

A Test of the Empathy-altruism Hypothesis versus the Simultaneous Egoism Hypothesis

by Taylor L. Miller

Two classes of motives are suggested for why we help others as a result of feeling empathic concern. The empathy-altruism hypothesis (EAH) states that feeling empathic concern for a person in need produces altruistic motivation. Egoism hypotheses propose motivation is directed at satisfying self-interested goals, such as avoiding punishment, obtaining rewards, lessening aversive arousal, reducing negative states, acquiring empathic joy, increasing aspects of one's self shared with another, or a combination thereof. For the present study, participants were told they and another ostensible participant would be completing a study investigating how communication, task difficulty, and task engagement affect task performance. In all conditions participants received a communication from the ostensible participant describing a recent relationship breakup. In the first condition, participants were asked to read the communication while remaining objective and detached. Furthermore they were led to believe that the ostensible other was dissimilar to them and had been assigned a task with a potential positive outcome, but had a low likelihood of receiving the positive outcome. Those in the second condition were asked to remain objective while reading the communication, but were given no information about similarity between themselves and the ostensible participant and were led to believe the participant had a high likelihood of receiving the positive outcome. The third condition was same as the first condition except that participants were asked to imagine the ostensible participant's thoughts and feelings while reading the communication. The primary dependent variable was whether participants indicated they would like to receive feedback about whether the other participant succeeded in receiving the positive task outcome. Results revealed that those in the imagine-other/no information/low likelihood of a positive outcome condition were more likely to request feedback about ostensible participant's outcome than those in the other two conditions, but the pattern of proportions was not statistically significant. Although the pattern of results is more consistent with the EAH than the egoistic alternative explanations, findings were ambiguous given the perspective-taking manipulation effect on empathic concern was weak.

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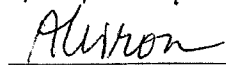
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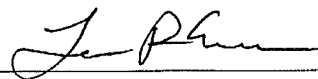


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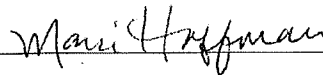
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A Test of the Empathy-Altruism Hypothesis versus the Simultaneous Egoism Hypothesis

Whether altruism exists in humans is debated among psychologists. Batson (2011) suggests humans can become altruistically motivated, and that empathy is a source of altruistic motivation. He defines empathy as “other-oriented emotions elicited by and congruent with the perceived welfare of someone else” (Batson, 2011, p.11). Given the many uses of the term empathy, (Batson, 2009; Lishner, Hong, Jiang, Vitacco, & Neuman, 2015), the emotional concept described by Batson will be referred to as *empathic concern* for the sake of clarity. Batson proposes that empathic concern produces an altruistic motivation where the ultimate goal is to increase the welfare of another. However, others propose that empathic concern is instead linked to egoism, which is motivation with the ultimate goal of increasing ones’ own welfare (Batson, 2011). The purpose of the current experiment will be to test the different proposed explanations for the nature of the motivation produced by empathic concern.

The Empathy Altruism Hypothesis (EAH)

The empathy-altruism hypothesis (EAH) was first proposed by Coke, Batson, and McDavis (1978), and states that altruism is produced by feeling empathic concern for a person in need. As previously mentioned, the EAH conceptualizes altruism as a motivational state with the ultimate goal of increasing another’s welfare. The best way to examine the possibility of altruism is experimentally.

The overall logic of testing the EAH is by testing the motivation produced by empathic concern. Those who are altruistically motivated have the ultimate goal of increasing another's welfare although unintended consequences produced as a result of increasing another's welfare may occur (e.g. positive mood one might feel after performing a good deed; Batson, 2011). In contrast, an egoistic motivation will have the ultimate goal of receiving self-benefits from increasing another's welfare, the success of which is merely a side effect of the behavior (Batson, 2011). Through the use of experimental designs, these two different types of motivations can be manipulated. First, empathic concern for a person in need is varied by randomly assigning participants to low and high empathic concern conditions. Often in the high empathic concern condition participants are given perspective-taking instructions that direct them to imagine what another person is thinking or feeling about his or her need situation, whereas participants are told to focus on another aspect of the situation or to remain objective in the low empathic concern condition. Then, in each of these groups, some of the participants are given the opportunity to behave in a manner that either effectively achieves an altruistic ultimate goal or an egoistic ultimate goal. The pattern of the resulting behavior is then used to evaluate which hypothesis has been supported.

Initial evidence consistent with the EAH comes from Coke, Batson, and McDavis (1978), which involved a need situation of either a university student struggling to support her siblings after the death of her parents or a master's student need for research volunteers. A perspective-taking manipulation was used in conjunction with these situations where participants were asked to remain objective or imagine what the student might have been feeling while watching the interview. All participants could easily

escape from being reminded of the student's need in the future if they did not wish to help. The first experiment also had a misattribution manipulation (relaxed or aroused), where participants ingested a placebo pill and were informed that one of the side effects was that they would feel relaxed or aroused. This gave participants in the imagine-other condition (who were told that the pill would make them aroused) an alternative explanation for their feelings experienced while listening to the interview, but not those who were told they would feel relaxed. Therefore, according to the EAH only these participants would feel empathic concern and choose to help more than the other participants. The second experiment gave participants false physiological feedback about their empathic arousal (low or high). Results supported the EAH, with more helping in the imagine-other condition, but only when participants could not match their arousal of given false low arousal feedback. These findings suggest that helping produced by perspective taking results from emotional arousal of empathic concern.

Egoism Alternatives

Empathy-specific punishment hypothesis.

A number of alternative explanations for the motivation produced by empathic concern have been proposed. One set of egoistic explanations falls under the empathy-specific punishment hypothesis, which claims that socialization has led most to the belief that when feeling empathic concern for another, helping is deemed the appropriate response (Archer, Diaz-Loving, Gollwitzer, Davis, & Foushee, 1981). This is due to a need to avoid punishment that might result from not helping. The empathy-specific punishment hypothesis has both self (avoid self-evaluation and self-punishment) and

social variations (avoid social evaluation and anticipated social punishment). In these variations, increasing the other's welfare is not the main concern. Instead, the motivation depends on whether others will notice one's failure to increase the others' welfare or whether one can personally justify failure to help.

Typically, experiments testing the empathy-specific punishment hypothesis have involved giving participants an opportunity to help, which will either be kept private or will be made public (others aware manipulation) or in which failure to help can be personally justified or not. Archer, Diaz-Loving, Gollwitzer, Davis, & Foushee, (1981) reported findings they interpret as consistent with the personal variant of the empathy-specific punishment explanation. However, other studies designed to test both personal and social variants of the empathy-specific punishment explanation are interpreted as supporting the EAH (Batson, Batson, Griffitt, Barrientos, Brandt, Sprengelmeyer, & Bayly, 1989; Batson & Weeks, 1996; Fultz, Batson, Fortenbach, McCarthy, & Varney, 1986). For example, Fultz et al. (1986) manipulated empathic concern using perspective taking and awareness of helping, where helping was made either a public or private. Their results indicated no difference in the high empathic concern condition for helping behavior (when behavior was made private or public). However, in the low empathic concern condition helping was only high when behavior was made public.

Empathy-Specific Reward Hypothesis.

