Understanding the Mechanism Behind Social Tuning of Automatic Prejudice: Attitudinal Alignment Or Social Norms?

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LOYOLA UNIVERSITY CHICAGO

UNDERSTANDING THE MECHANISM BEHIND SOCIAL TUNING OF AUTOMATIC PREJUDICE: ATTITUDINAL ALIGNMENT OR SOCIAL NORMS?

A THESISSubmitted TO

THE FACULTY OF THE GRADUATE SCHOOL

IN CANDIDACY FOR THE DEGREE OF

MASTER OF ARTS

PROGRAM IN APPLIED SOCIAL PSYCHOLOGY

BY

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CHICAGO, IL

AUGUST 2014
ACKNOWLEDGEMENTS

I would like to take this opportunity to thank all of the individuals who helped me through the thesis process. I would like to thank Dr. Jeff Huntsinger, my mentor here at Loyola University Chicago, who helped make the inception and conclusion of this project possible. I would like to thank my other committee member, Dr. Victor Ottati, for his feedback and perspective throughout this process as well. I would also like to thank the Mallett-Huntsinger lab for their help with data collection and giving me the space to carry out my experiment.

In addition, a special thank you to my family and friends who supported me along the way. Thank you for your encouragement.
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ABSTRACT

To explore the effect of social tuning on individual’s implicit prejudice, college students were brought into a lab to perform several tasks. Likability of the experimenter was manipulated in order to motivate individuals to socially tune or not (likable, dislikable). Ostensible attitudes of the experimenter were also manipulated (egalitarian, no known attitude). After these manipulations, students completed several Implicit Associations Tests (IATs). Results were analyzed using a factorial ANOVA design (2 (affiliative motivation: high, low) X 2 (views: egalitarian, control), revealing no interactions of likability or attitudes. I discuss the implications of these findings and explore possible solutions.

Keywords: IAT, social tuning, prejudice, norms, attitudes
CHAPTER ONE

INTRODUCTION

Implicit prejudice and stereotyping were once considered difficult, if not impossible, to change (Devine, 1989; Wilson, Lindsay & Schooler, 2000). A lifetime of social and cultural learning had supposedly embedded into our minds a host of implicit biases (Rudman, 2004). This rather pessimistic view, however, proved wrong as more recent research shows that implicit prejudice and stereotyping are quite malleable (Blair, 2002). A variety of factors have been shown to impact implicit prejudice, including exposure to positive outgroup exemplars (e.g., Martin Luther King; Dasgupta & Greenwald, 2001) and imagining counterstereotypic members of outgroups (e.g., business woman; Blair, Ma & Lenton, 2001).

Of particular interest is research demonstrating interpersonal regulation of implicit prejudice (e.g., Lowery, Hardin & Sinclair, 2001; Sinclair, Lowery, Hardin & Colangelo, 2005). In this research, people motivated to affiliate with an egalitarian interaction partner exhibited a reduction in implicit prejudice compared to those motivated to affiliate with a partner with unknown racial attitudes (Sinclair et al., 2005). The present thesis concerns the mechanism behind such interpersonal regulation of implicit prejudice. In particular, I asked whether interpersonal regulation of implicit prejudice reflects a process of interpersonal attitudinal alignment or a change in perceived norms regarding the expression of prejudice.
Social Tuning of Implicit Prejudice

Because of the importance of social interaction to self-understanding (e.g., Mead, 1934), many individuals seek to maintain bonds with others who have similar attitudes and beliefs (Hardin & Conley, 2001; Lowery et al., 2001). This perspective, known as the shared reality theory, argues that individuals are able to establish and develop mutual understanding by taking into account another social actor’s attitudes and beliefs. In order to maintain these bonds, we may even adjust, or “tune,” our attitudes and beliefs to another social actor according to the motivation to get along with this person. This interpersonal attitudinal alignment is referred to as the affiliative social tuning hypothesis (Sinclair & Huntsinger, 2006; Sinclair et al., 2005).

Several studies provide indirect support for the social tuning hypothesis. Lowery and colleagues (2001) showed that White participants displayed lower implicit prejudice in the presence of a Black experimenter than a White experimenter. They argued that white participants expressed lower levels of prejudice when interacting with a Black experimenter because they adjusted toward the presumed anti-racism (i.e. egalitarian) view of the Black experimenter in an effort to have a smooth interaction. Also consistent with the affiliative social tuning hypothesis is research by Richeson and Ambady (2003), which demonstrated the influence of situational power on automatic attitudes. White participants who interacted with a high power Black partner displayed reduced implicit prejudice compared to those who interacted with a low power Black partner. Because low power people generally desire to affiliate with high power
partners (e.g., Magee & Smith, in press), one could argue that white participants expressed lower levels of prejudice when interacting with a high power Black partner because they adjusted toward the presumed egalitarian views of their partner (i.e., social tuning).

Sinclair et al. (2005) provided direct support for the social tuning hypothesis by manipulating both the motivation to affiliate and the perceived intergroup attitudes of an interaction partner. In their study, participants interacted with either an experimenter who had obvious anti-racism, or egalitarian, attitudes or an experimenter who had no known attitudes with respect to race. Because of the experimenter’s likability, participants would socially tune their implicit prejudice toward the experimenter’s ostensibly egalitarian views. We can claim that individuals may consider another social actor’s implicit attitudes and beliefs in order to foster and maintain the social bond. What may be unclear is why the individual’s attitudes are actually changing. One possibility suggested by past research is that such shifts in implicit prejudice result from changes in perceived norms regarding the expression of prejudice.

