyday life: Pity (sympathy, pity; *r* = .64), Disgust (disgust, contempt; *r* =.60), Envy (envy, jealousy; *r* =.76), and Pride (pride, admiration; *r*

=.68). Note that the phrasing of the instruction was meant to lower the amount of socially desirable answers but still tap into participant's spontaneous emotions when seeing the faces. The four emotions were assessed with two items each (Cuddy, et al., 2008). We placed this assessment first, because a) measuring the mediator before the dependent variable appears advisable on logical as well as methodological grounds and b) in line with most SCM literature, we aimed to measure emotions that were evoked by the mere presentation of faces, separate from the context of exclusion (Cuddy, et al., 2008). After participants rated emotional responses towards the faces, they saw all faces for a second time and judged how acceptable it was to exclude this person from a group (procedure as described in Study 1).

Results

Moral judgments. As in Studies 1 and 2, we fitted a mixed linear model with acceptability of exclusion as the dependent variable. Warmth, competence, and the interaction were included as fixed effects. Participants and faces were treated as random intercepts. Additionally, random slopes for warmth, competence, and the interaction based on participants and faces were included (see *Appendix 2*).

An ANOVA revealed a significant effect of warmth, $F(1, 17.96) = 21.33$, $p < .001$. This main effect was qualified by the predicted warmth x competence interaction, $F(1, 30.78) = 25.96$, $p < .001$ suggesting that the perceived acceptability to exclude a target differs due to the perceived warmth and competence of the target's face. There was no significant effect of competence, $F(1, 18.24) = 1.12$, $p = .301$. These results mirror the results of Studies 1 and 2.

Consistent with the previous studies, contrasts confirmed that the exclusion of a warm-and-incompetent looking person was deemed less acceptable ($M_{warm/incompetent} = 2.03$, $SD = 1.06$) compared to the average of all other warmth and competence combinations, $b = -.27$, $t(241.57) = -7.77$, $p < .001$. The exclusion of a cold-and-incompetent looking person was again deemed more acceptable ($M_{cold/incompetent} = 2.39$, $SD = 1.16$), $b = .21$, $t(18.50) = 5.53$, $p < .001$, compared to the average of all other warmth and competence combinations

($M_{warm/competent}$ = 2.26, SD = 1.06; $M_{cold/competent}$ = 2.25, SD = 1.13). Means with standard errors are presented in *Figure 3a*.

Emotions. To investigate the factorial structure that underlies the emotion ratings of the faces, we analyzed the emotion items with a PCA. This resulted in a three-factor solution, with envy and pride loading on the same factor and pity and disgust items on separate factors. The result might represent the fact that pride and envy are complex emotions that are difficult to distinguish based on the mere presentation of a face. Nevertheless, the obtained factor pattern allows for testing our main hypotheses that disgust and pity mediate the effect of facial appearance on moral judgment. Although a clear distinction between envy and pride might have been further useful for reasons of exploration, it is not central to the present context.

Mediation via emotions. We hypothesized that the effect of warmth and competence on acceptability would be mediated by differences in the emotions elicited by the different manipulations. More specifically, we assumed that the effect of cold-and-incompetent individuals would be mediated by disgust, whereas the effect of warm-and-incompetent individuals on acceptability would be mediated by pity. All reported models are maximal linear mixed models including random intercepts for both participants and faces as well as random slopes for the respective contrasts as well as the mediators. Note that in the following models, all cases with missings on acceptability were excluded from the analyses (110 out of 2528). We tested for mediation using the joint significance test, which builds on the premise that if both a and b are significant, so is the indirect effect a x b (Fritz, Taylor, & MacKinnon, 2012; Fritz & MacKinnon, 2007). To calculate confidence intervals, we repeated the analyses with *Mplus*, using a Cross Classified Analysis with faces and participants as random effects. Confidence intervals were calculated with the Delta Method (Muthén & Muthén, 1998-2015). See *Figure 4* for the respective path models.

