Behavioral Mimicry as an Affiliative Response to Social Exclusion

Jessica L. Lakin
Drew University

Tanya L. Chartrand
Duke University

Author Note
Jessica L. Lakin, Psychology Department, Drew University; Tanya L. Chartrand, Fuqua School of Business, Duke University.

Correspondence concerning this chapter should be addressed to Jessica L. Lakin, Psychology Department, Drew University, 36 Madison Avenue, Madison, NJ 07940. E-mail: jlakin@drew.edu
Abstract

The nonconscious behavioral mimicry and social exclusion literatures are merged to explore whether mimicking the behaviors of others could be a possible affiliative behavior that follows social exclusion. Behavioral mimicry has been linked to liking, affiliation, and the development of rapport, and typically operates outside of conscious awareness, making it an especially attractive way to recover from the negative effects of rejection. Data consistent with this argument are reviewed, and future directions for a fruitful continued merging of these literatures are discussed.

Keywords: nonconscious behavioral mimicry, chameleon effect, affiliation, imitation, exclusion, rejection
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As many of the chapters in this book reveal, people’s responses to social exclusion experiences are quite complex (see also Richman & Leary, 2009; Williams, Forgas, & von Hippel, 2005; or Williams, 2009; for reviews of this literature). Emotionally, social exclusion may make people feel anger and frustration, sadness, or numbness, resignation and indifference. Cognitively, social exclusion causes a shift in time perspective, impairment in self-regulation, and reductions in complex cognitive abilities. And behaviorally, rejection leads people to engage in self-defeating behavior, increases interest in short-term gains, causes hostility and aggression, and often motivates behaviors that would ultimately serve to re-connect people with others (e.g., conformity, helping).

Understanding the consequences of social exclusion is further complicated by the circumstances surrounding the exclusion (Richman & Leary, 2009; Williams, 2009; Williams & Zadro, 2005), including the type of exclusion that occurs, the setting in which the exclusion occurs, the characteristics of the excluders, and individual differences in personality variables that are relevant to social exclusion experiences (e.g., need to belong, rejection sensitivity). Thankfully, the intense interest in this topic and the extensive amount of research on it over the past decade have allowed the literature in this field to develop to a point where these complexities are both recognized and appreciated.

One way to understand these multifaceted responses to social exclusion, especially with regard to its behavioral consequences, is to recognize that rejection threatens multiple fundamental needs, including the need to belong, the need for self-esteem, the need to have control over one’s environment, and the need to have a sense of meaningful existence (Williams, 2001, 2009). When rejection occurs, then, addressing these threatened needs occurs in different
ways depending on timing (e.g., when the outcome is assessed, the duration of the exclusion) and available situational alternatives. Specifically, Williams (2007a, 2007b, 2009) hypothesizes both an immediate reflexive response to rejection as well as a more reflective stage that, presumably, reflects people’s responses to rejection when they have had more time to think (sometimes consciously) about them.

This two-step response system does much to explain the seeming inconsistencies within the exclusion literature. For example, although there was much debate about the existence and magnitude of emotional responses to exclusion experiences (see Blackhart, Nelson, Knowles, & Baumeister, 2009), Williams’s model suggests that one might feel really bad immediately after exclusion, but that if the exclusion is prolonged, or if one is reflecting on a lifetime of exclusion, resignation may ultimately occur. This model is also important because it identifies moderators to exclusion experiences that can explain why rejection sometimes leads to behaviors designed to increase acceptance, and at other times, leads to behaviors that are clearly not going to serve this important need (e.g., aggression). In other words, at the reflective stage of responding, one can take into account attributions for the exclusion (e.g., was I excluded because of something over which I have control?), characteristics of the excluders (e.g., was I excluded by someone important to me?), and situational variables (e.g., is there a possibility that I could affiliate with someone?) that ultimately determine behavioral responses (see Richman & Leary, 2009, for a more lengthy discussion of possible moderators).

**Prosocial Behavioral Responses to Exclusion**

At this point, we understand that both anti-social and prosocial responses to social exclusion can occur, and the determining factors seem to be individuals’ appraisals of their current situation and situational constraints. For example, individuals often respond to exclusion
by getting angry and aggressing against others (Twenge, Baumeister, Tice, & Stucke, 2001), but this aggressive response decreases or disappears entirely if participants experience feelings of control in an unrelated task (Warburton, Williams, & Cairns, 2006) or are reminded of a social connection (Twenge, Zhang, Catanese, Dolan-Pascoe, Lyche, & Baumeister, 2007). Individuals also have difficulty self-regulating after exclusion (Baumeister, DeWall, Ciarocco, & Twenge, 2005), but self-regulation can occur quite easily if it serves the larger goal of affiliation (DeWall, Baumeister, & Vohs, 2008).

