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Self-Monitoring Without Awareness: Using Mimicry as a Nonconscious Affiliation Strategy

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This research sought to extend the current conceptualization of self-monitoring by examining whether self-monitoring motives and behaviors can operate outside of conscious awareness. Two studies examined nonconscious mimicry among high and low self-monitors in situations varying in affiliative cues. Participants interacted with a confederate who shook her foot (Study 1) or touched her face (Study 2). In both studies, high self-monitors were more likely to mimic the confederate's subtle gestures when they believed the confederate to be a peer (Study 1) or someone superior to them (Study 2). Low self-monitors mimicked to the same degree across conditions. Thus, when the situation contains affiliative cues, high self-monitors use mimicry as a nonconscious strategy to get along with their interaction partner.

For decades, the idea that we imitate each other has intrigued researchers from diverse domains of study. When we converse with another individual, our accents and speech patterns tend to become synchronized (e.g., Cappella & Panalp, 1981). We also mimic the specific physical postures and mannerisms of our interaction partners (e.g., Bernieri, 1988; LaFrance, 1982; LaFrance & Broadbent, 1976). Even yawns and laughter have been shown to be contagious (e.g., Provine, 1986, 1992). In fact, some have argued that mimicry is an innate tendency (see Lakin, Jefferis, Cheng, & Chartrand, 2003). Supporting this claim, Meltzoff and Moore (1977) demonstrated that neonates smile, stick out their tongues, and open their mouths when they perceive someone else engaging in those behaviors. Thus, mimicry appears to be a prevalent phenomenon in our daily lives.

Recent research has unveiled the nonconscious and unintentional nature of behavioral mimicry. Chartrand and Bargh (1999, Experiment 1) had participants interact with a confederate who continuously engaged in face touching or foot shaking, and found that participants tended to mimic the corresponding gestures of their interaction partner. Of importance, postexperimental interviews confirmed that participants were oblivious to the confederates' subtle mannerisms during the interactions, and were all the more unaware of their own tendencies to mimic these mannerisms. Chartrand and Bargh (1999) called this phenomenon the "chameleon effect," because, like chameleons changing their skin color to match their environment, people change their behaviors and mannerisms to match those of their interaction partners.

Mimicry as a Social Glue

The idea that mimicry serves important social functions has also received much attention in recent years (e.g., Bernieri, 1988; Chartrand, Maddux, & Lakin, in press; Lakin & Chartrand, 2003; Lakin et al., 2003). For instance, research has demonstrated a strong relationship between rapport and mimicry, such that people who like each other mimic each other's postures and mannerisms more than those who do not like each other (Bernieri, 1988; LaFrance, 1982; LaFrance & Broadbent, 1976). However, this correlational work did not address the causal direction of this relationship. Does greater liking lead to more mimicry, or does mimicry lead to greater liking? To test the latter causal direction, Chartrand and Bargh (1999, Experiment 2) had participants interact with a confederate who either mimicked or did not mimic their postures and physical mannerisms. Compared with those who were not mimicked, participants who were mimicked by the confederate later reported that the confederate was more likable and that their interaction with the confederate went more smoothly. Thus, nonconscious mimicry appears to serve a facilitative function in social exchanges.

Now imagine a situation in which there is no existing rapport between two people but one of the individuals desires to affiliate with the other. Will the mere desire to affiliate lead to more mimicry? This would be considered controversial for two reasons. First, it would contradict the correlational research discussed above because the lack of existing rapport should be related to less mimicry. Second, it would suggest that mimicry is used as a nonconscious strategy to affiliate. The notion that individuals can

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have a strategy that they automatically use without conscious awareness and intent is counterintuitive. To test these ideas, Lakin and Chartrand (2003) examined whether having a goal to affiliate increases nonconscious behavioral mimicry. Participants either had a nonconscious affiliation goal, a conscious affiliation goal, or no goal while watching a "live feed of another participant in the next room" (actually a videotape of a confederate) who completed a series of clerical tasks while continuously touching her face. The researchers found that having a goal to get along with someone, regardless of whether it was a conscious or a nonconscious goal, led to an increase in mimicry (i.e., more face touching). In a second study, Lakin and Chartrand found that participants who had a goal to affiliate but failed to accomplish their goal were more likely to nonconsciously mimic another person in a subsequent task. This finding further demonstrates that nonconscious mimicry is used as a *strategy* for affiliation (i.e., a means to an end), rather than simply an expressive display.

The Role of Self-Monitoring in Nonconscious Mimicry

The construct of self-monitoring represents the difference in the extent to which individuals control the image they project in social settings (Snyder, 1974, 1979, 1987). According to self-monitoring theory, those high in self-monitoring are motivated and able to monitor and control their public images. These individuals are concerned with behaving in an appropriate manner as demanded by the social situation, and they therefore use available information in the environment to guide their own behavior. As a result, their behavior is highly variable across different settings. High self-monitors, at one point, were dubbed "social chameleons" (Snyder, 1974) for the way they change their "color" to adapt to different social environments.

By contrast, those low in self-monitoring are less concerned with adjusting to the social environment. These individuals tend to act in accordance with their inner attitudes, even if the situational norms dictate otherwise. Low self-monitors value "being themselves," and therefore tend to show a considerable amount of consistency in their behavior across different situations.

