

April 2019

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The Motivations of Social Tuning: Perspective Taking and Affiliative Motivation

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Word Count: 7744

ABSTRACT

Two experiments were conducted to understand the role in perspective taking to social tuning.

Experiment 1 focused on if perspective taking led to social tuning, while Experiment 2 focused on how perspective taking relates into the affiliative motivation and social tuning model. Experiment 1 results suggest that perspective taking does lead into social tuning. In Experiment 2, results only suggest significance between affiliative motivation and social tuning, no other relatable significant was found.

Word Count: 7744

Keywords: perspective taking, social tuning, shared reality, affiliative motivation

The Motivations of Social Tuning: Perspective Taking and Affiliative Motivation

To feel comfortable and secure, people actively try to reassure and feel certain about their beliefs and values (Echterhoff, Higgins, Levine, 2009). One way to accomplish this is by developing a mutual understanding with others as this may help to validate and legitimize personal realities (Sinclair & Skorinko, 2018). This mutual understanding between one or more individuals is commonly referred to as *shared reality* (Hardin & Higgins, 1996; Hardin & Higgins, 2000). The shared reality theory also proposes that if an individual does not perceive a sense of mutual understanding with a relationship partner than that relationship will be abandoned. Therefore, sharing reality is a key aspect to social relationships.

Shared reality occurs when there is a mutual agreement and understanding between two or more individuals of an inner state. In other words, there is an alignment in attitudes between two individuals. It is also argued that shared reality is not possible unless there is a successful connection to another individual's inner state (Echterhoff, et al., 2009). One question that emerges is how do individuals align their views and get to this state of mutual understanding, or shared reality. One possible way in which individuals could be motivated to and ultimately achieve shared reality is through social tuning, or the process of unconsciously aligning one's views with an interaction partner (Davis & Rusbult, 2001; Sinclair, Huntsinger, Skorinko, & Hardin, 2005a). Individuals are motivated to engage in social tuning if they believe they can get knowledge from that partner, called epistemic motivation (Huntsinger, Lun, & Sinclair, 2009). Research also shows that individuals who have a desire to get along with their interaction partner, or affiliative motivation, are also more likely to engage in social tuning (Sinclair, et al., 2005; Skorinko & Sinclair, 2018). In addition, some recent work shows that collectivists are more likely to automatically engage in social tuning than individualists (Skorinko, Sinclair, Lun, Marotta, Calanchini, Paris, 2015). In each of these instances, social tuning is argued to occur because it enables

smoother social interactions and a better ability to maintain social relationships (Sinclair, et al., 2005). However, it is unclear if there are other instances or motivations that may increase the likelihood of engaging in social tuning. In the current work, we investigate one additional mechanism that may lead to social tuning: perspective taking.

Perspective Taking

In order to achieve a sense of shared reality, individuals need to understand another person's position and/or beliefs. Epistemic and affiliative social tuning provide the motivation to engage in social tuning and pick up on these attitudes. However, the actual process of thinking about another person's position is referred to as *perspective taking* (Epley & Caruso, 2008). The current work examines the role perspective taking plays in the social tuning and ultimately shared reality processes.

Research shows that perspective taking can unconsciously shape and influence self views. For instance, in one study perspective takers who took the perspective of an older family member enjoyed an article on sex less than perspective takers who took the perspective of a friend (Sinclair, Skorinko, & Conklin, 2011). In other words, taking the perspective of a significant other (older family member or friend) activated and amplified the relational schema the individual had for that person and consequently influenced their self-enjoyment. However, it is possible perspective taking endeavors will not have as strong of an influence when it involves someone that the person is less familiar with (e.g., a stranger, person they just met or plan to meet).

Research has also examined how perspective taking works when the target of the endeavor is less familiar to the perspective taker. In some work, perspective takers show a self-other overlap in which they ascribe more, typically positive) attributes of the other person into their self descriptions (Davis, Conklin, Smith, Luce, 1996). It has also been argued that this self-other overlap that occurs during perspective taking facilitates social coordination and relationships (Galinsky, Ku, & Wang,

2005). However, other research suggests that *how* the perspective taking occurs will influence whether self-other overlap even occurs (Myers, Laurent, & Hodges, 2014). For instance, if a perspective taker imagines the situation through their own (or self) lens, then they are more likely to express self-other overlap than if they imagine the situation through the target's lens (or other).

Furthermore, there is evidence that perspective taking can also influence the views that individuals have about outgroup members. Past work has found that when taking the perspective of an outgroup member who does not readily confirm negative stereotypes of their group reduces stereotyping of that target (Galinsky & Moskowitz, 2000). Perspective takers may even endorse more positive intergroup attitudes, limit automatic prejudices, and reduce discriminatory behaviors (Shih, Wang, Bucher, & Stotzer, 2009; Todd, Bodenhausen, Richeson, & Galinsky, 2011; Vescio, Sechrist, & Paolucci, 2003). However, research has also found that taking the perspective of a target that confirms negative stereotypes of their groups can lead to increased stereotyping (Skorinko & Sinclair, 2013). Moreover, research has found that perspective takers might act in more self-interested ways (Caruso, Epley, & Bazerman, 2006), and are not any more likely to accurately understand another person's behavior, values, attitudes etc. (Eyal, Steffel, & Epley, 2018).

Thus, the research shows that perspective taking can influence how the perspective taker perceives others (whether more positive or negatively). Moreover, the past work also suggests that perspective taking can, at times, influence self views as well. And, even though it does not necessarily lead to more accuracy in understanding or predicting others, it is certainly perceived to be an important component in social interactions (Eyal, et al., 2018).

Current Research

While epistemic and affiliative motivations drive individuals to get along with others potentially leading them to tune their behaviors and attitudes to form relationships, the actual act of picking up on the perceived inner state of an interaction partner comes from the act of perspective taking. Research on

perspective taking suggests that it plays a role in self views, attitudes of others, and can influence social coordination efforts. Furthermore, a deeper look into the affiliative social tuning hypothesis reveals that perspective taking is thought to be a key component in the social tuning process (Sinclair, et al., 2005). Therefore, the current work seeks to better understand the role that perspective taking plays in the social tuning process. More specifically, Experiment 1 investigates if perspective taking, in and of itself, can lead to social tuning. Experiment 2 takes this work a step further by investigating the roles that perspective taking and affiliative motivation have amongst one another in the social tuning process. We propose that perspective taking is an important component to the social tuning process because it leads the perspective taker to believe they have important information about their interaction partner that can enhance or smoothen the social interaction.

Experiment 1 Method

Participants

One hundred and twenty-two participants (62 female; 60 male) from a private university in the Northeast completed the study in exchange for class credit. Of these participants, four were removed from the analysis; two participants indicated they purposely tried to alter their results based on what they thought the study was about, and one participant reported hearing about the study from a classmate and knowing the purpose. Thus, the results are based on 118 participants (59 female; 59 male).

Materials & Design

Our research utilized a 2 (Perspective Taking: No Perspective Taking vs. Perspective Taking) x 2 (Perceived Views: Plain t-shirt vs. Eracism t-shirt) between participants design. In this design, participants are either primed to perspective take or not. In addition, participants see an experimenter who is wearing either a shirt that endorses positive and egalitarian attitudes towards race (i.e., “Eracism”) or a shirt that endorses no particular viewpoints (i.e., a plain t-shirt). To examine social tuning, we measured implicit and explicit racial attitudes to see if participants tuned toward the perceived view of their interaction partner.

Perspective Taking Manipulation. To manipulate perspective taking, we used a sentence unscrambling task (as in Skorinko, Sinclair, & Conklin, 2011). In this task, participants unscrambled five words to create a coherence sentence using four of the five words. In total, participants unscrambled 20 sentences. Half of the participants unscrambled sentences relating to perspective taking (e.g., “I understand her mindset”), and half the participants unscrambled sentences unrelated to perspective taking (e.g., “Toss the ball silently”).

Perceived Views Manipulation. To manipulate perceived views of the experimenter (or the interaction partner in this experiment), the experimenter wore one of two shirts during the experiment. Half the participants were led to believe their experimenter endorsed positive and egalitarian views towards other racial groups because they were wearing a t-shirt that said “Eracism”. Eracism is a play on words for “erase racism”. The remaining half of the participants interacted with an experimenter who provided no clear viewpoint as they were wearing a plain t-shirt that expressed no particular views. This “Eracism” shirt was pre-tested prior to use in the experiment, and participants reported that the shirt suggested the person wearing it would have positive and egalitarian views towards race. .

Explicit Racial Attitudes. To measure explicit racial attitudes, participants completed 41 questions regarding their beliefs about blacks. Fourteen questions came from Modern Racism Scale (McConahay, 1986), seven from the Symbolic Racism Scale (Henry & Sears, 2002) the 20 from Pro Anti-Black Scale (Katz & Hass,1988). The Modern Racism scale measures attitudes towards Black Americans on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree; “Generally, blacks are of the same intelligence as whites”). The Symbolic Racism Scale, measures underlying prejudice towards Blacks on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree; “Black leaders have been trying to push too fast”). The Pro-Anti Black scale measures positive and negative attitudes towards Blacks on a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree; “Too many Blacks still lose out on jobs and promotions because of their skin color.”).The explicit measures were counterbalanced with the implicit measures, such that half the participants completed the explicit measures first, whereas half the participants completed the implicit measures first. For each scale, items needing to be reverse scored were re-coded. After re-coding, the items for that scale were averaged together to create one score for that scale (e.g., Modern Racism score). After each composite was created, the scores for each scale were standardized since two scales used a 7-point scale and one used a 5-point scale. We then averaged the standardized scores for each scale (Modern

Racism, Symbolic Racism, and Pro-Black) to create one measure of explicit attitudes. Higher positive numbers indicate more positive and egalitarian views towards Blacks.

