

Running head: RACIAL PREJUDICE IS CONTAGIOUS

Racial Prejudice is Contagious

Dana R. Carney

Columbia University

Greg Willard

Harvard University

Direct Correspondence to:

Dana R. Carney
Assistant Professor, Management
Columbia University
Graduate School of Business
717 Uris Hall, 3022 Broadway
New York, NY 10027-6902
dcarney@columbia.edu

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Abstract

Racial prejudice toward social groups has persisted across geography and time. But from where does racial prejudice come? Research shows that racial prejudice is automatically expressed through subtle nonverbal cues. Research also shows that the architecture of the human mind forces us to automatically and unconsciously seek out others' nonverbal cues in order to efficiently navigate a complex social world. We hypothesized that humans could "catch" others' prejudice by merely observing its expression through subtle nonverbal behaviors. In two experiments we found that prejudice is subtly expressed through nonverbal behavior which is observed and unconsciously "caught" by others. This result underscores the insidious nature and likely rampant transmission of racial prejudice and has implications for individuals and how they choose to structure their exposure to others' behavior and for freedom of expression.

Keywords: *attitudes, emotional contagion, nonverbal, prejudice*

Racial Prejudice is Contagious

Here is a thought experiment: imagine that you are sitting in a public place. You observe a mother and small child walking down the sidewalk. A black man approaching from the other direction is walking down the sidewalk toward the mother. The mother delicately squeezes the child's hand and slowly polarizes their position to the furthest edge of the sidewalk; she looks away as he passes. Mother and child continue on and gently weave back to their original position. Moments later, a white man approaches. This time, the mother and child continue straight down the sidewalk; the mother briefly smiles at the man. In practice, you might not give a second thought to these subtle differences in behavior, or to their potential psychological significance. But consider for a moment that passively observing these behaviors might subtly shape the way you think and feel about black and white men. This possibility motivated the present research question: is racial prejudice contagious?

Racial prejudice is expressed through subtle nonverbal behaviors such as facial expressions, vocal attributes, and body movements. Beginning with seminal work by Word, Zanna, and Cooper (1974), research has repeatedly shown that whites express racial bias toward blacks through interpersonal "coldness" including less eye contact, fewer smiles, more physical distance, and interpersonal threat including more frequent blinking (Carney, 2004; Dovidio, Kawakami, & Gaertner, 2002; Fazio, Jackson, Dunton, & Williams, 1995; McConnell & Leibold, 2001). And from the literature on the meaning of these nonverbal cues, we know that interpersonal distance, less smiling and positivity, and gaze aversion signal antipathy and avoidance (e.g., Andersen, 1985; Argyle, 1967). The architecture of the human mind is set up to more readily learn to dislike out-groups (Olsson, Ebert, Banaji, & Phelps, 2006). Thus, observing the pairing of the negative behavior with an outgroup member should be particularly powerful.

No research of which we are aware has examined whether these nonverbal acts of prejudice transmitted to passively observing perceivers results in prejudice contagion.

There are a number of theoretical positions and experimental results which would suggest that passively watching a nonverbal act of prejudice might shape one's own racial prejudice. At the broadest level, dominant theories of automatic and controlled processes would suggest that passive observation of a subtle or ambiguous act of prejudice or discrimination should lead to uncorrected or uninhibited assimilative shifts in perception, cognition, and behavior (e.g., the APE Model by Gawronski & Bodenhausen, 2007; the QUAD Model by Conrey, Sherman, Gawronski, Hugenberg, & Groom, 2005; the MODE Model by Fazio, 1990). Equally as compelling, psychological principles such as associative learning also suggest that one can learn to dislike novel categories of humans and objects by observing the pairing of particular individuals (e.g., black Americans) with evaluative attributes (e.g., "dislike"; e.g., Olson & Fazio, 2002; Rydell & McConnell, 2006). Other psychological phenomena such as social proof suggest that humans have evolved to reference each other when making decisions about what is good and what is bad, as it is an efficient way to navigate a complex social world (Bandura, 1977; Walden & Ogan, 1988). Referencing others can have such powerful effects on us that others' behavior can, without direct or aggressive lobbying, persuade us of the irrational (e.g., Asch, 1955), sell us things we do not need (e.g., Cialdini, 1993), and enlist us to act unreasonably, inappropriately, and much differently than we otherwise would (Zimbardo, 1971). Recently Gino, Ayal, and Ariely (2009) demonstrated that observing others engage in unethical behaviors such as dishonesty and cheating can increase one's own unethical behaviors. These authors suggested that such behaviors can be contagious and transmitted via social referencing. Research on the social tuning hypothesis suggests the same social referencing phenomenon. In this research,

perceivers' attitudes conform to the salient and explicitly stated attitudes of those around them (e.g., Sinclair, Lowery, Hardin, & Colangelo, 2005).