Since its inception, self-monitoring research has made substantial contributions to the understanding of human social behavior. Particularly relevant to our research is work on interpersonal relationships demonstrating that high and low self-monitors behave differently in their social interactions. For example, Ickes and Barnes (1977) demonstrated that during an unstructured interaction with a stranger, high self-monitors tended to take on an active role by initiating and directing the flow of conversations. Self-monitoring was also found to correlate positively with speaking in the second-person (e.g., "you") and negatively with the use of first-person singular pronouns (e.g., "I," "me"), suggesting that high self-monitors interact in an accommodative fashion (Ickes, Reidhead, & Patterson, 1986). Furthermore, high self-monitors have been shown to use affiliating strategies such as touching their interaction partners and reciprocating intimacy and self-disclosures (Riggio, Friedman, & DiMatteo, 1981; Shaffer, Smith, & Tomarelli, 1982). Indeed, self-monitoring has been found to correlate with performance on jobs that entail an arbitrating role (Caldwell & O'Reilly, 1982). In sum, high self-monitors take on the role of the social facilitator in interpersonal interactions and they strive to bolster social relationships—the precise outcome of nonconscious mimicry.

Situational Cues That Augment Mimicry for High Self-Monitors

We argue in this article that high self-monitors should show a greater tendency to engage in nonconscious mimicry when the social situation calls for affiliation. Self-monitoring has been found to consist of *other-directedness*, or attentiveness towards others, and *public performing*, or a change in behavior according to the situational demands (Briggs & Cheek, 1988). Thus, high self-monitors' other-orientation should "open the door" for mimicry; they should be chronically attentive to information in the social context that serves as relevant cues for affiliation (e.g., when their interaction partner is someone with whom it would be beneficial to affiliate). They would then use these affiliative cues to guide their own behavior. In other words, their public performing tendencies would explain why they might engage in mimicry. Moreover, for high self-monitors, an environment that is laden with affiliation cues should be highly associated with the motive to affiliate in memory. As a result, being in that environment should automatically trigger the goal to get along with their interaction partner, leading them to pursue that goal nonconsciously (Bargh, 1990; Chartrand & Bargh, 1996). On the basis of the evidence that having an affiliation goal increases mimicry (Lakin & Chartrand, 2003), high self-monitors may well use mimicry as a nonconscious affiliation strategy when the situation triggers an affiliation motive.

A Nonconscious Component of Self-Monitoring

In the self-monitoring literature, there is an unstated yet implicit assumption that self-monitoring is a conscious, deliberative process (see Snyder, 1974). In this research, we hope to contribute to the understanding of self-monitoring processes by directly exploring the notion that self-monitoring motives and behaviors can operate outside of conscious awareness.

The idea that self-monitoring can be nonconscious is also consistent with recent arguments made in the impression management literature that self-presentation consists of an automatic, nonconscious component (Leary, 1995; Paulhus, 1993; Schlenker & Pontari, 2000). For example, Schlenker and Pontari (2000) suggested that in the automatic, "background mode" of self-presentation, people respond to impression-relevant cues even though they may not be aware that the social environment and their self-presentation agendas can influence their behaviors. This parallels the current contention that high self-monitors, being social facilitators, are chronically responsive to affiliation cues in the environment, which then guide their behavior without their conscious awareness. Nonetheless, empirical evidence for nonconscious self-presentation remains scarce, and a nonconscious aspect of self-monitoring, in particular, has never been explicitly suggested or investigated.

In sum, the present research seeks to broaden the understanding of the self-monitoring construct by showing that the affiliation attempts of high self-monitors can be so automatized that they operate outside of conscious awareness and manifest themselves through nonconscious affiliation techniques (e.g., increased mimicry).

Study 1

Overview

In the current research, high and low self-monitors were placed in situations that were either affiliation relevant or not, and the amount of mimicry participants exhibited was measured. Study 1 examined the effects of interacting with individuals who either belonged to a peer group or did not. Introductory psychology students interacted with a female confederate whom they believed to be a high school student, a fellow introductory psychology (Psych 100) student, or a graduate student. The confederate was in fact always the same individual, and she was trained to subtly shake her foot throughout her interaction with the participant. Foot shaking has been used in past research as the gesture to be mimicked (e.g., Chartrand & Bargh, 1999).

People are more motivated to manage the impressions they make on another person when there is a possibility of a future interaction with that person (Danheiser & Graziano, 1982; Leary, 1995). To the participants, the fellow Psych 100 student represented someone with whom they could potentially be future classmates (and even friends), whereas the high school student and the graduate student represented two nonpeer control groups (whom they would presumably never see again). It was hypothesized that high self-monitors should automatically detect the affiliation cue present in the Psych 100 condition, and respond by mimicking the foot-shaking gestures of the Psych 100 student more than the high school student or the graduate student. Low self-monitors, however, should not show differential mimicry across the different situations. Moreover, within the Psych 100 condition, high self-monitors should display more mimicry than low self-monitors.

Method

Participants

Sixty-eight (40 women, 28 men, mean age = 19.01 years) introductory psychology students at the Ohio State University participated in this experiment in partial fulfillment of a course requirement. Participants were randomly assigned to one of three confederate conditions: Psych 100 student, high school student, or graduate student.

