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SOCIAL OSTRACISM: HOW PEOPLE VIEW THEMSELVES AND OTHERS WHEN THEY EXCLUDE AND ARE EXCLUDED

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ABSTRACT

SOCIAL OSTRACISM: HOW PEOPLE VIEW THEMSELVES AND OTHERS WHEN THEY EXCLUDE AND ARE EXCLUDED

By

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Previous research on ostracism has focused on the target or perpetrator, but ostracism is an exchange involving both roles simultaneously. To gain an understanding of the effect of ostracism on perpetrators and targets, the current study involved groups of four in which three were assigned the role of perpetrator and instructed to exclude the fourth: an unsuspecting target. By having participants as both perpetrators and targets in the same interaction, we were able to assess how ostracism affected views of self and other group members for both roles. Participants completed measures of self-esteem, round-robin ratings of mood, activity level, attributions, liking, and personality. On self-esteem, there were no differences between roles, but targets expressed more negative and less positive affect and perpetrators reported more guilt. Results also indicated that targets viewed perpetrators more negatively than other perpetrators did. Perpetrators tended to view targets less favorably than themselves or other perpetrators.

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INTRODUCTION

The tragic shootings in 1999 at Columbine High School in Colorado, and shootings at other schools have left people questioning what would lead children to perform these acts of violence. Among the reasons presented by analysts was the consistent pattern that the aggressors had suffered exclusion and mistreatment by their peers for years (Smith, 2001; Benson, 2002). Peers and teachers agreed that these aggressors had been outcasts; either they were bullied, or they were the students no one included in activities, or paid much attention to (Duke, 1999). These students had been socially ostracized by their peers. If exclusion over time has the potential to contribute to such aggression within the target, then studying the phenomenon of social ostracism is indeed a worthy pursuit (Benson, 2002).

A complete understanding of the phenomenon of social ostracism requires that we consider its effects on all parties involved. This requires looking beyond the effects of ostracism on targets and perpetrators as separate and independent entities, and will involve exploring how perpetrators and targets function together, influencing each other. The current study explores how perpetrators and targets perceive themselves and their other group members who participate in an interaction involving ostracism.

Social ostracism has been defined as "an emotional withdrawal that occurs in the physical presence of the target" (Williams, 2001, p. 49). Although ostracism according to this definition may involve ignoring, excluding *and* rejecting (Williams, 2001, p. 11) this is perhaps too broad for the purposes of this study. Indeed rejection can still involve unpleasant inclusion in a group or vilifying the target, which could be fundamentally

different than a lack of inclusion (i.e., ignoring and excluding). For the purposes of this study, it is more fitting to define ostracism as the exclusion of at least one person, the target, by a group of others, the perpetrators, by means of ignoring or otherwise minimizing social interaction with the target. Although this definition does not take into account exclusion within dyads, this is purposeful. First, when there is only one perpetrator, there can be no ingroup coalition – which may be the case when there are multiple perpetrators. By sharing the experience of ostracizing a target, it has been suggested that cohesion among the perpetrators increases, thereby potentially creating an ingroup of perpetrators (Williams, 2001). Increasing the number of perpetrators also changes the attributions the target can make for ostracism. Being ostracized by a group would involve a behavioral, and presumably a cognitive consensus on the part of the perpetrators, making it more difficult for targets to dismiss the exclusion as simply a strange or chance encounter with one unpleasant interaction partner. Being excluded by a group of others should create more compelling evidence to the target that the ostracism is really happening, and is not just an erroneous interpretation of an individual's behavior. Being excluded or ignored by an individual (not a group) could also more easily be attributed to some situational factors influencing the behavior of the perpetrator.

Ostracism is done for various reasons, mainly as a way to socially control the target and boost group cohesion (Barner-Barry, 1986; Goodall, 1986; Gruter, 1986; Kurzban & Leary, 2001). Williams (2001) states that one of the main functions of ostracism is to return the target to the group, or to remove him or her altogether – with either of these extremely different outcomes strengthening group cohesion of the perpetrators. As a mechanism of social control, ostracism may be used as a form of

punishment or as a display of social superiority. *Punitive ostracism* is, as the name suggests, exclusion for the purpose of punishing the target(s) for some behavior the other group members disapprove of (Williams, 1997, 2001). Ostracism as a display of superiority is also termed *oblivious ostracism* (Williams, 1997, 2001). By using oblivious ostracism, perpetrators exclude because they consider the target to be unworthy of notice. These forms of ostracism have been shown to have a negative impact on both perpetrators and targets in a number of studies.

In particular, targets tend to suffer lowered self-esteem, more negative affect, and withdrawal from the group. In a study in which targets were excluded from a game of ball-toss via the Internet (Williams, Cheung, & Choi, 2000), they reported lower levels of self-esteem than participants who had been included in the game of toss for the entire time. In another study in which participants role-played being passengers on a commuter train, when targets were excluded they reported lower levels of self-esteem and more negative mood than perpetrators on a one-item measure of the construct (Williams, 2001). Alternatively, several studies have indicated that exclusion does not always lead to more negative affect. Twenge, Catanese, and Baumeister (2003) had participants interact for a few minutes before being separated. At this point, participants were instructed to choose two other participants they would most like to interact with again. Then, the experimenter gave participants false feedback about these ratings: some were told by the experimenter that they were not chosen by anyone to interact with (exclusion condition), and others were told that everyone had picked them as an interaction partner (inclusion condition). After this manipulation, they completed various mood measures, with several

studies showing no differences between participants who had been excluded versus those who had been included.

Other research suggests that the experience of being ostracized may even be interpreted as being physically painful. Research in which participants were excluded during a game of catch on a computer during an fMRI has suggested that when people are excluded, the brain registers the experience similarly to a physical blow (Eisenberger, Lieberman, & Williams, 2003). These negative psychological outcomes seem to be manifested behaviorally for targets. Williams (2001) reports that in role-play studies (such as the train-ride study) targets tend to withdraw from the interaction by leaning away from other group members and taking on a closed body posture, or by behaving erratically, engaging in foolish and intentionally annoying behaviors in an attempt to get attention from perpetrators.

Perpetrators have been less thoroughly investigated. People who recall a time when they ostracized someone expressed that they felt negative affect in doing so (Ciarocco, Sommer, & Baumeister, 2001; Williams, 2001). Evidence from the train-ride study suggests that compared with targets of ostracism, perpetrators feel less negative affect (Williams, 2001). Additionally, it seems that excluding comes at a cognitive cost: perpetrators used more cognitive resources to exclude a target than to interact in an unconstrained situation with the target (Ciarocco et al., 2001).

Theoretical and empirical background.

Ostracism has been studied by social scientists as a mechanism of maintaining order within a social group (Barner-Barry, 1986; Goodall, 1986; Gruter, 1986; Kerr, 1999; Kurzban & Leary, 2001). Kurzban and Leary (2001) present an evolutionary theory

suggesting that social exclusion is performed on members of social groups who do not provide resources to the group (or who tap resources without reciprocating), who are low-status group members, and who are potentially carrying parasites. In essence, they suggest that people are ostracized because they bear a potential disadvantage to the group if included. For instance, Barner-Barry (1986) presents an account of a playground bully who is excluded by the other children. The bully in her account, if included in the group, would disadvantage the others by not sharing resources (in this case, toys) and by bringing the threat of physical harm to the other children who were insistent upon equal sharing of toys. In this example, the bully was excluded because he did not share the group resources properly, exhibiting a poor group fit, and putting the group at a greater disadvantage if he were to be included.

Other reasons why perpetrators may exclude a target are given by Williams (2001) including: as a form of punishment (punitive ostracism), or because the target is not worthy of the perpetrators' time (oblivious ostracism). It may also be used to retaliate against mistreatment by someone, or as a means of cooling down an intense discussion. These are just a few of the reasons that prompt perpetrators to exclude, now we turn to the effects that ostracism has on the target.

In examining most social psychological research, the focus turns to the level of the individual. Particularly, the negative impact of ostracism on the target has been the main focus, and a theoretical description of the effects ostracism has on the target has been designed. Williams (1997, 2001) and his colleagues theorized that when a target is ostracized, four psychological needs are threatened: the need for self-esteem, need to belong, need for control, and need for a meaningful existence.

The need for self-esteem, as proposed by Leary and Baumeister (2000) suggests that the underlying reason why humans have self-esteem is that it serves as an internal measure of whether a person is socially successful and therefore fulfilling their need to belong. The need to belong (Baumeister and Leary, 1995) is the need to have non-negative, frequently occurring interactions in the context of a relationship. Baumeister and Leary provide compelling evidence that the need to belong is one of the most basic psychological needs. They give evolutionary arguments and discuss the negative consequences of when this need is not met (physical and mental illness, stress, and anxiety). Individuals who are ostracized are not socially successful, which translates into a lack of belonging that may drive the drop in self-esteem associated with ostracism (Williams, 1997).

The need for control is a need to feel as though one has control over his or her life, outcomes in social situations, or future (Williams, 1997). The target of ostracism lacks control over their social situation in that they may be unable to influence the perpetrators to interact with them. This lack of control over one's own social situation is thought to generalize to the extent that targets feel their need for control is unfulfilled (Williams, 1997). The need for a meaningful existence is an existential need to feel that one's life is meaningful, and that his or her presence is recognized and significant in some way (Greenberg, Pyszczynski, & Solomon, 1986). According to the hypothesis, because targets of ostracism are not recognized or acknowledged, they experience a feeling of non-existence in the setting.

Evidence suggests that these needs are threatened when a target is ostracized. In the train-ride study, targets of ostracism reported lower levels of self-esteem than

perpetrators (Williams, 2001). In the train-ride study as well, when targets were excluded from a ball-tossing game, they reported a lower level of belonging (Sommer & Williams, 1997; Williams, 2001). Additionally, the train-ride studies have shown that for targets (but not perpetrators) of ostracism the need for control and need for a meaningful existence is compromised (Williams 2001).

Creating an ostracism situation in the laboratory poses a creative challenge. Williams (1997) designed a classic methodology for the purpose of studying the target of ostracism in a lab. His ball-toss methodology involves a three-member group in which the two perpetrators are confederates, and the participant is the target. The group is told not to talk to one another while supposedly waiting for the study to begin. When the experimenter leaves, one confederate finds a ball and initiates a game of ball-tossing with the other confederate and the target. In inclusion conditions, the three continue the game for the full five minute waiting period. In the ostracism condition, after just one minute, the perpetrators begin only tossing the ball to each other, not tossing the ball to the target again for the remaining four minutes. The targets of exclusion were affected by exclusion in several ways relative to included subjects. Targets reported feeling a lower sense of belonging, liked the perpetrators less, and were more likely to blame the perpetrators rather than themselves for the ostracism. Additionally, targets in ball-toss studies tended to disengage from the group. This behavioral withdrawal was not typical in the inclusion groups.

In addition to laboratory studies, a number of narrative accounts have been studied to examine both target and perpetrator experiences (Sommer, Williams, Ciarocco, & Baumeister, 2001). These narratives usually involve participants recalling a time that

they were excluded or a time that they excluded someone. These reports, similar to the results of ball-toss studies, have provided evidence that being the target of exclusion results in the experience of more negative affect. In these accounts targets also tended to express feelings of being victimized by the perpetrator(s). Narrative accounts have also been used to examine the experiences of perpetrators of ostracism and suggest that they feel quite justified in excluding the target. These perpetrator narratives also indicated that they experienced negative affect as excluders.

In summary, research indicates that exclusion is a negative experience in several major ways for both targets and perpetrators. For targets, the experience of exclusion causes an increase in negative affect, a decrease in levels of self-esteem, a neurological response similar to that of physical pain, and may encourage withdrawal from the group. Perpetrators, although they may not seem to be suffering, do encounter negative consequences as well: they also experience an increase in negative affect, and use more cognitive resources to exclude, suggesting that it is a difficult behavior to maintain.

Factors that moderate the effects of ostracism.

The severity of the impact of ostracism varies across the context of the exclusion because these exchanges may differ in important ways for the target (Williams, 1997, 2001). First, how clear the exclusion is to the target can impact the effects of ostracism (Williams, 2001). If a target is unaware that he or she is being excluded, it is unlikely that there will be a large negative impact upon the target. If the ostracism is very clearly happening to the target, it will have negative effects, but may permit the target to find coping strategies for the exclusion. This seems to be most likely to occur with punitive ostracism in that the target would know that he or she is being excluded as a punishment

for some behavior on his or her part, but may find a way to cope with the ostracism. Accounts by targets in Williams' (2001) studies suggest that targets may cope with punitive ostracism in several common ways, such as by excluding the perpetrators in turn, by trying to get perpetrators' attention through negative behavior, or by just being patient and waiting for it to blow over. However, if targets are unsure as to whether or not they are truly being ostracized, they may be less likely to engage in a coping strategy, and may instead seek to find internal reasons for the perpetrator's behavior. By searching the self for reasons why they are being excluded, targets may be subject to more negative consequences.