**Social Norms and Expression of Prejudice**

The idea that social norms dictate the expression of prejudice has a long history in social psychology (e.g., Allport, 1954; Campbell, 1947). The group norm theory posits that an individual is shaped by attitudes of their valued group and is used as a reference or standard when expressing beliefs and attitudes (Sherif & Sherif, 1953). Thus, actual prejudice expressed by an individual has more to do with the prevailing norms than
actual contact with members of the outgroup. Because of this, it is argued that in order
to actually change a person’s prejudice, you have to change the group’s norms (Allport,
1954). There have been several studies supporting the power of social norms on the
expression of prejudice. Blanchard, Crandall, Brigham, and Vaughn (1994) found that
participant’s prejudice was influenced by a confederate voicing anti-racism views. In the
study, individual’s who were exposed to the anti-racism views expressed stronger anti-
racism views. While the above studies used the presence of a confederate, Sechrist and
Stangor (2001) demonstrated that just the suggestion of a consensus of a group was
enough to affect the expression of participant’s prejudice. When participant’s beliefs
were validated by a stated consensus, their attitudes were more in line with their
beliefs. Because the realization of social norms is a conscious process, this process
should be thought of as cognitively effortful, as opposed to the affiliative social tuning
hypothesis (Crandall and Eshleman, 2003).

The research on social norms suggests an alternative explanation of social tuning
effects. Namely, reduction in implicit prejudice from social tuning might merely reflect
changes in perceived norms regarding the expression of prejudice. The typical
manipulation of perceived beliefs used in past research (e.g., an ERACISM t-shirt) may
not simply communicate a partner’s individual beliefs, but rather the group’s beliefs or,
said another way, a social norm condemning expression of prejudice. Social norms are
particularly powerful architects of attitudes and beliefs when individuals are attached to
the group in question (Kelman, 1961). Motivation to affiliate with an ostensibly
egalitarian partner may simply be another form of attachment to the group. Put these
two ideas together and a compelling alternative explanation of affiliative social tuning
emerges.

Summary

According to shared reality theory, social tuning reflects a form of interpersonal
attitude alignment in which a person spontaneously adopts the attitudes of interaction
partners who elicit affiliation motivation. Alternatively, rather than resulting from
attitudinal alignment, individual’s perceptions of local social norms may be changing, as
opposed to their actual implicit attitudes. This may be especially the case when the
manipulation of an interaction partner’s perceived attitudes is accomplished via a t-shirt
with the word “ERACISM”. The purpose of the present research was to disentangle
these two explanations.

Prediction and Analysis Plan

In this experiment, participants will interact with an experimenter perceived to
have egalitarian or unknown racial attitudes and who elicits high or low levels of
affiliative motivation. Thus, the design of this experiment is a 2 (experimenter beliefs:
egalitarian, unknown) X 2 (affiliative motivation: high, low) between participants
factorial with participants randomly assigned to condition. The manipulations of
experimenter beliefs and affiliative motivation, taken from past research (e.g., Sinclair et
al., 2005), are described in detail below. Participants will complete a measure of implicit
prejudice and two measures designed to tease apart a shared reality and social norms
explanation of social tuning effects. Specifically, participants will complete an implicit measure of personal racial attitudes (Olson & Fazio, 2004) and an implicit measure of prejudice-related norms (Yoshida, Peach, Zanna & Spencer, 2012).

Predictions are as follows. First, consistent with past research (Sinclair et al., 2005), I predict that experimenter beliefs and affiliative motivation will interactively predict participants’ implicit prejudice. Specifically, when participants experience high affiliative motivation, participants interacting with an egalitarian experimenter will display less implicit prejudice than those who interact with an experimenter of unknown racial beliefs. Low affiliative motivation. By contrast, when participants experience low affiliative motivation, no differences in implicit prejudice as a consequence of experimenter beliefs are predicted.

Second, if the shared reality interpretation of social tuning is correct, then the measure of personal racial attitudes should display a similar pattern of change across conditions as the measure of implicit prejudice. Specifically, when participants experience high affiliative motivation, participants interacting with an egalitarian experimenter will display less personal prejudice than those who experience low affiliative motivation. By contrast, when participants experience low affiliative motivation, no difference in interacting with an experimenter of unknown racial beliefs, personal prejudice as a consequence of experimenter beliefs are predicted. Moreover, this change in personal prejudice should mediate the change in implicit prejudice.

Third, if the social norms interpretation is correct, then the measure of implicit
social norms should show a main effect of perceived beliefs. Moreover, this change in implicit social norms should mediate the change in implicit prejudice.
CHAPTER TWO

METHODS

Participants

One hundred forty-seven undergraduate students (114 women and 33 men) at Loyola University Chicago participated in the experiment for credit toward their introductory psychology class.

Procedure and Materials

When participants arrived at the lab, they were greeted by the experimenter who was either wearing a plain white t-shirt or a t-shirt with the word “eracism.” Participants were randomly assigned to a t-shirt condition. Following, participants were informed that the study was about social interactions and that they would be completing several computer tasks and questionnaires.