Apparatus and Materials

Laboratory room set-up. The laboratory room contained three chairs; one chair was reserved for the experimenter and the other two were designated for the participant and the confederate. The participant's chair and the confederate's chair were placed approximately 1.2 m apart, half-facing each other and half-facing the experimenter's chair. The interactions between the participants and the confederate were videotaped using four video cameras. Two of the cameras focused on the participant's face at different angles, a third camera provided a full body shot of the participant, and a fourth camera angled at the confederate. The cameras were hidden inside audio speakers mounted on the walls in the laboratory room, and were connected to videotaping equipment in the control room next door.

Photo description task. The interaction between the participant and the confederate involved a photo description task. Twelve color photographs selected from magazines such as *Life*, *Time*, and *National Geographic* were used for the experiment. The same photographs have been used in previous research (Lakin & Chartrand, 2003). The confederate was given the same 6 of the 12 photos in every session so that she could memorize a prepared script for those photos. The confederate was also trained to deliver her descriptions with natural hesitations such as pauses and "umms" to make her responses appear spontaneous. The photo description task gave the participant and the confederate the opportunity to interact with each other, but in a somewhat structured manner that avoided any disclosure of personal information.

Self-monitoring scale. Self-monitoring was assessed using the 18-item self-monitoring scale (Snyder & Gangestad, 1986). Sample items on the scale are "In different situations and with different people, I often act like very different persons" and "I find it hard to imitate the behavior of other people" (reverse-scored). Participants respond by indicating "true" or "false" to each item of the scale. Ten of the items are reverse-scored, and participants' self-monitoring scores are then computed by summing the number of true responses, with higher scores indicating higher levels of self-monitoring.

Procedure

Participants completed the experiment individually. A female experimenter brought the participant into the laboratory room and seated him or her in the participant's chair. The experimenter then explained that the experiment involved two people taking turns describing photographs, and that the researchers were interested in recruiting participants with different educational backgrounds for this study. She casually mentioned that the "other participant" (actually a confederate) was a high school student, a fellow Psych 100 student, or a graduate student, depending on the condition to which the participant had been randomly assigned. The female confederate was in fact always the same person. The experimenter then left the room for approximately 1 min, ostensibly to retrieve the "other participant" from the next room. During this 1-min period, the experimenter turned on the cameras from the control room to videotape the participant for a baseline measure of foot shaking—that is, the extent to which the participant was already shaking his or her foot before interacting with the confederate. After the 1-min baseline period, the experimenter brought the confederate (who was blind to the experimental condition) into the laboratory room and delivered the cover story. The cover story was taken from Chartrand and Bargh (1999). In brief, the experimenter explained that the purpose of the study was to pretest some photographs as potential stimuli for a new projective measure, and that the researchers are testing two people at a time to examine the effectiveness of a group format. Participants were told that researchers were interested in the ease of generating descriptions for the photos, and not in the actual descriptions of the photos per se. Thus, they were encouraged to discuss anything that came to mind about the photos.

The experimenter then gave the confederate her designated set of photos, and the participant the other set of photos. The confederate and the participant then took turns describing their photos until they completed all 12 photos. The experimenter always casually asked the confederate to begin first. The confederate described her photos adhering to a memorized script with natural hesitations. The confederate had her legs crossed, and shook her foot throughout the photo description task, which lasted approximately 5 min. The confederate was trained to shake her foot gently and to incorporate different kinds of foot-shaking movements (e.g., tapping, making circles with the tip of her foot) to make the gestures appear natural and inconspicuous. Following the photo description task, participants completed a questionnaire included to bolster the cover story. The questions generally asked participants about their experiences describing the photos during the interaction with the "other participant." Following the questionnaire, participants completed the self-monitoring scale.

The experimenter then verbally administered a funneled debriefing (Bargh & Chartrand, 2000), which contained questions that ranged from general to specific, designed to probe for suspicions about the experimental hypothesis. These questions were: (a) Are you wondering anything about this experiment, or do you have any questions about it? (b) What did you think this experiment was about? (c) Did any part of this experiment seem