The most compelling evidence for the existence of a prejudice contagion effect comes from research on contagion processes. This evidence suggests that people automatically, effortlessly, and rapidly “catch” others’ feelings, thoughts, and goals (Aarts, Gollwitzer, & Hassin, 2004; Hatfield, Cacioppo, & Rapson, 1994). Emotional contagion processes promote the rapid communication of risk and reward between people. Through this process, people are able to conform and respond appropriately to a richly complex social world without unnecessary expenditure of precious cognitive resource (Barsade, 2002). The emotional contagion process appears to work rapidly by largely automatic, effortless, and unconscious processes in which an actor experiences an emotion and expresses it nonverbally; a perceiver sometimes mimics the expression, and through facial muscles feeding back to the brain and/or cognitive activation of emotion concepts, the perceiver “catches” the affective state of the actor (e.g., Hatfield et al., 1994). Recent evidence from neuroscience shows the brain is readied to empathically process others’ experiences as one’s own. Research shows functional overlap in the brain when experiencing one’s own versus observing others’ emotional states (e.g., Wicker, Keysers, Plailly, Royet, Gallese, & Rizzolatti, 2003).

The Current Research

In the current research, we hypothesized that perceivers’ degree of racial prejudice would be shaped by passive observation of others’ nonverbal expression of prejudice or egalitarianism. Experiment 1 showed participant perceivers brief videos of white targets naturally expressing either (a) prejudice or (b) egalitarianism toward black targets. We tested whether perceivers’ racial prejudice and their impressions of the black targets would shift to be in alignment with the

prejudice level expressed by the whites. Experiment 2 was designed to isolate the impact of white targets' behavior during these interactions (the hypothesized source of the prejudice contagion effect) from the potentially confounding effect of viewing both the white and the black targets' behavior. Experiment 2 also manipulated the perceived context of the interaction (intergroup vs. not) predicting that prejudice will shift only when whites' negative behavior is paired with a black target.

Experiment 1

Experiment 1 tested the hypothesis that racial prejudice can be “caught” by merely observing brief episodes of prejudiced or egalitarian behavior. To test the prejudice contagion hypothesis, perceivers viewed a social interaction between a black confederate and a white target who was either extremely high on racial prejudice, or a white target who had egalitarian attitudes. Unlike self-report measures of racial bias which are generally stable across measurement moments and social contexts, implicit measures like the Implicit Association Test (IAT; Greenwald, Nosek, & Banaji, 2003) have been shown to be elastic—stretching and contracting with relevant shifts in everyday experience (e.g., Blair, 2002; Dasgupta & Greenwald, 2001). Thus, we predicted that observations of racially prejudiced (or egalitarian) interactions would shift implicit attitude to be consistent with the racial bias observed. We also expected perceivers' general impressions of the black target to be more negative when seeing prejudiced (versus egalitarian) nonverbal behavior.

Method

Participants

Fifty-nine undergraduates (24 male, 35 female) at Northeastern University participated as a psychology course option. Participants were primarily “White/European-American” (80%). Sex, and ethnicity did not significantly influence results and will not be further discussed.

Thin Slice Video Clip Stimuli

Eight 1-min video clips showing an intergroup interaction were selected from a larger set of videotaped intergroup interactions (Carney, 2004). The validity of this 1-min thin slice approach has been demonstrated in previous research (see Carney, Colvin, & Hall, 2007). Half of the clips depicted highly biased white targets interacting with a black confederate: the “prejudice” condition. In the prejudice video condition white targets held moderate to strong implicit and explicit prejudice (a more detailed description of these two measures can be found in the section with the sub heading “measures of racial prejudice”). White targets’ anti-Black IAT *D*-scores ranged from .20 to .65 with a Mean *D* = .42. White targets’ Attitudes Toward Blacks scale scores (ATB; Brigham, 1993) ranged from 2.25 to 3.00 with a mean of 2.60. The other half of the video clips depicted white targets with no prejudice: the “no-prejudice” video condition. In the no-prejudice condition white targets had IAT *D*-scores from -.66 to .01 with a Mean *D* = -.23; ATB scores ranged from 1.00 to 2.10 with a mean of 1.51. A significant difference between the prejudice and no-prejudice videos was found for both the implicit (IAT), $t(6) = -3.44, p < .02$; effect size $r = .82$, and explicit (ATB) $t(6) = -3.54, p < .02$; effect size $r = .91$ measures of racial prejudice. Each video contained a black target, who was one of four trained confederates instructed to behave in exactly the same manner across conditions. Videos contained an equal number of male and female targets and confederates. Target sex did not affect dependent measures (all $ps < .30$) and will not be further discussed.