Disgust. For disgust, there was a significant effect of warmth, $F(1, 37.22) = 26.26$, $p < .001$ that was qualified by the significant warmth competence interaction, $F(1, 16.63) = 14.38$, $p = .002$. As predicted, disgust was highest for cold-and-incompetent faces ($M_{cold/incompetent} = 2.24$, $SD = 1.08$). Generally, the pattern of means was similar to the mean pattern of acceptability, with warm-and-incompetent faces evoking the least disgust. ($M_{warm/competent} = 2.09$, $SD = 1.03$; $M_{warm/incompetent} = 1.94$, $SD = 1.00$; $M_{cold/competent} = 2.13$, $SD = 1.11$), see also *Figure 3b*. The cold-and-incompetent contrast was significant for disgust, $b = .19$, $t(133.57) = 5.88$, $p < .001$ (path a of the mediation). To test path b, we ran a regression analysis testing the effect of disgust on acceptability while controlling for the cold/incompetent contrast. Path b was significant, $b = .27$, $t(147.43) = 9.15$, $p < .001$. Disgust thus mediates the effect of cold and incompetent looking faces on acceptability (indirect effect = 0.05, 95% CI = [0.04, 0.07]).

Pity. For pity, there was a non-significant effect of competence, $F(1, 22.18) = 4.30$, $p = .054$, as well as a non-significant warmth x competence interaction, $F(1, 18.43) = 4.01$, $p = .060$. Testing the warm-and-incompetent faces against the average of all other conditions, the effect of the contrast was not significant, $t(15.05) = 0.38$, $p = .709$. Also, the pattern of the descriptive values does not match our prediction that pity should be highest for warm-and-incompetent faces. See *Figure 3c* for means and standard errors. The regression of acceptability on pity while controlling for the warm/incompetent contrast was not significant either, $t(74.29) = 0.43$, $p = .667$.

Exploratory Analysis. Exploratory post-hoc analyses revealed that instead of pity, the effect of warm-and-incompetent faces on acceptability was best described as mediated via disgust as well (Path a: $b = -.21$, $t(22.42) = -5.81$, $p < .001$, Path b: $b = .26$, $t(144.82) = 9.09$, $p < .001$; indirect effect = - 0.05, 95% CI = [-0.07, - 0.04]).

Discussion

Study 3 replicates the pattern for moral judgments that we found in the previous studies, with the lowest acceptability for excluding warm-and-incompetent looking individuals and the highest acceptability for excluding cold-and-incompetent looking individuals. Our primary hypothesis in Study 3, however, was to test the prediction that the effect of the warmth/competence manipulation on moral judgments was mediated via specific emotions elicited by the different faces. We find that the emotional responses to warm-and-incompetent faces are mainly characterized by a lack of disgust, whereas cold-and-incompetent faces seem to evoke both disgust and pity. The presence or absence of disgust is an important mediator when people make judgments about the acceptability of social exclusion based on facial appearance. Contrary to our prediction, however, pity was not a significant mediator.

Why is it that disgust seems to be more important than pity when making moral judgments that are based on faces? Because our focus was on first impressions and we wanted to measure the influence of emotion on acceptance of exclusion and not vice versa, we assessed emotions prior to the exclusion scenario. The elicited emotions were thus context-independent and represented spontaneous reactions to faces that participants had never seen before. Taking this context-independency of the emotions into account, one could speculate that primary emotions like disgust are more likely to be spontaneously elicited by faces than pity. In particular, disgust might be directly elicited by the mere sight of a cold-and-incompetent looking person (or be absent at the sight of a warm-and-incompetent one), and thus influence a subsequent moral judgment about how acceptable it is to exclude this person. Pity, however, might require more contextual information than the mere presentation of a warm-and-incompetent face. Most people might not assume that something bad happens to a warm-and-incompetent looking person in the first place, which is why there is no reason to feel pity when merely being presented with the portrait of a warm-and-incompetent looking

face (e.g., pity is usually not the first emotion when seeing a child). Together these considerations may explain why pity did not act as a mediator in the present study.