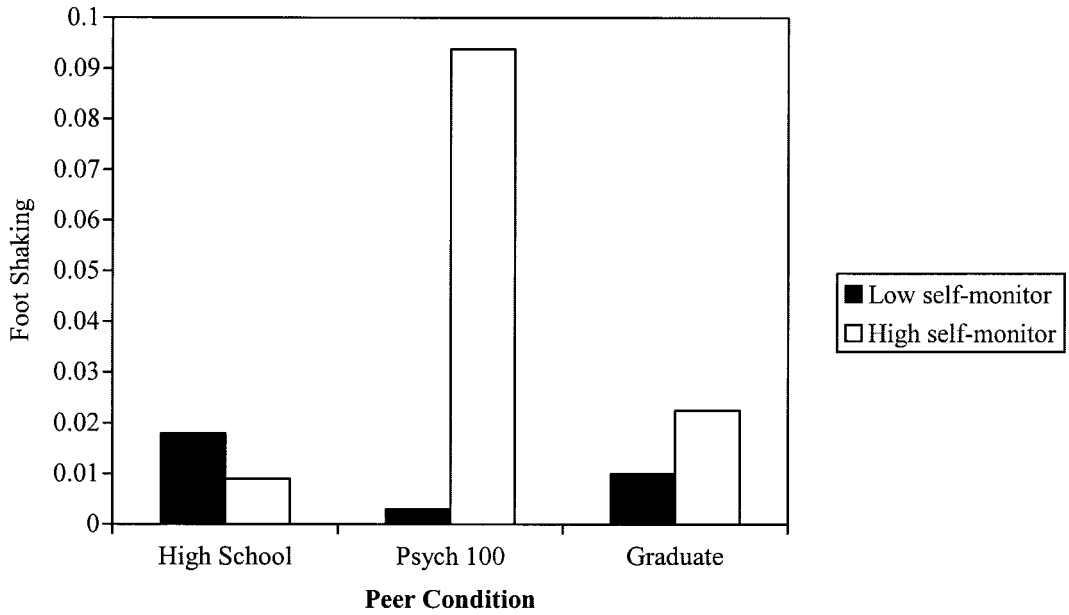

Figure 1. Mean proportion of time participants shook their feet, as a function of self-monitoring and peer condition. Psych 100 = introductory psychology.

strange to you, or were you suspicious of anything? (d) Did anything about the other participant's behavior seem strange to you? (If yes, how?). Finally, the experimenter asked participants to sign a video release form allowing use of their videotaped data, and fully debriefed and thanked them for their participation.

Results

Two independent coders who were blind to the participants' condition and the experimental hypotheses coded the videotapes for the amount of time participants spent shaking their feet. The interjudge reliabilities for foot shaking during the 1-min baseline and during the interaction were $r = .78$, $p < .001$, and $r = .51$, $p = .02$, respectively. Because the interactions between each participant and the confederate varied in length, the proportion of time participants shook their feet during the interaction (hereafter referred to as "foot shaking") and during the baseline (hereafter referred to as "baseline foot shaking") were computed by dividing the number of seconds spent foot shaking by the number of seconds of the actual interaction (for foot shaking) and the baseline (for baseline foot shaking). Baseline foot shaking was used in the analyses as a covariate.

A median split was conducted on the self-monitoring scores to place participants in either the high or low self-monitoring category.[1] Participants were categorized as high self-monitors if they scored 11 or greater on the 18-item self-monitoring scale, and as low self-monitors if they scored 10 or below. Planned contrasts were conducted to provide direct tests of our hypotheses.[2] To recapitulate, we hypothesized that (a) high self-monitors would mimic the Psych 100 student more than the high school student or the graduate student, whereas low self-monitors would not show differential mimicry across the different situations, and (b) within the Psych 100 condition, high self-monitors would mimic more than low self-monitors.

To test Hypothesis 1, contrasts were chosen such that comparisons could be made between the Psych 100 condition and the two control conditions (high school and graduate student conditions) for both high and low self-monitors. Thus, the high school student, Psych 100 student, and graduate student conditions were respectively assigned weights of –1, +2, and –1 for high self-monitors, and +1, −2, and +1 for low self-monitors. Results from this analysis, presented in Figure 1, revealed a significant planned contrast across the six conditions for this set of weights, $F(1, 61) = 4.64$, $p = .04$. As expected, high self-monitors shook their feet for a significantly larger proportion of time in the Psych 100 condition ($M = .09$) than they did in the high school student ($M = .01$) and

[1] A long-standing debate exists in the literature with regards to whether the self-monitoring construct should be treated as dichotomous (e.g., Gangestad & Snyder, 1985, 1991) or continuous (e.g., Finch & West, 1997; Miller & Thayer, 1989). Thus, data from both Studies 1 and 2 were also analyzed using a regression analysis. Although results from the regression analyses revealed somewhat weaker significance levels, the pattern of results was identical to those obtained with the analysis of covariance for both studies. Detailed analyses are available from the authors.

[2] We also conducted a 2 × 3 ANCOVA on foot shaking. Self-monitoring (high vs. low) and peer condition (high school student vs. Psych 100 student vs. graduate student) were the two between-participant variables, and baseline foot shaking was the covariate. Results indicated a significant main effect for baseline foot shaking, $F(1, 61) = 78.52$, $p < .0001$, indicating that baseline foot shaking predicted foot shaking during the interaction. The main effects for self-monitoring and peer condition were not significant ($ps > .20$), although a marginally significant Self-Monitoring × Peer Condition interaction was obtained, $F(2, 61) = 2.33$, $p = .11$. Because two of the three peer conditions were control groups, however, a global ANCOVA was not the most appropriate analysis to test whether the key condition (Psych 100 student) differed from the other two conditions (high school and graduate student).

the graduate student ($M = .02$) conditions, $F(1, 61) = 5.46$, $p = .02$. Low self-monitors, however, did not show significant differences in the amount they shook their feet across the Psych 100 student ($M = .003$), the high school student ($M = .02$), and the graduate student ($M = .02$) conditions ($F < 1$).

To test Hypothesis 2, a planned contrast comparing high and low self-monitors was conducted within the Psych 100 condition by assigning weights of +1 to high self-monitors and –1 to low self-monitors (and zeros for all other conditions). Results showed that there was a significant difference between high and low self-monitors, $F(1, 61) = 5.34$, $p = .02$. High self-monitors shook their feet significantly more ($M = .09$) than did low self-monitors ($M = .003$).