Integrating perpetrators and targets in the current study.

Research has examined the experiences of the targets and perpetrators separately, yet the true experience of ostracism does not occur in piecemeal, rather both perpetrators and targets interact simultaneously to create the unique phenomenon of ostracism. Indeed Williams (2001) writes that although an ostracism exchange appears to be simply perpetrators excluding targets, how and why perpetrators ostracize impacts the targets. In turn, how targets respond to being excluded, as well as their attributions as to why they are being ostracized, undoubtedly impact the perpetrators' behavior. Importantly, in psychological research, the emotions experienced and the perceptions of self and other group members need to be examined within the context of ostracism.

In order to examine how targets and perpetrators perceive each other; consider ostracism in four-person groups where one member is systematically excluded by the other three. In these groups, there are the two roles of perpetrator and target, each having different perspectives of the group and its members. The target of ostracism must

interpret his or her behavior as well as the behavior of the three perpetrators. The perpetrators have a somewhat more complex task in that they must interpret their own behavior, the target's behavior, and the behavior of the other two perpetrators. Previous laboratory studies of ostracism (ball-toss and cyberball methodologies) have examined targets compared to a control or inclusion condition (Williams & Sommer, 1997; Williams et al., 2000). This study will also involve a control condition with inclusion of all group members as a basis for comparison.

Predictions and reasoning.

Building on the previous work on ostracism, this study will be the first to directly explore targets and perpetrators within the same situation on measures of affect, interpersonal perception (for example, how Ann views Bob) and meta-perception (for example, how Ann thinks Bob views her). It has been found that both perpetrators and targets have an increase in negative affect after participating in an ostracism exchange. In the present study, we will offer evidence to discern who experiences more negative affect, targets or perpetrators. It seems likely that targets will suffer more negative affect, but that perhaps targets and perpetrators experience different negative emotions during exclusion (Williams, 2001, pp. 88-89). Targets are more likely to feel sadness at being left out of a group, frustration at their attempts to contribute to the group being thwarted, or anger at perpetrators for not paying attention to them. Perpetrators may feel more embarrassed or anxious about behaving in a counter-normative way (ignoring someone when the norm is to be inclusive and polite), or guilty for ostracizing a stranger for no reason beyond that they were instructed to do so.

In addition to examining affect, the impact of excluding and being excluded on self-esteem will be explored. Targets of exclusion should have lower self-esteem than others, particularly control group participants. This prediction would replicate findings from previous work supporting the need-threat hypothesis (Williams, 2001). The comparison between targets and perpetrators on self-esteem will also be of interest: Williams (2001) reported in his train-ride study that perpetrators of ostracism showed much higher levels of self-esteem than targets of ostracism compared to inclusion and argument conditions (in which perpetrators argued with a target, and did not exclude them). Based on the results of the train-ride study, targets should have the lowest self-esteem, perpetrators the highest, and control group members' scores should fall between the two. However, this study uses a multi-item measure of self-esteem, which may yield different results than Williams (2001) one-item measure, "I feel superior." (p. 154). My predictions are that targets will be the only group to differ on levels of self-esteem, and they will show significantly lower levels than both controls and perpetrators in the study.

The current study also investigates the attributions targets and perpetrators make about their own and others' behaviors. Targets will be likely to make more situational attributions about their own behavior in the study. Given the potential constraints of the situation the study will place them in, targets will be more likely to think the situation did not allow them to truly be themselves. To the extent that targets feel as though their behavior was dictated by the situation, these situational attributions will moderate self-ratings so that targets should have more positive, and/or less negative self-ratings. Targets will make more personal attributions about the perpetrators' behaviors. Given that targets will have only had one encounter with the perpetrators, they will make more personal

attributions because they only have that limited information to base their judgments on. To the extent that targets make more personal attributions about the perpetrators (especially for their exclusion behaviors), they will view them more negatively. In essence, targets will make the fundamental attribution error. They will somewhat correctly make more situational attributions about their own behaviors – which are in reality constrained by the strange situation they are in. Targets will incorrectly make more personal attributions about the perpetrators than is appropriate, because they are using the only information they have about the perpetrators.

Perpetrators will be unlikely to attribute their own behavior to personal factors, as they are aware that their own behaviors are constrained by the nature of the study. To the extent that they make more situational (and less personal) attributions about their own behaviors, perpetrators will have a more positive view of themselves. Perpetrators will be likely to fall into the fundamental attribution error as well when rating targets. Although they will rationally know that targets' behavior is constrained by the study, they again have no other information about the target to make other judgments about him or her, therefore, they will make more personal attributions about the behavior of the target in the interaction. If targets become withdrawn from the group, and discontinue active participation, perpetrators may then feel more justified in excluding the target, especially to the extent that perpetrators made more personal attributions about the target. The personal attributions perpetrators make about the target's behavior will moderate the degree to which perpetrators see themselves negatively. Even though all perpetrators are presumably performing the same non-normative behavior of ostracizing a stranger, it is likely that perpetrators will make more personal attributions about the other perpetrators,

due to a self-serving bias. Perpetrators should be likely to view themselves as being less cold or unsociable to the target than other perpetrators in order to see themselves in a more positive light. To the extent that perpetrators make more personal attributions about other perpetrators, they will also view them more negatively, especially in their behavior towards the target.

METHODS

Overview.

In this study, members of four-person groups engaged in a discussion lasting 10 minutes while being videotaped. In 31 groups, three of the group members were randomly chosen to exclude the fourth group member from the discussion. In 15 control groups no instructions concerning the structure of the interaction were provided. After the interaction, participants reported about their experience in the discussion and gave their perceptions of the other group members.

Participants.

Participants were 204 Michigan State University students, 133 women and 71 men, enrolled in lower-level psychology courses. Students completed this study in partial fulfillment of course requirements. The sample included 168 Caucasians, 12 Asians or Asian Americans, two Hispanics, 14 African-Americans, one Native American and seven participants of multiple ethnic backgrounds. These participants comprised 51 four-person groups that were studied of which 36 were in the ostracism condition, and 15 were control groups. The gender composition of the groups was not pre-determined, and was as follows: 12 groups had four women and no men, 16 groups had three women and one man, 15 groups had two women and two men, seven groups had one woman and three men, and one group had four men and no women.

In five of the ostracism groups, the target of exclusion verbally indicated *during* the discussion that he or she thought that he or she was being excluded from the group interaction as part of the study itself. These groups were removed from analysis and

classified as suspicious. Targets were also probed for suspicions through an open ended question on the post-interaction questionnaire, and during the debriefing. Those who reported suspicion in the questionnaire were the same people who expressed suspicion during the session. Participants who only expressed suspicion during the debriefing and not during the other two times were considered to be exhibiting face-saving behavior and were not removed.

After removing suspicious groups from the analysis, there were 184 participants including 122 women and 62 men. Total number of groups in the analysis were 31 ostracism, and 15 control. In the ostracism groups, there were 83 women and 41 men. Within the ostracism groups, 66 women and 27 men were perpetrators (participants who were asked to exclude another group member); 17 women and 14 men were randomly assigned to the role of the target of exclusion. In the control groups, there were 39 women and 21 men.

Materials.

Preliminary exercise.

Participants were asked to give their gender, age, number of roomates, ethnicity, status of romantic relationship, and information about friends (e.g., is your best friend on campus, do you have friends you regularly spend time with, how easy is it for you to make friends). This demographic questionnaire gave the experimenter time to set up the remainder of the study and is included as Appendix A.

Post-discussion questionnaire.

Group members completed measures after the discussion about their experiences in the group. All group members rated only themselves on self-esteem. All other ratings

were completed in a variables fastest moving, round-robin rating style. Round-robin ratings are ratings in which each group member rates themselves and every other group member on the same scales. In this study, group members rated themselves first, then each of the other group members in alphabetical order of their name tag (so, person D would rate himself first, then persons A, B, and C). Ratings were completed with variables fastest moving, that is, participants rated one person on all items, before beginning any items about the next person. The complete questionnaire as it was presented to participants is available in Appendix B.

State Self-Esteem (Heatherton & Polivy, 1991). This scale is designed to examine self-esteem moment-to-moment, not in general. The scale consists of 20 items and had a reliability of Cronbach's $\alpha = 0.90$, $M = 78.22$, $SD = 10.43$ across conditions. Participants used a five-point scale to rate items, with the endpoints 1 (not at all) to 5 (extremely). Higher scale values indicated higher levels of self-esteem.

Emotions. Participants completed round-robin ratings about the emotions that group members experienced during the interaction. Please refer to Table 1 for a list of all items in each emotion scale. The reliability of the negative emotions scale was $\alpha = 0.90$, and $\alpha = 0.79$ for positive emotions. Guilt was included as a separate measure. Although this was not planned, factor analyses revealed that this item did not load highly on either of the positive or negative emotion scales, and thus will be treated as a separate measure. Items were rated on a five-point scale with endpoints of 1 (barely or not at all) to 5(very much), with higher values indicating greater intensity of that emotion.

Activity during the interaction. A scale was created to measure the level of active behavioral involvement in the interaction, such as talking, making eye contact, or

withdrawing from the interaction (reversed-scored). A list of all scale items can be found in Table 1. The items were measured on a five-point scale, with endpoints of 1 (barely or not at all) to 5 (very much), and higher values indicating greater involvement and activity with the group during the interaction. The activity scale had a reliability of $\alpha = 0.88$.

Attributions. Items assessed the degree to which participants attributed behaviors in the interaction to personality factors or situational factors. A total of four items were used, two assessing personal attributions and two assessing situational attributions. All attribution scale items are listed in Table 1. Attributions were rated on a seven-point scale with endpoints of 1 (not at all) to 7 (very much), with higher values indicating a stronger attribution. Personal attribution items had a reliability of $\alpha = 0.87$, and situation attribution items had a reliability of $\alpha = 0.90$.

Liking. Participants were asked several questions about how well they liked each group member, but were not asked to rate themselves. Scale items may be found in Table 1. The liking scale was measured on a seven-point scale and had a reliability of $\alpha = 0.89$. Endpoints of the scale were 1 (not at all) to 7 (very much), with higher values indicating more liking.

Perceptions and meta-perceptions. Participants rated themselves and other group members on the Big Five dimensions of Openness, Agreeableness, Extroversion, and Neuroticism. It should be noted that Neuroticism was evaluated with a single item asking participants how relaxed they were. Therefore, all results are presented using the adjective Relaxedness, the opposite of Neuroticism. Participants also rated one another on physical attractiveness. Items were presented in a semantic differential scale with endpoints like, Intelligent and Unintelligent; Friendly and Unfriendly. Participants

additionally reported meta-perceptions, that is, how they believed each other group member perceived him or her on the same scales. Participants did not rate themselves on meta-perceptions.

Perceptions of agreeableness had a reliability of $\alpha = 0.87$, and meta-perceptions of agreeableness had an $\alpha = 0.91$. Perceptions of extroversion had a reliability of $\alpha = 0.86$, and the meta-perceptions had an $\alpha = 0.90$. The characteristics of openness, neuroticism, and physical attractiveness were all rated using one item, thus no reliability measures are given. Participants rated these items on a seven point semantic differential scale, with endpoints differing for each item. All scale items (scale endpoints) may be found in Table 1. Higher values indicated higher scores on the personality factors, with higher levels of relaxedness indicating lower levels of neuroticism.

Procedure.

For each session, 12 participants were recruited. If eight or more participants reported for the study, two groups were run simultaneously, one control, and one ostracism. If less than eight people showed up, one group was run, with condition randomly chosen, with the constraints that two-thirds of the groups be ostracism groups. Any extra participants were given another task to do. Groups of four people were used, and determination of who out of the 12 individuals recruited participated actively in this study was determined randomly with one exception. When participants arrived at the lab, they were asked to refrain from speaking to one another. The researcher first inquired as to whether any of the participants were acquainted. Acquainted individuals were not allowed to participate together in the same group.

Participants were then presented a brief verbal description of the study as well as a written informed consent form. Participants were told: "The study you are going to participate in involves group communication patterns and how those patterns affect group productivity. After reading and signing the informed consent, you will be separated so that you may complete a preliminary questionnaire in privacy. Upon completing this questionnaire, you will be brought together again in a different room to interact in your group for approximately 10 minutes. Group members will be identified only by letter (A, B, C, and D) and not by name. The group interaction will be videotaped. The videotapes will be coded after this semester has ended, and your identity will be kept confidential, that is, your name or other identifying information will not be associated with the videotape. After the group interaction, you will be asked to complete a series of questionnaires. Note that you may decline to participate in this study at any time without penalty."