Under what conditions may pity act as a mediator? Possibly, in cases where there is a contextual trigger for pity (e.g., the target person is ostracized or otherwise in distress), the observer might feel strong pity for a warm-and-incompetent looking person, and thus judge it as unacceptable when that person is ostracized. From this perspective, it might have been advantageous to assess emotional responses in the context of social exclusion. However, a potential disadvantage of this procedure is that it might have compelled participants to answer in a socially desirable way and to report a high amount of pity for all of the targets. Moreover, most SCM studies have assessed emotional responses to groups context-independently, since the SCM proposes *generalized* emotional responses these groups (Cuddy, et al., 2008). Interestingly, despite our assessment of the emotions being similar to other SCM studies, our results nevertheless differ. For instance, Cuddy and colleagues (2008) demonstrated that warm and incompetent groups elicit emotions of pity whereas cold and incompetent groups elicit disgust. But are emotions that are related to groups really as context-independent as emotions related to faces? Most individuals may have previous experiences and thus an implicit concept of specific groups (such as homeless people, the elderly, etc.). Therefore, they might associate these groups with specific emotions (such as pity for old and frail persons who are seen as helpless and deserving protection, or disgust for groups that are seen as useless and destructive for society). In contrast, for a specific face that an individual has never seen before, there is no previously existing context. This is why it is likely that context-independent, primary emotions such as disgust are of a higher importance when making judgments based on faces alone.

General Discussion

Ostracism is a ubiquitous phenomenon that can happen in a variety of situations and for many different reasons. This poses a challenge to observers who have to decide whether to

assist the ostracized person or not. Especially if observers need to make a moral judgment quickly and without effort, it is likely that they will rely on simple cues and heuristics. One very salient cue is the face of the excluded person. Here we suggest and empirically substantiate in three studies that the appearance of a person's face can influence how acceptable it is to exclude this person from a group. In line with the stereotype content model (Fiske, et al., 2002), we further demonstrate that the acceptability of exclusion varies depending on how warm and competent the target's face appears to be (Studies 1 – 3). On the one hand, it is perceived as more acceptable to exclude cold-and-incompetent looking others. On the other hand, we found low acceptance rates for excluding warm-and-incompetent looking others. These effects are mediated by feelings of disgust that are evoked by the faces (Study 3). As a default assumption, participants further appeared to picture the excluding group as incompetent and cold (Study 2), which is in line with previous research suggesting that observers normally dislike and disapprove of ostracism (Wesselmann, Wirth, et al., 2013). Power analyses with PANGEA (Westfall, 2015) conducted ex post suggest that the power for the detection of the warmth x competence interaction was > .90 in all studies, given a default effect size of d = .45 (note that standard effect sizes cannot be calculated for random effect models).

Complex judgments based on facial perceptions

Despite using a subtle facial manipulation we observed reliable effects, and the same pattern replicated across three studies. Of course, in a real-life setting observers usually have more cues to draw inferences from. Nevertheless, even in situations with a more complex context and more cues to draw inferences from, facial features represent an important and particularly salient part of the first impression that is hard to ignore (Bindemann, et al., 2005; Cerf, Harel, Einhäuser, & Koch, 2008; Hassin & Trope, 2000; Ro, et al., 2001). Because of the stability of first impressions due to mechanisms such as self-fulfilling prophecies and the confirmation bias, it is plausible that facial features will even continue to influence moral

judgments indirectly even if more valid cues might be available (Rule, 2014). An excluded person could, for instance, try to argue with the group about why he or she was being excluded, or simply leave the group without saying anything. If the excluded person looks cold-and-incompetent, however, in light of this first impression such behavioral reactions might more likely be interpreted as negative, hostile or disinterested by an observer than if the person was warm-looking.