Discussion

Study 1 tested the hypothesis that the environment can automatically activate motives and strategies used by high self-monitors. This study also sought to contribute to the nonconscious mimicry literature by identifying an individual difference moderator of mimicry.

In Study 1, high and low self-monitors interacted with someone whom they thought was a peer (a fellow Psych 100 student) or not (a high school student or a graduate student). To participants, the fellow Psych 100 student represented a potential friend or future classmate, whereas the high school student and graduate student were people likely never to be encountered again. High self-monitors, who are chronically tuned to the environment, should automatically detect the affiliation cue present in the Psych 100 condition and attempt to get along with the fellow Psych 100 student by nonconsciously mimicking her mannerisms. As expected, high self-monitors were more likely to mimic the presumed fellow Psych 100 student than the high school student or the graduate student, and they were more likely than low self-monitors to mimic the fellow Psych 100 student.

Additionally, it was important to ensure that high self-monitors did not have a stronger conscious motive to affiliate with the confederate in the Psych 100 condition compared with the other conditions. Thus, one question was included in the questionnaire packet that asked participants to indicate, on a 7-point scale (1 = *definitely not*, 7 = *definitely*), the extent to which they would like to spend more time with the "other participant" to get to know him or her better. Participants' responses were subjected to planned contrast analyses. Results revealed no significant effects (Fs < 1). High self-monitors were not more likely to want to spend more time with the fellow Psych 100 student than the high school or graduate student, and within the Psych 100 condition, high and low self-monitors also did not differ in their desire to spend more time with the confederate. Thus, high self-monitors used mimicry as an automatic strategy to affiliate with the peer even though they did not have a conscious motive to do so.

There is, however, a potential alternative explanation for the findings in this study. It is possible that the greater mimicry found among high self-monitors when interacting with the fellow Psych 100 student was a result of paying more attention to the Psych 100 student than the high school or graduate student because the Psych 100 student was a more relevant guide for them to determine how to act appropriately. To rule out this alternative explanation, two open-ended questions in the questionnaire packet asked participants to describe the "other participant's" style of speech and physical style, and to explain if anything about their speech or physical style was unusual or stood out to them. These two questions were included as an index of the amount of attention participants paid to the confederate. Participants' responses were tallied for the number of relevant features they mentioned. Planned contrasts were conducted and no significant effects were found (Fs < 1). Thus, high and low self-monitors paid similar attention to the confederate, regardless of her presumed educational level. In sum, there is substantial evidence that the mimicry effects found in Study 1 were not a result of having a conscious goal to affiliate or devoting more attention to a relevant social guide. In addition, none of the participants mentioned noticing the confederate's foot-shaking mannerisms in the open-ended questions, which provides further evidence that they did not mimic those gestures consciously.

We have argued that high self-monitors use nonconscious mimicry as a tool to affiliate with others when relevant affiliation cues are present. However, an alternative interpretation for the current findings is that high self-monitors may simply be using mimicry to express liking for their interaction partner. Conceivably, high self-monitors liked the fellow Psych 100 student more than the high school student or graduate student, and mimicked those they favored more as a way to show their liking for them. Thus, rather than using mimicry instrumentally as a nonconscious affiliation strategy, high self-monitors may simply be using it expressively as a display of fondness. To test whether high and low self-monitors differed in their liking for the confederate, one question in the questionnaire packet asked participants to rate the likeableness of the "other participant," on a 7-point scale (1 = *extremely dislikeable*, 7 = *extremely likeable*). Planned contrast analyses revealed no significant effects ($p > .22$). That is, high self-monitors were not more likely to give higher likeability ratings for the fellow Psych 100 student than the high school or graduate student, and within the Psych 100 condition, high and low self-monitors also did not differ in how much they liked the confederate. Thus, the greater mimicry that high self-monitors engaged in was not due to better liking for the fellow Psych 100 student. Indeed, Lakin and Chartrand's (2003, Experiment 2) finding that participants used mimicry to achieve an unfulfilled affiliation goal further supports our contention that nonconscious mimicry is an instrumental strategy rather than simply an expressive display.

Study 2

Overview

Study 2 explored another type of affiliation-relevant situation—namely, when one's outcome is dependent on another person. In Study 1, although there were presumed differences in educational background, the participants and the confederate were equal with respect to the roles they played in the experiment (i.e., as participants in a psychology study). Past research has found that people are motivated to self-present and ingratiate with a superior other (e.g., Kowalski & Leary, 1990; Stires & Jones, 1969). Thus, in a situation where a power differential exists between the participants and the confederate, high self-monitors should again be more likely than low self-monitors to detect the affiliation cue (i.e., interacting with someone in a position of power). As in Study 1,

individual participants interacted with a female confederate in a photo description task. Prior to the photo description task, the experimenter explained that a second task would involve a leader and a worker, and randomly assigned the roles for the participant and the confederate. Then the participant and the confederate engaged in the photo description task, during which the confederate touched her face continuously. As in previous research (Chartrand & Bargh, 1999; Lakin & Chartrand, 2003), face touching was used as the dependent variable in this study to generalize to different mimicking behaviors. Participants' self-monitoring was again assessed using the 18-item self-monitoring scale (Snyder & Gangestad, 1986). It was hypothesized that high self-monitors would mimic more when they were assigned the worker role (with the confederate being their leader in the later task) than when they were assigned the leader role. By contrast, low self-monitors should not differ in the amount they mimic across the different conditions, and they should mimic less than high self-monitors when they were assigned the worker role.