Participants were then seated in front of a computer. In order to manipulate the likability of the experimenter (i.e., affiliative motivation), participants were randomly assigned to the likable or dislikable condition. In both conditions, there was an overflowing bowl of candy near where the participant was seated. In the likable condition, the experimenter offered the participant a piece of candy from the bowl on the table, stating: “First, I would like to thank you for coming in today and participating in this experiment. I know you get credit for coming, but I would like to offer you
something extra, so I brought in some candy for you.” In the dislikable condition, the experimenter instead removed the bowl of candy, stating: “Just ignore this. Some of the other experimenters in the lab brought in candy for their subjects but I think you are lucky just to get credit.” An identical manipulation has been used in past research to induce high and low levels of affiliative motivation (see, e.g., Sinclair et al., 2005).

Next, following past research (e.g., Sinclair et al., 2005) to ensure that the participants would notice the “eracism” t-shirt in the egalitarian condition, the experimenter explained that the computer tasks required standard eyesight and that they needed to do a quick visual test. The experimenter would then look down at their shirt and say, “Let’s just use the letters on my t-shirt.” The experimenter would then stand at 3 different distances, having the participants read the word each time. In the control condition, participants will read random letters on a paper held by the experimenter at the same height as the words on the “eracism” shirt. They also stood at the same 3 distances, having the participants read the words each time.

Next, participants completed three implicit measures: 1) a measure of implicit norms (Yoshida, Peach, Zanna, & Spencer, 2012), 2) a personalized IAT measuring implicit prejudice (Olson & Fazio, 2004), and 3) a standard IAT measuring implicit prejudice (Greenwald, McGhee, & Schwarz, 1998). The order of the measure of implicit norms and the personalized IAT were counter-balanced. The measure of implicit prejudice was always the last of the three.
For exploratory purposes, participants then completed several measures of explicit prejudice (e.g., Attitudes Toward Blacks Scale; Brigham, 1993). Finally, participants completed several manipulations checks, a funnel debriefing to check for suspicion, and were given a verbal and written debriefing.

**Implicit prejudice.** The IAT served as the measure of automatic prejudice. It assesses the strength of associations between concepts; in this case it compares the speed with which one can pair “European American + Good” and “African American + Bad” versus “European American + Bad” and “African American + Good”. The IAT contains seven blocks. In block one (20 trials), participants classified pictures into the categories European American (by pressing the left computer key) and African American (by pressing the right computer key). In block two (20 trials), participants classify words into the categories “Good” (e.g., “happy”, “love”) and “Bad” (“agony”, “nasty”). In blocks three and four (congruent blocks), the first two blocks are combined and participants press the left computer key when any item in the category European American or Good appears on the screen, and they press the right computer key when any item in the category African American and Bad appears. In block five, participants completed the task from block two. In blocks six and seven (incongruent blocks), participants completed the task from blocks three and four, except the pairings were reversed (i.e., European American and Bad now shared the left response key, and African American and Good now shared the right response key). The order of the congruent (40 trials each) and incongruent (40 trials each) blocks were counterbalanced
across participants (Blocks 3-4 and 6-7). Participants receive error feedback throughout this task. The pictures and words used to represent the four categories are located in the Appendix A.

Response latencies on this measure were dealt with following the recommendations of Greenwald, Nosek and Banaji (2003) and all analyses used the D-ASIS measure as the measure of implicit attitudes, with higher values on this measure indicating greater automatic prejudice. Internal consistency of this measure was assessed via split-half reliability and showed moderate consistency, $\alpha = .40$

**Personalized IAT.** The basic procedure for this task is similar to a traditional IAT (see Olson & Fazio, 2004). The block structure and stimuli were identical to that of the IAT just described. In this task, however, the labels “Good” and “Bad” were replaced by the labels “I Like” and “I Dislike”, and following Olson and Fazio (2004), no error feedback was given during this task. As with the traditional IAT, response latencies on this measure were dealt with following the recommendations of Greenwald, Nosek and Banaji (2003) and all analyses used the D-ASIS measure as the measure of implicit attitudes, with higher values on this measure indicating greater automatic prejudice. The IAT showed moderate consistency, $\alpha = .48$.

**Implicit Norms.** The basic procedure for this task is identical to a traditional IAT (for a full description, see Yoshida et al., 2012). The block structure and stimuli were identical to that of the IAT described above. In this task, however, the labels “Good” and “Bad” were replaced by the labels “Most People Like” and “Most People Dislike”.


As with the traditional IAT, response latencies on this measure were dealt with following the recommendations of Greenwald, Nosek and Banaji (2003) and all analyses used the D-ASIS measure as the measure of implicit attitudes, with higher values on this measure indicating greater automatic prejudice. The IAT showed acceptable internal consistency, $\alpha = .56$.

**Explicit Measures.** Participants completed the following explicit measures of prejudice: The Attitudes Toward Blacks Scale (ATB; Brigham, 1993), Pro-Black and Anti-Black Questionnaire, (PAAQ; Katz & Haas, 1988), and Internal and External Motivation to Respond Without Prejudice (IMS, EMS; Plant & Devine, 1998). Full scales and reliabilities are included in Appendix A.