Implicit Racial Attitudes. Implicit Association Tests (IATs) determine the strength of implicit or unconscious associations (Greenwald, McGhee, & Schwartz, 1998). Therefore, we used an IAT to measure implicit associations towards Blacks. In this specific IAT, participants categorized names as either being associated with Blacks or Whites. The names come from a list of names that were tested to sound “white” or “black” (ABC News, 2006). The White name category included: *Katie, Brad, Emily, Scott, Madeline, and Colin*. The Black name category included: *Tyrone, Roshanda, Jamal, Shanice, Malik, and Aaliyah*. In addition to categorizing names, participants also classified words as pleasant or unpleasant. The pleasant words used were *rainbow, gift, joy, warmth, laughter, and health*. The unpleasant words include *sickness, terrible, vomit, failure, agony, and bad*.

Prior to starting the IAT, participants learned that they needed to categorize stimuli in the middle of the screen as quickly and accurately as possible by pressing the “d” key if the stimulus belongs to the left category or the “k” key if the stimulus belongs to the right category. In the first round, participants categorize names as being either White (e.g., Brad) or Black (e.g., Jamal) 20 times. Half the participants see the White category on the left and the Black category on the right, and the other half see the Black category on the left and the White category on the right. In the second round, participants classify words as being either pleasant (e.g., “laughter”) or unpleasant (e.g., “bad”) 20 times. In the third round, participants now need to categorize stimuli based on all four characteristics (Black, White, Pleasant, Unpleasant). Half the participants see White/Pleasant and Black/Unpleasant, and the other half see Black/Pleasant and White/Unpleasant (based on which category was on the left in the first round). Participants complete 20 practice trials and then 40 test trials.

In the fourth round, participants are trained to switch the spatial location of the categories presented in trial one initially (e.g., if White was on the left, it would now appear on the right). There

are 40 trials in this round. Round five is the same as round two—the pleasant/unpleasant categories stay in the same spatial location. In round six, the categories are again combined; however, this time the categories are aligned with the presentation of items in round five and round six. In other words, if was initially Pleasant/White on the left side it is now Pleasant/Black on the left side. Participants then complete 20 practice trials followed by 40 test trials. Higher d-scores indicate more favorable implicit attitudes towards Blacks.

Follow-up Questions and Demographics. We also measured participants attitudes towards the experimenter and any suspicions they had about the study or the study’s purpose. Participants also provided demographic information (i.e., race, school year, gender, and student status).

Procedure

Participants were welcomed into the room by an experimenter who was either wearing a shirt that expressed egalitarian racial views (e.g., Eracism) or a plain t-shirt that expressed no views. After providing informed consent, participants were led to believe that the study investigated how people interact in social situations after learning some details about an interaction partner. To decrease social desirability (Baumeister & Leary, 1995) and self-presentation (Hardin & Conley, 2001), participants received an envelope at the beginning of the study and were instructed to place all their handwritten work in that envelope. They also learned that the experimenter would not see any of their personal data. In addition, participants were informed that their vision needed to be tested for the computer portion of the experiment. To do this, we adapted the model used in another study (Skorinko, et al., 2015) where the experimenter pretends that they cannot find the eye chart, so they ask participants, in an impromptu fashion, to either read a) the letters on the shirt they are wearing at two different distances when the Eracism shirt is worn or b) five handwritten letters off a notepad that were ostensibly created just before the experiment began when the plain shirt is worn. The feigned eye test was to ensure that the participants noticed the message on the t-shirt worn by the experimenter.

After completing the vision test, participants engaged in what they believed was the first cognitive task. In this task, which was the Perspective Taking Manipulation, participants completed a sentence unscrambling task by creating a sentence from four out of five words presented. Half the participants unscrambled 20 sentences related to perspective taking (e.g., “John can relate to Heather”) and half the participants unscrambled 20 sentences unrelated to perspective taking (e.g., “Toss the ball silently”; from Skorinko, Sinclair, Conklin, 2011). Once the sentence unscrambling task was complete, half the participants were randomly assigned to complete the explicit measures first and the other half were randomly assigned to complete the implicit measure first. To measure explicit racial attitudes, participants completed a survey that contained items from the Modern Racism Scale (McConahay,

1986), Symbolic Racism Scale (Henry & Sears) and the Pro-Anti Black Scale (Katz & Hass, 1988). To measure implicit attitudes, participants completed an IAT (Greenwald, McGhee, & Schwartz, 1998) where participants categorized Black and White first names and Pleasant and Unpleasant words as quickly and accurately as possible on the computer.

After completing the counterbalanced explicit and implicit measures, all participants answered follow-up questions that assessed their attitudes towards the experimenter and their demographic information (i.e., race, gender, school year, and student status). Again, participants were reminded that the experimenter would not see any of their responses and they were reminded that when they were finished to place all items in an envelope and seal it. Once the participants sealed their envelopes, they were thanked for their participation and verbally debriefed on the purpose and procedures of the experiment.

Results and Discussion

In this study, we were looking to see if perspective takers engage in social tuning. More specifically, we predict that perspective takers who interact with an experimenter wearing a shirt that endorses positive egalitarian views should be the most likely to social tune by expressing positive and egalitarian views. All analyses were assessed for statistical significance at $\alpha = .05$ and were analyzed using a 2 X 2 ANOVA with Perspective Taking (No Perspective Taking, Perspective Taking) and Perceived Views (Plain t-shirt, Racism t-shirt) as factors.

Explicit Attitudes

For explicit attitudes, there were no main effects for Perceived Views, $p = 0.83$ (see Table 1). However, there was a marginal main effect for Perspective Taking $F(1, 114) = 3.57$, $p = 0.06$, $\eta_p^2 =$

0.03, such that those who were primed to Perspective Take ($M=0.16$, $SD=0.91$) endorsed more positive explicit attitudes towards Blacks than those who were not primed to Perspective Take ($M=-0.13$, $SD=0.90$). There was also a significant interaction between Perceived Views and Perspective Taking, $F(1,114) = 4.18$, $p = 0.04$, $\eta_p^2 = 0.04$ (Figure 1). A simple effects analysis showed how if an experimenter is wearing a plain shirt and a participant is primed in the neutral condition, they are more likely to endorse positive views towards blacks ($M=0.02$, $SD= 0.17$) than those who were primed in the perspective taking condition ($M= 0.00$, $SD= 0.15$), $F(1,114)=0.01$, $p=0.91$. If an experimenter is wearing the eracism t-shirt and participants are primed to perspective take, they endorsed more positive views towards blacks ($M= 0.38$, $SD=0.18$) than those who were neutrally primed ($M=-0.28$, $SD= 0.16$), $F(1,114)=7.38$, $p < 0.01$. Looking in the other direction, if participants were neutrally primed and saw the experimenter wear a plain t-shirt, then participants were more likely to endorse more positive racial views ($M=0.02$, $SD= 0.17$) than those who saw an eracism shirt ($M=-0.28$, $SD=0.16$), $F(1,114)=1.65$, $p=0.20$. Participants who were primed to perspective and saw the experimenter wearing an eracism t-shirt, endorsed more positive racial views ($M=0.38$, $SD=0.18$) than those who saw a plain shirt ($M=0.00$, $SD=0.15$), $F(1,114)=2.59$, $p=0.11$. A simple effects analysis showed that a participant is more likely to perspective take when the eracism t-shirt is worn.

Implicit Attitudes

For implicit attitudes there were no main effects for Perceived Views, $p= 0.46$, or for Perspective Taking, $p= 0.69$. There also was no significant interaction between Perceived Views and Perspective Taking, $p= 0.76$.

Conclusion

From Experiment 1, the results suggest that perspective taking does lead to social tuning for explicit attitudes, but not for implicit attitudes. When the interaction partner (the experimenter) is wearing a t-shirt that expresses positive egalitarian racial views, the participant is more likely to perspective take and endorse positive explicit racial attitudes. However, this effect does not seem to occur for implicit attitudes. Since perspective taking seems to lead to social tuning at least for explicit attitudes, we wanted to also examine the role that affiliative motivation plays in this process since the two are linked together in social tuning models (Sinclair, et al., 2005).

Experiment 2

Experiment 1 provided us with initial evidence that perspective taking, in and of itself, leads to social tuning as perspective takers who saw an interaction partner who ostensibly had egalitarian views towards Blacks endorsed more positive and egalitarian explicit views towards Blacks. While Experiment 1 provides preliminary evidence that perspective taking and social tuning are linked, it does not provide any information on whether perspective taking and affiliative motivation are linked as the affiliative social tuning hypothesis proposes (Sinclair, et al., 2005).

As mentioned earlier, research has shown that individuals that have high affiliative motivation (or a high desire to get along with someone) are more likely to engage in social tuning than those with low affiliative motivation (Sinclair, 2005; Skorinko & Sinclair, 2018). For instance, in one experiment, participants were led to believe they would be interacting with a female partner who ostensibly supported either gender traditional or gender nontraditional roles (Sinclair, et al., 2005). Participants either had low or high affiliative motivation to get along with this interaction partner. The results indicate that those who had high affiliative motivation were more likely to engage in social tuning than

those who had low affiliative motivation. In other words, if a participant had high affiliative motivation and believed their partner supported gender traditional views, then they rated themselves as more gender traditional. And, if the participant had high affiliative motivation and believed their partner supported gender non-traditional views, then they rated themselves as more nontraditional. In a second experiment, African American participants either had high or low affiliative motivation and were led to believe that their interaction partner either held stereotypically negative views about African Americans intelligence or counterstereotypic positive views (Sinclair, et al., 2005). Participants with high affiliative motivation were more likely to tune towards their interaction partner than those with low affiliative motivation. In other words, if the participant believed the partner endorsed stereotypic views of African Americans, they rated themselves as less intelligent than when they had high affiliative motivation and believed the experimenter endorsed stereotypic views. Likewise, African American participants who had high affiliative motivation and believed the experimenter endorsed counterstereotypic views, rated themselves as more intelligent. .