The empathy-specific reward hypothesis is similar to the empathy-specific punishment hypothesis, but instead it is based on the premise that awareness and expectations of personal or social rewards for increasing the other's welfare is associated with feelings of empathic concern (Batson, Dyck, Brandt, Batson, Powell, McMaster, &

Griffitt, 1988). It is the rewards that those feeling empathic concern are motivated to acquire. The opportunity to help is motivated by self-benefits/rewards. Like the empathy-specific punishments explanation, the empathy-specific rewards explanation has been tested using experiments that have involved giving participants an opportunity to help, which will either be kept private, will be made public (others aware manipulation), in which failure to help can be personally justified or not. Whether mood is affected by successful or unsuccessful helping outcomes and accessibility of reward-relevant versus need-relevant thoughts among those induced to feel high empathic concern also have been used to evaluate the empathy-specific reward explanation.

For example, one experiment by Batson et al. (1988) examined the mood effects of being deprived of the opportunity to help. Participants were induced to feel low or high empathic concern for a confederate who was about to receive electric shocks. In the beginning, all participants were told that they would be able to help the confederate avoid the shocks. However, once the experiment began, some participants learned that they would not be able to help and some learned that a different task had been assigned the other participant so the shocks would no longer occur. The mood change experienced by the participants supported the EAH, with a more positive mood change when the victim's need was relieved, and was not affected by the participants' ability to help. The other experiment by Batson et al. (1988) used the Stroop Task to examine the effects on reaction time color-naming latency to reward-relevant and need-relevant words. Participants were better at naming need-relevant words as opposed to reward relevant words when they were induced to feel empathic concern, a pattern predicted by the EAH.

Supplemental laboratory experiments by Batson and Weeks (1996) tested whether participants would feel a justification for ineffective helping. This assumed that individuals in the high empathic concern condition should feel no difference in their mood if their helping is effective/ineffective. Batson and Weeks (1996) related this to the feeling of “it's the thought that counts.” However, the EAH predicts that those who failed to help would feel less positive due to not having reached their ultimate goal of helping another in need. Results were consistent with the EAH such that participants in the high empathic concern condition reported a less positive mood when their helping failed to assist the person in need. To date, all studies testing the empathy-specific reward explanation against the EAH has been interpreted as supporting the EAH (Coke et al., 1978; Batson & Coke, 1981; Toi & Batson, 1982; Batson, O'Quin, Fultz, Vanderplas, Isen, 1983; Batson, Bolen, Cross, & Neuringer-Benefiel, 1986; Eisenberg, Fabes, Miller, Fultz, Mathy, Shell, & Reno, 1989).

Aversive Arousal Reduction Hypothesis (AARH).

Another egoism explanation that is often pitted against the EAH is known as the aversive arousal-reduction hypothesis (AARH), where the ultimate goal is to remove or avoid any aversive feeling that accompanies empathic concern (Coke et al. 1978). In this hypothesis, desire to increase another's welfare is aimed at reducing any aversive feeling of empathic concern. Laboratory experiments have evaluated this hypothesis by allowing participants to either help the person in need or escape the situation if help is not provided. Escape from the situation is then manipulated by creating scenarios where escape is easy or difficult. The AARH predicts that participants in easy escape conditions will help less than those in the difficult escape condition when empathic concern is high.

This is due to the fact that either escaping the situation or helping should both reduce the arousal, therefore the participant will be motivated to complete whichever behavior is least costly in the situation. In contrast, the EAH predicts the same high (or very high) rate of helping across both levels of ease of escape where empathic concern is high because escape is not an option that will increase the other's welfare.

Testing the AARH involves manipulating an experimental situation where participants can either help the person in need or escape the situation in order to reduce aversive arousal. A test of this theory by Coke et al. (1978) supports the EAH, with participants choosing to help another in need even when escape from the experimental situation they were in was "easy." Since then, other experiments have been interpreted as supporting the EAH over the AARH such as Batson, Bolen, Cross, and Neuringer-Benefiel, 1986; Batson and Coke, 1981; Batson, O'Quin, Fultz, Vanderplas, and Isen, 1983; Eisenberg Fabes, Miller, Fultz, Mathy, Shell, and Reno, 1989; Fabes, Fultz, Eisenberg, May-Plumlee, and Christopher, 1989; Stocks Lishner, and Decker, 2009; and Toi and Batson, 1982.

Negative-State Relief Hypothesis.

Cialdini, Schaller, Houlihan, Arps, Fultz, and Beaman (1987) first proposed the negative-state relief hypothesis, which claims that empathic concern-inducing situations also create feelings of sadness and negative affect. These feelings are associated with a desire for mood enhancement as opposed to altruism, which is what is claimed to explain the helping found in previous research interpreted as supporting the EAH. This explanation does not require the individual to help another in need. Instead, what is

necessary is an anticipation of mood enhancement. The distinguishing characteristic of this hypothesis is that empathic concern-induced participants are motivated to help in order to seek rewards to feel better.

Experimental support comes from Cialdini et al. (1987), where participants were given either payment or praise prior to being asked if they would assist the person in need. In conjunction with the negative-state-relief hypothesis, lower helping rates were found when participants who were in the easy-escape/high empathic concern condition were given payment prior to being asked to help. However, results of this experiment have been questioned since payment reduced helping in both difficult and easy escape conditions, a pattern that is not predicted by the negative-state-relief hypothesis.

In another study, Cialdini et al. (1987) led some participants to believe that they had taken a mood-fixing pill (designed to convince the participants that helping would not enhance their mood). Interestingly, there was diminished helping for individuals in the high compared to the low empathic concern group, when participants were informed that due to the pill, helping would not increase their mood. While this research appears to support egoism, the experiments have been questioned due to participants not focusing on their emotions and instead on the elaborate pill placebo procedure. Schroeder, Dovidio, Sibicky, Matthews, and Allen (1988) independently conducted a similar study that used a less distracting mood-fixing manipulation and reported evidence consistent with the EAH.

Studies that have tested the negative-state relief hypothesis have manipulated whether feeling empathic concern can decrease if a participant is provided with a mood-enhancing experience before given a chance to help, are led to believe that helping will

not enhance their mood, or believe that their mood will enhance regardless of whether or not they help. Studies by Cialdini et al. (1987) and Schaller and Cialdini (1988) supported these alternative explanations. However, other studies have been interpreted as supporting the EAH such as Batson, Batson, Griffitt, Barrientos, Brandt, Sprenglemeyer and Bayly, 1989; Batson, Dyck, Brandt, Batson, Powell, McMaster, and Griffitt, 1988; Batson and Weeks, 1996; Dovidio, Allen, and Schroeder, 1990; and Schroeder, Dovidio, Sibicky, Matthews, and Allen, 1988.

Empathic Joy Hypothesis (EJH).

The empathic joy hypothesis (EJH) was proposed by Smith, Keating, & Stotland (1989). They argued that individuals feel joy when the needs of others are relieved and that those experiencing empathic concern are particularly sensitive to that possibility. Specifically, those feeling empathic concern are motivated by the desire to obtain empathic joy, which can be gained when another's need is met. Supporting evidence of this hypothesis came from their experiment where empathic concern (high/low) and a feedback (anticipated feed/not) were manipulated regarding information about a fellow student who was having difficulty adjusting to life at college. The results from this study indicated that more helping occurred among high-empathic concern participants when they anticipated receiving feedback about the student (Smith et al., 1989), but only when an internal analysis of the findings was conducted.