Although anti-social responses to exclusion can and do occur in certain circumstances, prosocial responses to exclusion also make theoretical sense. Humans and other animals have a strong need to belong (Baumeister & Leary, 1995; see also Leary & Baumeister, 2000), and every type of exclusion threatens this fundamental need to some degree. Thus, when one has been excluded, it would be both physically and socially adaptive to respond to that exclusion by trying to affiliate with others (Brewer, 1997; Caporael, 2001). To the extent that there are opportunities available for affiliation, then, it would make evolutionary sense to take advantage of them (Lakin, Jefferis, Cheng, & Chartrand, 2003).

Not surprisingly, then, there are a number of studies that demonstrate possible affiliative, prosocial responses to social exclusion. In one, participants were more likely to conform to the clearly incorrect answers of others in an Asch-like figure-judging task if they had recently been excluded in a ball-tossing game (Williams, Cheung, & Choi, 2000). Conformity is certainly not always a positive behavior, but it does serve to create similarity, which is strongly related to liking (Byrne, 1971). The threat of social exclusion also increases compliance to a request for a monetary donation (Carter-Sowell, Chen, & Williams, 2008) and reduces people’s tendency to experience negative social influence; when uncooperative behavior was followed by the threat of
social exclusion, cooperative behaviors increased (Kerr et al., 2009). Whether these particular affiliative responses are reflexive or reflective is an open question; regardless, it is clear that yielding to social influence is one possible way that people could affiliate with others after exclusion or rejection.

There is growing evidence that there are clear automatic and reflexive affiliative behaviors that happen after exclusion as well. For example, after rejection, people become more interested in social information (Gardner, Pickett, & Brewer, 2000; see also Pickett & Gardner, 2005), are more attuned to social opportunities (Maner, DeWall, Baumeister, & Schaller, 2007), and have better memory for social information, especially when it involves social behaviors of others (Hess & Pickett, 2010). This interest in affiliation even extends to perceptual processing of stimuli that might lead to social acceptance; the threat of exclusion causes people to pay more attention to and devote more time to processing smiling faces than disapproving faces (DeWall, Maner, & Rouby, 2009) and to show more interest in others who display genuine smiles as opposed to deceptive smiles (Bernstein, Sacco, Brown, Young, & Claypool, 2010).

Our work has focused on another possible automatic affiliative response to social exclusion: nonconscious behavioral mimicry. Specifically, given the strong link between mimicry of other people’s behaviors and affiliation and rapport (see below), we were interested in whether the automatic tendency to imitate the mannerisms of others might occur after social exclusion as a way to help people to affiliate, albeit automatically, with others. We begin with a brief review of the mimicry literature to highlight the importance of this behavior in creating affiliation and rapport with others, and then discuss the specific links to the social exclusion literature. We end by discussing unanswered questions that will drive this literature in the next decade.
Nonconscious Behavioral Mimicry

Nonconscious behavioral mimicry occurs when an individual unwittingly imitates the mannerisms or behaviors of another person (Chartrand & Bargh, 1999; Chartrand, Maddux, & Lakin, 2005; Lakin et al., 2003). The idea of behavior matching has a long history in the field of psychology (e.g., James, 1890), but there has been a resurgence of interest in this topic over the past several decades. Almost without exception, this literature has revealed strong links, both correlational and causal, between behavioral mimicry and liking, affiliation, and rapport (interested readers can consult a number of recent review articles [e.g., Chartrand & van Baaren, 2009; Chartrand et al., 2005] for a more thorough understanding of the behavioral mimicry literature).

There is evidence that people imitate the behaviors of those with whom they have ongoing relationships: parents (Bernieri, Reznick, & Rosenthal, 1988; Jones, 2007), therapists (Charney, 1966; Maurer & Tindall, 1983), and teachers (Bernieri, 1988; LaFrance, 1979; LaFrance & Broadbent, 1976). But behavioral mimicry also occurs under the most minimal conditions; even neonates imitate the facial movements of complete strangers (e.g., Meltzoff & Moore, 1977). More recently, Chartrand and Bargh (1999, Experiment 1) had participants interact with two unfamiliar confederates who engaged in different nonverbal behaviors. Participants mimicked the mannerisms of the confederates – they shook their foot more when they were with a foot-shaker than when they were with a face-rubber, and rubbed their face more when they were with a face-rubber than when they were with a foot-shaker. At the conclusion of the experiment, participants were asked about the mannerisms of the confederate, and about their own mannerisms, and none noticed either. The fact that participants unwittingly change their mannerisms and behaviors to blend in with their social environments is why this mimicry
behavior has been called the “chameleon effect.”