The differentiated, yet stable pattern of observed results also speaks against a general "positivity bias" of our participants. If that was the case, the exclusion of a warm-and-competent looking group member should have been least acceptable, because persons who score high on both variables are typically evaluated most positively. However, this was not the case. Participants in all three studies judged it as less acceptable to exclude warm-and-incompetent than warm-and-competent looking persons, which speaks for a more refined judgment process than a simple decision of whether the excluded individual is "good" or "bad".

Moral Judgment of Social Exclusion and other Aggressive Acts

We have demonstrated that facial perceptions of warmth and competence affect the moral judgment of social exclusion and further pointed out two specific biases (against cold-and-incompetent looking persons and in favor of warm-and-incompetent looking persons). An important question is whether the observed pattern is specific for social exclusion, or whether it generalizes to other acts of aggression in a broader sense. In line with our findings from Study 1, a study that used the trolley track moral dilemma in which the target is killed to save others (Cikara, et al., 2010), found a negative bias against groups which were perceived to be both cold and incompetent, such as homeless people or drug addicts. However, in the study by Cikara and colleagues, there was no positive bias in favor of warm-and-incompetent groups, which we demonstrated for warm-and-incompetent looking faces in the present studies. Presumably, this is due to the different settings: When judging the acceptability of exclusion,

participants might have felt that competent-looking persons might do well without a group or that they may easily find another one to join, compared to an incompetent but warm individual who needs special protection for that reason. For obvious reasons, these considerations do not hold when judging how acceptable it is to kill a person for the sake of others, as participants did in the study by Cikara and colleagues (2010). Cold-and-incompetent persons, however, might be perceived as expendable in any situation – both for a specific group as well as for society in general.

The Importance of Facial Appearance for Social Exclusion Research

The present results have important implications for studies on social exclusion and ostracism, since they indicate that the facial appearance of sources as well as targets can influence how ostracism is perceived by observers or potential sources of ostracism. So far, however, most studies on social exclusion have been conducted using paradigms with anonymous participants, such as in the widely used Cyberball paradigm (Williams, Cheung, & Choi, 2000), where sources as well as targets of ostracism are depicted as little stick men with only rudimentary facial features. Newer versions of Cyberball include the option to upload photos representing the player, so therefore it might be interesting to investigate systematic effects of individuating features such as facial appearance on how participants perceive ostracism.

In addition to moral judgments of observers, it might further be interesting to investigate the effect of source's faces on perceptions and reactions of the targets themselves. For instance, there is an ongoing debate in social exclusion research about the circumstances under which targets react to social exclusion with anger and aggression towards the sources or whether they try to reconcile with the group that has just excluded them (e.g., Çelik, et al., 2013; Maner, DeWall, Baumeister, & Schaller, 2007; Williams, 2009). Related to this debate, the Behavior from Intergroup and Affective Stereotypes (BIAS) map predicts that individuals tend to react with active harm towards individuals perceived as cold and with active

facilitation to individuals perceived as warm (Cuddy, et al., 2008). Accordingly, it could be possible that individuals react more aggressively when they are being ostracized by cold-and-incompetent looking others, but more prosocially when they are being excluded by warm-looking individuals. The present studies further indicate that participants who do not see any faces at all (as is the case in a standard Cyberball game) might stereotypically tend to imagine excluders as cold-and-incompetent people and therefore react towards them with hostility. This might be a possible explanation as to why previous research has usually found stronger evidence for aggressive than prosocial reactions following social exclusion (Williams, 2009).

Consequences: Bystander Intervention, Public "Shaming"