Participants then chose an identification tag attached to a necklace from an envelope that was passed around the room. This necklace had the letter by which participants were identified during the interaction so that names were not disclosed. Participants who chose the letters A, B, or D were excluders in the group, and the participant who chose C was the target of exclusion by the other three participants. In the study, person C was always the target of ostracism.

In the ostracism condition, the researcher led each participant individually into a different room to complete a demographic questionnaire. Participants were told that they were being moved so that they would have more space. Persons A, B, and D were all seated in the same room together to complete the demographic questionnaire, but person

C was seated in a room alone to do the questionnaire. At this point the researcher told persons A, B, and D together the true nature of the interaction in the session.

She said, "In today's study, we are interested in how people respond to various group contexts. In today's session, we are particularly interested in exclusion. You have all been assigned an identification letter at random, and in this condition, person C is the person who will be excluded. Person C cannot hear us right now. You will have the role of excluders in this study. This means that we would like you to do your best to minimize your interactions and communications with C. Your role in today's study is to exclude C from the discussion and to ignore his or her comments to the fullest extent that you can. Person C does not know that you have been given any of these instructions. Although we recognize that this may be rather difficult, we ask that you do your best in your role. Are there any questions?" The researcher asked them not to interact again until the discussion commenced. During this time, person C was seated in a different room alone, and was given the same demographic questionnaire as A, B, and D. The researcher next handed out the discussion task to each participant and asked them to look over the task so that they would be prepared to discuss their answers with the rest of the group. She then led the participants individually to the interaction room in alphabetical order of their nametags (i.e., A was brought in first, then B, then D).

The researcher seated the participants around a square table and placed a master copy of the discussion task on the table for the participants to complete as a group. At this point she began videotaping the session, and because one camera was able to view only two people, we used two different cameras in corners of the room to capture the faces of all group members. The discussion task is from Johnson and Johnson (1975) and involves

discussing and rank ordering what equipment would be important to bring along when making a 200 mile group trip on the surface of the moon. Participants were encouraged to discuss their ideas and were told that the discussion was more important than coming to a consensus for all items on the list.

The researcher instructed participants to begin their discussion once she left the room. Participants were assured that no one was watching them during the actual discussion, and that the researchers were all out of earshot. The experimenter returned at the end of 10 minutes to announce the end of the discussion. She then stopped recording and seated participants in a larger room with cubicles so that they would not be able to see one another easily.

Each participant was given the post-discussion questionnaire to complete. Participants were told, "Now that you have interacted in your group, we'd like to know a little more about you and your experiences in the group by having you complete some questionnaires. Please be as honest and precise in your answers as you can, and follow any instructions on the questionnaire itself. Keep in mind that the other group members will not see or be given any information about your answers." The questionnaires included measures of state self-esteem, activity during the discussion, emotion, attribution, liking, perceptions and meta-perceptions of the group members. Members completed round-robin ratings for all scales except self-esteem. Group members were seated facing away from each other and were not allowed to talk to each other but were allowed to look at each others nametags to help them remember which group member wore each letter.

After collecting the completed questionnaires, in the ostracism condition, the researcher led participants back into the interaction room began recording again, handed out a written debriefing form, and verbally debriefed the participants in the following way:

"We would like to thank you for your participation in this study. Today's study is really a study of how people experience group interactions in which one individual is purposely excluded by the other members of a group. Our interest in this area comes from two sources. First, from a basic social science perspective, understanding how people respond to being excluded or to excluding others is a central question in interpersonal relationships and group processes. Second, and perhaps more importantly, current social problems, such as violence in the k-12 school system, are being attributed in part to exclusion, and so gaining greater understanding of the underlying effects may help us to address this problem.

"In order to examine social exclusion in a realistic fashion, we needed to set up a situation in which one person was excluded from participating in the group. We did this by telling persons A, B, and D that they should make every effort to exclude C during the discussion task. Person C was unaware of any such instructions. The letters that identified you in the study were distributed randomly, that is, there is nothing about you that made you any more or less likely to be given the role you were assigned in the study. In this study, deception was deemed necessary to enhance the believability of the study. It may not be fun to exclude or be excluded by someone, but by your participation in this study, you have made a valuable contribution for understanding human behavior, and

answering questions like, "How do the people who exclude another feel about their behavior and the person who was excluded? How does the target of exclusion feel about the people who excluded him or her?" You have helped us gain some answers to these questions with your participation.

"We are concerned that each of you understand that the group dynamics that occurred in the interaction were created by the experimental design, and do not reflect anything about you or your normal interpersonal style. This condition has randomly been chosen to involve ostracism, and you were all randomly assigned to your letters. We did not use any characteristics about you as the basis of the letter assignment. If you have any questions about this research, please let me know.

"We would like to thank you again for your time! Note that attached to this explanation of the present research is a summary of basic findings concerning how people respond to ostracism."

During the debriefing session, participants were encouraged to interact openly on a more casual, friendly basis. The researcher prompted discussion by asking participants a few questions like, "Did you enjoy the study? How did you feel, person C? How did the rest of you feel about the role you had to do?" The researcher also provided information to all participants about counseling that is available on campus, and explained that talking about this experience with a friend or counselor may help alleviate any negative feelings that they may be experiencing.

The control condition involved many of the same procedures outlined above. Participants were introduced to the study in the same way and were given the same

informed consent form as participants in the ostracism condition. In the control condition, unlike the ostracism condition, participants were allowed to complete the preliminary questionnaire in the same room, but spread far apart. Participants in the control condition were not given instructions regarding the structure of the discussion. The group interaction was videotaped, as in the ostracism condition, and the same interaction task was used. After the interaction, the same post-discussion questionnaire was given to participants in the control condition as in the ostracism condition. Participants in the control condition were debriefed in a slightly different manner as those in the ostracism condition. Participants in the control condition were told that this study examined the social relations model, and were not told anything about the other condition in which exclusion occurred. These debriefings were not videotaped.

RESULTS

Overview.

Data analysis for this study involved several types of analyses. General descriptive statistics were computed, including means, standard deviations, and reliability information. These data have been partially presented in the methods section, and are presented in full in Tables 2 and 3. We performed analyses to examine if participants had lower self-esteem after excluding or being excluded, compared to controls. We also compared round-robin ratings of group members, to see if perpetrators, targets, and controls differed in mood, activity, attributions, liking, and perceptions. To do this, data were tested for non-independence, and analysis of variance was used. Finally, how the dynamic between perpetrators and targets affected how participants viewed themselves, and other group members was examined using multi-level analyses.

Self-esteem.

Participants who experienced exclusion in their group, especially as targets, were expected to have lower levels of self-esteem than members of control groups. A two-step analysis was used to explore this difference. First, the degree of non-independence was tested using self-esteem scores within group. Evidence of non-independence was not found in either the control groups, nor the ostracism groups, for the overall or subscale measures, therefore individual was used as the unit of analysis in the second step, analysis of variance. Next, a one-way analysis of variance was used comparing perpetrators, targets and control group members' levels of self-esteem (see Table 4).[1]

Unexpectedly, there were no differences between these groups on levels of state self-esteem nor any of the sub-scales: appearance, performance, or social self-esteem.

The impact of role on self and other perceptions.

The next set of analyses turns to how group members differed on the round-robin ratings of their other group members. Three separate analyses were conducted to compare participants self- and other-perceptions both within the ostracism groups and between ostracism and control groups. In all analyses group was treated as the unit of analysis. The first analyses compared control group members perceptions of self and others with how perpetrators saw other perpetrators and how perpetrators saw themselves. These analyses establish a baseline comparison to determine whether the ostracism situation had an impact on perpetrators and changed their perceptions relative to individuals who were not involved in exclusion.

The second set of analyses focused on the perceptions that targets of ostracism had of perpetrators and themselves and included control group members self- and other-perceptions as a comparison. These analyses explore the degree to which being ostracized affected the targets' self-perceptions, and perceptions of the other group members (the perpetrators).

The last set of these analyses compares how control group members rated themselves and other group members with how perpetrators rated the target of ostracism groups. Perpetrators of ostracism have been rarely studied, and never have they been asked to provide information about the person they excluded immediately after the ostracism occurred.

Controls versus Perpetrators.

As a result of the round-robin rating task each control group provided 16 data points for every variable. Twelve of these data points are ratings of other group members (e.g., A rating B, A rating C, AD, BA, etc.) and four are self-ratings (e.g., AA, BB, etc.). For each control group, a mean other-rating score was computed by averaging over the 12 data points, and similarly, a mean self-rating score was computed by averaging over the four self-rating data points. In the ostracism groups there were three perpetrators who rated themselves and each other providing six other-ratings of perpetrators by perpetrators and three self-ratings of perpetrators. As was the case for the control group, two means were computed based on the perpetrators ratings, one mean averaging over the six other-ratings, and a second mean averaging over the three self-ratings. These four means were then used as outcome scores in a two by two mixed-model factorial ANOVA treating group type (control versus ostracism) as a between-groups factor and rating type (self versus other) as a within-groups factor. Means and standard deviations can be found in Tables 5, 6, and 7.

Although general positive and negative emotions did not differ as a function of rating type or group type, there were significant differences in ratings of guilt. The group type main effect, $\underline{F}$ (1,44) = 44.20, $\underline{MSE}$ = 0.36, $\underline{p} < 0.001$, indicated that higher levels of guilt were experienced by perpetrators in the ostracism group relative to individuals in control groups. The rating type main effect for guilt, $\underline{F}$ (1,44) = 23.00, $\underline{MSE}$ = 0.08, $\underline{p} <$ 0.001, indicating that on average individuals rated their own experience of guilt higher than they rated others, was qualified by a significant interaction, $\underline{F}$ (1,44) = 17.40, $\underline{MSE}$ = 1.37, $\underline{p} < 0.001$, such that self- and other- ratings in the control groups did not differ

whereas perpetrators self-ratings of guilt in the ostracism groups were substantially higher than perpetrators ratings of the other perpetrators experience of guilt.

Activity levels differed by group type, F (1,44) = 5.30, MSE = 0.20, $p < 0.05$, indicating that on average, activity scores were higher in ostracism groups than control groups. Personal attributions differed by rating type, F (1,44) = 8.31, MSE = 0.13, $p < 0.01$, such that participants generally made fewer personal attributions about their own behavior than the behaviors of their other group members. Situational attributions differed by group type, F (1, 44) = 10.01, MSE = 0.76, $p < 0.005$, indicating that perpetrators of ostracism made more situational attributions about themselves and the other perpetrators, than control group members made about themselves and the other control groups members.

Turning the focus now to perceptions of personality characteristics, participants rated themselves and others on agreeableness, extroversion, relaxedness, and intelligence, as well as physical attractiveness. Perceptions of agreeableness differed by rating type, F (1,44) = 15.37, MSE = 0.10, $p < 0.001$, such that participants rated themselves as more agreeable than other group members. Ratings of extroversion showed an interaction between group type and rating type, F (1,44) = 4.09, MSE = 1.08, $p < 0.05$. Perpetrators in the ostracism groups rated the other perpetrators as more extroverted than themselves, whereas control group members rated themselves as more extroverted than others. Ratings did not differ significantly on intelligence, relaxedness, or physical attractiveness.

Self-ratings were not gathered for liking, or meta-perceptions, and so only between-groups analyses examining the group type effects on perceptions of others were used. No group differences emerged in these analyses.

Controls versus Targets.

Round-robin ratings were again used in this set of analyses. These analyses contrasted perceptions that targets of ostracism had of self and perpetrators with control group members perceptions of self and other group members to establish baseline differences. As before, the control group ratings were broken into two types: self and other. Means were computed as in the previous analysis. In the ostracism groups there was one target (person C) who rated each of the three perpetrators (e.g., CA, CB, CD). These ratings were averaged into a mean of the perceptions of perpetrators by the target. The target also rated him or herself (CC). These four scores: self and other ratings by controls and by the target of ostracism were then used as outcome scores in a two by two mixed-model factorial ANOVA treating group type (control versus ostracism) as a between-groups factor and rating type (self versus other) as a within-groups factor. Means and standard deviations can be found in Tables 5, 6, and 7.