**Nonconscious Behavioral Mimicry and Affiliation**

The fact that people imitate those who are close to them suggests the importance of this behavior for establishing and maintaining relationships (Lakin et al., 2003). Indeed, the behavioral mimicry literature is now filled with examples linking mimicry to the development of liking. Chartrand and Bargh (1999, Experiment 2) manipulated behavioral mimicry and found that when a confederate mimicked the behavior of participants (as opposed to engaging in neutral, nondescript mannerisms), participants reported liking the confederate more, and that the interaction had been more smooth and harmonious. This general finding has been replicated a number of times (see Chartrand and van Baaren, 2009, for a review), and has even been demonstrated with interpersonal synchrony rather than mimicry (Hove & Risen, 2009) and when avatars mimic the facial expressions of human participants (Bailenson & Yee, 2005). People who are mimicked are also more likely to help others, even others who were not involved in the interaction where mimicry first occurred (van Baaren, Holland, Kawakami, & van Knippenberg, 2004), have an easier time understanding the emotions of others (Stel & van Knippenberg, 2008), are more trustful of others (Maddux, Mullens, & Galinsky, 2008), and report feeling closer to others more generally (Ashton-James, van Baaren, Chartrand, Decety, & Karremans, 2007).

One of the most interesting aspects of people’s tendency to imitate automatically others’ behaviors is that this mimicry appears to be used strategically, albeit unconsciously, in situations where people are interested in trying to affiliate. Indirect evidence to support this idea was provided by Cheng and Chartrand (2003), who explored the relationship between self-monitoring and behavioral mimicry. High self-monitors are particularly interested in controlling their public
image and behaving in a socially appropriate manner (Snyder, 1987), which Cheng and Chartrand argued would include trying to affiliate with similar or powerful targets. In their first study, college-student participants interacted with a confederate whom they believed to be a high school student, a fellow college student, or a graduate student. Low self-monitors did not differentially mimic the confederate in the three different description conditions, but high self-monitors exhibited greater mimicry in the fellow college student condition than in either the high school or graduate student conditions. A second study replicated this effect: High self-monitors mimicked an interaction partner who was described as being higher in status (i.e., a leader rather than a worker) to a greater degree than when their partner was lower in status, whereas low self-monitors didn’t differentially mimic their partners. Cheng and Chartrand concluded that high self-monitors were especially sensitive to affiliative situational cues that suggested they should create liking, and nonconscious mimicry was the “tool” through which they accomplished their objective.

More directly, Lakin and Chartrand (2003) explored whether people who have an affiliation goal would be more likely to mimic the behaviors of interaction partners. In a first study, participants were given a conscious affiliation goal (i.e., they were told to affiliate with a future interaction partner), a nonconscious affiliation goal (i.e., they were subliminally primed with words like friend and together), or no affiliation goal. Participants were then surreptitiously videotaped while watching another participant (actually a confederate) who was touching her face while engaging in routine clerical tasks. The video tapes were later coded to determine the extent to which participants were touching their own faces while watching the confederate. Regardless of whether the affiliation goal was conscious or nonconscious, those with an active goal mimicked the behaviors of the potential interaction partner more than participants who did
not have an affiliation goal.

A second study extended this initial finding by showing an increase in mimicry in a situation where there was even more pressure to create rapport with an unknown person: recent failure at an affiliation goal (Lakin & Chartrand, 2003, Experiment 2). Participants were subliminally primed with an affiliation goal or not, and then participated in an ostensibly unrelated second experiment. The second experiment involved two interviews with different confederates. The first interview was either successful (i.e., the confederate was friendly and polite) or unsuccessful (i.e., the confederate was unfriendly and abrupt), leading participants to succeed or fail at their affiliation goal (if they had one). During the second interview, the second confederate shook her foot throughout the interaction, and participants were again surreptitiously videotaped so we could code the extent to which participants shook their own feet. Participants who were primed with an affiliation goal and were not able to accomplish this goal in a first interaction (i.e., they failed at their goal by interacting with a unfriendly, terse confederate) mimicked the behaviors of the second interaction partner more than participants who did not have an affiliation goal or participants who had an affiliation goal and succeeded in the first interaction. Presumably, participants who failed in a first attempt to achieve their goal continued to pursue their active goal with a newly-introduced interaction partner by mimicking that person’s behaviors.