Although trained to behave exactly the same way across interactions, it was important to empirically determine whether trained black confederates behaved in an equivalent manner across interactions and conditions. Trained coders watched and rated black confederates’ behavior on two variables which have been shown to be related to liking/positivity (Andersen, 1985; Dovidio et al., 2002): (a) overall nonverbal “friendliness” (0-9 scale; interrater $r = .83$) and (b) body orientation (-3 to +3 scale; interrater $r = .82$). Critically, the black confederates did not behave differently across condition on nonverbal friendliness, $t(6) = -0.59, p = .57$; effect size $r = .23$, or body orientation, $t(6) = -0.58, p = .58$; effect size $r = .23$.

Also critical to the predicted prejudice contagion result is that white targets in the prejudice condition were expressing more negative nonverbal behavior than those in the no-prejudice condition. To test this, trained coders watched and rated white targets' nonverbal behavior. Coded behaviors have been shown previously to be related to racial prejudice (Carney, 2004; Dovidio et al., 2002; McConnell & Leibold, 2001): number of smiles and laughs, interactional enjoyment, and overall warmth (average interrater reliability $r = .99$). Behaviors were combined to form a composite index of nonverbal positivity which was then correlated with white targets' measured racial prejudice (a composite index comprised of both explicit and implicit bias). Consistent with past research on nonverbal expressions of racial prejudice, white targets expressed prejudice by acting significantly less positive toward their black interaction partners, $r(6) = -.73$, $p < .05$ across video condition (i.e., across the video conditions, more racial prejudice was linearly related to more negative nonverbal behavior). In addition, there was a statistically significant difference between the prejudice and no-prejudice video conditions such that prejudiced white targets expressed less positive behavior ($M = -.38$ on the composite "positivity" variable) than white targets in the no-prejudice video condition ($M = .63$), $t(6) = 2.57$, $p < .05$; effect size $r = .88$.

Measures of Racial Prejudice

The IAT (Greenwald et al., 2003) and the ATB (Brigham, 1993) were used to measure white targets' racial prejudice. The IAT measured associative strength between social categories "black" and "white" and the evaluative attributes "good" and "bad." An index of each target's implicit racial bias was derived by subtracting reaction times when associating black+bad & white+good relative to the reverse pairing (white+bad & black+good). The IAT followed the most current programming and scoring procedures to date (as of 2009). The ATB is a 20 item self-report measure of racial prejudice. A sample item is: "It is likely that black people will bring violence to neighborhoods when they move in" and items are anchored on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

Procedure

Participant perceivers were randomly assigned to watch one of the “prejudice” or one of the “no-prejudice” videos. Perceivers watched this same video twice, and were instructed to form an impression of the individuals in the interaction. Perceivers watched this same video twice and were instructed to form an impression and make ratings of both the black and the white target (one after each viewing; order of target rated first was counterbalanced). Perceivers made three “liking” ratings about each target: “How much did you like this person?”, “How much did you dislike this person?”, “Would you want to be friends with this person?”, and 6 adjective ratings: kind, considerate, thoughtful, hostile, unfriendly, and dislikeable, from 1 (*not at all*) to 7 (*very much*). Positive items were reverse-scored and averaged with negative items to create a negative impression index for each target (Cronbach’s $\alpha = .90$ for black and $\alpha = .85$ for white targets). Participants were carefully debriefed at the end of the study. All participant perceivers explicitly reported that the white target in the interaction did not influence their impression of the black target. Following the video observation and impression formation task, participants completed an evaluative race IAT using a two-button serial response box with high temporal resolution. The IAT was exactly the same as the one described in the previous section.

Results and Discussion

To test the prejudice contagion hypothesis, we examined the effect of video condition (prejudice vs. no-prejudice) on perceivers’ IAT scores. As predicted, participants observing the prejudice videos showed significantly stronger bias on the evaluative race IAT ($M = .38$, $SD = 0.27$) than did those who watched the no-prejudice videos ($M = .22$, $SD = 0.32$), $t(56) = 2.01$, $p = .05$, effect size $r = .26$ (Figure 1).