While this past works shows the connection between affiliative motivation and social tuning, it does not elucidate if affiliative motivation increases the likelihood to engage in perspective taking or if perspective taking increases affiliative motivation. Therefore, in Experiment 2 we examine the role that perspective taking has in conjunction with affiliative motivation. To do this, participants were primed to perspective taking, have affiliative motivation, or neither motivation (neutral). We measured the likelihood to engage in social tuning, and we also measured the extent to which participants engaged in perspective taking and felt affiliative motivation to try to better understand how these two mechanisms are linked.

Method

Participants

Sixty-five participants (41 female; 24 male) from a private institution in the northeastern United States completed the study in exchange for class credit. Of these participants, two were removed from the analysis because they admitted to knowing about the study or purposely trying to skew results. The analyses are based on 63 participants (40 female; 23 male).

Materials & Design

This experiment utilized a 3 (Motivation: Neutral vs. Perspective Taking vs. Affiliative Motivation) x 2 (Perceived Views: Neutral vs. Egalitarian) between participants design. In it, we measured implicit and explicit racial attitudes as well as perspective taking and affiliative motivation.

Motivation Manipulation. To manipulate different interpersonal motivations, we modified the sentence unscrambling task used in Experiment 1 where participants had to unscramble sentences using all but one of the words provided. For Experiment 2, participants unscrambled sentences related to: a) perspective taking, b) affiliative motivation, or c) neither perspective taking or affiliative motivation (i.e., neutral). We used the same sentence unscrambling task for the perspective taking and neutral conditions used in Experiment 1. The only modification made was that we reduced the number of sentences to 16 from 20. We created a new 16-item sentence unscrambling task related to affiliative motivation (e.g., “She cooperates with me”). This new unscrambling task was tested on a small group of participants, and it was determined to be associated with affiliative motivation.

Perceived Views Manipulation. Rather than interacting with an experimenter in Experiment 2, we led participants to believe they would be interacting with another participant. Prior to this ostensible interaction, the participant answered two questions about their hobbies and then “learned”

how their partner completed those questions (e.g., “What hobbies do you participate in outside of WPI?” and “What is your favorite thing to do at WPI?”). Participants also saw a photograph of their supposed partner. In the neutral views condition, participants saw a photograph of one of two models wearing a plain green t-shirt and their neutral biography response “I like to read books and play video games”. In the egalitarian views condition, participants saw a photograph of one of two models wearing a green t-shirt that said “Eracism” and the biography responses included “I like to read books and play video games. I’m also part of BYOP, which is an activist group that protests for underrepresented minorities”.

Explicit Racial Attitudes. As in Experiment 1, we measured explicit racial attitudes. We again used the Pro-Anti Black Scale (Katz & Hass, 1988); however, we modified it to be on 7-point Likert-type scale rather than a 5-point Likert-type scale. Instead of the Modern Racism and Symbolic Racism Scales, which we felt were too extreme to measure participants’ attitudes, we used the Subtle Prejudice Scale (Pettigrew & Meertens, 1995) and the Racial Explicit Attitudes Test (Brigham, 1993) and measured both on 7-point Likert-Type scales. As in Experiment 1, the Pro-Anti Black scale consists of 20 items pertaining to explicit attitudes towards Black Americans. The Subtle Prejudice Scale contains 10 items which are split into three different categories: traditional values, cultural differences, and positive emotion. The Racial Explicit Attitudes Test consists of 20 items on a 7 point likert-type scale that have to do with explicit racial biases towards Black Americans (e.g., “If I had a chance to introduce Black visitors to my friends and neighbors, I would be pleased to do so.”). As in Experiment 1, the explicit and implicit scales were counterbalanced. In addition, any items needing to be reverse scored were, and then all items for each scale were averaged together. Since all items were on the same scale this time (7-point Likert-type), the scores were not standardized in Experiment 2.

Implicit Racial Attitudes. As in Experiment 1, we again measured implicit attitudes using the Implicit Association Task (Greenwald, McGhee, & Schwartz, 1998). In Experiment 2, we made two

changes. First, participants completed a Single Category Implicit Association Task (Karpinski, & Steinman, 2006) that measured implicit attitudes towards Black people only instead of both white and black people. The SC-IAT is a modification from a regular IAT test that measures the strength of associations with a single attitude object instead of two. The SC-IAT used only focuses on attitudes towards Blacks. The SC-IAT was chosen to see if tuning might occur on implicit attitudes if those attitudes are not evaluative in nature (e.g., Good/Heterosexual and Bad/Homosexual). After completing the SC-IAT, participants completed a word search task as a filler to give their participants a break from the categorization. After spending one minute on the word search, participants completed a Black/White Race IAT where they, instead of names, categorized photographs of White and Black faces with “good” and “bad” words (Greenwald, et al., 1998). In the Race IAT, higher scores indicate more negative attitudes towards Black people. For the SC-IAT, the higher more positive the score, than the more favorable attitudes towards Blacks; where as a lower negative number indicates more negative attitudes.

Perspective Taking Measure. In addition to measuring the implicit and explicit attitudes of our participants, we also measured participants’ perspective taking towards the ostensible interaction partner. We measured perspective taking with the Self Dyadic Perspective Taking Test (Long, 1987) and the Interpersonal Reactivity Index (Davis, 1980). The Self Dyadic Perspective Taking test consists of seven statements on a 7-point Likert-type scale (1 = does NOT describe me; 7 = describes me VERY well; e.g., “I believe I will know how my partner feels.”). The Interpersonal Reactivity Index consists of five questions on a 7-point scale (1 = does NOT describe me to 7 = describes me VERY well; e.g., “If I’m sure I’m right about something, I won’t waste much time listening to my partner’s argument”). Items needing to be recoded were reverse scored, and an average perspective taking score was created for each scale. Higher numbers mean more self-reported perspective taking.

Affiliative Motivation Measure. We also measured affiliative motivation using the Interpersonal Orientation Scale (Hill, 1987). The affiliative motivation measure consisted of thirteen statements about interpersonal orientation on a 7-point Likert-type scale (1 = not at all true; 7 = completely true). The questions focus on the four dimensions thought to underlie affiliative motivation: social comparison, emotional support, positive stimulation, and attention (Hill, 1987). The first three questions are taken from the social comparison component of the IOS (e.g., “If I am not certain about how well I am doing at something, I will be glad to be with my partner so I can compare myself to them.”). The next four items are from the positive stimulation dimension (e.g., “I would find it very satisfying to be able to form a new friendship with my partner.”). The last 6 items are from the social support subsection of the IOS (e.g., “One of my greatest sources of comfort when things get rough is being with other people.”). Items needing to be recoded were reverse scored, and an average affiliative motivation score was created for each scale. Higher numbers mean more self-reported affiliative motivation.

Demographics. As in Experiment 1, participants also provided demographic information (i.e., race, school year, gender, and student status) as well as some follow up questions about the study (e.g., “Did you notice anything about the shirt that your partner was wearing in the photograph?”).

Procedure

Participants were welcomed into the room by the experimenter and seated at one of the computers in the lab. After giving informed consent, participants were led to believe they would be completing social and cognitive tasks both individually and with an interaction partner. Participants then began what they believed was their first cognitive task. This was the motivation manipulation. As in Experiment 1, participants completed a sentence unscrambling task (adapted from Skorinko, et al., 2011). However, this time, participants were randomly assigned to unscramble sentences related to: a)

perspective taking (e.g., “She took his perspective”), b) affiliative motivation (e.g., “She cooperates with me”), or c) neutral sentences (e.g., “Toss the ball silently”).

Once the unscramble task was complete, participants were told that they would next complete a social task, which served as the perceived views manipulation. In this task, the experimenter explained that before the interaction task the participant and the ostensible partner would view a picture of one another and answer some personal information about themselves. The experimenter then took a polaroid picture of the participant to share with the ostensible interaction partner. The experimenter takes this photograph to another lab room, and they pretend to take a picture of the ostensible partner. Returning to the participant, the experimenter hands a photograph of their ostensible partner to the participant to view. The participants viewed one of two models who are wearing either a plain green t-shirt (Neutral Views Condition) or a green t-shirt that says “Eracism” (Egalitarian Views Condition). After viewing the photograph, participants completed two questions related to their hobbies that they learn their partner will get to view. After answering the questions, the computer “generated” the results of the task and displayed the partners ostensible responses. Participants in the Neutral Views Condition learned that their partner participates in activities unrelated to equal rights (e.g., “I like to read books and play video games”). Those participants in the Egalitarian Views Condition learned that their partner participates in activities related to equal rights for others (e.g., “I like to read books and play video games. I’m also part of BYOP, which is an activist group that protests for underrepresented minorities”). It is important to note that this is a yoked condition. If participants saw a ostensible partner in a plain green shirt, they learn their partner engages in neutral non-race related activities. If the participants saw the ostensible partner in the “Eracism” shirt, they learn their partner engages in positive race-related activities.