In sum, this work sets the stage for linking social exclusion experiences to nonconscious behavioral mimicry. As the Cheng and Chartrand (2003) and Lakin and Chartrand (2003) studies reveal, people are more than able to use mimicry in situations where it is personally beneficial. In situations were people want, or need, to affiliate, behavioral mimicry is one strategy for accomplishing this goal.
Nonconscious Behavioral Mimicry and Social Exclusion

Our recent work has attempted to merge the nonconscious behavioral mimicry literature with the social exclusion literature. Specifically, given the links between behavioral mimicry and affiliation, and between social exclusion and the need to address threatened belongingness needs, we have argued that one way in which people might be able to recover from social exclusion is by mimicking the behaviors of new interaction partners. Because behavioral mimicry often occurs nonconsciously (and may be more successful to the extent that it does, see Bailenson, Yee, Patel, & Beall, 2008), it should be a particularly common post-exclusion affiliative behavior: it requires few, if any, taxed regulatory resources (Baumeister et al., 2005). Data from two studies that test this idea directly support our claim (Lakin, Chartrand, & Arkin, 2008; see also Lakin & Chartrand, 2005).

In the first study, participants were recruited to complete two unrelated tasks. The first was to play Cyberball with three other participants (actually confederates; Williams et al., 2000; Williams & Jarvis, 2006). Participants were not given any information about their fellow players, and half were excluded during the ball-tossing game. The second task was to describe a set of photographs to a new partner, someone who had not played Cyberball and therefore knew nothing of the exclusion or inclusion experience. This confederate shook her foot throughout her interaction with participants, and surreptitious video recordings of the participants were later coded to determine the extent to which they mimicked this nonverbal behavior. Controlling for the amount of foot-shaking that occurred during a baseline period, participants who had been excluded while playing Cyberball mimicked the foot-shaking behavior of the confederate significantly more than participants who had been included. The mimicry behavior of the participants seemed to have the desired effect as well. When the confederate (who was blind to
condition) was asked to evaluate her interactions with each participant, she reported that the interactions with excluded participants had gone more smoothly than her interactions with included participants.

A second experiment was conducted to explore whether affiliation needs resulting from exclusion could be addressed by mimicking the behaviors of any interaction partner. That is, we wondered whether mimicry of an interaction partner’s behaviors would still occur if the interaction partner did not share a salient characteristic with the excluding group. We reasoned that mimicry of a partner who shared a commonality with participants and with their excluders would be especially likely to address any threatened belongingness needs that arose from the earlier exclusion.

The procedure for the second study was similar to that of the first, but this time, participants had more information about their fellow Cyberball players. Specifically, the female participants were excluded by either three males (i.e., an outgroup) or three females (i.e., an ingroup). Their subsequent interaction was still with a novel person who had not played Cyberball and knew nothing about it, but the confederate either shared a group membership with the participant (i.e., the confederate was female too) or not (i.e., the confederate was male).

We expected that participants who had been excluded by ingroup members and then interacted with an ingroup confederate would mimic the foot-shaking behavior of that confederate more than participants in any of the other conditions. Analyses revealed a significant interaction consistent with our prediction. Participants in the female exclusion condition mimicked the female confederate more than the male confederate, but there were no differences between mimicry of the female and male confederates in the male exclusion condition or a control condition where participants did not play Cyberball. A planned contrast comparing the
female exclusion / female confederate condition to the other conditions was also significant. Importantly, the increase in mimicry observed in this condition was expected to be mediated by threatened belongingness needs; a correlational analysis indicated that belongingness needs were a stronger predictor of mimicry in the ingroup exclusion / ingroup confederate condition than in any of the other conditions.

In both of these experiments, it is important to note that the increase in mimicry by excluded participants occurred despite the fact that they reported no conscious awareness of the confederate’s behaviors or the fact that their own behaviors were affected by the confederate. This suggests that the behavioral mimicry that occurred was indeed nonconscious. Use of mimicry in situations where people want to affiliate is functional, as it gives people an opportunity to pursue their affiliation goals without spending limited cognitive resources on determining the best way to do so. Given that being excluded can cause regulatory difficulties (Baumeister et al., 2005), automatic affiliative behaviors should be an attractive (unconscious) option after rejection occurs.