Method

Participants

Participants were 53 introductory psychology students (35 women, 18 men, mean age = 19.77 years) who took part in the experiment in exchange for partial course credit. Data from several participants were excluded from the analysis for the following reasons: Video data from 5 participants could not be obtained because of equipment malfunction; video data from 1 participant could not be coded because the participant's seating posture did not allow coders to see his face on the tape; 4 participants had guessed that the confederate was not a real participant; 3 participants indicated that they did not remember whether they had been assigned the role of leader or worker when probed at the end of the experiment. This resulted in a final sample of 41 participants (28 women, 13 men, mean age = 19.44 years). Participants were randomly assigned to the worker or the leader condition.

Apparatus and Materials

The laboratory room set-up was identical to that used in Study 1. The same color photographs from Study 1 were also used in this experiment. Participants' self-monitoring was once again assessed using the 18-item self-monitoring scale.

Procedure

Participants took part in the experiment individually. A male experimenter brought the participant into the laboratory room and seated him or her in the participant's chair. The experimenter then left the laboratory room, ostensibly to look for the "other participant," and turned on the video cameras from the control room to record a baseline measure of face touching by the participant. After the 1-min baseline period, the experimenter reentered the laboratory room with the confederate and seated her in the confederate's chair.

He described the experiment as two short studies, with the first one being a photo description task. He then explained, "In the second experiment, you will be completing some problem-solving tasks. It involves a leader and a worker, and the leader will be choosing tasks for the worker to work on, and the strategy that the worker will use to complete that task." Gesturing to the participant, the experimenter told them they would be the leader (for participants in the leader condition) or the worker (for participants in the worker condition), and assigned the other role to the confederate. (The "second task," in fact, never took place.)

The experimenter then delivered the cover story for the first (i.e., photo description) task. The cover story was the same as the one used in Study 1, with the exception that the experimenter said that the photos were being pretested for a future experiment (rather than for a projective measure) to shorten the total length of the instructions.

The confederate and participant then engaged in the photo description task, with the confederate always first to begin. The confederate touched her face throughout the entire interaction, which lasted approximately 5 min. The confederate was, again, trained to touch her face subtly and to use a variety of face-touching gestures.

Following the photo description task, the experimenter asked the confederate to leave with him, allegedly to give each participant some privacy in completing the next set of questionnaires. Participants again completed a questionnaire containing (a) filler questions regarding their experience in the photo description task, (b) the same three questions from Study 1 that were used to rule out alternative explanations, and (c) the self-monitoring scale.

The experimenter then administered the funneled debriefing, identical to the one used in Study 1. Finally, participants were asked to sign a video release form permitting use of their videotaped data, and were fully debriefed and thanked for their participation.

Results

Independent coders blind to the participants' condition and the experimental hypotheses coded the videotapes for the amount of time participants touched their faces. The interjudge reliabilities for face touching during the 1-min baseline and during the interaction were $r = .68$, $p < .01$, and $r = .76$, $p < .01$, respectively. Once again, the proportion of time participants touched their faces during the interaction (hereafter, "face touching") and during the baseline (hereafter, "baseline face touching") were calculated by dividing the number of seconds spent face touching by the number of seconds of the interaction. Again, on the basis of a median split, participants who scored 10 or above on the 18-item self-monitoring scale were classified as high self-monitors, and those who scored 9 or below were classified as low self-monitors.

A 2 (high vs. low self-monitoring) × 2 (worker vs. leader) analysis of covariance (ANCOVA) was conducted using face touching as the dependent measure and baseline face touching as the covariate. Results are depicted in Figure 2 and revealed a marginally significant Self-Monitoring × Role Assigned interaction, $F(1, 36) = 3.45$, $p = .07$. Simple effect analyses indicated that high self-monitors spent a larger proportion of the interaction time mimicking when they were the worker ($M = .12$) than when they were the leader ($M = .06$), $F(1, 36) = 3.96$, $p = .05$. Low self-monitors did not show significant differences in the amount they mimicked, regardless of whether they had been assigned to be the worker ($M = .07$) or the leader ($M = .08$; $F < 1$). Within the worker condition, there was a marginally significant difference between high and low self-monitors, such that high self-monitors mimicked more than did low self-monitors, $F(1, 36) = 3.24$, $p = .08$.