After completing this social task, participants learned they get to choose a set of scales from a list of options for their partner to complete; and their partner gets to choose a set of scales for them to

complete from the same list. However, the participants learn that they will *not* see their partners scores nor will their partner see their score. Participants were always asked to complete items related to racial attitudes, consisting of both implicit and explicit attitude measurement tasks. Half the participants completed implicit racial attitudes first (i.e., a Single Category IAT and a regular Black/White IAT), and half the participants completed explicit racial attitudes measurements first (i.e., Pro-Anti Black Scale, Subtle Prejudice Scale, and the Racial Explicit Attitudes Test; Katz & Hass, 1988; Pettigrew & Meertens, 1995; Brigham, 1993).

After completing the counterbalanced implicit and explicit measures, participants answered a final survey that measured their affiliative motivation (i.e., Interpersonal Orientation Scale; Hill, 1987) and Perspective Taking motivation (i.e., Self Dyadic Perspective Taking Scale & Interpersonal Reactivity Index; Long, 1987; Davis, 1980). Participants also answered questions about their attitudes towards the interaction partner, followed by their demographic information (i.e., race, gender, academic year). Once the participants finished the final survey, they were all thanked for their participation and verbally debriefed on the study's purpose and procedures.

Results and Discussion

In Experiment 2, we investigated if perspective taking led to social tuning and if it increased affiliative motivation. We also examined if affiliative motivation led to social tuning and if it increased perspective taking. All analyses were assessed for statistical significance at $\alpha = .05$. We conducted one set of analyses looking at perspective taking using a 2 X 2 ANOVA with Perspective Taking (No Perspective Taking, Perspective Taking) and Perceived Views (Plain t-shirt, Eracism t-shirt) as factors. We conducted a second set of analyses looking at affiliative motivation using a 2 X 2 ANOVA with

Affiliative Motivation (No Affiliative Motivation, Affiliative Motivation) and Perceived Views (Plain t-shirt, Eracism t-shirt) as factors.

Perspective Taking and Social Tuning

Explicit Attitudes. There was a main effect for Perspective Taking $F(1,39)=4.35, p=0.04, \eta_p^2 = 0.10$, such that when participants were primed to perspective take ($M = -0.27; SD = 0.69$) they displayed more negative racial views than when they were not primed to perspective take ($M = 0.07; SD = 0.55$). There was also a main effect for Perceived Views $F(1,39)=5.51, p=0.02, \eta_p^2 = 0.12$ in that if a participant saw an ostensible partner wearing an eracism shirt ($M = -0.29; SD = 0.61$) they were more likely to display negative racial views than if they saw an ostensible partner wearing a plain shirt ($M = 0.11; SD = 0.61$). However, there was no significant interaction between Perspective Taking and Perceived Views $p = 0.42$, as seen in Table 3. Unlike Experiment 1, we did not find evidence for perspective taking leading to social tuning in Experiment 2 for explicit attitudes.

Implicit Attitudes on SC-IAT. As seen in Table 5, there was no main effect for Perspective Taking ($p = .83$), nor was there a significant interaction between Perspective Taking and Perceived views ($p = .34$). However, there was a marginally significant main effect for Perceived Views, $F(1,39)=3.62, p=0.06, \eta_p^2 = 0.09$ such that participants were more likely to endorse positive implicit racial views if the model was wearing a plain shirt ($M = 0.14; SD = 0.21$) than the Eracism shirt ($M = -0.01, SD = 0.31$). Therefore, perspective taking did not lead to social tuning on the SC-IAT.

Implicit Attitudes on the Race IAT. Looking at the Race IAT as the dependent variable, there was no main effect for Perceived Views ($p = .17$). There was no significant interaction between Perspective Taking and Perceived Views $p = 0.85$. However, as seen in Table 7, there was a marginally significant main effect with Perspective Taking $F(1,39)=3.92, p=0.06, \eta_p^2 = 0.00$ such that participants who are primed to perspective take ($M = 0.40; SD = 0.35$) endorsed more negative

implicit racial views than those not primed to perspective take ($M = 0.24$; $SD = 0.22$). Thus, perspective taking did not lead to social tuning on the Race IAT.

Does Perspective Taking Increase Affiliative Motivation?

Besides social tuning, we were also interested in whether perspective taking would increase affiliative motivation. Therefore, we conducted an analysis to see if perspective takers were more likely to experience affiliative motivation. As seen in Table 9, there was no main effect for Perceived Views, $p = .47$. There was also no significant interaction between Perceived Views and Perspective Taking $p = 0.97$. However, there was a significant main effect for Perspective Taking $F(1,39)=17.6$, $p < 0.01$, $\eta_p^2 = 0.31$ where participants who were primed to perspective take ($M = 5.94$, $SD = 0.78$) reported more affiliative motivation than those not primed to perspective taking ($M = 4.71$; $SD = 1.05$). Therefore, perspective taking does seem to increase affiliative motivation.

Affiliative Motivation and Social Tuning

Explicit Attitudes. Looking at Affiliative Motivation and Perceived Views as factors, there were no significant main effects for either Perceived Views $F(1,37)=1.61$, $p=0.21$, $\eta_p^2 = 0.04$ or Affiliative Motivation $F(1,37)=0.03$, $p=0.88$, $\eta_p^2 = 0.00$ as seen in Table 4. However, there was a significant interaction between Affiliative Motivation and Perceived Views $F(1,37)=4.82$, $p=0.04$, $\eta_p^2 = 0.12$ (Figure 2). A simple effects analysis found that if the model was wearing a plain t-shirt and the participant was primed with a neutral mindset, then they are more likely to endorse positive attitudes towards blacks ($M=0.63$, $SD=0.26$) than those who were primed in the affiliative motivation condition ($M=0.03$, $SD=0.24$), $F(1,37)=2.89$, $p = 0.10$. If the model was wearing an eracism t-shirt and the participant was primed in the Affiliative Motivation condition, then they are more likely to endorse more positive attitudes towards black ($M=0.27$, $SD=0.29$) than those who were given a

neutral prime ($M = -0.26$, $SD = 0.23$), $F(1,37) = 1.99$, $p = 0.17$. Looking in the other direction, participants that were given a neutral prime and saw a plain shirt were more likely to endorse more positive attitudes towards blacks ($M = 0.63$, $SD = 0.26$) than those who saw an eracism shirt ($M = -0.26$, $SD = 0.23$), $F(1,37) = 6.53$, $p = 0.02$. If participants were primed to affiliative motivate and they saw an eracism shirt on the model, participants endorsed more positive attitudes towards blacks ($M = 0.27$, $SD = 0.29$) than those who saw a plain shirt ($M = 0.03$, $SD = 0.24$), $F(1,37) = 6.53$, $p = 0.02$.

Implicit Attitudes on SC-IAT. As seen in Table 6, there were no main effects for Affiliative Motivation ($p = 0.78$) or Perceived Views ($p = 0.15$). There was also no significant interaction between Perceived Views and Affiliative Motivation on the single category implicit association task, $p = 0.23$. Therefore, affiliative motivation did not lead to social tuning on the SC-IAT.

Implicit Attitudes on the Race IAT. As seen in Table 8, there were no main effects for Affiliative Motivation ($p = 0.63$) or Perceived Views ($p = 0.46$). There was also no significant interaction between Perceived Views and Affiliative Motivation on the Race IAT, $p = 0.45$. Therefore, affiliative motivation did not lead to social tuning on the Race IAT.

Does Affiliative Motivation Increase Perspective Taking?

Besides social tuning, we were also interested in whether affiliative motivation would increase perspective taking. Therefore, we conducted an analysis to see if those with affiliative motivation were more likely to take another person's perspective. As seen in Table 10, there were no main effects for Perceived Views ($p = .30$) or Affiliative Motivation ($p = .89$). There was also no significant interaction between Perceived Views and Perspective Taking $p = 0.78$. Therefore, affiliative motivation does not seem to increase perspective taking.

Conclusion

Unlike Experiment 1, Experiment 2 did not provide any evidence that perspective taking led to social tuning on explicit or implicit measures. Rather, perspective takers tended to endorse more negative explicit and implicit racial views than non-perspective takers. However, perspective taking did increase affiliative motivation. Replicating past research (Sinclair, et al., 2005), we also found that affiliative motivation did lead to social tuning for explicit attitudes towards race. However, this effect did not replicate for implicit attitudes. In addition, affiliative motivation did not increase perspective taking tendencies.

General Discussion

These two experiments investigated the effects that perspective taking has on social tuning. In Experiment 1, individuals primed to perspective take engaged in social tuning by endorsing more positive egalitarian racial views when the experimenter expressed those same views. This provides preliminary evidences that perspective taking by itself can lead to social tuning and extends past work showing that affiliative motivation is a primary factor that can lead to social tuning (Sinclair, Lowery, Hardin, & Colangelo, 2005b). However, Experiment 1 did not provide any evidence on how perspective taking and affiliative motivation work in the social tuning process. Experiment 2 examined this relationship.

While Experiment 2 found evidence that affiliative motivation led to social tuning for explicit attitudes, replicating past work (Sinclair, et al., 2005a). However, affiliative motivation did not lead to social tuning on implicit attitudes (as found in past work) (Sinclair, et al., 2005a; Skorinko & Sinclair, 2018). In addition, we were unable to replicate the findings from Experiment 1 as perspective takers did not engage in social tuning of explicit or implicit attitudes in Experiment 2. Though this research

did not replicate this finding, it did provide evidence that individuals who perspective take are more likely to experience affiliative motivation.