Positive and negative emotions experienced in the interaction differed between targets and control group members, but ratings of guilt did not. A main effect of group-type on positive emotion, $F(1,44) = 9.07$, $MSE = 0.72$, $p < 0.005$, indicates that control group members rated one another as having more positive emotion than targets of ostracism rated themselves and their group members. Experiences of positive emotions in the discussion also differed by rating-type, $F(1,44) = 4.59$, $MSE = 0.41$, $p < 0.05$, indicating that self-ratings were lower on average than other-ratings. These main effects

are qualified by an interaction of group type by rating type, F (1, 44) = 5.22, MSE = 2.17, $p < 0.05$, such that although the ratings from control groups on positive emotion were similar regardless of the person being rated, ratings by targets of ostracism vary by who was being rated with targets self-reporting the lowest levels of positive emotion. A main-effect of group-type on negative emotion, F (1,44) = 5.19, MSE = 0.32, $p < 0.05$, indicates that targets reported that members of their groups experienced more negative emotion during the discussion than control group members.

Scores on levels of activity in the discussion also differed between control group members and targets. Control groups reported more activity than did targets of ostracism, F (1, 44) = 6.47, MSE = 0.49, $p < 0.02$. Also, self-ratings on activity were lower than ratings of others, a difference by rating type, F (1,44) = 5.81, MSE = 0.36, $p < 0.03$. However, there was no interaction between rating-type and group.

The extent to which an individual ascribed their own or others' behavior to aspects of the situation did not differ as a function of group or rating type. However, attributions to personal aspects differed by rating type, F (1,44) = 6.93, MSE = 0.22, $p < 0.02$, indicating that group members made more personal attributions about other group members than themselves regardless of condition, thus making the fundamental attribution error.

The ratings of perceptions of personality and physical attractiveness indicate that targets and control group members perceived themselves and their group members differently. Ratings of extroversion, relaxedness, and physical attractiveness did not differ between these rating types or groups, but perceptions of agreeableness, and intelligence differed. Control group members, on average, had higher ratings of

agreeableness than targets, F (1, 44) = 5.78, MSE = 0.59, $p < 0.03$, and ratings of agreeableness differed by rating type, F (1,44) = 24.59, MSE = 0.44, $p < 0.001$, such that group members tended to rate themselves as more agreeable than their other group members, regardless of condition. These main effects were qualified by an interaction, F (1,44) = 10.29, MSE = 4.50, $p < 0.005$, such that targets viewed perpetrators as least agreeable. Intelligence differed by rating type, F (1, 44) = 4.42, MSE = 0.35, $p < 0.05$, indicating that participants tended to see themselves as more intelligent than they saw their other group members.

The remaining analyses comparing targets with control groups involve only group-type effects because self-ratings are dropped from analysis. The remaining variables that were analyzed involve liking and meta-perceptions.

Liking scores differed by group type, F (1,44) = 14.32, MSE = 0.88, $p < 0.001$. This effect is such that targets of ostracism liked their other group members (the perpetrators who excluded them) less than control group members liked their other group members. Meta-perceptions of agreeableness differed by group type, F (1,44) = 10.44, MSE = 0.50, $p < 0.005$, such that targets in the ostracism groups thought they were rated as less agreeable by their group members (the perpetrators) than control group members thought they were rated by other group members. Similarly, targets thought their other group members rated them as less extroverted, F (1,44) = 5.81, MSE = 1.95, $p < 0.03$, less relaxed, F (1,44) = 5.66, MSE = 1.04, $p < 0.03$, and less intelligent, F (1,44) = 7.41, MSE = 0.88, $p < 0.01$, than control group members thought their other group members viewed them. Targets of ostracism did not differ from control groups on how physically attractive they thought others rated them.

Comparison of control group with perpetrators' ratings of target.

To finish the comparisons with control group members, means for the perpetrators' ratings of the target were computed similarly to those discussed previously: there were three perpetrators per group who each provided one rating of the target (e.g. AC, BC, and DC). Means for the control groups were computed as previously discussed. The mean ratings of targets by perpetrators and the mean control group ratings were compared in a one-way ANOVA. Means and standard deviations can be found in Tables 5, 6, and 7.

For these analyses, only group differences were observed. Negative emotion ratings differed by condition, F (1,44) = 47.46, MSE = 0.36, $p < 0.001$, as did ratings of positive emotion, F(1,44) = 55.01, MSE = 0.19, $p < 0.001$, and guilt, F(1,44) = 6.30, MSE = 0.16, $p < 0.02$. These results indicate that perpetrators thought targets experienced more negative emotion, less positive emotion, and more guilt than control group members thought their other group members experienced.

Ratings of activity during the interaction differed by condition, F (1,44) = 25.57, MSE = 0.44, $p < 0.001$, such that control group members thought their other group members were more active than perpetrators rated the target as being. Personal attribution scores differed across conditions, F (1,44) = 8.57, MSE = 1.00, $p < 0.005$, as did situational attribution scores, F (1,44) = 19.98, MSE = 0.60, $p < 0.001$. These results indicated that control group members made more personal attributions about other group members than perpetrators did about the target; likewise perpetrators made more situational attributions about the target than control group members did about their other group members.

Perceptions of agreeableness, extroversion, intelligence, and physical attractiveness did not differ by condition. However, perceptions of relaxedness did, F (1,44) = 5.47, MSE = 0.90, $p < 0.03$, indicating that control group members thought their other group members were more relaxed than perpetrators thought targets were. Liking scores differed by condition, F (1,44) = 7.27, MSE = 0.35, $p < 0.01$, also indicating that control group members liked their other group members more than perpetrators liked the targets, but that perpetrators liked other perpetrators most, and targets liked perpetrators least. Meta-perceptions of agreeableness differed across conditions, F(1,44) = 18.07, MSE = 0.95, $p < 0.001$, such that control group members thought their other group members rated them as more agreeable than perpetrators thought targets rated them. Also, perpetrators thought that targets rated them as more extroverted than control group members thought their other group members rated them, F (1,44) = 4.94, MSE = 0.34, $p < 0.03$. Meta-perceptions of intelligence, relaxedness, and physical attractiveness did not differ by condition.

Differences between perpetrators and targets of ostracism.

To examine the perpetrator and target mean ratings simultaneously, the five rating types within ostracism groups (perpetrators ratings of other perpetrators (PP), perpetrators self-ratings (PS), perpetrators ratings of the target (PT), target ratings of the perpetrators (TP), and target self-ratings (TS)) were contrasted using a repeated measures ANOVA with Geisser-Greenhouse corrections and group as the unit of analysis. As in previous analyses, means of each rating type were computed within the group and used as the dependent variable in the analyses (see Tables 5, 6, and 7). Paired t-tests with

Bonferroni corrections were used to follow-up significant F-tests, using a per comparison alpha level of 0.01 to correct for family-wise error.

Ratings on negative emotion, positive emotion, and guilt were compared by rating-type using the process detailed above. All means, standard deviations, and results of post-hoc comparisons are available in Table 7. Results of the post-hoc comparison are presented such that rating types that share a subscript letter (within each item being rated), do not differ significantly.

Ratings of positive emotion differed between the five rating types, $\underline{F}$ (4, 120) = 20.70, $\underline{MSE}$ = 0.45, $\underline{p} < 0.05$. Perpetrators experienced the most positive emotion in the study, according to themselves, other perpetrators and targets. Targets experienced less positive emotion according to self and perpetrators. The means of the five rating-types on the negative emotion scale were compared, and differed by rating type, $\underline{F}$ (4, 120) = 37.55, $\underline{MSE}$ = 0.23, $\underline{p} < 0.001$. In general, perpetrators were rated as experiencing very little negative emotion. Targets reported experiencing slightly more negative emotion than the perpetrators, but the perpetrators rated the target as experiencing the most negative emotion. The five rating types differed significantly on ratings of guilt, $\underline{F}$ (4, 120) = 21.78, $\underline{MSE}$ = 0.27, $\underline{p} < 0.05$. Targets were rated as feeling very little guilt, and perpetrators were seen as only experiencing slightly more guilt than targets. However, perpetrators rated themselves as feeling the most guilt in the interaction. Emotionally, targets had less positive affect and more negative affect than perpetrators, but perpetrators felt more guilt than targets in the interaction.

Next, how targets and perpetrators viewed themselves and each other on activity level during the interaction, and the attributions they made about behaviors in the

interaction were compared. Ratings of activity level differed by rating type, F (4, 120) = 26.17, MSE = 0.37, $p < 0.05$. It was agreed by all rating types that perpetrators were more active in the study than targets. The extent to which participants thought that behaviors and feelings experienced in the study were due to something about the person being rated differed by rating type, F (4, 120) = 4.39, MSE = 0.94, $p < 0.05$. Fewer personal attributions were made about the target than the perpetrators. To the extent that participants thought that behaviors and feelings experienced in the study were due to something about the situation, scores differed by rating type, F (4, 120) = 3.28, MSE = 1.04, $p < 0.05$. Parallel to the results about personal attributions, more situational attributions were made about the target, and fewer were made about the perpetrators. During the interaction, perpetrators were more active than targets, and more personal than situational attributions were made about the perpetrators than targets.

Targets and perpetrators also differed on how they perceived one another on the five perception ratings. Analyses of agreeableness indicated that there was a mean difference between the five rating-types, F (4, 120) = 19.22, MSE = 0.40, $p < 0.05$. All participants rated themselves highest on agreeableness, with perpetrators making the second highest ratings of the other perpetrators and the target. Targets rated perpetrators as the lowest on agreeableness. Analysis of variance revealed that there were no differences in the rating types on extroversion, F (4, 120) = 0.59, MSE = 0.94, $p = 0.57$ (n.s.). Ratings of intelligence differed, F (4, 120) = 4.50, MSE = 0.33, $p < 0.05$. Post-hoc tests indicated that perpetrators rated themselves and other perpetrators as most intelligent. Targets rated themselves as lower than perpetrators on intelligence. Cross-role ratings (target rating perpetrators, and perpetrator rating target) were the lowest. Analysis

of variance indicated a marginal difference between the rating-types on levels of relaxedness, F (4, 120) = 2.24, MSE = 0.93, p = 0.09. Self-ratings and perpetrators ratings of other perpetrators were highest on levels of relaxedness. Cross-role ratings were lowest on relaxedness. Ratings of physical attractiveness differed, F (4, 120) = 3.48, MSE = 0.73, $p < 0.05$. Post-hoc tests revealed that perpetrators rated themselves as the most physically attractive. Perpetrators and targets rated the perpetrators as least attractive. Targets ratings of self and perpetrators ratings of targets did not differ from any other scores. Overall, participants rated themselves more favorably than others, and rated group members in a different role less favorably than those in their own role.

Participants rated each other on liking, but not themselves. In these analyses, only three rating types were compared, perpetrators' ratings of targets and other perpetrators, and targets' ratings of perpetrators. Scores on liking differed by rating-type, F (2, 60) = 20.97, MSE = 0.61, $p < 0.001$. Post-hoc tests indicate that perpetrators liked other perpetrators most, and targets second most. Targets liked perpetrators least of anyone in the discussion group.

Meta-perceptions of the four personality characteristics discussed previously, and physical attractiveness were examined. For all analyses, perpetrators' ratings of other perpetrators, the targets, and the targets ratings of the perpetrators were compared. Group members differed by rating-type on levels of agreeableness, F (2, 60) = 24.10, MSE = 0.70, $p < 0.05$. Post-hoc comparisons revealed that perpetrators thought that other perpetrators found them more agreeable than other rating-types. Perpetrators ratings of targets and targets ratings of perpetrators did not differ from one another but were both lower than how perpetrators rated other perpetrators.

Participants thought that they were rated differently on extroversion by different raters, F (2, 60) = 18.22, MSE = 1.17, $p < 0.05$. Paired t-tests revealed that perpetrators felt that targets and other perpetrators rated them the similarly on extroversion. Targets thought that perpetrators rated them lower on extroversion than the other groups. Participants thought others rated them differently on levels of intelligence depending on rating-type, F (2, 60) = 17.44, MSE = 0.62, $p < 0.05$. Perpetrators thought that other perpetrators and targets rated them similarly on intelligence. Targets thought that perpetrators found them less intelligent than the other rating-types. Participants thought they were rated differently on levels of relaxedness by different types of people, F (2, 60) = 5.80, MSE = 0.68, $p < 0.05$. Although the ANOVA indicates that there is a difference between rating-types, post-hoc tests did not reveal any significant differences between rating-types at the $\alpha = 0.01$ level. Participants did not differ in how physically attractive they thought other people found them, F (2, 60) = 3.84, MSE = 0.62, $p < 0.06$. Thus, meta-perceptions differed by role in the group such that the targets thought they were viewed less favorably (lower on agreeableness, extroversion, and intelligence) by the perpetrators while perpetrators only thought that targets viewed them as less agreeable..