Discussion

Study 2 sought to demonstrate that high and low self-monitors behave differently at a nonconscious level when interacting with a "superior." High and low self-monitors interacted with someone who would later have more or less power than they would. When participants were assigned the role of the "worker" in this exper-

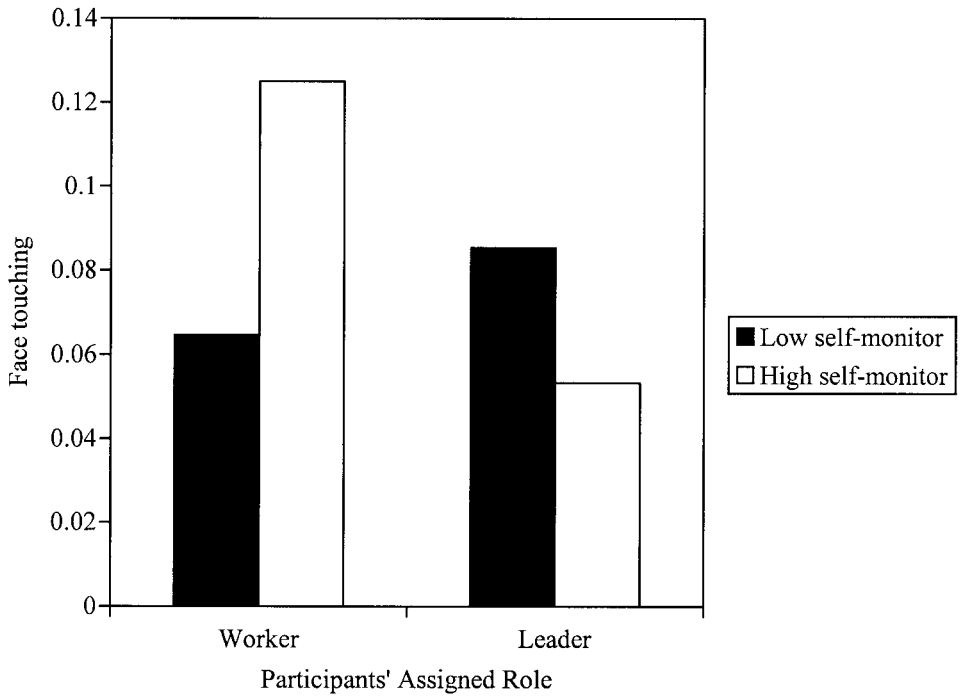

Figure 2. Mean proportion of time participants touched their faces, as a function of self-monitoring and role assigned.

iment, the confederate would later have direct power over them. This situation should activate an affiliation motive among high but not low self-monitors, thereby leading high self-monitors to mimic more than if they had been assigned the "leader" role. Indeed, results indicated that high self-monitors mimicked more when they assigned the worker role than when they were assigned the leader role, whereas low self-monitors did not show significant differences in mimicry as a function of their status in the purported later task.

As in Study 1, participants were asked to indicate, on a 7-point scale (1 = *definitely not*, 7 = *definitely*), how much they would like to spend more time with the "other participant" to get to know him or her better. A 2 (high vs. low self-monitoring) × 2 (worker vs. leader) analysis of variance (ANOVA) was conducted and no significant main effects or interactions were found (Fs < 1.06). Participants were also asked to describe the confederate's speech and physical styles, and their responses were coded for the number of relevant features mentioned. Again, a 2 × 2 ANOVA revealed no significant main effects or interactions (Fs < 1). Moreover, none of the participants noticed the confederate's face-touching gestures. Finally, participants also rated the confederate's likeableness, and a 2 × 2 ANOVA yielded no significant main effects or interactions (Fs < 1). Thus, results from Study 2 demonstrated that high self-monitors were more likely to mimic the leader than the worker even though they did not have a conscious motive to get along with the leader, did not pay more attention to her, and did not show greater liking for the more powerful other.

Taken together, Studies 1 and 2 provide the first empirical evidence that self-monitoring can be manifested nonconsciously, in this case through nonconscious mimicry, when the situation contains affiliation cues.

General Discussion

The construct of self-monitoring has exerted a strong influence on the field of social psychology. Since its inception almost three decades ago (Snyder, 1974), researchers have studied the application and consequences of self-monitoring in a vast variety of research areas, advancing our understanding of topics such as interpersonal orientations (e.g., Jones & Baumeister, 1976), romantic relationships (e.g., Snyder & Simpson, 1984), attitudes and persuasion (e.g., Snyder & Tanke, 1976), and consumer psychology (e.g., DeBono & Snyder, 1989). Given this extensive research program, it is somewhat surprising that the automatic features of self-monitoring have previously not been explored. In this research, we sought to expand the understanding of self-monitoring even further by examining one potential means by which self-monitoring can guide one's nonconscious behavior.

In the current research we have argued that people high in self-monitoring, who are contextually guided to a large degree, can be extremely well-practiced in identifying affiliation cues in the social environment, and in using means of affiliation in these situations. Consequently, the entire sequence of affiliation, from the relevant social environment to the very act of affiliation, has become automatic and nonconscious for high self-monitors over time.

In two studies we tested and found that high self-monitors mimicked a peer more than a nonpeer (Study 1), and mimicked someone with relatively more power more than another with relatively less power (Study 2). We also found that mimicry was not a result of having a conscious affiliation goal, having paid more attention to the target of mimicry, or displaying greater liking. Thus, when high self-monitors encountered a situation that

contained affiliation cues, they were more likely to use mimicry as a nonconscious strategy to get along with their interaction partner. Those same social situations did not lead to more mimicry among low self-monitors. Our finding that high self-monitors nonconsciously affiliated with the person who could be of value to them is also consistent with the idea that high self-monitors tend to have "friendships of utility" rather than "friendships of pleasure" (Snyder, 1987). Whereas past research has shown that high self-monitors are apt at facilitating social interactions (e.g., Ickes & Barnes, 1977; Ickes et al., 1986; Riggio et al., 1981; Shaffer et al., 1982), the current research is the first to demonstrate that they do so even at a nonconscious level.