Limitations and Future Research

Considering the results of this study and the past research done around social tuning, there are some additional avenues for future work. For instance, past research has suggested that when individuals tune, it may last for up to a week (Weisbuch, Sinclair, Skorinko, & Eccleston, 2009). Future work should investigate how long lasting social tuning is when the person engages in social tuning through perspective taking versus affiliative motivation to see if there are any similarities or differences in how long the effects last. Further future research is also suggested based on the limitations of this current research.

One limitation of the current work is that it only measured attitudes towards race. In other words, the current research supports previous social tuning research investigating social tuning of racial attitudes due to affiliative motivation (Sinclair, et al., 2005b). It also shows that perspective taking may lead to social tuning of explicit racial attitudes. However, it is unclear if social tuning will only occur for racial attitudes or if these effects can be replicated with other social group attitudes. If these results are not reproducible in similarly polarizing views such as sexual orientation, gender, or body image, then the significance of perspective taking towards achieving social tuning and its effects on affiliative motivation should be reconsidered. Given that social tuning has occurred for racial attitudes, gender, sexual behaviors, and sexual orientation (Sinclair, et al. 2005a; Skorinko, et al., 2011; Skorinko, et al., 2015), it is likely it would replicate for different attitudes, but this assertion needs to be examined.

Another possible limitation for Experiment 1 in particular is that the research assistants varied in their racial and ethnic identification. Overall all the experimenters, we did see evidence of perspective taking leading to social tuning in Experiment 1. Out of curiosity, once we were attempting

to comb out data, we looked to see if the Experimenter's race had an influence in the results. It showed that social tuning was most likely to occur for perspective takers when the experimenter was White. If participants believed consciously or unconsciously that the research assistants were simply bolstering their statuses and in-groups through endorsing self-positive views, this may have increased the distance and separation they felt towards their partner(s) in either experiment (Sinclair et al., 2005a). In Experiment 2, the experimenter's race still varied; however, the experimenter was not the interaction partner in this study, rather it was an ostensible partner. The two models were white females with blonde hair. Future research needs to further investigate the role of the race of the interaction partner on social tuning, especially when that person is promoting a cause relevant to their own group (e.g., a Black person promoting positive racial views).

The current research also only focused on short-term (less than an hour) interacting individuals who had no predisposed connection/relationship. Evidence from previous research has supported that perspective taking increases the influence of significant-other representations on attitudes (Skorinko, et al, 2011), but the degree of this effect is unclear. Future work should investigate the roles of partner familiarity and self-other overlap on social tuning and perspective taking (Skorinko, et al., 2011).

Lastly, future work should focus on the salience perspective taking has leading to shared reality. Previous research has proposed perspective taking to be one of the potential stages leading to shared reality (Echterhoff, et al., 2009), but no current research has investigated perspective taking significance in the affiliative social tuning-shared reality model. The current research from Experiment 1 suggests perspective taking encourages social tuning, but fails to elaborate on if or how a mutual agreement and understanding of attitudes is achieved. If an alternative method can be employed in achieving this mutual understanding, society's negative attitudes can be shifted positively to reach a more egalitarian state.

Shifting negative attitudes implicitly and explicitly in individuals and leading them to adopt more positive views is crucial in leading society to becoming egalitarian to not only all races, but of every individual and background. If understanding the perspective of the individuals we interact with can shift both implicit and explicit attitudes, further research should be conducted in understanding the role and relationship perspective taking has with affiliative motives and social tuning generally.

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Tables and Figures

Table 1

Descriptive and Inferential Statistics for Perspective Taking and Perceived Views on Explicit Racial Attitudes in Experiment 1.

Group	N	M	SD	F	<i>p</i>	η_p^2
Perceived Views				0.05	0.83	0.00
Eracism T-Shirt	56	0.02	0.98			
Plain T-Shirt	62	0.01	0.87			
Perspective Taking				3.57	0.06	0.03
Perspective Taking	60	0.16	0.91			
No Perspective Taking	58	-0.13	0.90			
Perspective Taking*Perceived Views				4.18	0.04*	0.04
Neutral, Plain	28	0.02	0.83			
Neutral, Eracism	30	-0.28	0.96			
Perspective, Plain	34	-0.0015	0.91			
Perspective, Eracism	26	0.38	0.89			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 2

Descriptive and Inferential Statistics for Perspective Taking and Perceived Views on Implicit Attitudes in Experiment 1.

Group	N	M	SD	F	<i>p</i>	η_p^2
Perceived Views				0.55	0.46	0.01
Eracism T-Shirt	56	-0.50	0.43			
Plain T-Shirt	62	-0.44	0.42			
Perspective Taking				0.16	0.69	0.00
Perspective Taking	60	-0.45	0.43			
No Perspective Taking	58	-0.49	0.41			
Perspective Taking*Perceived Views				0.09	0.76	0.00
Neutral, Plain	28	-0.47	0.39			
Neutral, Eracism	30	-0.50	0.44			
Perspective, Plain	34	-0.41	0.44			
Perspective, Eracism	26	-0.50	0.42			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 3

Descriptive and Inferential Statistics for Perspective Taking and Perceived Views on Explicit Attitudes in Experiment 2.

Group	N	M	SD	F	<i>p</i>	η_p^2
Perceived Views				5.51	0.02*	0.12
Eracism T-Shirt	22	-0.29	0.61			
Plain T-Shirt	21	0.11	0.61			
Perspective Taking				4.35	0.04*	0.10
Perspective Taking	22	-0.27	0.69			
No Perspective Taking	21	0.07	0.55			
Perspective Taking*Perceived Views				0.67	0.42	0.02
Neutral, Plain	10	0.38	0.55			
Neutral, Eracism	12	-0.19	0.41			
Perspective, Plain	11	-0.14	0.58			
Perspective, Eracism	10	-0.42	0.79			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 4

Descriptive and Inferential Statistics for Affiliative Motivation and Perceived Views on Explicit Traditional Attitudes in Experiment 2.

Group	N	M	SD	F	p	η_p^2
Perceived Views				1.61	0.21	0.04
Eracism T-Shirt	20	-0.05	0.82			
Plain T-Shirt	21	0.31	0.86			
Affiliative Motivation				0.03	0.88	0.00
Affiliative Motivation	19	0.13	0.76			
No Affiliative Motivation	22	0.15	0.94			
Affiliative Motivation*Perceived Views				4.82	0.04*	0.12
Neutral, Plain	10	0.63	1.02			
Neutral, Eracism	12	-0.26	0.67			
Affiliation, Plain	11	0.03	0.59			
Affiliation, Eracism	8	0.26	0.76			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 5

Descriptive and Inferential Statistics for Perspective Taking and Perceived Views on SC-IAT Implicit Attitudes in Experiment 2.

Group	N	M	SD	F	p	η_p^2
Perceived Views				3.62	0.06*	0.09
Eracism T-Shirt	22	-0.01	0.31			
Plain T-Shirt	21	0.14	0.21			
Perspective Taking				0.05	0.83	0.00
Perspective Taking	19	0.06	0.23			
No Perspective Taking	22	0.07	0.32			
Perspective Taking*Perceived Views				0.93	0.34	0.02
Neutral, Plain	10	0.20	0.21			
Neutral, Eracism	12	-0.04	0.37			
Perspective, Plain	11	0.10	0.22			
Perspective, Eracism	8	0.02	0.25			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 6

Descriptive and Inferential Statistics for Affiliative Motivation and Perceived Views on SC-IAT Implicit Attitudes in Experiment 2.

Group	N	M	SD	F	<i>p</i>	η_p^2
Perceived Views				2.12	0.15	0.05
Eracism T-Shirt	20	-0.01	0.32			
Plain T-Shirt	21	0.13	0.23			
Affiliative Motivation				0.08	0.78	0.00
Affiliative Motivation	19	0.05	0.24			
No Affiliative Motivation	22	0.07	0.32			
Affiliative Motivation*Perceived Views				1.51	0.23	0.04
Neutral, Plain	10	0.20	0.21			
Neutral, Eracism	12	-0.04	0.37			
Affiliation, Plain	11	0.06	0.25			
Affiliation, Eracism	8	0.04	0.25			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 7

Descriptive and Inferential Statistics for Perspective Taking and Perceived Views on Race IAT Implicit Attitudes in Experiment 2.

Group	N	M	SD	F	p	η_p^2
Perceived Views				1.95	0.17	0.05
Eracism T-Shirt	22	0.38	0.26			
Plain T-Shirt	21	0.26	0.33			
Perspective Taking				3.92	0.06*	0.09
Perspective Taking	19	0.41	0.35			
No Perspective Taking	22	0.24	0.22			
Perspective Taking*Perceived Views				0.04	0.85	0.00
Neutral, Plain	10	0.16	0.26			
Neutral, Eracism	12	0.30	0.17			
Perspective, Plain	11	0.36	0.37			
Perspective, Eracism	8	0.46	0.33			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 8

Descriptive and Inferential Statistics for Affiliative Motivation and Perceived Views on Race IAT Implicit Attitudes in Experiment 2.

Group	N	M	SD	F	p	η_p^2
Perceived Views				0.55	0.46	0.02
Eracism T-Shirt	20	0.26	0.29			
Plain T-Shirt	21	0.18	0.29			
Affiliative Motivation				0.23	0.63	0.01
Affiliative Motivation	19	0.19	0.36			
No Affiliative Motivation	22	0.24	0.22			
Affiliative Motivation*Perceived Views				0.59	0.45	0.02
Neutral, Plain	10	0.16	0.26			
Neutral, Eracism	12	0.30	0.17			
Affiliation, Plain	11	0.19	0.33			
Affiliation, Eracism	8	0.19	0.41			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 9

Descriptive and Inferential Statistics for Perspective Taking and Perceived Views on Affiliative Motivation Attitudes in Experiment 2.