Competing findings testing the EJH against the EAH come from experiments where anticipated feedback about the result of one's helping effort is manipulated and whether or not there is an opportunity to help. Other studies such as one conducted by

Batson, Batson, Slingsby, Harrell, Peekna, & Todd, (1991) support the EAH. In this experiment, participants listened to an interview where a young woman was experiencing difficulty adjusting to college life, and given the choice to hear a second interview given by the woman or separate person. However, before they made their decision some participants were given a 20, 50, or 80 percent likelihood that the woman's condition would improve. Results from the EJH predict a linear relationship between choosing to hear a second interview and the young woman's condition improving, such that the highest proportion of participants who choose to hear a second interview should be those in the 80 percent condition, and the lowest proportion of participants who choose to hear the second interview should be in the 20 percent condition. In contrast, the EAH predicted that requesting to hear a second interview would be greatest in the high empathic concern over the low empathic concern condition (no linear pattern). Findings from this experiment followed the prediction made by the EAH, with no indication that likelihood of improvement was a factor among those in the high empathic concern condition.

Self-Other Merging Hypothesis (SOMH).

Psychologists have proposed another motivation that may be associated with empathic concern that has to do with self-other merging. The self-other merging hypothesis (SOMH) claims that conditions increasing empathic concern for the person in need also result in perceiving aspects in another that are similar to one's self. For this hypothesis, it is the perceptual merging that produces helping behavior with possible forms of self-other merging including identification of the self with the other (Hornstein, 1978), the perception that the other has become included in the self (Aron & Aron, 1986;

Wegner, 1980), perception that aspects of the self exist in the other (Cialdini, Brown, Lewis, Lue, & Neuberg, 1997; Davis, Conklin, Smith, & Luce, 1996), or that the self and the other are viewed as being interchangeable at the group level (Turner, 1987). Distinguishing characteristics of this hypothesis include participants' perception of overlap between characteristics in oneself and characteristics of another in need.

In comparison to the other hypotheses, the SOMH results are more mixed and harder to interpret. This is partly due to many claims that self-other merging accounts for increased helping, but no empirical support. An experiment supporting the EAH over the SOMH is reported in Maner, Luce, Neuberg, Cialdini, Brown, and Sagarin (2002) where manipulations of perceived oneness and empathic concern were found to be independent predictors of helping. For this experiment, similarity was manipulated by taking measures of participants' brain-wave patterns, which they were told gave the researchers an indication of their similarities and differences between people. Afterward, some participants were told that they were similar to the student in need and others were told they were dissimilar to the person in need. The results indicated that feeling of empathic concern and perceived oneness had no effect on helping behavior, as predicted by the EAH, but relies on a complex and debatable parsing of empathic concern items into two different affect latent factors (Lishner & Stocks, 2010). Other tests of the SOMH by Batson, Sager, Garst, Kang, Rubchinsky, & Dawson, 1997; Stürmer, Snyder, Kropp, & Siem, 2006; and Stürmer, Snyder, & Omoto, 2005 all are interpreted as supporting the EAH.

Simultaneous Accounts.

Given that no single egoistic explanation appears sufficient to account for all findings, some researchers have argued that multiple egoistic motivations working together explain the findings of previous research that support the empathy-altruism hypothesis (Neuberg, Cialdini, Brown, Luce, Sagarin, & Lewis, 1997). However, Batson (2011) suggests that because each specific egoistic explanation has unique psychological qualities it is unwise to try and formulate an all-encompassing experiment. Thus, sequential testing is recommended so long as all experimental situations are as similar as possible, so results can be compared. Nevertheless, it is possible that two, three, or even four egoistic motivations work together to produce findings that appear consistent with the empathy-altruism hypothesis, which will be referred to as the simultaneous-egoism hypothesis.

Proposed Research

The proposed research seeks to evaluate the tenability of the simultaneous-egoism hypothesis (SEH) claim by using a dependent measure that is not a helping behavior. This was done to methodologically eliminate the tenability of the some of the egoism hypotheses from accounting for findings that would be consistent with the EAH. Specifically, the empathy-specific punishment hypothesis and empathy-specific reward hypothesis are eliminated because there generally is no way to gain reward or avoid punishment in the absence of a helping opportunity. The negative-state relief hypothesis also is generally eliminated because there is no opportunity for mood enhancement via helping.

The desire for feedback about the welfare of a person in need was measured by having participants believe that they were partaking in an experiment involving another student who had written a communication depicting a recent negative life event. As a cover story for the experiment, participants were told that the researchers were looking at “how personalized task communication and task difficulty affect task performance.” All participants were led to believe that they and another ostensible participant would be completing a task in the same situation. For this task, participants were informed that the other participant had been assigned the role of Sender who was to write a brief communication before completing the task, and they had been assigned the role of Receiver who was to read the communication before completing their task. However, some participants were asked to remain objective and others to imagine what the other participant was thinking and feeling about the event written in the communication. The communication describes a recent relationship breakup. In addition, all participants were led to believe that they received an easy task to complete, whereas the other participant received either an easy or difficult task to complete. Also, some participants were given information making the ostensible participant appear dissimilar. At the end of the experiment, participants chose whether they wanted to receive feedback about the other participant’s task performance.

In total, three experimental conditions were created. In the first condition participants were asked to remain objective while reading about the negative event described by the ostensible participant (low empathic concern). They also were led to believe the other participant was dissimilar (low self-other merging) and had been assigned a positive outcome, but had a difficult task (low likelihood of receiving the

positive outcome). The perspective adopted in the second condition was identical to the first (low empathic concern) but participants did not receive information about the ostensible participant's similarity (high self-other merging). In this condition, participants were led to believe the ostensible participant had been assigned a positive outcome, but had an easy task (high likelihood of receiving the positive outcome). In the third condition, participants were asked to imagine the ostensible participant's thoughts and feelings (high empathic concern) and were led to believe the participant was dissimilar (low self-other merging). In this condition participants were told the ostensible participant had been assigned a positive outcome, but had a difficult task (low likelihood of receiving the positive outcome).

Competing predictions are made by the SEH and the EAH. Use of desire for feedback as the primary dependent measure eliminates the empathy-specific punishment explanation, empathy-specific reward explanation, and negative-state relief explanation from accounting for potential findings consistent with the EAH. The only explanations remaining are the empathic joy hypothesis, AARH, and the SOMH. The SOMH was addressed through the manipulation of similarity (no information/dissimilar information). If supported, participants would request feedback when no dissimilarity information was given. The EJH and the AARH were addressed by the manipulation that the ostensible participant has either a low or high likelihood of receiving a positive outcome. According to these explanations, participants should not request feedback when the likelihood is low because it is unlikely that knowing about the other's performance would enhance their mood or reduce negative feelings produced by reading about the need situation.

Therefore, both egoism explanations predict only a request for feedback in the objective/no information/high likelihood of a positive outcome condition. When empathic concern is low, egoism should lead participants to request feedback in the objective/high likelihood/no-information condition. Finally, the EAH predicts that request for feedback will be high in the imagine-other/difficult task/dissimilar information condition, whereas the SEH predicts request for feedback will be low.

Method

Participants

Sixty-five female undergraduate students from the University of Wisconsin Oshkosh participated in the study and were compensated with course credit for their time. Five participants were excluded from analyses due to suspicion, resulting in 20 participants in each of the three conditions. Choosing to limit the participant pool to only women was done to reduce potential error produced by cross-gender impression management (Jones & Pittman, 1982). Thus, only participants of the same gender as the researcher were selected. Participants signed up for the research study through the university SONA system. Once participants arrived at the study they were assigned to one of three conditions using randomized blocks: (a) objective/difficult task/dissimilar information condition, (b) objective/easy task/no-information condition, or (c) imagine-other/difficult task/dissimilar information condition.