**Manipulation Checks.** Participants were given seven items assessing their perceptions of the experimenter’s likability (e.g., “How much do you want to get along with the experimenter?”). Participants responded using a 10-point scale ranging from 1 (not at all) to 10 (very much). A composite measure was formed ($\alpha = .86$). Participants were also given three items with the same scale range assessing their perceptions of the experimenter’s attitudes (e.g., “How would you characterize the experimenter’s attitudes toward African Americans in general?”). The composite measure formed showed acceptable consistency ($\alpha = .67$). These questions are included in Appendix A.
CHAPTER THREE

RESULTS

The final sample included 147 participants. Seven participants were excluded from analyses because of suspicion as well as other procedural errors. One participant was excluded due to suspicion. African American participants were also excluded from analyses (n = 7).

Preliminary Analyses

I first wanted to determine if the manipulations of experimenter beliefs and affiliative motivation were successful. To do so, the measure of perceived experimenter beliefs was submitted to an independent means t-test. This analysis revealed that the manipulation of perceived beliefs was unsuccessful. Participants did not think egalitarianism was more important to the experimenter who wore the eracism shirt (\(M = 23.70, SD = 4.40\)) compared to the experimenter who wore the blank shirt (\(M = 23.11, SD = 4.38\)), \(t (145) = .81, p = .77\). An independent means t-test revealed that the manipulation of affiliative motivation was successful. Participants reported higher affiliative motivation toward the likable experimenter (\(M = 51.55, SD = 9.26\)) than the rude experimenter (\(M = 45.40, SD = 11.60\)), \(t (145) = 3.55, p = .02\).
Main Analyses

First, consistent with past research (Sinclair et al., 2005), I predicted that experimenter beliefs and affiliative motivation will interactively predict participants’ implicit prejudice. Second, if a shared reality interpretation of social tuning is correct, then the measure of personal racial attitudes should display a similar pattern of change across conditions as the measure of implicit prejudice. Moreover, this change in personal prejudice should mediate the change in implicit prejudice. Third, if the social norms interpretation is correct, then the measure of implicit social norms should show a main effect of perceived beliefs. Moreover, this change in implicit social norms should mediate the change in implicit prejudice.

Implicit prejudice. To test the first prediction, participants’ scores on the standard implicit prejudice IAT were submitted to a 2 (experimenter beliefs: egalitarian, unknown) X 2 (affiliation motivation: high, low) between participants analysis of variance (ANOVA).

This analysis did not reveal the predicted experimenter beliefs by affiliative motivation interaction, $F(1, 143) = .02, p = .90, \eta^2 = .000$. Neither the main effect of experimenter beliefs nor the main effect of affiliative motivation were significant, $F(1, 143) = .25, p = .62, \eta^2 = .002$, and $F(1, 143) = .52, p = .47, \eta^2 = .004$, respectively.

Personalized prejudice. The measure of personalized prejudice was submitted to the same ANOVA as before. This analysis revealed that there was no significant experimenter beliefs by affiliative motivation interaction, $F(1, 143) = .68, p = .41, \eta^2_p =$
Ostensible egalitarian attitudes of the experimenter did not have a significant effect on personalized implicit prejudice, $F(1, 143) = .50, \ p = .48, \ \eta^2_p = .003$. In other words, participants who interacted with an experimenter who wore the eracism t-shirt did not have lower levels of implicit prejudice. Affiliative motivation was marginally significant, $F(1, 143) = 2.97, \ p = .09, \ \eta^2_p = .02$. Participants who interacted with the likable experimenter had lower personalized implicit prejudice ($M = -.41, SD = .25$) than those who interacted with the dislikable experimenter ($M = -.35, SD = .22$). There was not a significant interaction of affiliative motivation and perceived egalitarian attitudes, $F(1, 143) = .68, \ p = .41, \ \eta^2 = .005$.

**Implicit norms.** Similar to personalized implicit prejudice, ostensible egalitarian attitudes of the experimenter did not have a significant effect on social norms implicit prejudice, $F(1, 143) = .27, \ p = .60, \ \eta^2 = .002$. In other words, participants who interacted with an experimenter who wore the eracism t-shirt did not have lower levels of implicit prejudice. Affiliative motivation was marginally significant, $F(1, 143) = 3.20, \ p = .08, \ \eta^2 = .02$. Participants who interacted with the likable experimenter had lower social norms implicit prejudice ($M = -.43, SD = .24$) than those who interacted with the dislikable experimenter ($M = -.35, SD = .28$). There was not a significant interaction of affiliative motivation and perceived egalitarian attitudes, $F(1, 143) = .55, \ p = .46, \ \eta^2 = .004$.