Consistent with expectations, participant perceivers generally formed a more negative impression of the black confederates who were interacting with prejudiced whites (as compared to impressions of the black confederates interacting with egalitarian whites). Figure 2 shows there was a Video Condition x Target Rating interaction, $F(1, 57) = 5.25$, $p = .03$, effect size $r = .29$. Analysis of the simple main effects showed that negative impressions of the black targets were significantly higher after observing viewing the prejudice ($M = 3.27$, $SD = .92$) than after

the no-prejudice videos ($M = 2.77$, $SD = 0.89$), $t(57) = 2.03$, $p = .048$, effect size $r = .26$. White targets, despite the fact that they were the ones expressing the behavior, were rated equivalently across condition (prejudice: $M = 3.62$, $SD = .76$; no-prejudice: $M = 3.62$, $SD = .90$), $t(57) = 0.01$, $p = .99$, effect size $r = .01$.

Like research showing the contagious nature of emotional states, goals, and ethics, Experiment 1 suggests that racial prejudice is also contagious. After observing a prejudiced white person behave negatively toward a black person, participants formed a more negative impression of the black person and they demonstrated higher racial prejudice than those participants who observed an egalitarian white person. However, Experiment 1 left open the possibility that perceivers' prejudice shifted because the black targets were acting differently across conditions. Although the black confederates were trained to behave consistently in response to each target, and their behavior was coded and shown to be consistent across conditions, these features do not entirely preclude the possibility that black targets could have responded in subtly different ways to the different white targets which could account for the result. The primary purpose of Experiment 2 was to rule out this alternative.

Experiment 2

In Experiment 2, we sought to replicate the prejudice contagion result observed in Experiment 1, while ruling out the potential influence of black confederates' behavior. Therefore, in Experiment 2 we replicated the basic paradigm used in Experiment 1 except that participants viewed only the white target—all audio and video of the black confederates was digitally removed. Given that participants viewed only one of the two interaction partners, we were able to manipulate the perceived context of the interaction; although the omitted interaction partners were black, participants in Experiment 2 were led to believe the omitted interaction partners were either black or white. Because research suggests the mind is better prepared to learn to dislike out-groups (Olsson et al., 2006), we expected the prejudice contagion result to replicate only when perceivers thought the white targets' behavior was directed toward a black interaction partner.

Method

Participants

Seventy one participants (38% female) from a paid participant pool at Columbia University participated. Ethnicities were 49% Asian, 27% Caucasian, 7% Black, 4% Latina/o, and 13% said “other” or did not report his or her race/ethnicity. Sex and ethnicity did not significantly influence results and will not be further discussed.

Procedure

Video editing. Participants were randomly assigned to observe either a prejudice or no-prejudice video. Different from Experiment 1, in Experiment 2, the black confederates’ audio and video content was removed (the videos were cropped to remove the black confederates from sight and silences were inserted in place of the black confederates’ voices on the audio tracks). In other words, participants only saw and heard white targets’ behavior.

Interaction context manipulation. Prior to observing one of the videos, each participant was shown a still photograph of the white target’s ostensible interaction partner. Half of the participants saw a picture of the white target and an ostensible white interaction partner; half of the participants saw a picture of the white target and the actual black interaction partner. Thus, the experimental design was a 2 (target prejudice level: prejudice vs. no-prejudice) x 2 (race of ostensible interaction partner: black vs. white) between-participants design. In the task, participants observed and were instructed to form an impression of the white target. Participants then took an implicit measure of racial prejudice (the same evaluative race IAT used in Experiment 1).

Results and Discussion

We hypothesized that perceivers would “catch” the racial prejudice of the white targets by observing their behavior—but only when that behavior was believed to be expressed toward a relevant target of the bias: a black interaction partner. To test this question, we conducted a 2 (target prejudice: prejudice vs. no-prejudice) x 2 (race of ostensible interaction partner: black vs. white) analysis of variance on participant perceivers’ IAT scores. As predicted, there was a

significant interaction between prejudice video condition and ostensible race of partner, $F(1, 70) = 4.09, p < .05$; effect size $r = .24$. The interaction pattern is displayed in Figure 3. Replicating the basic result of Experiment 1, there was a significant difference between the prejudice and the no-prejudice conditions when perceivers believed the white targets' interaction partner was black, $t(34) = -2.03, p < .05$; effect size $r = .33$. However, when participants believed the interaction partner was white, there was no significant effect of condition, $t(33) = .92, p > .36$, effect size $r = .16$.