Procedure

All participants were told to meet for the study at a specific location away from the laboratory. Participants were then led to an empty room with the label Participant 1 on the outside of the door (to strengthen their belief that there was more than one participant). Sitting on a desk were two consent forms and an Introduction for the participants to read and sign before the study began (see Appendixes A and B). The researcher went over the consent form which indicated that while no harm was anticipated, they were free to withdraw from the study at any time. If the participants

chose to partake in the study, then they were instructed to read an introduction form containing a cover story stating that the researcher was interested in looking at how personalized communication, task difficulty, and task engagement affect task performance. Instructions read, "In multiple areas of our life we must complete tasks. We must complete tasks in work settings, educational settings, and personal settings. How well we perform and react to a task depends on a variety of factors... in this study we are interested in looking at how personalized communication and task difficulty affect task performance." The researcher then left the room to give participants a chance to read over the Introduction in private.

Once they had finished reading the Introduction, participants were instructed to open the door. The researcher returned and reiterated the ostensible purpose of the study and what participants would be doing during the study. In addition, participants were further reminded of the presence of another participant and told that if they and the ostensible participant performed well enough on their tasks they would receive a raffle ticket good for a chance to win a \$50 gift card. Moreover, participants were told that if both they and the ostensible participant performed well enough to receive a raffle ticket, they would be entered into different raffles.

Next, participants were given their assigned role. All participants were assigned the Receiver role and told that the other participant was assigned the Sender role. Participants were then informed that the task of the Sender (Appendix C) was to communicate an important life event that recently occurred to the Receiver. "In writing the communication, the Sender was instructed to briefly write about a meaningful event that has happened recently in his or her life." The researcher then left the room to go and

wait for the Sender to finish writing the communication, with the promise to deliver it when finished.

Manipulation of Empathic Concern.

Upon delivery of the communication, perspective-taking instructions were given to participants (Appendixes D & E) on how they should read the communication (Appendix F). In the *objective condition*, participants were told that they should remain as objective as possible about the event described, with the instructions “try to remain as objective as possible about the event described and how it has affected his or her life.” These instructions were designed to induce low empathic concern. In contrast, the *imagine-other condition* had participants try to imagine what the Sender was thinking and feeling about the event described and how it may affect her life, with the instructions “try to imagine what the sender is thinking and feeling about the event described and how it has affected his or her life.” These instructions were designed to induce high empathic concern. All instructions were pre-arranged in randomized blocks and presented in a manner that prevented the researcher from seeing which set of instructions participants received so that the researcher would remain blind to experimental condition.

Measurement of Empathic Concern and Perspective Taking.

Next participants were given a Communications Reactions Questionnaire (Appendix G), which contained six different items that measure empathic concern (*compassionate, sympathetic, softhearted, tender, warm, and moved*), along with a Communications Reactions Questionnaire 2 (Appendix H), which served as a manipulation check for the perspective taking instructions. This included the questions “While reading the communication, to what extent did you imagine the thoughts and

feelings of the sender?” and “While reading the sender’s communication, to what extent did you remain objective and detached?”

Manipulation and Measurement of Self-other Merging.

Once participants opened the cubicle door signifying that they had completed the questionnaire, the researcher provided them with more information about the sender in a folder. All who were randomly assigned to the imagine-other condition and half of those assigned to the objective condition received the Information about the Sender form which listed the Senders preferences for movies, pets, sports, colors, and music (Appendix I). This form was compiled based on the least the common preferences recorded from a pre-survey taken by all participants in the SONA pool. The other half of the objective-perspective participants did not receive any type of information about the Sender’s preferences. Preference information was designed to create low perceptions of merging with the Sender, which were measured using a Perceptions of SENDER Questionnaire (Appendix J). Questions on the measure included: “How similar to yourself do you perceive the SENDER to be?”; “Below are seven pictures that depict possible ways of viewing the relationship between two people. Please circle one of these seven pictures that best indicates the extent to which you feel that you and the SENDER are connected.” “To what extent do you see yourself and the SENDER as part of the same group?”; and “To what extent would you use the term “we” to describe your relationship with the sender?” All were rated using a 7-point scale. Folders were pre-arranged in randomized blocks prior to running participants to ensure the researcher would be blind to whether participants received preference information.

Manipulation of the Likelihood of Positive Outcome.

After the Perception of Sender form was completed, participants were given a folder enclosed with task assignments for both the Sender and Receiver (Appendixes K & L). Those in the imagine-other condition and the objective/dissimilar condition were informed that the difficult task had been assigned to the Sender, whereas those in the objective/no-information condition were told that the Sender had received the easy task. Participants always were informed they had been assigned the easy task. Folders were pre-arranged in randomized blocks and presented in a manner that permitted the researcher from seeing which assignment condition participants received so that the researcher would remain blind to experimental condition.

After receiving the task assignment information, participants then filled out a Before Task Reaction Questionnaire (Appendix M), which measured their own reaction to their and the Sender's task assignment. Questions included "How difficult do you think it will be for the SENDER to meet the qualifying score to win the raffle ticket on his or her task?" and "How difficult do you think it will be for you to meet the qualifying score to win the raffle ticket on your task?" All items were assigned using a 7-point scale.

Measurement of Desire for Additional Feedback. The final part of the experiment had participants read and fill out a short form that asked whether they wished to receive feedback about how the Sender performed on the task (Appendix N). After this, participants opened the door and the researcher began the debriefing process (Appendix O).

Results

Descriptive statistics for all measures by experimental condition are presented in Table 1 (*Means and Standard Deviations of Measures by Experimental Condition*).

Perceived Difficulty of Sender's Task

A one-way analysis of variance (ANOVA) was calculated on participants' perception of the sender's task. Perceived difficulty of the Sender's Task was measured by asking participants to answer the following item: "How difficult do you think it will be for the SENDER to meet the qualifying score to win the raffle ticket on his or her task?" (1 = *not at all*, 7 = *extremely difficult*). The analysis was significant, $F(2,57) = 37.23$, $p < .001$. Participants perceived the sender's task most difficult in the imagine-other/dissimilar/low-likelihood condition ($M = 4.90$, $SD = 1.29$) and the objective/dissimilar/low-likelihood condition ($M = 5.05$, $SD = 1.39$), and least difficult in the objective/no-information/high-likelihood condition ($M = 2.10$, $SD = .91$). A planned contrast indicated a significant difference between the objective/no-information/high-likelihood condition, and the objective/dissimilar/low-likelihood condition and the imagine-other/dissimilar/low-likelihood condition combined, $t(57) = -8.62$, $p < .001$, $r = .75$.

Perceived Self-Other Merging

A one-way analysis of variance (ANOVA) was calculated on participants' perceived self-other merging with the sender. Perceived self-other merging was measured

by the following items: Please circle one of these seven pictures that best indicates the extent to which you feel that you and the SENDER are connected” (see Appendix J for circles); “How similar to yourself do you perceive the SENDER to be?”; “To what extent do you see yourself and the SENDER as part of the same group?”; “To what extent would you use the term “we” to describe your relationship with the SENDER?” These questions were measured on a 7-point scale, with 1 being “not at all” and 7 being “extremely.” Responses from these items were averaged to form a merging index score (Cronbach's $\alpha = .89$). Participants indicated the most self-other merging in the objective/no-information/high likelihood condition ($M = 3.78$, $SD = .94$), and less self-other merging in the imagine-other/dissimilar/low-likelihood condition ($M = 2.45$, $SD = 1.75$) and in the objective/dissimilar/low likelihood condition ($M = 2.33$, $SD = 1.15$). A planned contrast indicated a significant difference between the objective/no-information/high-likelihood condition, and the objective/dissimilar/low-likelihood condition and the imagine-other/dissimilar/low-likelihood condition combined, $t(57) = 4.99$, $p < .001$, $r = .55$.