While the Lakin et al. (2008) studies are the only published ones to date that have directly linked being socially excluded to an increase in nonconscious behavioral mimicry, Over and Carpenter (2009) have recently replicated the conceptual link between ostracism and imitation more generally. Specifically, they primed five-year-old children with a minimal display of ostracism: the children watched two short videos, each of which depicted a group of shapes moving away from a single shape. After watching the ostracism or control videos (where no rejection occurred), all the children watched an experimenter play with a new toy, which was actually a box, a ball, and three small tools. The experimenter interacted with the toy in a scripted manner and then passed all of the materials to the child, who was allowed to do
whatever he or she wanted to do with them. An imitation score was calculated based on the extent to which the children engaged with the toy in a similar manner to that of the experimenter. Analysis of this data revealed that the children who had watched the ostracism videos imitated the experimenter’s behaviors to a greater extent than the children who watched the control videos. These data further support imitation as an affiliative behavior that occurs after exclusion (or the idea of exclusion). The fact that this link has been demonstrated in children is consistent with the idea that there is evolutionary significance to the mimicry/affiliation relationship (Lakin et al., 2003).

**Future Directions**

The nonconscious behavioral mimicry findings of Lakin et al. (2008) and the imitation findings of Over and Carpenter (2009) are both consistent with the body of literature demonstrating affiliative behavioral consequences of social exclusion (e.g., Kerr et al., 2009; Williams et al., 2000). Because behavioral mimicry is often automatic, the Lakin et al. findings are probably most consistent with other research demonstrating an increased sensitivity to social information and opportunities after social exclusion. Just as people are interested in new chances to find positive interaction partners (Maner et al., 2007), engage in early perceptual processing of social information (Bernstein et al., 2010; DeWall et al., 2009), and pay more attention to and remember more social information (Gardner et al., 2000; Hess & Pickett, 2010) after being rejected, people also affiliate by automatically and nonconsciously tuning their behaviors to those of their interaction partners. This behavioral similarity creates liking and rapport, and results in smoother and more harmonious interactions (Chartrand et al., 2005).

As the social exclusion literature continues to develop, there are a number of questions that still need to be addressed to gain a fuller understanding of possible affiliative responses to
exclusion. Studying nonconscious behavioral mimicry in this context also provides an opportunity to extend the mimicry literature.

First, the social exclusion literature provides a natural context in which one could study behavioral mimicry of ingroup and outgroup members, a topic that has been understudied in the imitation literature (see Yabar, Johnston, Miles, & Peace, 2006, for one exception to this statement). A related issue concerns how people feel about and respond to exclusion by outgroup members. As the second study of Lakin et al. (2008) demonstrates, people were more likely to mimic the behaviors of an ingroup partner following ingroup exclusion. Does this finding hold for exclusion by other groups, particularly groups that are not based on sex? If exclusion is threatening to core social motives like the need to belong (even when it is exclusion from a disliked outgroup like the KKK; Gonsalkorale & Williams, 2007), are there circumstances under which affiliating with someone, even if that person is an outgroup member, would be better than affiliating with no one? In other words, future research will need to determine the limits to behavioral mimicry following exclusion: is it an all-or-none phenomenon, or is the automatic affiliative response subject to situational moderators as well? And, if so, identifying those moderators would be a meaningful contribution to both the social exclusion and behavioral mimicry literatures.

Second, is an increase in behavioral mimicry a response unique to social exclusion, or is it a common response in other situations in which group-related concerns are activated? A related question is whether different types of exclusion experiences (e.g., active vs. passive) would all result in an increase in mimicking the behaviors of others (see Molden, Lucas, Gardner, Dean, & Knowles, 2009, for an argument about why this might not be the case). In other words, because of its link to affiliation, is behavioral mimicry an effective response to any
type of group-related threat? There is some preliminary evidence that something as simple as feeling different from a group motivates behavioral mimicry (Uldall, Hall, & Chartrand, 2010), but this issue has not been fully explored. It is not yet clear whether and to what extent behavioral mimicry would address these types of perceived threats, or threats that result from different types of exclusion experiences.

Finally, one of the most important questions that has yet to be addressed concerns if and how the link between behavioral mimicry and social exclusion can be utilized to help people who experience rejection, particularly people like the socially anxious who seem to experience the consequences of rejection much more intensely (e.g., Oaten, Williams, Jones, & Zadro, 2008). This is a tricky topic. On the one hand, it seems that behavioral mimicry would be a simple and low-effort affiliative response to exclusion. It’s automatic, and therefore happens unintentionally and without expenditure of limited cognitive resources (Chartrand et al., 2005). On the other hand, it’s automatic. It is not clear the extent to which it can be taught, and if it can be taught, if it is as effective as when it happens spontaneously (but see Stel & Vonk, 2010). Given the fact that social exclusion is, at best, disheartening, and at worst, devastating, continuing to explore the link between nonconscious behavioral mimicry and rejection will be fruitful for both basic and applied reasons.
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