Experiment 2 replicated the basic result of Experiment 1, and extended these findings in two important ways. First, Experiment 2 demonstrated that observing subtly prejudiced behavior directed toward a black person—even if the black person's reaction is not observed—renders one's own racial prejudice stronger. This finding strengthens the prejudice contagion interpretation by casting doubt on the alternative explanation that black targets' behavior was responsible for changes in perceivers' racial prejudice. Second, Experiment 2 demonstrated that this effect is contingent upon observing prejudiced behavior directed at a black target. Interestingly, a perceiver need not actually see the black target in an interaction in order to be influenced. In other words, hearing a white person negatively tell a story about a black person may be enough to shift perceivers' racial prejudice.

General Discussion

These results suggest that racial prejudice is contagious. That simply viewing another person engage in a discriminatory act can, without your awareness or consent, shape your own racial prejudice is worrisome at best, and deeply disturbing at worst. The flip side of these results, of course, is that acts of genuine egalitarianism can also shape racial attitudes toward equality. Although alarming in implication, the prejudice contagion result should not be surprising given what social science knows about the architecture of the human mind and brain, and its automatic readiness to process others' thought, feeling, and action as its own (Wicker, 2003) and its readiness to learn antipathy toward out-groups (Olsson et al., 2006).

Our results show that not only do we form more negative impressions of blacks targeted by prejudiced behavior, but we become more racially prejudiced in general. How long these impressions and prejudices last when formed after one exposure is a question beyond the scope of the current research; however, it can be stated with certainty that repeated exposure to any pairings of events (e.g., black person + negative behavior) can and will shape perceivers' minds for the long term (e.g., Hebb, 1949).

The primary implication of the current research is the suggestion that racial prejudice is shaped not only by cultural histories and media, or by others' explicit statements and behaviors, but also by observing more subtle nonverbal behaviors and reactions. Over 50 years of research on nonverbal communication has shown the powerful ways in which subtle signals can shape all manner of thought, feeling, and behavior (for a review, see Spitz, 1997). Imagine, for example a child feels her father grip her hand a little more tightly as they pass a black man on the street; or a little boy views his mother speak less and make less eye contact than usual while transacting with a black cashier at the supermarket. Why should the nonverbal expression of prejudices toward social groups be any less contagious than the emotional contagion of others' nonverbal expression of happiness, surprise, fear, or anger?

We believe this result has implications for individuals and the choices they make in daily life when allowing themselves to be exposed to racially prejudiced behavior. These results also have policy implications for the freedom of expression. Countries such as the United States of America simultaneously espouse both freedom of expression and intergroup tolerance. Without responsibility and boundary imposed upon freedom of expression, is it possible that free societies with ideals of intergroup egalitarianism will never reach their goals?

Limitations and Future Directions

An interesting possibility that was not addressed in the present research is the effect of prejudice contagion on perceivers who are socially or otherwise connected to the target persons (i.e., the person expressing the bias or the target of the bias). Would the pattern of results in the present research, for example, replicate were the perceivers themselves black? While including

vs. excluding black participants from analyses did not significantly change results, this social group was not well-represented in the present samples (between 0% and 5%). Furthermore, would the pattern of results emerge more strongly if the perceiver was close friends with the person expressing the bias (cf. Sinclair et al., 2005)? Future research should address these important questions.

The present findings are also limited in that we focused specifically on racial prejudice. We chose this focus because we believe it provides insight into an important social issue. However, based on our theoretical position, the present findings are broadly relevant and have implications for any situation in which an attitude is expressed behaviorally in the presence of a relevant attitude object. Further research should examine attitude contagion effects within domains beyond racial attitudes. Viewing other peoples' reactions to a specific person (e.g., a political candidate; a defendant in a trial; a product salesperson) or even those involving non-human objects (e.g., clutching a purse when a particular type of person or social group member passes by) may have important implications. We believe this prejudice contagion result represents an exciting new direction for research in a number of domains involving social judgment and decision making.

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Figure Captions

Figure 1. Experiment 1: Participant perceivers' prejudice as a function of observed video condition (*Ms* and *SEs*).

Figure 2. Experiment 1: Participant perceivers' negative impressions of black and white targets as a function of observed video condition (*Ms* and *SEs*).

Figure 3. Experiment 2: Participant perceivers' prejudice as a function of observed video condition and ostensible interaction partner race (*Ms* and *SEs*).