Empathic Concern

Responses to the two questions from the Communications Reactions Questionnaire 2 that asked participants to indicate the extent to which they remained objective and imagined the thoughts and feelings of the sender while reading the communication served as manipulation checks of the perspective taking manipulation. Mean differences on these items were examined using a one-way analysis of variance (AVOVA). Those in the imagine-other/dissimilar/low-likelihood condition indicated they remained less objective and imagined the senders perspective more so ($M = 3.20$, $SD =$

1.67 and $M = 6.25$, $SD = 1.45$, respectively) than did those in the objective/no-information/high-likelihood condition ($M = 4.35$, $SD = 1.50$ and $M = 5.00$, $SD = 1.59$, respectively) and the objective/dissimilar/low-likelihood condition ($M = 4.70$, $SD = 1.59$ and $M = 4.35$, $SD = 2.03$, respectively). A planned contrast indicated a statically significant difference between the imagine-other/dissimilar/low likelihood condition, and the objective/dissimilar/low-likelihood condition and objective/no-information/high-likelihood conditions combined for both manipulation check measures, $t(57) = -3.05$, $p = .004$, $r = .37$, and $t(57) = 3.37$, $p = .001$, $r = .41$, respectively. These results suggest that the perspective taking manipulation was effective.

A one-way analysis of variance (ANOVA) was calculated on participants' feeling of empathic concern after reading the sender's communication. The feeling of empathic concern was measured by the following items: *compassionate*, *sympathetic*, *softhearted*, *tender*, *warm*, and *moved communication* (1 = *not at all*, 7 = *extremely*). Responses from these items were averaged to form an empathic concern index score (Cronbach's alpha = .75). Those in the imagine-other/dissimilar/low-likelihood condition ($M = 4.95$, $SD = 1.19$) indicated feeling more empathic concern than did those in the objective/no-information/high-likelihood condition ($M = 4.61$, $SD = 1.12$) and the objective/dissimilar/low-likelihood condition ($M = 4.58$, $SD = 1.10$). A planned contrast indicated no significant difference between the imagine-other/dissimilar/low likelihood condition, and the objective/dissimilar/low-likelihood condition and objective/no-information/high-likelihood conditions combined, $t(57) = 1.14$, $p = .26$, $r = .15$. This result suggests that the perspective-taking manipulation was unsuccessful and weak in producing an effect on empathic concern.

Desire for Feedback

Two logistic regressions were conducted to test whether desire for feedback could best be explained by either the EAH or the SEH. For the first logistic regression, Contrast 1 (-1, 2, -1) and Contrast 2 (-1, 0, 1) were created. The first contrast tested the SEH prediction pattern where the value of -1 was assigned to those in the objective/dissimilar/low-likelihood condition and the imagine-other/dissimilar/low-likelihood condition, and the value of 2 was assigned to those in the objective/no-information/high-likelihood condition. Contrast 2 was created to provide an orthogonal comparison set to Contrast 1.

For the second logistic regression, Contrast 1 (-2, 1, 1) and Contrast 2 (0, -1, 1) were created. The first contrast tested the EAH prediction pattern where the value of -2 was assigned to those in the objective/dissimilar/low-likelihood condition and the value of 1 was assigned to those in the objective/no-information/high-likelihood condition, and to those in the imagine-other/dissimilar/low-likelihood condition. Contrast 2 was created to make an orthogonal comparison set to Contrast 1.

In both regressions, the contrasts were used to predict whether a participant would choose to receive feedback about the sender's performance (0 = chose no feedback, 1 = chose feedback). For the SEH predictive pattern, neither Contrast 1, $B = -.15$, $SE = .18$, Wald $\chi^2(1) = .69$, $p = .41$, $Exp(B) = .86$, nor Contrast 2, $B = .63$, $SE = .34$, Wald $\chi^2(1) = 3.49$, $p = .06$, $Exp(B) = 1.88$. For the EAH predictive pattern neither Contrast 1, $B = .24$, $SE = .18$, Wald $\chi^2(1) = 1.24$, $p = .19$, $Exp(B) = 1.27$, nor Contrast 2, significantly predicted desire for feedback $B = .54$, $SE = .26$, Wald $\chi^2(1) = 2.13$, $p = .10$, $Exp(B) = 1.71$. Finally, correlations of empathic concern, self-other merging, and

perceived difficulty of the task with desire for feedback were relatively small, $r = .01$, $p = .92$, $r = .11$, $p = .39$, $r = .05$, $p = .73$.

Discussion

This experiment examined the competing empathy-altruism hypothesis (EAH) and simultaneous-egoism hypothesis (SEH). The EAH states that altruism is produced by feeling empathic concern for a person in need (Coke et al., 1978). Experimentally, empathic concern is usually manipulated by having participants adopt the perspective of the person in need. Conversely, the SEH states that empathic concern produces one or more egoistic motivations, such as avoiding punishment, obtaining rewards, lessening aversive arousal, reducing negative states, acquiring empathic joy, or increasing aspects of one's self shared with another. The competing hypotheses were evaluated by measuring desire for feedback about whether a need-reducing outcome was obtained by creating experimental conditions designed to vary the following: (a) the level of empathic concern for a person in need; (b) the perception of self-other merging; and (c) the perception the likelihood of need improvement.

Overall, the results of this experiment indicated a successful manipulation of perceived difficulty of the sender's task. That is, when the sender was assigned to a task that they were previously informed had only a small number of students successfully complete, participants rated that the sender would have greater difficulty obtaining the raffle ticket. The manipulation of perceived similarity also appeared successful such that participants who were given information regarding the sender's preferences (prefilled

with the least common selections) indicated that they perceived the sender more dissimilar to themselves. Although the manipulation of empathic concern was not statistically significant, means scores were in the direction expected, but the effect was small. Based on statistical significance, the pattern for the measure of request for feedback did not support either hypothesis. However, the descriptive pattern of responses did appear more similar to that predicted by the EAH. Indeed, the EAH contrast pattern almost doubled the prediction of asking for feedback as opposed to the SEH contrast pattern, which did not generally improve the prediction of asking for feedback.

Limitations.

One of the major limitations of this experiment was its small sample size, with only 20 participants per condition. This may have resulted in less accurate descriptive statistics. Another limitation was failure to clearly manipulate empathic concern. This may have occurred because participants failed to follow the assigned perspective-taking instructions. This possibility was suggested in the debriefing with a number of the participants indicating that their instructions were “hard or difficult to follow while reading the communication” or that the instructions “did not affect how they read the communication.” This inability to take on the sender’s perspective or stay objective could have contributed to the small effect of the perspective taking manipulation feelings of empathic concern. Finally, participants may have had some confusion about the sender’s actual need and how that need could be resolved. It is possible that some participants assumed the Sender’s need did not concern experiencing low mood, but instead concerned hoping that she and her boyfriend would get back together. If so, then obtaining information about whether the sender met the qualifying score, which would

provide information about mood improvement, would not provide useful information about whether her need for reunion had been resolved. As such, future studies should address this limitation by focusing the participant's attention on the Sender wanting the raffle ticket to improve her mood.