**Mediation analysis.** Since the effects did not emerge for the IATs, I did not conduct a mediation analysis.
Exploratory Analyses

In an effort to determine why I did not, at the very least, replicate past research, I conducted several exploratory analyses in which I examined several factors that may account for this non-replication. During the time we were running the experiment, we had a procedural change. When we first started collecting data, we had two computers set up on a long table facing a wall. The computers were close to each other, and we thought that we should change the setup in case participants were able to see each other’s screens. We decided to move the computers so that they were across from each other instead. However, when analyzing the data, we see that before this procedural change, we did see a significant interaction affiliative motivation and perceived egalitarian attitudes that replicated past research (e.g., Sinclair et al., 2005), $F(1, 35) = 4.33, p = .045, \eta^2 = .110$. Consistent with past research (Sinclair et al., 2005), when affiliative motivation was high, participants displayed lower implicit prejudice when the experimenter was wearing the eracism t-shirt ($M=-.29, SD=.27$) than the control t-shirt ($M=-.43, SD=.18$). This pattern reversed when affiliative motivation was low, consistent with past research showing similar anti-tuning effects. Now participants displayed higher implicit prejudice when the experimenter was wearing the eracism t-shirt ($M=-.37, SD=.22$) than the control shirt ($M=-.20, SD=.20$). The main effect of affiliative motivation, $F(1, 35) = 1.03, p = .32, \eta^2_p = .03$, and attitudes, $F(1, 35) = .08, p = .79, \eta^2_p = .002$, were not significant. It is unclear why this procedural change would have made a difference in obtaining the predicted effects.
As for the other measures of implicit prejudice, there was not significant main effect of ostensible attitudes, $F(1, 35) = .001, p = .97, \eta^2_p = .000$, or affiliative motivation, $F(1, 35) = 2.06, p = .16, \eta^2_p = .06$, for personalized implicit prejudice. There was not a significant interaction either, $F(1, 35) = .47, p = .50, \eta^2_p = .013$. Additionally, there was not significant main effect of ostensible attitudes, $F(1, 35) = .32, p = .58, \eta^2_p = .009$, or affiliative motivation, $F(1, 35) = .41, p = .53, \eta^2_p = .012$, for social norms implicit prejudice. There was not a significant interaction either, $F(1, 35) = 1.22, p = .28, \eta^2_p = .034$.

We also looked at demographics of the participants. When looking at the effectiveness of our manipulation, it looks like females were driving the effect of affiliative motivation. Females reported liking the experimenter who was likable ($M = 53.21, SD = 8.95$) more than the rude experimenter ($M = 46.36, SD = 11.73$), $t(112) = 3.51, p = .004$. Males did not report liking the experimenter who was likable ($M = 45.13, SD = 7.68$) more than the rude experimenter ($M = 42.39, SD = 10.96$), $t(31) = .82, p = .23$. In reference to our main predictions, we did not observe any significant responses for males. For females, there was a significant main effect of affiliative motivation in reference to the $d$-scores on the personalized IAT, $F(1, 110) = 6.22, p = .01, \eta^2 = .054$. However, our sample was predominately female. We also did not see any significant differences between ethnicities.

There were three experimenters who ran all of the sessions. To check for possible experimenter effects, we looked at possible differences in responses between participants who were run by different experimenters. This was tested by running a 2
There was not a significant main effect of RA on standard implicit prejudice, $F(1, 135) = 2.36, p = .10, \eta^2_p = .034$, personalized implicit prejudice, $F(1, 135) = .04, p = .96, \eta^2_p = .001$, or social norms prejudice, $F(1, 135) = 1.64, p = .20, \eta^2_p = .024$, based on what experimenter they interacted with. Additionally, no significant interactions were found.

Two of the experimenters were African American, so we also looked at possible effects of race of experimenter. This was tested by running a 2 (experimenter beliefs: egalitarian, unknown) X 2 (affiliation motivation: high, low) X 3 (experimenter race: African-American, White) between participants analysis of variance (ANOVA).

While there was not a significant main effect of race of experimenter on personalized implicit prejudice, $F(1, 139) = .04, p = .85, \eta^2_p = .000$, or social norms, $F(1, 139) = .06, p = .80, \eta^2_p = .000$, there was a significant main effect for the standard implicit prejudice. Participants who interacted with the White experimenter did show a decrease in implicit prejudice ($M = -.23, SD = .25$) on the standard test when compared with those who interacted with the African American experimenters ($M = -.34, SD = .23$), $F(1, 139) = 4.25, p = .030, \eta^2_p = .024$. However, this may be effected by the small sample size of participants run with the Caucasian experimenter ($n = 36$) versus the African American experimenters ($n = 111$).

Discussion

The present study set out to examine the antecedent of implicit prejudice
reduction brought on by social tuning. There is strong support for both the interpersonal attitudinal alignment and social norms perspectives. Based on the existing research supporting social tuning and the shared reality theory, we believe that the individual is considering the likable experimenter’s egalitarian attitudes in an effort to facilitate a social bond. The social norms literature would consider that the individual is taking the experimenter’s attitudes and beliefs as a cue for the attitudes and beliefs of the social group as a whole. For this experiment, the social group of interest could be considered Loyola University Chicago undergraduates. We predicted that consistent with past research, individuals who interacted with a likable and ostensibly egalitarian experimenter would show reduced levels of implicit prejudice (Sinclair et al., 2005). Unfortunately, we were not able to replicate these findings.

Ultimately, we hoped to tease apart the two explanations of social tuning. If the shared reality interpretation was more accurate, then the measure of implicit personalized attitudes should show the same decrease in implicit prejudice that the implicit prejudice measure would. For example, when interacting with the likable experimenter with egalitarian views, participants would display less prejudice on the implicit prejudice measure as well as the personalized implicit prejudice measure, when compared to individuals who interacted with the dislikable experimenter, or those low in affiliative motivation. We did not see this effect either. If the social norms support was accurate, we expected to see a main effect of perceived beliefs. Specifically, participants who interact with an experimenter with ostensibly egalitarian beliefs would show a decrease in implicit social norms prejudice, when compared with those who
interacted with an experimenter of unknown beliefs. We did not find support for this prediction as well.