Multi-level analyses.

Analyses of the means have clearly established that perpetrators and targets of ostracism differ from one another and from control group members in how they perceive themselves and other group members. We now examine whether the attributions and feelings people had for their own and others' behavior predicted how they responded to the ostracism situation.

Multilevel regression analyses were conducted treating group as the upper-level unit and individual within group as the lower-level unit. Consider as an example whether perpetrators who more strongly attributed the target's behavior during the interaction to personal factors liked the target less. Each perpetrator rated the degree to which the target's behavior could be explained by personal characteristics of the target. Similarly, each perpetrator also rated how much they liked the target. Thus for each group, there are three predictor scores and three outcome scores, and these form the basic data for the multilevel analysis.

How do perpetrators' attributions for their own behavior affect their own and others' perceptions?

Perpetrators ratings of the extent to which their own behavior could be explained by personal and situational factors were used to predict a) how perpetrators perceived themselves on all other variables, b) how perpetrators perceived the target, and c), how the target perceived the perpetrators. These results are presented in Table 8.

Contrary to expectations, perpetrators who more strongly attributed their behavior and emotions during the interaction to personal factors tended to report experiencing more positive emotion, less negative emotion, and less guilt during the interaction. They also reported that they were more actively involved in the interaction and were more extroverted. Again, contrary to expectations, perpetrators who more strongly attributed their behavior and emotions during the interaction to situational factors did not show any differential perceptions of self or targets, nor were they differentially seen by the targets.

The personal and situational attributions that perpetrators made about their own behavior in the interaction were used to predict their perceptions of the target. To the

extent that perpetrators made stronger personal attributions about their own behavior during the interaction, they perceived targets as being more intelligent. The extent to which perpetrators made stronger situational attributions about their own behavior in the interaction did not predict perpetrators perceptions of the target.

Focusing now on how the perpetrators personal and situational attributions about themselves can be used to explain how perpetrators were perceived by targets in the interaction, perpetrators who made more personal attributions about themselves tended to be seen by targets as more active, and more extroverted during the discussion. Note that this is consistent with how perpetrators saw themselves on activity and extroversion. When perpetrators made stronger situational attributions about their own behavior in the interaction, targets rated them as being marginally less relaxed.

How do perpetrators attributions for the targets' behavior affect their own and others' perceptions?

Turning to the personal and situational attributions that the perpetrators made about the target's behaviors and emotions in the interaction, these attributions were used to predict how perpetrators viewed themselves, how perpetrators viewed the target, and how targets perceived the perpetrators. The results are presented in Table 9. Contrary to predictions, to the extent that perpetrators made stronger personal attributions about the targets' behavior in the interaction, perpetrators indicated that they felt marginally guiltier, and perceived themselves as being less agreeable. In accordance with predicted results, perpetrators who made stronger situational attributions about the target reported experiencing more positive emotion in the interaction and perceived themselves as more active in the discussion. However, when perpetrators made stronger situational

attributions about the targets' behavior in the interaction, perpetrators rated themselves as being less intelligent and marginally less relaxed.

The personal and situational attributions that perpetrators made about targets' behavior during the interaction were used to predict how perpetrators perceived the target in the discussion. To the extent that perpetrators made stronger personal attributions about the targets' behavior, perpetrators thought that targets experienced more positive emotion, less negative emotion and less guilt during the interaction. Perpetrators who made stronger personal attributions about targets behavior also reported that the targets were more active, more extroverted, and more intelligent during the interaction, and that they liked targets more. When perpetrators made more situational attributions about the behavior of the targets in the interaction, the perpetrators perceived targets as experiencing more negative emotion, and being less relaxed during the interaction. Additionally, perpetrators who made stronger situational attributions about targets behavior reported that targets were marginally less active in the discussion, but were more physically attractive.

The extent to which perpetrators attributed the targets' behavior to personal or situational factors was then used to predict how the target in turn perceived the perpetrators. Stronger personal attributions that perpetrators made about targets did not predict how targets perceived perpetrators, however, perpetrators who made stronger situational attributions about the target were perceived by the target as being more actively involved in the discussion, and as being more extroverted.

<u>How do targets' attributions for their own behavior affect their own and others' perceptions?</u>

Turning now to using the attributions that targets made to predict perceptions of self and other group members, the strength of personal and situational attributions that targets made about their own behavior during the interaction was used to predict how perpetrators perceived the target. These attributions that targets made about their own behavior did not significantly predict how perpetrators rated themselves or how targets rated perpetrators. All results are presented in Table 10, but only those predicting how perpetrators rated the target are discussed. Additionally, results predicting how perpetrators viewed themselves are not included in this table because there are none that reached statistical significance, and more importantly, there was no theoretical reason that targets attributions about themselves would be predictive of how perpetrators viewed themselves.

Targets who made stronger personal attributions about their own behavior in the discussion were seen by perpetrators as experiencing more positive emotion, marginally less negative emotion, and marginally less guilt. Additionally, when targets made stronger personal attributions about their own behavior, perpetrators rated the target as participating more actively in the discussion. When targets made stronger situational attributions about their own behavior in the interaction, the perpetrators perceived the targets as being more extroverted.

How do targets' attributions for the perpetrators behavior predict their own and others' perceptions?

Looking now at the personal and situational attributions that targets made about perpetrators behavior during the interaction, these attributions were used to predict how

the perpetrators perceived the target, and how the target perceived the perpetrators. Results of these analyses are presented in Table 11.

When targets made more situational attributions about perpetrators' behavior in the interaction, targets also tended to perceive perpetrators as experiencing less positive emotion. The situational attributions that targets made about perpetrators during the discussion were not significantly predictive on other variables.

Targets who made stronger personal attributions about the behavior of the perpetrators in the interaction were perceived by the perpetrators as experiencing marginally more positive emotion and marginally less negative emotion during the interaction, results opposing the original hypotheses. When targets made stronger personal attributions about the behavior of the perpetrators, the targets also perceived perpetrators as experiencing more positive emotion and less negative emotion. Targets additionally perceived perpetrators as being more active in the discussion, more extroverted, and indicated that they liked the perpetrators more.

The effects of guilt.

Looking now to another predictor of perceptions of group members, how much guilt the perpetrators reported experiencing in the study was used to predict how perpetrators viewed themselves, how perpetrators perceived the target, and how the target perceived the perpetrators during the interaction. Results are available in Table 12.

Perpetrators who reported experiencing stronger feelings of guilt during the interaction also tended to perceive themselves as experiencing less positive emotion and more negative emotion during the interaction. Additionally, perpetrators who reported experiencing more guilt during the discussion saw themselves as being marginally less

agreeable, marginally less relaxed, and rated themselves as less physically attractive. When perpetrators reported experiencing more guilt during the interaction, they in turn rated targets as more physically attractive, and as being marginally less relaxed during the interaction.

Using the targets ratings of the perpetrators, how guilty the targets perceived the perpetrators as feeling during the interaction predicted how the target perceived the perpetrators in other ways. The more guilty targets thought that perpetrators felt during the interaction, the more negative emotions they thought perpetrators experienced. Also, targets who thought perpetrators experienced more guilt during the interaction also perceived them as being more physically attractive.

DISCUSSION

Self-esteem.

In this study, three participants were instructed to exclude a fourth person in a brief (10 minute) interaction. Based on previous research (Sommer et al., 2001; Williams, 1997; Williams et al., 2000; Williams, 2001) we predicted that targets would have lower self-esteem relative to controls (participants who did not experience exclusion). In our study, however, we found no differences in self-esteem as a function of role in the study, indicating that perpetrators, targets and control group members did not differ significantly in their levels of self-esteem.

This unusual lack of differences on self-esteem, particularly with regards to control group members versus targets may be explained with reference to Williams' (1997, 2001) need threat hypothesis, specifically the link between the need to belong and need for self-esteem. According to sociometer theory (Leary & Baumeister, 2000), self-esteem serves as an indicator of an individual's success (or failure) at fulfilling their need to belong. Thus, the loss of a meaningful interpersonal bond would cause levels of self-esteem to drop. In the current study, targets never established the beginnings of this bond with perpetrators because exclusion of the target began without any prior inclusion. Thus, when targets were excluded, although they suffered several negative consequences, their self-esteem (sociometer) remained stable.

In previous work in which targets do exhibit a decrease in self-esteem, they are excluded after they interact briefly with perpetrators, after establishing the beginnings of an interpersonal bond. The loss of an interpersonal bond such as that which occurs in

ball-toss paradigms can, in the mind of the target, conceivably be blamed on some behavior on their part. Targets may self-blame more in these situations, resulting in lowered self-esteem. However, when an interpersonal bond is not yet formed and the target is rejected, as in this study, although there are negative effects on mood and perceptions of perpetrators, it is actually reasonable that there would be no decrease in levels of self-esteem because 1) targets did not lose a relationship by being excluded by strangers, and 2) they had not yet had the opportunity to do anything to warrant self-blame for the exclusion.

This distinction in how targets were excluded – after some inclusion, or prior to any interaction - may have important consequences that were not foreseen when the methodology for the current study was designed. A new study is being designed which will examine this distinction. Participants will be assigned to one of two conditions. In the prior-inclusion condition, they will complete a discussion task in a group of four, and then be placed in an ostracism situation like that of the current study. In the no-prior-inclusion condition, a similar procedure to that of the current study's ostracism condition will be used, with no interaction between group members allowed prior to the discussion task.

Comparing perceptions of ostracism and control group participants.

Comparisons of ostracism and non-ostracism groups tell us that overall, ostracism group members had less enjoyable interactions and viewed their group members less favorably. In contrast to the self-esteem results, comparisons with control group members on other variables indicated that excluding and being excluded does negatively impact perpetrators and targets. Specifically, targets experienced more negative and less positive

affect than controls during the interaction. Additionally, perpetrators experienced more guilt than controls or targets during the interaction. Excluding a group member made perpetrators feel guilty about their behavior, and being excluded caused targets to feel badly, but not necessarily about themselves.

Consistent with the evidence that targets in this study were negatively affected, but not in their self-view, is the information about perceptions and meta-perceptions. Targets thought their group members saw them as less agreeable, less extroverted, and less intelligent, compared to how control group members thought they were seen by other group members. However, targets did not rate themselves less favorably on these traits compared to controls. Again, information from targets indicates that being ostracized negatively impacted their experience with the group, but not their view of self.

Control group members liked each other more than targets and perpetrators liked one another. Given that perpetrators ignored the target, it is no surprise that targets liked perpetrators less than controls liked each other. This finding concurs with previous work by Williams (2001). Also, there are existing theoretical reasons why perpetrators should like targets less compared to controls. In real-life ostracism situations, it is often the case that exclusion is used on a group member who is behaving unpleasantly, but in this study, perpetrators were told to exclude the target for no reason. However, Williams (2001) has suggested that when the reason for ostracism is unclear, the 'interpersonal bond' is damaged more. Although this was meant to apply more to targets than perpetrators, it is likely that the tension is felt not only in how targets view perpetrators, but how perpetrators view targets. It seems likely that since perpetrators knew there was no reason to exclude the target beyond complying with the experimenter, this negatively affected

the group cohesion, especially between targets and perpetrators. Additionally, reporting a lower liking score could be how perpetrators justified their exclusion of the target. Perpetrators may have rationalized that it was more acceptable to exclude someone they didn't like, with the liking ratings of the target following suit with this line of thinking. Oddly however, perpetrators did not rate targets less favorably on other dimensions, perhaps because they felt unable to justify these other more objective ratings, whereas liking was potentially a more subjective rating.

Comparisons between perpetrators and targets

Previous work has examined both perpetrators and targets, usually with a rather disjointed approach. Often narratives written by participants recalling their experiences as both a target and a perpetrator are compared. Even using such a within-subjects approach, the context of these narratives may differ vastly across the reports. A report from a participant's perspective as a target may describe being punitively ostracized by a romantic partner, yet the same participant's report of their experience as a perpetrator may describe how they ignored an unpopular classmate in high school. Different contexts surrounding ostracism experiences of the same person may impact the effects that exclusion had on that person such that some contexts may more negatively affect mood and others may particularly damage self-esteem. Comparing targets and perpetrators that share the same context of ostracism allows for a more stable, controlled evaluation of these roles. This study offers the advantage of studying targets and perpetrators within the same context to examine how they directly influence each others' perceptions of self and other.