Future Directions and Conclusions.

Other than increasing the sample size of each condition, future attempts to conduct this experiment should include finding a way to better motivate participants to adopt the perspective taking instructions given to them before reading the communication. A suggestion for how to do this would be to give participants the reading instructions and communication separately to help make sure the instructions are fully understood, this also gives the participant a chance to ask questions. However, a potential drawback of this would be that the impact of the instructions dissipates by the time the participant begins reading the communication. It is expected that if participants can successfully follow these instructions, then the manipulation of empathic concern will be successful.

Further, it is important to consider whether a simultaneous test of egoism hypotheses is even possible, a concern raised by Batson (2011). Non-significant results from this experiment could be interpreted as evidence that testing multiple egoism hypotheses in the same experiment is not possible. However, other than failure to manipulate empathic concern, most other aspects of the procedure appeared successful suggesting the approach should not be so quickly abandoned. Instead, the present findings should be interpreted in an encouraging light and suggest a simultaneous test may yet be possible with enough diligence and creativity.

Appendix A
Informed Consent

The Department of Psychology supports the practice of protecting human participants in research. The following information is provided so that you can decide whether you wish to participate in the present study. Your participation is solicited but is strictly voluntary. We assure you that your name and responses will remain confidential.

If you decide to participate in this study, you will be asked to read or write a communication and you will be asked to complete a task. Your reactions to the study will be assessed by questionnaires throughout the study.

If you agree to participate, you will be free to withdraw at any time and will still receive credit for the amount of time spent in the study. If you decide not to participate in this study, please let the researcher know and he or she will excuse you from the study. You do not need to tell the researcher your reasons for choosing not to participate. If you do decide to withdraw from the study, any information collected from you up to that point will then be destroyed.

All results will be recorded confidentially. We will not release information about you in any way or form that could identify you.

If you have any questions, please ask us or contact:

David A. Lishner, Ph.D.
Department of Psychology
University of Wisconsin Oshkosh
Oshkosh, WI 54901
lishnerd@uwosh.edu
920-915-2014

If you have any complaints about your treatment as a participant in this study, please call or write:

Chair, Institutional Review Board for
Protection of Human Participants
c/o Grants Office
UW Oshkosh
920-424-1415

Although the chairperson may ask for your name, all complaints are kept in confidence.

Consent Statement: By signing the statement below, I am confirming that I am at least 18 years old and have received an explanation of the study. I agree to participate. I understand that my participation in this study is strictly voluntary, and that I may withdraw at any time.

Name

Date

Appendix B
Introduction

In multiple areas of our life we must complete tasks. We must complete tasks in work settings, educational settings, and personal settings. How well we perform and react to a task depends on a variety of factors. Some factors include how easy or difficult the task is to perform and whether we communicate with others about the task. Understanding how these factors can influence performance and reactions to tasks may have important implications for how to best structure features of settings where tasks occur in everyday life. To this end, in this study we are interested in looking at how personalized communication and task difficulty affect task performance.

What Will Happen in This Study

Task Consequences. In order to explore the effects of these factors on task performance and task reactions you and another participant will each complete a task. Because we want people to care about the tasks, there will be a real consequence for successfully completing the task. To successfully complete the task you must get a specific number of questions on the task correct. If you are able to make this “qualifying score,” then you will receive a raffle ticket good for a chance to win a \$50.00 gift certificate to the store of the winner’s choice. We have two raffles for this study, so in the event that both you and the other participant each earn a raffle ticket, each of you will be put into a different raffle. You will be given instructions about how to complete the task later in the study.

Task Difficulty. To examine the effect of task difficulty on task performance and reactions each participant will be randomly assigned to complete either an **EASY** or **DIFFICULT** task. If you are assigned to the **EASY** task, then you will need to obtain a relatively low qualifying score to receive the raffle ticket. If you are assigned to the **DIFFICULT** task, then you will need to obtain a relatively high qualifying score to receive the raffle ticket. Based on pilot testing, approximately 90% of people are able to obtain the qualifying score on the **EASY** task and approximately 10% of people are able to obtain the qualifying score on the **DIFFICULT** task. The level of task difficulty will be determined randomly for each participant in the study session. You each may receive the same difficulty level or you each may receive a different difficulty level.

Task Communication. To examine the effect of personalized communication on task performance and reactions, one participant will be randomly assigned the role of **SENDER** and one participant will be randomly assigned the role of **RECEIVER**. If you are assigned the **SENDER** role you will be asked to write a brief communication describing an important event that has recently happened in your life before completing your task. This communication will be given to the other participant, who will be assigned to the **RECEIVER** role. If you are assigned the **RECEIVER** role, you will be asked to read the communication sent by the **SENDER** before completing your task. By having both a **SENDER** and a **RECEIVER** in the same session we are able to examine the effect of having or not having personalized information about others in the task setting on

task performance and reactions while controlling for factors such as time of day, day of week, weather, etc.

Task Performance and Reactions. Task performance will be determined by how many correct responses you make on the task. In addition, your reactions to the task will be assessed throughout the study. Your anticipatory reactions prior to completing the task as well as your reactions following task completion will both be assessed. Immediately after completing the task you will also be asked to write a brief description of your reactions to completing the task, which will help us get a better sense of any thoughts or feelings that resulted from your performance.

Appendix C
RECEIVER INFORMATION

Role Assignment Sheet - RECEIVER

You have been randomly assigned to the RECEIVER role.

As **RECEIVER**, you will be asked to read a personal communication written by the **SENDER**. In writing the communication, the **SENDER** was instructed to briefly write about a meaningful event that has happened recently in his or her life. Once you have read the communication you will be asked some questions regarding your reactions to the communication and your perceptions of the **SENDER**.

After answering the questions, both you and the **SENDER** will be notified of which tasks you each have been randomly assigned to complete. At this point both you and the **SENDER** will be given your assigned tasks and asked to complete them. Following the completion of the task, both you and the **SENDER** will be asked to write a brief summary of your reactions as a result of completing the task and your perceptions of the task outcomes you received.

At this time, please open the door to let the researcher know that you are ready to continue.

Appendix D

Communication Instructions for RECEIVER I

Inside this folder is a communication written by the SENDER. He or she was asked to write about an important event that has happened in his or her life recently.

Reading Perspective

Below is a set of reading perspective instructions. Previous participants in this study have informed us that adopting the reading perspective helped them think informatively about the communication. For this, please read the following perspective instructions carefully.

While you are reading the SENDER's communication, try to imagine what the SENDER is thinking and feeling about the event described and how it has affected his or her life. (Try not to concern yourself with attending to all the information discussed in the communication. Just try to imagine how the SENDER is thinking and feeling as you read the communication.)

Please read over the reading perspective instructions a second time. When you feel like you have a good sense of the reading perspective, please open the folder and read the communication from the sender. Once you have finished reading the communication, please complete the questionnaires provided by the research assistant in the appropriate order.

Appendix E

Communication Instructions for RECEIVER II

Inside this folder is a communication written by the SENDER. He or she was asked to write about an important event that has happened in his or her life recently.

Reading Perspective

Below is a set of reading perspective instructions. Previous participants in this study have informed us that adopting the reading perspective helped them think informatively about the communication. For this, please read the following perspective instructions carefully.