However, we did note that there was a procedural change early on in the study that may have had an effect on our findings. When participants were sitting beside each other, we did see the interaction that we predicted to find. However, for the rest of the experiment, participants were sitting across from each other and we did not find this interaction. We are not exactly sure why this happened and this was one change that was made that could possibly be considered to have an effect. We have also considered possible confederate fatigue. Possibly, earlier on in the experiment, the experimenters were more vigilant with the procedure that they had to conduct in order to convey egalitarian attitudes with the t-shirt and the eye test, and conveying likability by offering the candy and dislikability by taking away the candy. This fatigue could have set in around the same time that we had the set up change with the desks. Some participants were run in pairs or alone. We thought that individuals may be able to influence their peers, but we did not find a difference between those that took part in the study by themselves or with another student.

One possible reason we did not see the first predicted results could be due to the lack of our manipulations working. In past research, when these manipulations were successful, we could see the predicted interaction of affiliative motivation and egalitarian attitudes. This would lead us to make the conclusion that social tuning is a somewhat robust effect. While we followed the technical equivalents of these manipulations, we may have failed to take into account psychological equivalence.
Schwarz & Strack (2014) explain the importance of replication and what a failed replication actually means. While we did follow the same steps that past research has laid out, we may have failed to create the same psychological situation. With regards to the attitudes manipulation, we had the eracism t-shirt and made this attitude apparent by using the eye test sequence. However, as discussed earlier, this manipulation failed to create different perceptions of the experimenter’s race-relevant attitudes in participants. The affiliative motivation manipulation (likability, dislikability) was implemented by offering candy or taking candy away. This manipulation was successful. These are part of the technical processes and were performed as described. However, the importance of context, as Schwarz and Strack point out, is what more research replications should be concerned with. The failure of the perceived views manipulation means that this study, while procedurally identical to past research, was not conceptually equivalent in that the manipulations did not create the same psychological situation for participants. Thus, the implications of this failed replication for the original research are unclear, and caution must be taken in making statements regarding the replicability of the original finding. Future research should identify possible changes to the perceived views manipulation that would need to be made in order to find results that are conceptually equivalent.

In order to address these issues, for example, we could have piloted these manipulations to see if they would work and then tried to find other procedures to manipulate our independent variables if they did not work. Of course, perhaps the questions that we included in our manipulation checks were not sensitive enough to
pick up on actual participants’ perceptions of the experimenters’ attitudes or likability/dislikability. However, given that similar questions were successfully used in past research would seem to speak against such a possibility.

Future research should explore further alternative manipulations that may be effective in reproducing social tuning. Once this is established, I would be interested in addressing the usefulness of the alternative IATs that I included in this study as ways to determine if social tuning is driven attitudinal alignment or social norms. As we have seen from past research social tuning does lead to a decrease in implicit prejudice and this has important implications for our research. Understanding why social tuning takes place and its underlying mechanisms will help lend more support to this field and further research.
APPENDIX A

FIGURES
Figure 1. Implicit Prejudice d-score by attitude and affiliative motivation

- Standard Implicit Prejudice

- Egalitarian Attitudes
- Unknown Attitudes

Affiliative Motivation

Low
High

-0.4
-0.3
-0.2
-0.1

0

0.1
Figure 2. Personalized Implicit Prejudice d-score by attitude and affiliative motivation
Figure 3. Social Norms Implicit Prejudice d-score by attitude and affiliative motivation
Figure 4. Results before procedural change- Implicit Prejudice d-score by attitude and affiliative motivation
APPENDIX B

EXPLICIT MEASURES

AND STUDY MATERIALS
Implicit Measures

1) Implicit prejudice (Greenwald et al., 1998; Journal of Personality and Social Psychology)
2) Implicit attitudes (Olson & Fazio, 2004; Journal of Personality and Social Psychology)
3) Implicit social norms (Yoshida, Peach, Zanna & Spencer, 2012; Journal of Experimental Social Psychology)

<table>
<thead>
<tr>
<th>Block</th>
<th>No. of Trials</th>
<th>Function</th>
<th>Items assigned to Left key response</th>
<th>Items assigned to Right key response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>Practice</td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>Practice</td>
<td>Good</td>
<td>Bad</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
<td>Practice</td>
<td>Black + Good</td>
<td>White + Bad</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>Test</td>
<td>Black + Good</td>
<td>White + Bad</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>Practice</td>
<td>Good</td>
<td>Bad</td>
</tr>
<tr>
<td>6</td>
<td>40</td>
<td>Practice</td>
<td>White + Good</td>
<td>Black + bad</td>
</tr>
<tr>
<td>7</td>
<td>40</td>
<td>Test</td>
<td>White + Good</td>
<td>Black + bad</td>
</tr>
</tbody>
</table>

Note: Blocks 3, 4 and 6, 7 are counterbalanced across participants

Stimuli

All implicit measures will use the same set of stimuli presented below:

White names: Heidi, John, Donna, Brad, Meredith, Paul, Shannon, Brian, Katie, Robert
Black names: Rashan, Chanda, Tameisha, Malik, Sharise, Tyrone, Yolanda, Jamal, Roshanda, Darnel
Good: pleasant, joy, peace, love, glory, pleasure, excitement, laughter, paradise, vacation
Bad: unpleasant, death, hatred, failure, terrible, violent, insecure, agony, destroys, bad
Labeling of the response keys is as follows:

*Implicit prejudice*: The labels will be Black vs. White and Good vs. Bad

*Implicit attitudes*: The labels will be Black vs. White and “I like” vs. “I don’t like”

*Implicit social norms*: The labels will be Black vs. White and “People like” vs. “People don’t like”

Instructions for social norms IAT: “The following screens will ask you to distinguish between things most people like or dislike. The words most people like refer to what students at Loyola University Chicago actually like, not what they should like.”
EXPLICIT MEASURES

Pro-black/Anti-black Scale

Directions: Please read each statement carefully and then choose the number that best corresponds with how strongly you agree or disagree with the statement.

1. Black people do not have the same employment opportunities that Whites do.
   1  2  3  4  5  6
   Strongly Disagree                               Strongly Agree

2. It's surprising that Black people do as well as they do, considering all the obstacles they face.
   1  2  3  4  5  6
   Strongly Disagree                               Strongly Agree

3. Too many Blacks still lose out on jobs and promotions because of their skin color.
   1  2  3  4  5  6
   Strongly Disagree                               Strongly Agree

4. Most big corporations in America are really interested in treating their Black and White employees equally.
   1  2  3  4  5  6
   Strongly Disagree                               Strongly Agree

5. Most Blacks are no longer discriminated against.
   1  2  3  4  5  6
   Strongly Disagree                               Strongly Agree

6. Blacks have more to offer than they have been allowed to show.
   1  2  3  4  5  6
   Strongly Disagree                               Strongly Agree
7. The typical urban ghetto public school is not as good as it should be to provide equal opportunities for Blacks.

1 2 3 4 5 6

Strongly Disagree Strongly Agree

8. This country would be better off if it were more willing to assimilate the good things in Black culture.

1 2 3 4 5 6

Strongly Disagree Strongly Agree

9. Sometimes Black job seekers should be given special consideration in hiring.

1 2 3 4 5 6

Strongly Disagree Strongly Agree

10. Many Whites show a real lack of understanding of the problems that Blacks face.

1 2 3 4 5 6

Strongly Disagree Strongly Agree

11. Although there are exceptions, Black urban neighborhoods don't seem to have strong community organization of leadership.

1 2 3 4 5 6

Strongly Disagree Strongly Agree

12. The root cause of the social and economic ills of Blacks is the weakness and instability of the Black family.

1 2 3 4 5 6

Strongly Disagree Strongly Agree

13. On the whole, Black people don't stress education and training.

1 2 3 4 5 6

Strongly Disagree Strongly Agree
14. Many Black teenagers don't respect themselves or anyone else.

1  2  3  4  5  6

Strongly Disagree  Strongly Agree

15. Blacks don't seem to use opportunities to own and operate little shops and businesses.

1  2  3  4  5  6

Strongly Disagree  Strongly Agree

16. Very few Black people are just looking for a free ride.

1  2  3  4  5  6

Strongly Disagree  Strongly Agree

17. Black children would do better in school if their parents had better attitudes about learning.

1  2  3  4  5  6

Strongly Disagree  Strongly Agree

18. Blacks should take the jobs that are available and then work their way up to better jobs.

1  2  3  4  5  6

Strongly Disagree  Strongly Agree

19. One of the biggest problems for a lot of Blacks is their lack of self-respect.

1  2  3  4  5  6

Strongly Disagree  Strongly Agree

20. Most Blacks have the drive and determination to get ahead.

1  2  3  4  5  6

Strongly Disagree  Strongly Agree
Attitudes Toward Blacks Scale

1. If a black were put in charge of me, I would not mind taking advice and direction from him or her.
   1   2   3   4   5   6
   Strongly Disagree                                               Strongly Agree

2. If I had a chance to introduce black visitors to my friends and neighbors, I would be pleased to do so.
   1   2   3   4   5   6
   Strongly Disagree                                               Strongly Agree

3. I would rather not have blacks live in the same apartment building I live in.
   1   2   3   4   5   6
   Strongly Disagree                                               Strongly Agree

4. I would probably feel somewhat self-conscious dancing with a black in a public place.
   1   2   3   4   5   6
   Strongly Disagree                                               Strongly Agree

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.
   1   2   3   4   5   6
   Strongly Disagree                                               Strongly Agree

6. I think that black people look more similar to each other than white people do.
   1   2   3   4   5   6
   Strongly Disagree                                               Strongly Agree

7. Interracial marriage should be discouraged to avoid the “who-am-I?” confusion which the children feel.
   1   2   3   4   5   6
   Strongly Disagree                                               Strongly Agree
8. I get very upset when I hear a white make a prejudicial remark about blacks.
   1  2  3  4  5  6
   Strongly Disagree                                         Strongly Agree

9. I favor open housing laws that allow more racial integration of neighborhoods.
   1  2  3  4  5  6
   Strongly Disagree                                         Strongly Agree

10. It would not bother me if my new roommate was black.
    1  2  3  4  5  6
    Strongly Disagree                                         Strongly Agree