Group	N	M	SD	F	p	η_p^2
Perceived Views				0.53	0.47	0.01
Eracism T-Shirt	22	5.17	1.12			
Plain T-Shirt	21	5.46	1.09			
Perspective Taking				17.6	0.00**	0.31
Perspective Taking	21	5.94	0.78			
No Perspective Taking	22	4.71	1.05			
Perspective Taking* Perceived Views				0.00	0.97	0.00
Neutral, Plain	10	4.83	0.96			
Neutral, Eracism	12	4.61	1.14			
Perspective, Plain	11	6.03	0.90			
Perspective, Eracism	10	5.83	0.65			

Note: * = $p \leq .05$ and ** = $p \leq .01$

Table 10

Descriptive and Inferential Statistics for Affiliative Motivation and Perceived Views on Perspective Taking Attitudes in Experiment 2.

Group	N	M	SD	F	p	η_p^2
Perceived Views				1.12	0.30	0.03
Eracism T-Shirt	20	5.45	0.62			
Plain T-Shirt	21	5.21	0.72			
Affiliative Motivation				0.02	0.89	0.00
Affiliative Motivation	19	5.33	0.72			
No Affiliative Motivation	22	5.33	0.65			
Affiliative Motivation*Perceived Views				0.08	0.78	0.00
Neutral, Plain	10	5.17	0.69			
Neutral, Eracism	12	5.46	0.61			
Motivation, Plain	11	5.26	0.78			
Motivation, Eracism	8	5.43	0.67			

Note: * = $p \leq .05$ and ** = $p \leq .01$

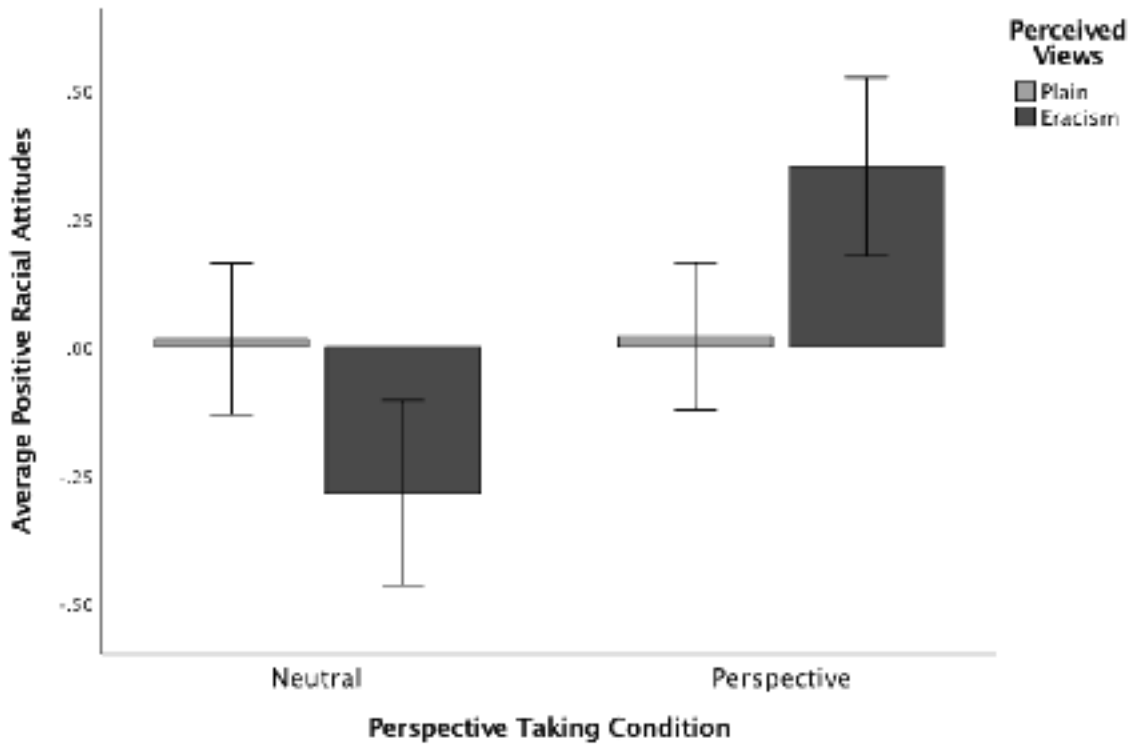


Figure 1. Experiment 1 results of perspective taking and explicit racial attitudes.

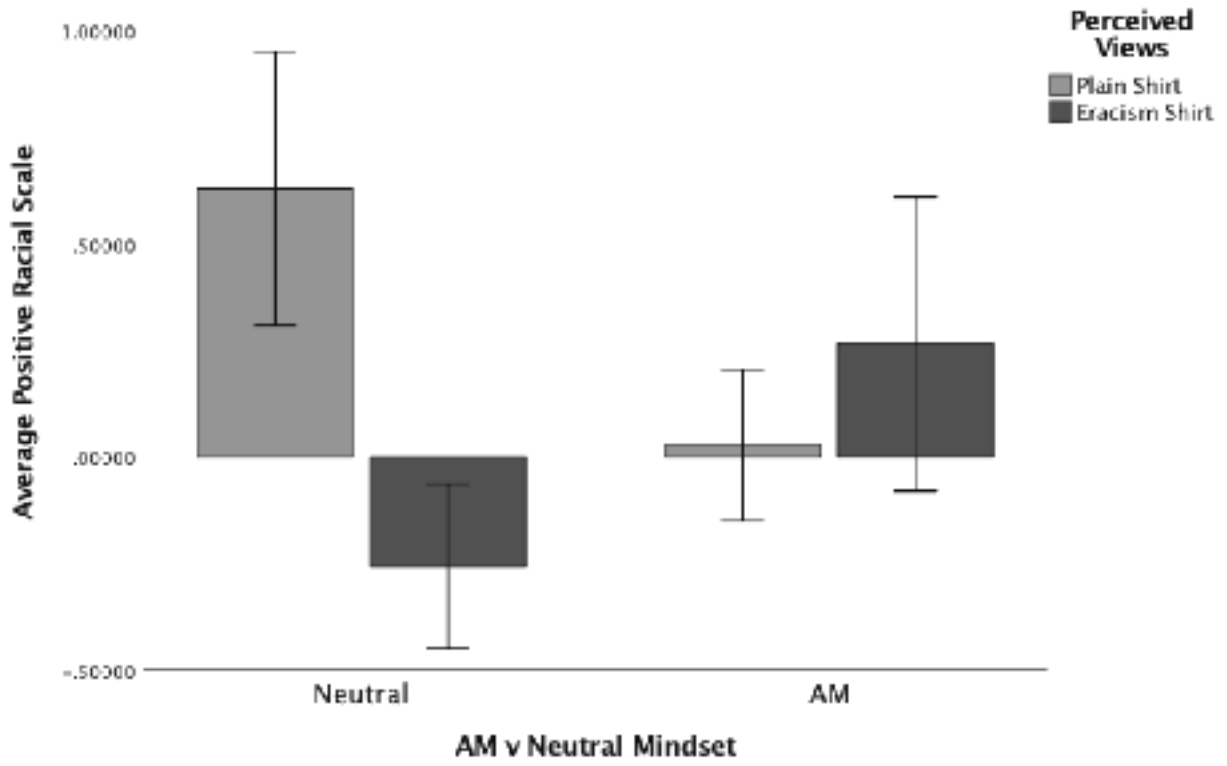


Figure 2. Experiment 2 results of affiliative motivation and explicit traditional views.

Appendix A

Experiment 1 Unscramble Task A, Perspective Taking Condition

A

Participant # _____

For each set of words below, make a grammatical sentence and write it down in the space provided. For each set of words, there is **one word** that is not needed in the sentence.

For example:

Flew eagle the plane around

The eagle flew around.

1. empathize I her take with

2. feels pain Jane's Mary has

3. John her Heather relate to can

4. see himself can in shoes Alex's Adam hear

5. took his perspective She her

6. I her mindset considered situation

7. understand I mother her mindset

8. Jim's puts Derek himself shoes pants in

9. viewpoint mother sees father's strikes

10. understand I her lost position

11. understands Joe life outlook Rachel's

12. birds she with me empathizes

13. Christine's context Joey sees guess in the situation

14. I world blimp her through eyes see the

15. know she I how feels wakes

16. Lisa point of Mary's view story took

17. hard can Lauren's be perspective taking relate

18. he Sally sympathizes Harry with

19. I relate that can to today

20. perspective I understand Jeremy's picture

Appendix B

Experiment 1 Unscramble Task B, Neutral Condition

B

Participant # _____

For each set of words below, make a grammatical sentence and write it down in the space provided. For each set of words, there is one word that is not needed in the sentence. This sheet is double-sided.

For example:

Flew eagle the plane around

The eagle flew around.

1. ball throw toss silently the

2. he observes occasionally people watches

3. ate she it selfishly all

4. prepare the gift wrap neatly

5. the push wash frequently clothes

6. somewhat prepared I was refer

7. picked throw apples hardly the

8. they obedient him often meet

9. helpless it hides there over

10. send I mail it over

11. a smile what parrot great

12. ball the hoop toss normally

13. saw hammer the train he

14. maintain she to composure try

15. the machine wash frequently clothes

16. sky the seamless red is

17. a have June holiday wedding

18. salad I make green tasty

19. she line leads the children

20. have wing a butterfly I

Latino/Hispanic

Please specify. _____

Middle Eastern

Please specify. _____

Native American/Alaska Native

Biracial/Mixed race.