As previously found by Williams (2001), targets suffer a broader range of negative emotions than do perpetrators. Perpetrators, although negatively affected by excluding the target, suffered guilt more than other negative emotions. Additionally, targets tended to express less pleasure than perpetrators during interactions according to their reports of positive affect, which concurs with previous research that targets enjoy an interaction that involves ostracism less than perpetrators do (Williams 2001). Additionally, perpetrators thought targets were suffering more negative affect than targets actually self-reported – a perception which may be either a manifestation of perpetrators' guilt, or a perception that added to perpetrators' self-ratings of guilt.

Predictions about the attributions that group members would make about one another were not well supported. Contrary to predictions, fewer personal attributions were made about targets by perpetrators, and more situational attributions were made about targets by perpetrators. By the same vein, when targets were less active, more situational attributions were made about them. Additionally, perpetrators may have known that the target's behavior was constrained by the nature of the design of the study, adding to likelihood that perpetrators would make situational attributions about the targets' behavior.

Not surprisingly, targets rated perpetrators as less agreeable compared to how perpetrators rated targets. This perception is reflective of the target's reality in the interaction. By ignoring the target, perpetrators did not exhibit characteristics of agreeable people in their actions towards the target, and targets rated the perpetrators accordingly.

The meta-perception data show that perpetrators thought they were seen as more agreeable by other perpetrators. Although this did not concur with how perpetrators actually rated each other, it may reflect ingroup favoritism. Perpetrators expected to be rated more favorably by other members who were similar to them – in this case the other perpetrators who shared a unique role in the group. Coinciding with ingroup favoritism is outgroup derogation, the phenomenon that ingroup members rate an outgroup member less favorably (Turner, Brown, & Tajfel, 1979). Targets' meta-perceptions of perpetrators reflect their awareness of this outgroup derogation in that targets expected perpetrators to rate them as less intelligent and less extroverted. Perpetrators did rate targets as less intelligent, indicating that to this extent, targets were meta-accurate as to how they were seen by other group members.

These results are similar to the comparisons with control groups, and are consistent with many findings of ingroup-outgroup interpersonal perception. Perpetrators rated each other similar to self, and tended to make positive ratings about other perpetrators displaying a perception of ingroup similarity and favoritism. Perpetrators tended to make negative evaluations of the target which reflects outgroup derogation, and perceptions of dissimilarity of self from the outgroup member. It is interesting that the targets themselves were, to an extent, aware of this derogation as reflected in some of their meta-perceptions of perpetrators.

Moderational findings

We examined whether the attributions an individual made for their own or others behavior moderated their reactions to the ostracism situation. It should be noted that the attribution measures are suspect. The best interpretation of them is that higher attribution

scores are actually attributions for higher levels of activity; however, they were intended to measure attributions about ostracizing behaviors of perpetrators and targets' reactions to ostracism. In hindsight, the measure used was not the most accurate. That stated, results indicated that there was some degree of moderation, although not in the way we anticipated. Participants (regardless of if they were perpetrators or targets) who made more personal attributions for their own behavior in the study also reported more positive experiences in the interaction. Making personal attributions about one's own behavior may suggest that the raters took more responsibility for their own actions, inferring that they felt a great sense of personal control in the interaction. The maintenance of a sense of personal control has been shown in other research to be positively related to self-efficacy (Friedland, Keinan, & Regev, 1992). The positive relationship between personal self-attributions and positive outcomes in the interaction relates back to Williams' (1997, 2001) theoretical work on ostracism's deleterious effect on need for control. Perhaps those participants who took responsibility for their actions maintained a greater sense of control of their own actions, and fared better psychologically in the interaction. Attributions may be an important moderator in the outcome of ostracism exchanges if they indeed measure a sense of personal control, but validation of this interpretation requires more testing in other settings and a better measure of attributions.

The attributions that perpetrators made about targets moderated how they viewed themselves and the target. When perpetrators made more personal attributions about the targets' behavior, they tended to feel worse (guiltier, and less agreeable), but thought that the target fared better in the interaction emotionally and on other variables. Conversely, perpetrators who made more situational attributions about the targets behavior in the

interaction felt better about themselves, but perceived the target as having a worse experience – an increase in negative affect and less relaxedness. Because targets were not instructed about how to act in the interaction, it is likely that many tried initially to be active group members. It is likely therefore that the perpetrators made more personal attributions about the more active targets, and in turn felt even worse that they ignored an enthused and potentially valuable group member. Alternatively, when targets were sullen, or withdrawn and quiet, perpetrators may have felt the target was just playing into their role in the study and perpetrators may have felt more justified in ignoring a less valuable group member.

Attributions are sensitive to measurement, as documented by previous work (Gilbert & Malone, 1995) and a potential problem encountered in this study was that predictions were based on participants using a scale to make attributions about ostracism behaviors, but it is questionable whether participants actually were thinking of the ostracism behavior per se when they completed the attribution measures. The instructions for the scale did not specifically tell participants to answer the questions thinking of the ostracism behaviors because doing so would have revealed the true purpose of the study too soon, thereby potentially skewing other important answers on the questionnaire. Therefore, it is unclear as to exactly what behaviors the participants were making attributions about: the general behaviors in the interaction, or those involving exclusion specifically. In all likelihood, given the patterns of peoples' responses, participants were making attributions about activity level, not ostracism-related behaviors specifically.

Limitations

The current study has taken important steps in understanding social ostracism by providing new information about perpetrators and targets as participants in an ostracism exchange, and by addressing questions raised by previous work about targets and perpetrators. Despite all efforts, this study had several limitations.

One problem encountered, which was previously discussed, is that the attributions we measured were general, and not specifically about ostracism behaviors. This issue is difficult to resolve without making participants suspicious about the nature of the study. However, if attributions were the final measure that participants completed, perhaps questions specifically about the attributions for ostracism could be asked without the concern of it influencing other responses on dependent measures.

In real-life situations of ostracism, exclusion can occur for days or weeks (Williams, 1997, 2001), but in our study, ostracism only occurred for 10 minutes. Although the length of exclusion is brief in this study, it has been standard for ostracism to last only a few minutes in laboratory settings (Williams & Sommer, 1997, Williams et al., 2000). Short-term ostracism has been adequate to examine its effects on perpetrators and targets. Longer exposure to exclusion presents a number of ethical problems in that it may cause targets (and perpetrators) more psychological harm than is reversible with a debriefing, or than is needed to adequately study ostracism. In addition to ethical issues, it would be impractical and stressful on participants to assign them to days of either excluding or being excluded by others, especially when short-term methods are satisfactory for studying exclusion.

Like many laboratory settings, the ostracism interaction was somewhat contrived. In using a laboratory experimental design, we were able to gain control over the context of the reason and length of exclusion, but had to sacrifice some degree of realism. In the current study, efforts were made to make the situation as realistic as possible for participants. They were not asked to imagine an exclusion situation, but were asked to perform exclusion behaviors towards a target, perhaps enhancing the naturalism of the ostracism exchange.

The attempts made at making this laboratory study realistic involved the use of role-play for participants. The use of role-play by the perpetrators could have detracted from the realism of their experience in the situation, and perhaps compromised the validity of their responses to the post-interaction questionnaire. However, responses on dependent measures of the questionnaire, discussions that occurred in debriefing, as well as even a brief view of the video-tapes of the interactions indicate that almost all perpetrators took their role in the study seriously and psychologically immersed themselves as being true perpetrators. Although no reason was provided for perpetrators to exclude the target, and in many instances in reality people exclude for some reason, it is not unheard of to exclude someone for no reason. For instance, adolescent girls have been observed to be particularly adept at excluding someone for no substantial reason except that others are doing it (Williams, 2001).

Conclusions

As with many experiments, this study provided information answering questions posed by previous work, yet raises more questions that deserve attention and investigation. For instance, our study does not examine if the gender composition of the

groups affected the experience of group members, or if targets who were the only ethnic minority in the group were affected differentially. Thoroughly examining these issues would require groups that are composed of specific types of people, which this study did not include. Additionally, it would be interesting to give perpetrators a reason to exclude the target – whether it be an impairment that may hinder the group, or something such as an obnoxious interpersonal style.

Other future directions for the study of ostracism should include examining the differences in methodologies that use the threat of ostracism, ostracism during the entire interaction, or ostracism after a brief period of inclusion during the study. These comparisons and other questions can be answered by using the naturalistic method of ostracism in the present study as a means of experimentally manipulating level of inclusion. This method can easily be used to test a variety of moderators on perpetrators and targets, such as the ambiguity of the ostracism and the reason for the ostracism. Additionally, this study included a control (inclusion) condition, but it is clear that many of the most informative questions about how perpetrators and targets influence one another can be addressed without a control group. Using the method of the current study to examine the impact of exclusion on perpetrators and targets requires only that both of these roles be present, and the absence of a control group would not detract from the strength of the study. This is a distinct advantage over designs examining only perpetrators or targets because those studies must use controls for the sake of a comparison group.

Methodologically, the study of ostracism demands creativity. Ethical concerns prohibit any drastic exclusion, or ostracism for an extended length of time. Data

collection requiring a specific number of participants in a group can lengthen the time it takes for sufficient data to be collected. To avoid these issues, previous ostracism research has used confederates, dyadic interactions, or recall methods. These techniques have allowed important preliminary investigations into how ostracism affects the perpetrators and the targets separately. However, this study was the first to use a method in which participants served as both perpetrators and targets in the same group, allowing the entire exchange to be studied. Due to ethical and practical considerations, this is perhaps as close to a naturalistic setting that we can achieve while still maintaining control of the setting and context of the exchange, and obtaining data from both targets and perpetrators about each other.

This study has explored the interaction of perpetrators and targets in an ostracism context, largely quantitatively at this point. More data from this study are being examined and analyzed on a more experiential level. The videotapes of the sessions are being examined to answer more questions about what exactly happened in each exchange during the study. Coders are rating each group member on several items related to how they behaved in the study (e.g., anxiousness, alertness, being on task). They are also rating how each perpetrator behaved towards the target (e.g., Did they ignore comments? Did they become short or terse?). Perpetrators are also being rated on how they interacted with the other perpetrators relative to the target (e.g., To what extent did this person look to the other perpetrators for support?). Also, the group of perpetrators is coded as a unit on dimensions such as, agreement, happiness, tension, and successfully exclusion of the target. Targets are being rated on their reaction to the exclusion, (e.g., Looking away from group members, Throwing out ideas, Seems not to notice exclusion). The videos are

a rich source of data about exclusion groups and can be used in the future to address new questions about ostracism interactions.

The current study has begun to answer questions raised by previous work, and provides new insights into the experience of social ostracism. Ostracism is an exchange in which all group members influence each other in distinct and powerful ways. It is clear that both targets and perpetrators are negatively affected by exclusion, yet in different ways. Exploring the process of how ostracism works will require further study, and the methods used in the present research should provide a useful guide for this process.

APPENDICES

PRELIMINARY QUESTIONNAIRE.

Before beginning the discussion exercise, we would like to know some basic background information about you. Please answer all questions that you are comfortable answering so that we can gain a more complete picture of who you are.

What letter were you given to identify yourself as in the interaction? _____

1. Please indicate your gender (circle ONE): FEMALE MALE

2. What is your age? _____

3. Do you live with any roommates? YES NO

3 a. If so, how many? _____

4. What is your ethnicity?

African-American/ Black _____
Asian, or Asian-American _____
Pacific Islander _____
Native American / Indigenous people _____
Caucasian / White / European descent _____
Hispanic / South American / Carribbean Islander _____
Multi-Racial (please indicate what races you are) _____

5. Are in you a romantic relationship? YES NO

a. If yes, how long have you been in this relationship? _____

b. Is this an exclusive relationship? YES NO

6. Is your best friend on campus? YES NO

7. Do you have friends that you spend time with regularly? YES NO

8. How easy do you find it to make new friends in your classes?

1	2	3	4	5
Very difficult	Somewhat Difficult	Neutral	Easy	Very Easy

Thank you for taking the time to tell us a little about yourself. Please stay seated until the experimenter returns. He or she will collect this form, and take you to the next part of the study.

POST-DISCUSSION QUESTIONNAIRE

What was your letter in the interaction: _____ Session number :_____

Instructions: Please complete the following questions about your experience in your group. Be as honest and accurate as you can. Because we would like to keep this information anonymous, please do NOT place your name, PID, or any other identifying information on this questionnaire.

This is a questionnaire designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Again, answer these questions as they are true for you RIGHT NOW.