11. It is likely that blacks will bring violence to neighborhoods when they move in.
    1  2  3  4  5  6
    Strongly Disagree                                         Strongly Agree

12. I enjoy a funny racial joke, even if some people might find it offensive.
    1  2  3  4  5  6
    Strongly Disagree                                         Strongly Agree

13. The federal government should take decisive steps to override the injustices blacks suffer at the hands of local authorities.
    1  2  3  4  5  6
    Strongly Disagree                                         Strongly Agree

14. Black and white people are inherently equal.
    1  2  3  4  5  6
    Strongly Disagree                                         Strongly Agree

15. Black people are demanding too much too fast in their push for equal rights.
    1  2  3  4  5  6
16. Whites should support blacks in their struggle against discrimination and segregation.

1   2   3   4   5   6

Strongly Disagree                  Strongly Agree

17. Generally, blacks are not as smart as whites.

1   2   3   4   5   6

Strongly Disagree                  Strongly Agree

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.

1   2   3   4   5   6

Strongly Disagree                  Strongly Agree

19. Racial integration (of schools, businesses, residences, etc.) has benefitted both whites and blacks.

1   2   3   4   5   6

Strongly Disagree                  Strongly Agree

20. Some blacks are so touchy about race that it is difficult to get along with them.

1   2   3   4   5   6

Strongly Disagree                  Strongly Agree
Internal and External Motivation to Respond Without Prejudice scales (IMS/EMS)

Directions: Please read each statement carefully and then choose the number that best corresponds with how strongly you agree or disagree with the statement.

   1  2  3  4  5  6
   Strongly Disagree  Strongly Agree

2. I try to hide any negative thoughts about Black people in order to avoid negative reactions from others.
   1  2  3  4  5  6
   Strongly Disagree  Strongly Agree

3. If I acted prejudiced toward Black people, I would be concerned that others would be angry with me.
   1  2  3  4  5  6
   Strongly Disagree  Strongly Agree

4. I attempt to appear nonprejudiced toward Black people in order to avoid disapproval from others.
   1  2  3  4  5  6
   Strongly Disagree  Strongly Agree

5. I try to act nonprejudiced toward Black people because of pressure from others.
   1  2  3  4  5  6
   Strongly Disagree  Strongly Agree

6. I attempt to act in nonprejudiced ways toward Black people because it is personally important to me.
   1  2  3  4  5  6
   Strongly Disagree  Strongly Agree
7. According to my personal values, using stereotypes about Black people is okay.

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<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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8. I am personally motivated by my beliefs to be nonprejudiced toward Black people.

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<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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9. Because of my personal values, I believe that using stereotypes about Black people is wrong.

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<td>Strongly Agree</td>
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10. Being nonprejudiced toward Black people is important to my self-concept.

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<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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</table>
Manipulation Check: Affiliative motivation

How much do you want to get along with the experimenter?

1  2  3  4  5  6  7  8  9  10
Not at all          Very much

How much would you want to have a smooth interaction with the experimenter?

1  2  3  4  5  6  7  8  9  10
Not at all          Very much

How much do you want to associate with the experimenter?

1  2  3  4  5  6  7  8  9  10
Not at all          Very much

How much of a connection do you feel toward the experimenter?

1  2  3  4  5  6  7  8  9  10
Not at all          Very much

How much do you want to socialize with the experimenter?

1  2  3  4  5  6  7  8  9  10
Not at all          Very much

How much do you want to cooperate with the experimenter?

1  2  3  4  5  6  7  8  9  10
Not at all          Very much

How much do you like the experimenter?

1  2  3  4  5  6  7  8  9  10
Not at all          Very much
### Manipulation Check: Experimenter’s Attitudes

How would you characterize the experimenter's attitudes toward African Americans in general?

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<th>7</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td>Very negative</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Very positive</td>
</tr>
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</table>

How likely is it that the experimenter believes discrimination against African Americans is a problem?

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<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Very likely</td>
</tr>
</tbody>
</table>

How likely is it that the experimenter expects you to value treating all ethnic groups equally?

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<tbody>
<tr>
<td>Not at all likely</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Very likely</td>
</tr>
</tbody>
</table>
Demographic and Funnel Debriefing Questions:

Demographic Questions:

What is your gender?
Male   Female

What is your ethnicity?
White  Black  Asian  Latino(a)  Other

How old are you?

Funnel Debriefing Questions:

1. What do you think the purpose of this experiment was?

2. What do you think this experiment was trying to study?

3. Did you think that any of the tasks you did were related in any way?
   a. If yes, in what way were they related?

4. Did anything you did on one task affect what you did on any other task?
   a. If yes, how exactly did affect you?

5. Were you comfortable during the study?

6. Were you distracted at all during the study?
REFERENCE LIST


VITA

Amanda Daniel was born in Bamberg, Germany, and was an Army brat for most of her life. Before attending Loyola University Chicago, she attended Kennesaw State University, earning her Bachelor of Science in Psychology, cum laude, in 2012.

At Loyola, Daniel worked directly with Dr. Jeffrey Huntsinger on studies regarding implicit prejudice. She also worked with Dr. R. Scott Tindale in his group decision making lab, as well as teaching assistantship duties with Dr. Fred Bryant.