Please specify. _____

Other. Please specify. _____

3. Are you currently a student?

Yes No

3a. If Yes, what year in school are you?

1st 2nd 3rd 4th-5th Graduate Student

It would be helpful for us to know, for future sessions, if the instructions given to you by the experimenter were understandable. Were the instructions clear?

Did anything in today's session strike you as odd or unusual?

Sometimes in studies in social psychology, participants believe there is more going on than meets the eye. It would be helpful to know if you felt that way about this particular session. What hypothesis did you think we were testing? Did thinking this influence your responses in any way?

Before being asked this question, had you noticed the tshirt that the experimenter was wearing?

YES NO

If "yes," what did you notice about the shirt?

Appendix D

Experiment 1 Explicit Racial Attitudes Test

Questionnaire

Section I: For the following series of questions, indicate the degree to which you agree or disagree with the following statements. Remember that your answers are confidential, so be as honest as possible. This questionnaire is double-sided.

- 1. Over the past few years, the government and news media have shown more respect for blacks than they deserve.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

- 2. It is easy to understand the anger of black people in America.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

- 3. Many black people miss out on good housing because white owners won't rent or sell to them.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

- 4. Blacks are getting too demanding in their push for equal rights.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

- 5. It would bothersome to you if a black family with about the same income and education moved next door.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

- 6. It is objectionable for a member of your family to have a friendship with a black person.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

- 7. Open housing laws, which allow more racial integration of neighborhoods, are good.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

- 8. Generally, full racial integration is favorable.**

strongly disagree 1 2 3 4 5 6 7 strongly agree

9. It is a good idea for children to go to schools that have about the same proportion of blacks and whites as generally exists in your area.

strongly disagree 1 2 3 4 5 6 7 strongly agree

10. Generally, blacks are of the same intelligence as whites.

strongly disagree 1 2 3 4 5 6 7 strongly agree

11. Laws that permit a black person to rent or purchase housing, even when the person offering the property for sell or rent does not wish to rent or sell it to blacks, are favorable.

strongly disagree 1 2 3 4 5 6 7 strongly agree

12. Discrimination against blacks is no longer a problem in the United States.

strongly disagree 1 2 3 4 5 6 7 strongly agree

13. Blacks should not push where they are not wanted.

strongly disagree 1 2 3 4 5 6 7 strongly agree

14. It's really a matter of some people not trying hard enough; if blacks would only try harder, they could be just as well off as whites.

strongly disagree 1 2 3 4 5 6 7 strongly agree

15. Irish, Italian, Jewish, and many other minorities overcame prejudice and worked their way up. Blacks should do the same.

strongly disagree 1 2 3 4 5 6 7 strongly agree

16. Black leaders have been trying to push too fast.

strongly disagree 1 2 3 4 5 6 7 strongly agree

17. How much of the racial tension that exists in the United States today do you think blacks are responsible for creating?

none at all 1 2 3 4 5 6 7 all of it

18. How much discrimination against blacks do you feel there is in the United States today, limiting their chances to get ahead?

none at all 1 2 3 4 5 6 7 a lot

19. Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class.

strongly disagree 1 2 3 4 5 6 7 strongly agree

20. Over the past few years, blacks have gotten less than they deserve.

strongly disagree 1 2 3 4 5 6 7 strongly agree

21. Over the past few years, blacks have gotten more economically than they deserve.

strongly disagree 1 2 3 4 5 6 7 strongly agree

Appendix E

Experiment 2 Unscramble Task A, Perspective Taking Condition

Participant # _____

For each set of words below, make a grammatical sentence and write it down in the space provided. For each set of words, there is one word that is not needed in the sentence. This is double-sided.

For example:

Flew eagle the plane around

The eagle flew around.

1. John her Heather relate to can

2. see himself can in shoes Alex's Adam hear

3. took his perspective She her

4. I her mindset considered situation

5. understand I mother her mindset

6. Jim's puts Derek himself shoes pants in

7. viewpoint mother sees father's strikes

8. understand I her lost position

9. Christine's context Joey sees guess in the situation

10. I world blimp her through eyes see the

11. know she I how feels wakes

12. Lisa point of Mary's view story took

13. hard can Lauren's be perspective taking relate

14. I relate that can to today

15. perspective I understand Jeremy's picture

16. sees Robert view needs with Barbra's

Appendix F

Experiment 2 Unscramble Task B, Affiliative Motivation condition

Participant # _____

For each set of words below, make a grammatical sentence and write it down in the space provided. For each set of words, there is one word that is not needed in the sentence.

For example: Flew eagle the plane around

The eagle flew around.

1. I to her get along considered wanted with

2. envy I life outlook Rachel's

3. Peter him boss wants like to his candy

4. I want Joey to know guess

5. want I to email to her get know

6. maintain others I get along to with want

7. salad Jackson with Jason affiliates

8. Want be like together I with friends to

9. likes Joe really going Sam

10. birds she with me cooperates

11. I blimp interact with want to him

12. know she traveled wanted him to

13. Lisa friend Mary's wants story to be

14. Lauren likes bad cooking with Frank

15. to Sally be Harry wants with style

16. bond I with him picture want to

Appendix G

Experiment 2 Unscramble task C, Neutral condition

Participant # _____

Neutral Unscramble Task (C)

For each set of words below, make a grammatical sentence and write it down in the space provided. For each set of words, there is one word that is not needed in the sentence.

For example:

Flew eagle the plane around

The eagle flew around.

1. ball throw toss silently the

2. he observes occasionally people watches

3. ate she it selfishly all

4. prepare the gift wrap neatly

5. the push wash frequently clothes

6. somewhat prepared I was refer

7. picked throw apples hardly the

8. they obedient him often meet

9. helpless it hides there over

10. send I mail it over

11. a smile what parrot great

12. ball the hoop toss normally

13. saw hammer the train he

14. maintain she to composure try

15. the machine wash frequently clothes

16. sky the seamless red is

Appendix H

Experiment 2 Biographies

These confederate biographies were used to manipulate views of participants' interaction partner. Participants saw either neutral views or egalitarian views

Biography**Egalitarian Views**

Name: Sarah

Age: 22

What hobbies do you participate in outside of WPI?

I like to read books and play video games. I'm also part of BYOP, which is an activist group that protests for underrepresented minorities.

Favorite thing to do at WPI?

I really like to lounge at the quad or the campus center.

Neutral Views

Name: Sarah

Age: 22

What hobbies do you participate in outside of WPI?

I like to read books and play video games.

Favorite thing to do at WPI?

I really like to lounge at the quad or the campus center.

Appendix I

Experiment 2 Explicit Racial Attitudes Test

For each question below, circle the scale number that most accurately represents your view.
(1) for *strongly disagree* to (7) *strongly agree*.

1. "If a black were put in charge of me, I would not mind taking advice and direction from him or her."
2. "If I had a chance to introduce black visitors to my friends and neighbors, I would be pleased to do so."
3. "I would rather not have blacks live in the same apartment building I live in."
4. "I would probably feel somewhat self-conscious dancing with a black individual in a public place."
5. "I would not mind it at all if a black family with about the same income and education as me moved in next door."
6. "I think that black people look more similar to each other than white people do."
7. "Interracial marriage should be discouraged to avoid the "who-am-I?" confusion which the children feel."
8. "I get very upset when I hear a white individual make a prejudicial remark about blacks."
9. "I favor open housing laws that allow more racial integration of neighborhoods."
10. "It would not bother me if my new roommate was black."
11. "It is likely that blacks will bring violence to neighborhoods when they move in."
12. "I enjoy a funny racial joke, even if some people might find it offensive."
13. "The federal government should take decisive steps to override the injustice blacks suffer at the hands of local authorities."
14. "Black and white people are inherently equal."
15. "Black people are demanding too much too fast in their push for equal rights."
16. "Whites should support blacks in their struggle against discrimination and segregation."
17. "Generally, blacks are not as smart as whites."
18. "I worry that in the next few years I may be denied my application for a job or a promotion because of preferential treatment given to minority group members."
19. "Racial integration (of schools, businesses, residences, etc.) has benefitted both whites and blacks."
20. "Some blacks are so touchy about race that it is difficult to get along with them."

Appendix J

Pro-Anti Black Scale

For each question below, circle the scale number that most accurately represents your view. (1) for *strongly disagree* to (7) *strongly agree*.

1. "Black people do not have the same employment opportunities that Whites do."
2. "It's surprising that Black people do as well as they do, considering all the obstacles they face."
3. "Too many Blacks still lose out on jobs and promotions because of their skin color."
4. "Most big corporations in America are really interested in treating their Black and White employees equally."
5. "Most Blacks are no longer discriminated against."
6. "Blacks have more to offer than they have been allowed to show."
7. "The typical urban ghetto public school is not as good as it should be to provide equal opportunities for Blacks. "
8. "This country would be better off if it were more willing to assimilate the good things in Black culture."
9. "Sometimes Black job seekers should be given special consideration in hiring. "
10. "Many Whites show a real lack of understanding of the problems that Blacks face."
11. "The root cause of the social and economic ills of Blacks is the weakness and instability of the Black family."
12. "Although there are exceptions, Black urban neighborhoods don't seem to have strongly community organization of leadership. "
13. "On the whole, Black people don't stress education and training. "
14. "Many Black teenagers don't respect themselves or anyone else. "
15. "Blacks don't seem to use opportunities to own and operate little shops and businesses. "
16. "Very few Black people are just looking for a free ride. "
17. "Black children would do better in school if their parents had better attitudes about learning. "
18. "Blacks should take the jobs that are available and then work their way up to better jobs."
19. "One of the biggest problems for a lot of Blacks is their lack of self-respect. "
20. "Most Blacks have the drive and determination to get ahead. "

Appendix K

Traditional subtle scale

For each question below, circle the scale number that most accurately represents your view. (1) for *strongly disagree* to (7) *strongly agree*.