1. I feel confident about my abilities.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

2. I am worried about whether I am regarded as a success or failure.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

3. I feel satisfied with the way my body looks right now

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

4. I feel frustrated or rattled about my performance.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

5. I feel that I am having trouble understanding things that I read.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

6. I feel that others respect and admire me.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

7. I am dissatisfied with my weight.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

8. I feel self-conscious.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

9. I feel as smart as others.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

10. I feel displeased with myself.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

11. I feel good about myself.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

12. I am pleased with my appearance right now.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

13. I am worried about what other people think of me.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

14. I feel confident that I understand things.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

15. I feel inferior to others at this moment.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

16. I feel unattractive.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

17. I feel concerned about the impression I am making.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

18. I feel that I have less scholastic ability right now than others.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

19. I feel like I'm not doing well.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

20. I am worried about looking foolish.

1	2	3	4	5
Not at All	A little Bit	Somewhat	Very Much	Extremely

Using the scale below, indicate how the group interaction made **YOU** feel.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Frustrated

_____ Sad

_____ Outgoing

_____ Angry

_____ Embarrassed

_____ Worried

_____ Guilty

_____ Confused

_____ Warm

_____ Disgusted

_____ Self-conscious

_____ Happy

_____ Resentful

Using the scale below, please evaluate the degree to which **YOU** displayed the following behaviors.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Talked during the interaction

_____ Made eye contact with group members

_____ Smiled at group members

_____ Stayed focused on the discussion

_____ Contributed to the group task

_____ Acted as a group leader

_____ Withdrew from the interaction

Please circle the number that best corresponds to your answer.

When people interact with others, they often try to explain their own feelings and behavior. One basic way of explaining behavior is to think of it being caused either by your personality (who you are) or by characteristics of the situation (anyone would behave in this way if they were in this particular situation.)

With this in mind, please circle the number that best corresponds to your answer.

How much was your behavior during the interaction a reflection of who you are as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much were the feelings you experienced during the interaction a reflection of who you are as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much was your behavior during the interaction a reflection of the <u>situation</u> you were in?

1	2	3	4	5	6	7
Not at all						Very much

How much were the feelings you experienced during the interaction due to the <u>situation</u> you were in?

1	2	3	4	5	6	7
Not at all						Very much

For each of the following characteristics, indicate with an X the degree to which **you** possess the characteristic. The closer the X is to a word, the more you believe the word describes **you**.

Outgoing	_____: _____: _____: _____: _____: _____: _____	Reclusive
Unintelligent	_____: _____: _____: _____: _____: _____: _____	Intelligent
Likeable	_____: _____: _____: _____: _____: _____: _____	Unlikable
Friendly	_____: _____: _____: _____: _____: _____: _____	Unfriendly
Relaxed	_____: _____: _____: _____: _____: _____: _____	Nervous
Talkative	_____: _____: _____: _____: _____: _____: _____	Quiet
Considerate	_____: _____: _____: _____: _____: _____: _____	Inconsiderate
Physically Attractive	_____: _____: _____: _____: _____: _____: _____	Physically Unattractive

PERSON B

Using the scale below, indicate how the group interaction made **PERSON B** feel.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Frustrated

_____ Sad

_____ Outgoing

_____ Angry

_____ Embarrassed

_____ Worried

_____ Guilty

_____ Confused

_____ Warm

_____ Disgusted

_____ Self-conscious

_____ Happy

_____ Resentful

Using the scale below, please evaluate the degree to which **PERSON B** displayed the following behaviors.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Talked during the interaction

_____ Made eye contact with group members

_____ Smiled at group members

_____ Stayed focused on the discussion

_____ Contributed to the group task

_____ Acted as a group leader

_____ Withdrew from the interaction

Please circle the number that best corresponds to your answer.

How much do you think PERSON **B**'s behavior during the interaction is a reflection of who he or she is as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think the feelings PERSON **B** experienced were a reflection of who he or she is as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think PERSON **B**'s behavior is a reflection of the <u>situation</u> he or she was in?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think the feelings PERSON **B** experienced were due to the <u>situation</u> he or she was in?

1	2	3	4	5	6	7
Not at all						Very much

For each of the following characteristics, indicate with an X the degree to which you believe PERSON **B** possess the characteristic. The closer the X is to a word, the more you believe PERSON **B** exhibits this trait.

Outgoing _____: _____: _____: _____: _____: _____: _____ Reclusive

Unintelligent _____: _____: _____: _____: _____: _____: _____ Intelligent

Likeable _____: _____: _____: _____: _____: _____: _____ Unlikable

Friendly _____: _____: _____: _____: _____: _____: _____ Unfriendly

Relaxed _____: _____: _____: _____: _____: _____: _____ Nervous

Talkative _____: _____: _____: _____: _____: _____: _____ Quiet

Considerate _____: _____: _____: _____: _____: _____: _____ Inconsiderate

Physically Attractive _____: _____: _____: _____: _____: _____: _____ Physically Unattractive

How much did you like PERSON **B**?

1 2 3 4 5 6 7
Not at all Very much

How much do you think PERSON **B** liked you?

1 2 3 4 5 6 7
Not at all Very much

Would you want to interact with PERSON **B** again?

1 2 3 4 5 6 7
Not at all Very much

How much would you like to get to know PERSON **B** better in a social setting?

1 2 3 4 5 6 7
Not at all Very much

For each of the following traits, indicate with an X the degree to which **you believe that PERSON B thinks that YOU possess the characteristic**. The closer the X is to a word, the more you believe PERSON **B** thinks that you exhibit this trait.

Outgoing	_____: _____: _____: _____: _____: _____: _____	Reclusive
Unintelligent	_____: _____: _____: _____: _____: _____: _____	Intelligent
Likeable	_____: _____: _____: _____: _____: _____: _____	Unlikable
Friendly	_____: _____: _____: _____: _____: _____: _____	Unfriendly
Relaxed	_____: _____: _____: _____: _____: _____: _____	Nervous
Talkative	_____: _____: _____: _____: _____: _____: _____	Quiet
Considerate	_____: _____: _____: _____: _____: _____: _____	Inconsiderate
Physically Attractive	_____: _____: _____: _____: _____: _____: _____	Physically Unattractive

PERSON C

Using the scale below, indicate how the group interaction made **PERSON C** feel.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Frustrated

_____ Sad

_____ Outgoing

_____ Angry

_____ Embarrassed

_____ Worried

_____ Guilty

_____ Confused

_____ Warm

_____ Disgusted

_____ Self-conscious

_____ Happy

_____ Resentful

Using the scale below, please evaluate the degree to which **PERSON C** displayed the following behaviors.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Talked during the interaction

_____ Made eye contact with group members

_____ Smiled at group members

_____ Stayed focused on the discussion

_____ Contributed to the group task

_____ Acted as a group leader

_____ Withdrew from the interaction

Please circle the number that best corresponds to your answer.

How much do you think PERSON **C**'s behavior during the interaction is a reflection of who he or she is as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think the feelings PERSON **C** experienced were a reflection of who he or she is as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think PERSON **C**'s behavior is a reflection of the <u>situation</u> he or she was in?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think the feelings PERSON **C** experienced were due to the <u>situation</u> he or she was in?

1	2	3	4	5	6	7
Not at all						Very much

For each of the following characteristics, indicate with an X the degree to which you believe PERSON **C** possess the characteristic. The closer the X is to a word, the more you believe PERSON **C** exhibits this trait.

Outgoing _____: _____: _____: _____: _____: _____: _____ Reclusive

Unintelligent _____: _____: _____: _____: _____: _____: _____ Intelligent

Likeable _____: _____: _____: _____: _____: _____: _____ Unlikable

Friendly _____: _____: _____: _____: _____: _____: _____ Unfriendly

Relaxed _____: _____: _____: _____: _____: _____: _____ Nervous

Talkative _____: _____: _____: _____: _____: _____: _____ Quiet

Considerate _____: _____: _____: _____: _____: _____: _____ Inconsiderate

Physically Attractive _____: _____: _____: _____: _____: _____: _____ Physically Unattractive

How much did you like PERSON **C**?

1 2 3 4 5 6 7
Not at all Very much

How much do you think PERSON **C** liked you?

1 2 3 4 5 6 7
Not at all Very much

Would you want to interact with PERSON **C** again?

1 2 3 4 5 6 7
Not at all Very much

How much would you like to get to know PERSON **C** better in a social setting?

1 2 3 4 5 6 7
Not at all Very much

For each of the following traits, indicate with an X the degree to which **you believe that PERSON C thinks that YOU possess the characteristic**. The closer the X is to a word, the more you believe PERSON C thinks that you exhibit this trait.

Outgoing	_____: _____: _____: _____: _____: _____: _____	Reclusive
Unintelligent	_____: _____: _____: _____: _____: _____: _____	Intelligent
Likeable	_____: _____: _____: _____: _____: _____: _____	Unlikable
Friendly	_____: _____: _____: _____: _____: _____: _____	Unfriendly
Relaxed	_____: _____: _____: _____: _____: _____: _____	Nervous
Talkative	_____: _____: _____: _____: _____: _____: _____	Quiet
Considerate	_____: _____: _____: _____: _____: _____: _____	Inconsiderate
Physically Attractive	_____: _____: _____: _____: _____: _____: _____	Physically Unattractive

PERSON D

Using the scale below, indicate how the group interaction made **PERSON D** feel.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Frustrated

_____ Sad

_____ Outgoing

_____ Angry

_____ Embarrassed

_____ Worried

_____ Guilty

_____ Confused

_____ Warm

_____ Disgusted

_____ Self-conscious

_____ Happy

_____ Resentful

Using the scale below, please evaluate the degree to which **PERSON D** displayed the following behaviors.

1 = Barely or not at all 2 = A little 3 = Somewhat 4 = Moderately 5 = Very Much

_____ Talked during the interaction

_____ Made eye contact with group members

_____ Smiled at group members

_____ Stayed focused on the discussion

_____ Contributed to the group task

_____ Acted as a group leader

_____ Withdrew from the interaction

Please circle the number that best corresponds to your answer.

How much do you think PERSON **D**'s behavior during the interaction is a reflection of who he or she is as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think the feelings PERSON **D** experienced were a reflection of who he or she is as a person?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think PERSON **D**'s behavior is a reflection of the <u>situation</u> he or she was in?

1	2	3	4	5	6	7
Not at all						Very much

How much do you think the feelings PERSON **D** experienced were due to the <u>situation</u> he or she was in?

1	2	3	4	5	6	7
Not at all						Very much

For each of the following characteristics, indicate with an X the degree to which you believe PERSON **D** possess the characteristic. The closer the X is to a word, the more you believe PERSON **D** exhibits this trait.

Outgoing _____: _____: _____: _____: _____: _____: _____ Reclusive

Unintelligent _____: _____: _____: _____: _____: _____: _____ Intelligent

Likeable _____: _____: _____: _____: _____: _____: _____ Unlikable

Friendly _____: _____: _____: _____: _____: _____: _____ Unfriendly

Relaxed _____: _____: _____: _____: _____: _____: _____ Nervous

Talkative _____: _____: _____: _____: _____: _____: _____ Quiet

Considerate _____: _____: _____: _____: _____: _____: _____ Inconsiderate

Physically Attractive _____: _____: _____: _____: _____: _____: _____ Physically Unattractive

How much did you like PERSON **D**?

1 2 3 4 5 6 7
Not at all Very much

How much do you think PERSON **D** liked you?

1 2 3 4 5 6 7
Not at all Very much

Would you want to interact with PERSON **D** again?

1 2 3 4 5 6 7
Not at all Very much

How much would you like to get to know PERSON **D** better in a social setting?

1 2 3 4 5 6 7
Not at all Very much

For each of the following traits, indicate with an X the degree to which **you believe that PERSON D thinks that <u>YOU</u> possess the characteristic**. The closer the X is to a word, the more you believe PERSON **D** <u>thinks that you</u> exhibit this trait.

Outgoing	_____: _____: _____: _____: _____: _____: _____	Reclusive
Unintelligent	_____: _____: _____: _____: _____: _____: _____	Intelligent
Likeable	_____: _____: _____: _____: _____: _____: _____	Unlikable
Friendly	_____: _____: _____: _____: _____: _____: _____	Unfriendly
Relaxed	_____: _____: _____: _____: _____: _____: _____	Nervous
Talkative	_____: _____: _____: _____: _____: _____: _____	Quiet
Considerate	_____: _____: _____: _____: _____: _____: _____	Inconsiderate
Physically Attractive	_____: _____: _____: _____: _____: _____: _____	Physically Unattractive

Please describe, in your own words, your experience in the interaction today. Particularly, describe what you thought about each person in the interaction, and how each person in the interaction made you feel. (Feel free to use the back of this page or request more paper if you need more space to express yourself.)

FOOTNOTES

1. Analyses were initially done with gender to explore any differences, but there were no significant interactions (the largest $F(5, 178) = 2.70$, $MSE = 57.26$, $p = .07$), therefore gender was dropped from the analyses.