While you are reading the SENDER's communication, try to remain as objective as possible about the event described and how it has affected his or her life. (Try not to concern yourself with imagining what the SENDER is thinking or feeling as a result of the event. Just try to remain objective and detached as you read the communication).

Please read over the reading perspective instructions a second time. When you feel like you have a good sense of the reading perspective, please open the folder and read the communication from the sender. Once you have finished reading the communication, please complete the questionnaires provided by the research assistant in the appropriate order.

Appendix F

Communication From SENDER

Directions for SENDER: In the space below, please write a brief communication about an important event that has happened in your life recently.

[To be hand written—Female Version]

I'm supposed to write about something interesting that's happened to me lately. Well, I don't know if this will be interesting to anybody else, but one thing I can think of is that two days ago I broke up with my boyfriend. We've been going out since our Junior year in high school and have been really close, and it's been great being at UWO together. I thought he felt the same, but things have changed. Now he wants to date other people. He says he still cares a lot about me, but he doesn't want to be tied down to just one person. I've been feeling pretty bad about it. My friends say I'll feel better eventually, but that really hasn't happened yet. I've been trying to think about other positive things in my life. Maybe if I get lucky I'll get the easy task and do good enough to get a raffle ticket for the gift card. That would probably be a positive thing. I definitely don't want the hard task. It doesn't seem like most people do very good on that one.

Appendix G
Communication Reactions Questionnaire I

Directions: Please indicate the extent to which you experienced each of the following feelings while reading the communication from the sender. Although you may not have experienced all of these feelings while reading this communication, please circle a response for each feeling.

	Not at all				Extremely			
Happy	1	2	3	4	5	6	7	
Sad	1	2	3	4	5	6	7	
Compassionate		1	2	3	4	5	6	7
Angry	1	2	3	4	5	6	7	
Sympathetic	1	2	3	4	5	6	7	
Amused	1	2	3	4	5	6	7	
Softhearted	1	2	3	4	5	6	7	
Interested	1	2	3	4	5	6	7	
Tender	1	2	3	4	5	6	7	
Warm	1	2	3	4	5	6	7	
Anxious	1	2	3	4	5	6	7	
Moved	1	2	3	4	5	6	7	
Guilty	1	2	3	4	5	6	7	
Annoyed	1	2	3	4	5	6	7	
Embarrassed	1	2	3	4	5	6	7	
Entertained	1	2	3	4	5	6	7	

Appendix H
Communication Reactions Questionnaire II

Directions: Please answer each of the questions below in response to the SENDER's communication.

1. How interesting was the sender's communication?

Not at all

Very interesting

1 2 3 4 5 6 7

2. How clear was the sender's communication?

Not at all

Very clear

1 2 3 4 5 6 7

3. While reading the sender's communication, to what extent did you remain objective and detached?

Not at all

Very Much

1 2 3 4 5 6 7

4. While reading the communication, to what extent did you imagine the thoughts and feelings of the sender?

Not at all

Very Much

1 2 3 4 5 6 7

5. While reading the sender's communication, to what extent did you imagine yourself in his or her situation?

Not at all

Very Much

1 2 3 4 5 6 7

6. How positive or negative was the meaningful event described by the sender?

Extremely negative

Neutral

Extremely positive

-3 -2 -1 0 1 2 3

Appendix I
Information About Sender

Sender ID# _____

Directions: Below are prescreen questions that participants answered while setting up their participant accounts. In the spaces next to each question, the research assistant has written the answers the SENDER gave for the question on his or her prescreen. This information has been given to you to help give you a better sense of what the SENDER is like as an individual. Once you have finished reading this information, please complete the Perceptions of SENDER Questionnaire that is also in this folder.

- ____ 1. What is your favorite sport?
- A. Baseball
 - B. Soccer
 - C. Football
 - D. Hockey*
 - E. Other (Please write your favorite sport here) _____
- ____ 2. What is your favorite movie genre?
- A. Horror
 - B. Comedy
 - C. Drama
 - D. Sci-Fi*
 - E. Fantasy
 - F. Other (Please write your favorite movie genre here)

- ____ 3. What is your favorite music genre?
- A. Classical*
 - B. Rock
 - C. Country
 - D. Rap
 - E. R&B
 - F. Other (Please write your favorite music genre here)

- ____ 4. What is your favorite color?
- A. Red
 - B. Blue
 - C. Green
 - D. Yellow*
 - E. Orange
 - F. Purple

G. Other (Please write your favorite color here) _____

____ 5. What is your favorite type of pet?

- A. Dog
- B. Cat
- C. Fish
- D. Lizard
- E. Bird
- F. Insect*

Other (Please write your favorite type of pet here) _____

*least common answer

Appendix J
Perceptions of SENDER Questionnaire

Directions: Please answer each of the questions below.

1. How likeable do you find the SENDER?

Extremely Not at all
Likable

1 2 3 4 5 6
7

2. To what extent do you value the SENDER?

Not at all
Very Much

1 2 3 4 5 6
7

3. How much do you value the welfare of the SENDER?

Not at all
Very Much

1 2 3 4 5 6
7

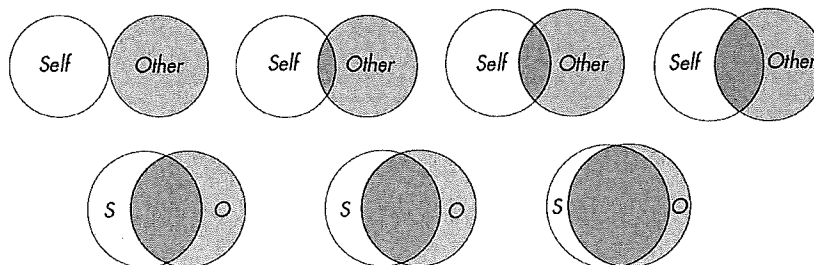
4. How similar to yourself do you perceive the SENDER to be?

Extremely Not at all
Similar

1 2 3 4 5 6
7

5. Below are seven pictures that depict possible ways of viewing the relationship between two people. Please circle one of these seven pictures that best indicates the extent to which you feel that you and the SENDER are connected.

Circle the picture below which best describes your relationship



6. To what extent do you see yourself and the SENDER as part of the same group?

Not at all

Very Much

27

1 2 3 4 5 6
7

7. To what extent would you use the term "we" to describe your relationship with the SENDER?

Not at all

Very Much

1 2 3 4 5 6
7

Appendix K
Task Assignments I

(Pair #3)

The tasks for each of the two participants were randomly assigned prior to the participant's arrival today. Depending on which role you have been assigned, your randomly assigned task is as follows:

RECEIVER: The RECEIVER will have the **EASY** task.

The task is **easy**. For this task you will need to obtain a relatively low qualifying score to receive the raffle ticket. Approximately 90% of people are able to obtain the qualifying score on this task.

SENDER: The SENDER will have the **EASY** task.

The task is **easy**. For this task you will need to obtain a relatively low qualifying score to receive the raffle ticket. Approximately 90% of people are able to obtain the qualifying score on this task.

Appendix L
Task Assignments II

(Pair #3)

The tasks for each of the two participants were randomly assigned prior to the participant's arrival today. Depending on which role you have been assigned, your randomly assigned task is as follows:

RECEIVER: The RECEIVER will have the **EASY** task.