1. "Blacks living here should not push themselves where they are not wanted. "
2. "Many other groups have come to the United States and overcome prejudice and worked their way up. Blacks should do the same without special favor. "
3. "It is just a matter of some people not trying hard enough. If Blacks would only try harder they could be as well off as White people. "
4. "Blacks living here teach their children values and skills different from those required to be successful in the United States. "

Appendix L

Experiment 2 cultural subtle scale

For each question below, circle the scale number that most accurately represents your view.
(1) for *very different* to (7) *very similar*.

1. "How different or similar do you think Blacks living in the US are to White People in THE VALUES THEY TEACH THEIR CHILDREN?"
2. "How different or similar do you think Blacks living in the US are to White People in THEIR RELIGIOUS BELIEFS AND PRACTICES?"
3. "How different or similar do you think Blacks living in the US are to White People in THEIR SEXUAL VALUES AND PRACTICES?"
4. "How different or similar do you think Blacks living in the US are to White People in THE LANGUAGE THEY SPEAK."

Appendix M

Experiment 2 positive subtle scale

For each question below, circle the scale number that most accurately represents your view.
(1) for *Never* to (7) *Very Often*.

1. "How often have you felt SYMPATHY for Blacks living in the US? "
2. " How often have you felt ADMIRATION for Blacks living in the US?"

Appendix N

Experiment 2 general partner attitudes

For each question below, circle the scale number that most accurately represents your view.

(1) for *Not at All* to (7) *Very Much*.

1. "How likeable does your partner seem?"
2. "How motivated are you to get along with your partner?"
3. "To what extent do you feel that you and your partner have things in common?"
4. "How important is it for you to feel as though your partner likes you?"
5. "How motivated are you to put yourself in your partner's shoes?"
6. "How important is it for you to try to think about yourself from your partner's standpoint?"
7. "To what extent are you able to see the world through your partner's eyes?"
8. "How easily are you able to take the perspective of your partner?"
9. "How able are you to understand your partner's standpoint?"

Appendix O

The Perspective Taking measures; First five items are taken from the IRI Scale, the last seven are taken from the Dyadic Perspective Taking Scale.

For each question below, circle the scale number that most accurately represents your view. (1) for *Does NOT Describe me* to (7) *Describes me VERY Well*.

1. "Before criticizing my partner, I will try to imagine how I would feel in their place."
2. "If I'm sure I'm right about something, I won't waste much time listening to my partner's argument"
3. "I may try to understand my partner better by imagining how things look from his/her perspective."
4. "I believe that there are two sides to every question, and I will try to look and think about both sides."
5. "I will sometimes find it difficult to see things from my partners point of view."
6. "I will not only listen to my partner, but I will understand what they are saying, and will try to show that I know where they are coming from."
7. "I believe I will know how my partner feels."
8. "It will be difficult for me to compare my point of view with that of my partner."
9. "I will evaluate the motivation of my partner before I try to understand their behavior."
10. "As a rule, I usually have trouble putting myself into someone else's shoes."
11. "If I'm involved in an argument with my partner, I will take into account my partners point of view and compare it with my own."
12. "I think I will be able to sense or realize what my partner is feeling."

Appendix P

Experiment 2 Affiliative Motivation measures;

First three items are from the Social Comparison IOS, the last four items are taken from the Positive Stimulation IOS.

For each question below, circle the scale number that most accurately represents your view. (1) *not at all true* to (7) *completely true*.

1. "If I am not certain about how well I am doing at something, I will be glad to be with my partner so I can compare myself to them."
2. "If I am uncertain that what is unexpected of me, such as in a task or the social situation, I will likely to look to my partner for cues."
3. "I find that I often have the desire to be around other people who are experiencing the same thing I am when I am unsure what is going on."
4. "Just being around my partner and finding out about them is one of the most interesting things I can think of doing."
5. "I will feel like I have really accomplished something valuable if I am able to get close to my partner."
6. "I would find it very satisfying to be able to form a new friendship with my partner."
7. "I think I will get satisfaction out of the contact with my partner more than they may realize."

Appendix Q

Experiment 2 General Affiliative Motivation Measures

These measures were taken from social support subsection of the IOS.

For each question below, circle the scale number that most accurately represents your view.

(1) *Strongly disagree* to (7) *Strongly agree*.

1. "If I feel unhappy or kind of depressed, I usually try to be around other people to make myself feel better."
2. "I usually have the greatest need to have other people around me when I feel upset about something."
3. "One of my greatest sources of comfort when things get rough is being with other people."
4. "When I have not done very well on something that is important to me, I can get to feeling better simply by being around other people."
5. "During times when I have to go through something painful, I usually find that having someone with me makes it less painful."
6. "It seems like whenever something bad or disturbing happens to me I often just want to be with a close, reliable friend."

Appendix R

Follow Up On Racial Attitudes Measures

For each question below, circle the scale number that most accurately represents your view.

(1) *Not at all* to (7) *Very much*.

1. "To what extent do you think your partner holds positive, or egalitarian, views towards Blacks?"
2. "How likely is it that your partner expects YOU to hold stereotypic views of Blacks?"
3. "To what extent do you endorse egalitarian, or favorable, views of Blacks?"

Appendix S

Experiment 2 Follow Up Questions

Asked participants about any suspicions or other unusual things they may have been affected by.

"Did you notice anything about the shirt that your partner was wearing in the photograph?"

"As of right now, did you notice anything unusual about the tasks that you completed so far?"

"As of right now, what do you think this study is testing?"

Appendix T

Luisa Perez's Reflection

Although this project took the whole year, it was a very insightful experience. Without much prior knowledge to applied statistics, running this project was definitely a learning curve. In the beginning, I did not understand what most of the numbers signify but now I can pick out significant values and what those values actually mean. It was definitely frustrating having to stay up all night looking and combing through data, but once something significant was found, it easily made my day. However, figuring out how to translate that data into words on the paper was another challenge in it of itself! I did not realize how much format needed to go into the paper and it was very frazzling to deal with but overall I felt like my team and I did a good job.

It was also interesting to see the spread of people that came to our studies and how they would react if they felt like they knew the study or were just completely flabbergasted after debriefing. Before this project, the longest group work I was apart of was only several weeks long. But we never had to write anything or had to focus on data analysis. It was simply just coding, coding, coding. From it, I did not feel like I grew a strong relationship with those teammates, but in this project I have developed better friendships. Doing this project made me feel more ready as a psychology major with the experience I have gained. It was great time and I hope this project can be helpful for a future group!

Appendix U

Paul Beatty's reflection

During my four terms of working on our IQP research topic in Psychology, I learned about the many different challenges and tasks that go into research experiments. While learning about the different topics and theories about the motivations of social tuning, I also learned how to properly run a study and analyze the data we collected afterwards. I learned more about practical statistics and how they can be directly applied to science research in this project than any other statistics or business analytics classes I have taken. Being able to work in SSPS and working with real data is the best kind of experience one can get to learn these theories and solidify them in my mind. Being involved in the lab and having the guidance of an advisor was super helpful in my learning experience and the overall smoothness of the project. It was a unique learning experience working in the lab and designing and running my own experiment; and gave me real life experience in what working in the field could potentially yield. The group work we do at this school and on this project specifically has taught me how to properly manage work between members and keep on task. Overall, my time working in the lab and my team members/advisor was a highlight of my time here at WPI and is something I would not have been able to achieve so effectively had I not transferred here. Having the opportunity to work directly with ongoing, practical research in the field is something I have always wanted to do and why I originally pursued psychology in college.

Appendix V

Daniel Vega's Reflection

Looking back over the previous experiments and research my team and I conducted and analyzed over the past year, I can firmly say I feel very proud and satisfied on what we accomplished and learned even though I clearly have much to improve upon.

This real world experience has provided me both a framework and glimpse into what to expect for my future both potentially in my line of work and definitely in obtaining a clinical psychology doctorate. Psychological research is a rapidly growing cornerstone becoming ever-more salient and necessary for clinical psychologists' ability to practice by providing the method and knowledge of previous and developing modern theories, processes, and mechanisms. As such, I am very grateful for having and completing this opportunity which has acted as an initial starting point for this component.

This experience has highlighted my talents and weaknesses in the research process and how to begin addressing and honing the two. I understand now that I am much more well-suited in writing, literature reviews, background research, presenting, and relaying complicated psychological information in simpler terms to general audiences, but also that I need to practice and re-learn my statistical background to better analyze and interpret results.

This project has also made me much more comfortable approaching psychological research and forming experiments through the scientific method. Prior to this experience, I honestly wouldn't have known where or how to begin any psychology related research or how to analyze said data once collected. It has allowed me to think much farther than I've previously been challenged to do so and in the face of this adversity, I have ostensibly grown to a point to think more independently and propose my own hypotheses, and form my own methodology to test those claims; these skills and growth alone have made this project invaluable.

Finally, I would like to thank the person who has made this all possible, who supported, guided, and pushed me further countless times through this arduous process, and resolved my doubts and bolstered my confidence - my advisor and personal friend Professor Jeanine Skorinko. I also would like to express my gratitude for my group members Luisa Perez and Paul Beatty who both were wonderful research assistants and friends through this entire process and I am very glad to have met and worked with.