A person's moral judgment about whether exclusion is acceptable or not might have severe behavioral consequences. A typical example may be situations of bystander intervention (Latané & Darley, 1969), in which an observer's moral judgment about a situation might be critical for the decision about whether he or she should assist and support the excluded person, or sympathize with the excluding group and give the cold shoulder to the victim as well. Given that facial cues lack objective validity (Hassin & Trope, 2000; Olivola & Todorov, 2010), the finding that people nevertheless use them for making judgments about social exclusion and also show agreement in the way that they use them, might be alarming: For instance, someone who observes the exclusion of a target perceived to be cold-and-incompetent based on appearance might choose not to act but to ignore the target. Moreover, an observer might side with and protect a target that has actually harmed the excluding group before, just because he or she is perceived as both warm and incompetent. Such misjudgments could for instance be problematic regarding cyberbullying on social networks such as Facebook or displays of social exclusion in the media (e.g., in reality TV or reports about current political affairs). In both examples, often the audience has neither the possibility nor the motivation to gather further information other than that which is displayed. Together with

the high anonymity in social media, the worst case might be unjustified public shaming of either the excluders or the excluding group, depending on what their respective faces look like.

Conclusions

Three studies demonstrate that (a) a person's facial appearance is important when making moral judgments about social exclusion and (b) that perceptions of warmth and competence particularly influence the acceptability of social exclusion: excluding warm-and-incompetent looking persons is perceived as least acceptable, whereas excluding cold-and-incompetent looking persons is perceived as most acceptable. Moreover, (c) the effect seems to be mediated via the emotion of disgust as a response to a person's facial appearance. The results thus indicate that in ambiguous situations, people's moral judgment about social exclusion of others may be driven by a short gaze at their faces.

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Appendix 1: Instructions Study 1

This study is about exclusion from social groups. A group consists of three or more persons and can be anything from a circle of friends to coworkers, club members, etc. Sometimes, groups do decide to exclude specific members from the group, which are then not part of the group anymore. There can be a variety of reasons for such an exclusion, which may be considered as more or less fair and justified by others.

We are interested in how people judge the exclusion of a group member *(from their own group)* on the basis of minimal information. For this reason, you will be presented with pictures of several persons *(which had been excluded from your group)* and decide for each how acceptable this exclusion is in your opinion**.**

Please imagine *(that you are a part of)* a group of four people. *(Your/The)* group has decided to exclude one of its members. Your job is to decide personally how acceptable you think *(your/the)* group's decision was.

On the first screen you will be presented with a picture of a single person (the person who is excluded from *(your/the)* group). You will then see a screen that asks you to answer how acceptable you think it is for *(your/the)* group to exclude this member.

Your job is simply to tell us how acceptable/unacceptable this action would be.

Answer "1" if you think your group's action is completely unacceptable, "2" if you judge it to be somewhat unacceptable, "3" if you think that it is somewhat acceptable, and "4" if you think the action is very acceptable. Please answer spontaneously and as quickly as possible, for you only have a limited amount of time for this task!

Finally, you will be presented with a screen that asks you to wait for the next scenario.

You might feel that you need more information than is provided about the situation and the *(other members of your)* group before you can give your answer. However, in real life, people often have to make judgments quickly and with a minimum of information. Therefore, we ask you to decide spontaneously without making any unnecessary assumptions.

Appendix 2: Variance explained by the Random Effects in Study 1 -3

Study 1

	Random Effects	Variance
Participants	Intercept	.481
	Warmth	.016
	Competence	.026
	Warmth x Competence	.009
Faces	Intercept	.056
	Warmth	.009
	Competence	.004
	Warmth x Competence	.003
Residual		.418

Study 2

	Random Effects	Variance
Participants	Target Intercept	.446
	Target Warmth	.057
	Target Competence	.031
	Target Warmth x Competence	.041
	Sources Intercept	.117
	Sources Slope	.031
Faces Target	Target Intercept	.056
	Target Warmth	.009
	Target Competence	.004
	Target Warmth x Competence	.003
Faces Source 1	Sources Intercept	.004
	Sources Slope	.015
Faces Source 2	Sources Intercept	.000
	Sources Slope	.000
Faces Source 3	Sources Intercept	.018
	Sources Slope	.032
Residual		.440

Study 3

	Random Effects	Variance
Participants	Intercept	.513
	Warmth	.054
	Competence	.081
	Warmth x Competence	.100
Faces	Intercept	.048
	Warmth	.003
	Competence	.007
	Warmth x Competence	.025
Residual		.463