The task is **easy**. For this task you will need to obtain a relatively low qualifying score to receive the raffle ticket. Approximately 90% of people are able to obtain the qualifying score on this task.

SENDER: The SENDER will have the **DIFFICULT** task.

The task is **difficult**. For this task you will need to obtain a relatively high qualifying score to receive the raffle ticket. Approximately 10% of people are able to obtain the qualifying score on this task.

Appendix M
Before Task Reactions Questionnaire

Directions: Please answer each of the questions below.

1. How happy are you with the type of task you have been assigned to complete?

Extremely Not at all
happy
1 2 3 4 5 6
7

2. How difficult do you think it will be for you to meet the qualifying score to win the raffle ticket on your task?

Extremely Not at all
difficult
1 2 3 4 5 6
7

3. How difficult do you think it will be for the SENDER to meet the qualifying score to win the raffle ticket on his or her task?

Extremely Not at all
difficult
1 2 3 4 5 6
7

4. How mentally engaging do you expect your task will be to complete?

Extremely Not at all
engaging
1 2 3 4 5 6
7

5. How difficult do you expect it will be to think about other things besides the task while you are completing the task?

Extremely Not at all
difficult
1 2 3 4 5 6
7

6. To what extent do you expect to think about the SENDER while you are completing your task?

Not at all
Very Much

1 2 3 4 5 6
7

7. To what extent do you expect to think about the SENDER after you have finished completing your task?

54

Not at all
Very Much

1 2 3 4 5 6
7

8. To what extent do you expect to think about the SENDER after the study is over?

Not at all
Very Much

1 2 3 4 5 6
7

Appendix N
For the RECEIVER Only

As the RECIEVER you have the option of receiving information about how the SENDER performed on his or her task. Specifically, you can choose to be told whether the SENDER performed well enough on the task to earn a score high enough to earn a raffle ticket. If you do choose to be told how the SENDER performed, then you will be told about his or her performance at the same time you are told about your own performance. If you choose not to be told how the SENDER performed on his or her task, then you will just be told about your own performance. Any raffle tickets earned by you or the SENDER will be placed in different raffles.

Please keep in mind this is only an option for the RECIEVER. The SENDER will not be given any feedback about your performance in order to keep the communication roles consistent. Regardless of which option you choose, it will not affect whether the study is successful.

Please indicate your choice by marking an X next to one of the options below:

_____ **I WANT** to be told whether the SENDER performed well enough to earn a raffle ticket.

_____ **I DO NOT WANT** to be told whether the SENDER performed well enough to earn a raffle ticket.

Once you have finished completing this form, please open the door to let the researcher know you are ready to continue with the study.

Appendix O

Communication and Task Performance: Debriefing

Thank you for participating in this study. The purpose of this form is to provide you more in-depth information about the study. The actual purpose of this study is not to examine how personalized communication and task difficulty affect task performance. Rather, the actual purpose of this study is to examine how emotional reactions to a person in need influences whether one wants to receive additional information about the person in need depending on whether the person receives a positive outcome.

To examine this issue we have participants read about a person in need (i.e., the SENDER). Several variables are then manipulated to create different experimental conditions. First, to create low and high emotional arousal for the person in need, participants are randomly assigned to try and remain objective or try to imagine what the person in need is thinking and feeling. Some participants also are given information about his or her preferences (e.g., favorite sport, favorite color, etc.) designed to make the person in need seem dissimilar to the participants. Second, using random assignment, participants are told that the person in need has received either an easy task or a difficult task. Finally, participants are given the opportunity to receive additional information about how the person in need performed on his or her task, which is the dependent variable in the experiment.

All participants were told that they were the RECEIVER and that the other participant in need was the SENDER. All participants were given the same hand-written communication. By keeping these pieces of the communication constant, we are able to see how perceived similarity with the SENDER and emotional reactions to the SENDER's situation combine with perceived task difficulty to influence participants' desire to receive additional information about the RECEIVER.

As you may have guessed by now, there were a number of misleading things that you were told about this study. First, there is not a second student participating in the study at the same time as you. The sender is a fictitious participant added to create the impact of hearing about a person in need in a realistic way. Second, there is no task to complete for a chance at the raffle prize. However, the raffle itself is real and your name will be added to the raffle along with all other participants in the study. At the conclusion of the study a name will be drawn and the winner will be contacted via email to claim his or her \$50. The purpose for giving you this misleading information was not to trick you. Rather, it was given to you to allow us to keep constant the person in need and the need situation that was described so that we could precisely determine whether or not the experimental conditions we created were solely responsible for men's and women's emotional reactions to encountering a person in need. If we told participants the full truth about the purpose of the study in the beginning and that the other participant is actually not real, then participants may experience the situation as fictional or as pretend. This could lead participants to react very differently from how they would react in real-life situations when encountering people in need. Also, in some circumstances, if participants know about the actual purpose of a study, then they may feel compelled to

report their reactions in an untruthful manner. For these reasons, when psychologists examine certain psychological processes they may withhold some information about a study or provide participants with some information about the study that is misleading.

We realize that you may feel a bit uncomfortable about having been told misleading information, but we want to assure you that it only was done to ensure that your experience in this study was as realistic as possible. Furthermore, it is important to remember that there is no correct or incorrect behavior or response to any of the questionnaires or materials in this study. However,

if you still have any concerns about this study, then please speak with the research assistant about your concerns or contact Dr. David Lishner (at lishnerd@uwosh.edu). Either of these individuals will be more than happy to talk with you about any concerns you may have.

Again, thank you very much for your participation. We value the time and energy you spent in this study and it is our hope that the data you have provided will help us to better understand human psychology.

Appendix P

Table 1

Table 1

Means and Standard Deviations (in Parentheses) of Measures by Experimental Condition

Measure likelihood	Objective/ Dissimilar/ Low likelihood	Objective/ No-info/ High likelihood	Imagine-other/ Dissimilar/ Low
Objective	4.70 (1.59)	4.35 (1.50)	3.20 (1.67)
Imagine-Other	4.35 (2.03)	5.00 (1.59)	6.25 (1.45)
Empathic Concern	4.58 (1.10)	4.61 (1.12)	4.95 (1.19)
Self-other merging	2.33 (1.15)	3.78 (.935)	2.45 (1.17)
Performance Difficulty	5.05 (1.39)	2.10 (.912)	4.90 (1.29)
Desire for Feedback*	0.500	0.550	0.750

Note. Values in the Desire for Feedback row are proportions of participants selecting to receive feedback.

Appendix Q

Table 2

Table 2

Logistic Regression Analyses

Hypothesis <i>Exp(B)</i>	<i>B (SE)</i>	Wald χ^2	df	<i>p</i>
SEH				
Constant 1.47	.39 (.26)	2.13	1	.15
Contrast 1 (-1, 2, -1) 0.86	-.15 (.18)	0.69	1	.41
Contrast 2 (-1, 0, 1) 1.88	.63 (.34)	3.49	1	.06
EAH				
Constant 1.47	.39 (.26)	2.13	1	.15
Contrast 1 (-2, 1, 1) 1.27	.24 (.18)	1.73	1	.19
Contrast 2 (0, -1, 1) 1.71	.54 (.26)	2.13	1	.10

Note. SEH = simultaneous-egoism hypothesis. EAH = empathy-altruism hypothesis.

Order of conditions for contrast coefficients is as follows: objective/dissimilar/low-likelihood, objective/no-information/high-likelihood, imagine-other/non-information/low-likelihood.

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