Table 1. Items that comprise the measures.

Scale Name	Items
Positive Emotion	outgoing
	warm
	happy
Negative Emotion	frustrated
	sad
	angry
	embarrassed
	worried
	confused
	disgusted
	self-conscious
	resentful
Guilt	guilty
Activity	Talked during the interaction.
	Made eye contact with group members.
	Smiled at group members.
	Stayed focused on the discussion.
	Contributed to the group task.
	Acted as a group leader
	Withdrew from the interaction.
Person Attribution	How much do you think A's behavior is a reflection of who he or she is as a person?
	How much do you think the feelings A experienced were a reflection of who he or she is as a person?
Situation Attribution	How much do you think A's behavior is a reflection of the situation he or she was in?
	How much do you think the feelings A experienced were due to the situation he or she was in?
Liking	How much did you like Person A?
	How much do you think Person A liked you?
	Would you want to interact with Person A again?
	How much would you like to get to know Person A better in a social setting?

Table 1 (cont'd).

Agreeableness	Likeable / Unlikeable Friendly / Unfriendly Considerate / Inconsiderate
Extroversion	Outgoing / Reclusive Talkative / Quiet
Neuroticism	Relaxed / Nervous
Intelligence	Intelligent / Unintelligent
Physical Attractiveness	Physically Attractive / Unattractive

Note. Scales and scale items for perceptions and meta-perceptions were identical. Participants were given instructions to rate another person in perception ratings, and to rate how they thought another person would rate themselves in the meta-perception ratings. Items were labels on the endpoints of a semantic differential scale.

Table 2. Descriptive Statistics for Round-Robin Ratings across both conditions and all groups.

	M	SD	Number Items	Scale Endpoints	Cronbach's alpha
Positive Emotions	1.42	0.64	9	1,5	0.79
Negative Emotions	2.47	1.08	3	1,5	0.90
Guilt	1.41	0.90	1	1,5	--
Activity	3.68	0.87	7	1,5	0.88
Person Attributions	4.38	1.46	2	1,7	0.87
Situation Attributions	4.93	1.44	2	1,7	0.90
Liking	4.70	1.21	4	1,7	0.89

Note. For all scales, higher numbers indicate greater levels of the variable.

Table 3. Descriptive Statistics for Round-Robin Ratings of Perceptions and Metaperceptions across both conditions and all groups.

	M	SD	Number Items	Scale Endpoints	Cronbach's alpha
Perceptions					
Agreeableness	5.79	1.00	3	1,7	0.87
Extroversion	5.30	1.30	2	1,7	0.86
Relaxed	5.35	1.36	1	1,7	--
Intelligence	5.71	0.94	1	1,7	--
Physical Attractiveness	4.83	1.30	1	1,7	--
Metaperceptions					
Agreeableness	5.25	1.22	3	1,7	0.91
Extroversion	5.20	1.40	2	1,7	0.90
Relaxed	5.30	1.25	1	1,7	--
Intelligence	5.23	1.12	1	1,7	--
Physical Attractiveness	4.56	1.12	1	1,7	--

Table 4. Means and standard deviations for state self-esteem and subscales.

	Perpetrators	Targets	Controls
Overall	79.02 (10.43)	76.58 (10.60)	77.83 (10.41)
Performance	28.81 (3.80)	28.16 (3.78)	28.85 (3.97)
Social	28.27 (4.64)	27.52 (4.66)	28.22 (4.64)
Appearance	20.90 (4.08)	20.90 (4.08)	20.77 (4.20)

Table 5. Means for the Seven Rating Types on emotions, activity, attributions, and liking.

		Exclusion					Control	
		Other-ratings			Self-Ratings		Other	Self
		PP	PT	TP	PS	TS	ratings	ratings
Positive Emotions	M	2.74 $_{a}$	1.61 $_{b}$	2.38 $_{a}$	2.76 $_{a}$	1.74 $_{b}$	2.62	2.64
	SD	0.74	0.46	0.92	0.68	0.81	0.36	0.46
Negative Emotions	M	1.25 $_{a}$	2.49 $_{b}$	1.32 $_{a, c}$	1.27 $_{a}$	1.66 $_{c}$	1.19	1.21
	SD	0.14	0.72	0.44	0.17	0.72	0.12	0.12
Guilt	M	1.66 $_{a}$	1.34 $_{a, b}$	1.26 $_{b}$	2.21 $_{c}$	1.10 $_{b}$	1.03	1.07
	SD	0.43	0.48	0.66	0.66	0.54	0.07	0.18
Activity	M	3.98 $_{a}$	2.74 $_{b}$	3.65 $_{c}$	4.01 $_{a}$	3.08 $_{d}$	3.80	3.73
	SD	0.34	0.77	0.63	0.35	0.85	0.33	0.39
Person Attributions	M	4.50 $_{a}$	3.76 $_{b}$	4.40 $_{a}$	4.42 $_{a, b}$	3.81 $_{a, b}$	4.68	4.29
	SD	0.72	1.16	1.29	0.70	1.44	0.51	0.76
Situation Attributions	M	5.09 $_{a}$	5.60 $_{b}$	4.71 $_{a}$	5.17 $_{a, b}$	4.92 $_{a, b}$	4.54	4.50
	SD	0.62	0.86	1.53	0.82	1.52	0.46	0.69
Liking	M	5.08 $_{a}$	4.42 $_{b}$	3.80 $_{c}$	--	--	4.92	--
	SD	0.65	0.64	1.09	--	--	0.47	--

Note. Same subscript letters indicate that means on this scale are not statistically different according to paired t-test with a significance level of $\alpha = 0.01$. Different subscript letters indicate a difference in the means between rating types in the ostracism groups only.

Table 6. Means for the Seven Rating Types perceptions.

		Exclusion					Control	
		Other-ratings			Self-Ratings		Other	Self
		PP	PT	TP	PS	TS	ratings	ratings
Agreeableness	M	5.88 $_{a, b}$	5.63 $_{a}$	4.97 $_{c}$	6.17 $_{d}$	6.17 $_{b, d}$	5.85	6.11
	SD	0.39	0.58	0.91	0.44	0.72	0.34	0.46
Extroversion	M	5.48 $_{a}$	5.26 $_{a}$	5.22 $_{a}$	5.13 $_{a}$	5.19 $_{a}$	5.26	5.37
	SD	0.46	1.03	0.88	0.67	1.55	0.42	0.60
Relaxed	M	5.47 $_{a}$	4.88 $_{b}$	5.00 $_{a, b}$	5.39 $_{a, b}$	5.35 $_{a, b}$	5.58	5.52
	SD	0.63	1.06	0.91	0.89	1.33	0.63	0.53
Intelligence	M	5.80 $_{a}$	5.60 $_{a, b}$	5.32 $_{a}$	5.88 $_{b}$	5.74 $_{a, b}$	5.73	5.87
	SD	0.36	0.59	0.81	0.46	0.73	0.47	0.39
Physically attractive	M	4.86 $_{a}$	4.64 $_{a, b}$	4.34 $_{a}$	5.07 $_{b}$	4.93 $_{a, b}$	4.88	5.12
	SD	0.75	0.83	0.88	0.59	1.21	0.44	0.56

Note. Same subscript letters indicate that means on this scale are not statistically different according to paired t-test with a significance level of $\alpha = 0.01$. Different subscript letters indicate a difference in the means between rating types in the ostracism groups only.

Table 7. Means for the Rating Types metaperceptions.

		Exclusion			Control
		PP	PT	TP	
Agreeableness	M	5.70_{a}	4.24_{b}	4.82_{b}	5.54
	SD	0.49	1.12	0.77	0.54
Extroversion	M	5.53_{a}	5.60_{a}	4.13_{b}	5.19
	SD	0.57	0.57	1.64	0.60
Relaxed	M	5.38_{a}	5.31_{a}	4.73_{a}	5.49
	SD	0.75	0.73	1.20	0.43
Intelligence	M	5.53_{a}	5.39_{a}	4.44_{b}	5.24
	SD	0.41	0.52	1.07	0.58
Physically attractive	M	4.72_{a}	4.52_{a}	4.17_{a}	4.62
	SD	0.64	0.64	1.15	0.43

Note. Same subscript letters indicate that means on this scale are not statistically different according to paired t-test with a significance level of $\alpha = 0.01$. Different subscript letters indicate a difference in the means between rating types in the ostracism groups only.

Table 8. Regression results (unstandardized coefficients) predicting within group perceptions as a function of the degree to which the perpetrators attributed their own behavior during the interaction to personal and situational characteristics

Predicted Perception:	How P saw Self		How P saw Target		How Target saw P	
Attribution:	Person	Situation	Person	Situation	Person	Situation
Positive emotion	.29**	.08	.03	-.01	.08	-.02
Negative emotion	-.06*	.03	.10	.04	-.01	.00
Guilt	-.22*	.09	.07	-.04	.01	-.01
Activity	.21***	.05	.01	-.06	.18**	.05
Liking	--	--	.11	.11	-.02	-.10
Agreeableness	.03	.02	.01	.02	.08	.02
Extroversion	.32**	-.13	.09	-.03	.43***	.03
Intelligence	-.01	-.04	.17*	.06	.06	-.07
Relaxed	.09	-.01	-.09	-.10	.14	-.17+
Physical attractiveness	.15	-.07	.05	.10	.10	-.06

Note. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9. Regression results (unstandardized coefficients) predicting within group perceptions as a function of the degree to which the perpetrators attributed the behavior of the target during the interaction to personal and situational characteristics

Predicted Perception:	How P saw Self		How P saw Target		How Target saw P	
Attribution:	Person	Situation	Person	Situation	Person	Situation
Positive emotion	-.03	.19*	.12*	-.07	.05	.06
Negative emotion	.02	.02	-.20***	.18**	.01	-.06
Guilt	.17+	.03	-.15**	.06	-.03	.06
Activity	-.03	.15***	.21***	-.11+	.04	.18**
Liking	--	--	.18**	.06	.00	-.08
Agreeableness	-.13*	-.07	.06	-.03	.02	.08
Extroversion	-.04	-.04	.21**	-.01	-.07	.25*
Intelligence	-.03	-.11*	.12*	-.06	.10	.04
Relaxed	-.15	-.21+	.01	-.34**	-.06	.05
Physical attractiveness	-.07	-.13	.11	.20*	-.03	-.08

Note. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 10. Regression results (unstandardized coefficients) predicting within group perceptions as a function of the degree to which the targets attributed their own behavior during the interaction to personal and situational characteristics.

Predicted Perception:	How P saw Target		How Target saw P	
Attribution:	Person	Situation	Person	Situation
Positive emotion	.13*	.04	.17	.08
Negative emotion	-.17+	-.08	.02	.05
Guilt	-.11+	-.05	.02	.06
Activity	.27**	.15	.11	.07
Liking	.11	.05	.23+	.03
Agreeableness	-.03	.06	.10	.04
Extroversion	.07	.26*	-.10	-.01
Intelligence	-.01	-.01	.00	-.10
Relaxed	-.06	.04	.13	.01
Physical attractiveness	.02	-.11	.02	.13

Note. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 11. Regression results (unstandardized coefficients) predicting within group perceptions as a function of the degree to which the targets attributed the perpetrators behavior during the interaction to personal characteristics.

Predicted Perception:	How P saw Target		How Target saw P	
Attribution:	Person	Situation	Person	Situation
Positive emotion	.11*	.05	.20**	-.16*
Negative emotion	-.12+	.01	-.06*	.04
Guilt	-.04	.07	-.06	.02
Activity	.06	.04	.24**	-.01
Liking	.08	-.02	.20*	.05
Agreeableness	-.06	.03	.06	.00
Extroversion	-.08	.10	.27**	-.07
Intelligence	-.08	.02	.03	-.01
Relaxed	-.09	-.05	.12	-.06
Physical attractiveness	-.11	-.11	.09	.12

Note. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 12. Regression results (unstandardized coefficients) predicting within group perceptions as a function of the degree to which the perpetrators perceived themselves or were perceived by targets as experiencing guilt during the interaction.

Predictor perception:	P rating Self	P rating Self	Target rating P
Outcome perception:	P rating Self	P rating Target	Target rating P
Positive emotion	-.15*	-.03	.22
Negative emotion	.14***	.05	.19**
Activity	.02	-.02	-.08
Liking	--	.11	-.15
Agreeableness	-.11+	.02	.19
Extroversion	-.05	.02	-.05
Intelligence	-.03	.08	.08
Relaxed	-.19+	-.17+	.11
Physical attractiveness	-.17*	.19*	.48*

Note. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

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