Furthermore, results from Study 2 provide suggestive evidence for the idea that high self-monitors may be status oriented (Gangestad & Snyder, 2000). In their comprehensive reexamination of the self-monitoring literature, Gangestad and Snyder (2000) proposed that high self-monitors may be particularly concerned with status negotiation and status enhancement in their social exchanges. Although the current research was not designed to examine these potential attributes of high self-monitors, the findings in Study 2 suggest that high self-monitors are indeed sensitive to information about relative status and act accordingly as a result.

Are High Self-Monitors More Liked by Interaction Partners?

Previous research has found that mimickers are better liked than nonmimickers (Chartrand & Bargh, 1999; Lakin & Chartrand, 2003). Coupled with our finding that self-monitors mimic more in certain situations, the implication seems to be that high self-monitors should be better liked by the people they mimic (e.g., a peer or a superior other) than low self-monitors. However, we would caution against jumping to such a conclusion. First, we are unaware of any evidence suggesting that high self-monitors are better liked than low self-monitors. Second, it is important to note that mimicry is simply one of many strategies for affiliation, and low self-monitors may have different ways of developing their interpersonal relationships compared with high self-monitors. Previous work has shown that high and low self-monitors experience qualitatively different relationships with others (Snyder & Smith, 1986): High self-monitors tend to be involved in more casual dating relationships and spur-of-the-moment friendships that are compartmentalized into different activities (i.e., they have different friends in different situations). Low self-monitors, by contrast, tend to have more enduring romantic relationships and friendships characterized by commitment, closeness, and nurturance. Thus, rather than using quick affiliation strategies, low self-monitors may prefer to affiliate with someone by spending time to learn about them and by letting others learn about their true selves. In addition, different affiliation strategies may also be differentially effective for high and low self-monitors. Research has found that high self-monitors tend to be better friends with other high self-monitors, whereas low self-monitors are better friends with other low self-monitors (Snyder, 1974; Snyder & Smith, 1986), suggesting that high and low self-monitors may be responding to the types of affiliation strategies that they would adopt themselves.

Implications and Future Directions

As noted above, the major contribution of the current research was the finding that self-monitoring is not necessarily a conscious and deliberate process. Certain aspects of self-monitoring can become so well-learned that they manifest themselves automatically on encountering the appropriate situation. Thus, the current findings broaden the understanding of the self-monitoring construct, and open up further questions with regards to the nonconsciousness of self-monitoring.

For example, it seems highly probable that self-monitoring can affect behavior nonconsciously in other contexts as well. Recent research has begun to examine the notion that high and low self-monitors may differ in the extent to which their behavior is affected by stereotype priming (DeMarree, Wheeler, & Petty, 2003). According to Wheeler and Petty (2001), stereotype priming may selectively activate a part of the self-concept (i.e., a possible self, see Markus & Nurius, 1986) that is semantically related to that stereotype, and the activated possible self, in turn, serves to guide subsequent behavior. In the case of self-monitoring, whereas high self-monitors tend to adjust their behaviors according to available social cues, the behaviors of low self-monitors tend to be driven by their inner feelings and attitudes (Snyder, 1974). Thus, to the extent that primed stereotypes overlap with their self-concept, one would expect the effects of stereotype priming on behavior to be stronger for low self-monitors than for high self-monitors (DeMarree et al., 2003).

This research also contributes to the nonconscious mimicry literature by identifying an important individual difference moderator of mimicry. On the basis of the findings from this research, several predictions can be made about other potential individual difference and situational variables as moderators of mimicry. For instance, people are more likely to look to others for information and direction when they feel uncertain about how to act or respond in a particular situation (Asch, 1956; Sherif, 1966). Conceivably, then, individuals who are causally uncertain (Weary & Edwards, 1990) or self-doubtful (Oleson, Poehlmann, Yost, Lynch, & Arkin, 2000) may display more mimicry when they interact with an individual who would likely possess more information, such as a teacher or a mentor.

Yet another potential avenue for future research is to examine gender differences in mimicry. Theorists have long argued that females are socialized to have a greater need for interdependence and social harmony than do males (e.g., Eagly, 1987). This indicates that females may be more likely than males to engage in mimicry during social interactions.

Finally, although this research focused on high self-monitors, one might wonder if low self-monitors would exhibit more mimicry under certain conditions. Although high self-monitors are interested in affiliation in a wide variety of situations, Gangestad and Snyder (2000) have suggested that unlike their high self-monitoring counterparts, low self-monitors may be particularly invested in close relationships. Thus, whereas high self-monitors find a wide variety of circumstances to be affiliation relevant, low self-monitors may be motivated to bolster their interactions only with close others, such as their friends, family, or romantic partners. Mimicry may be more evident among low self-monitors in those situations. In addition, when feeling depressed, low self-monitors are more likely than high self-monitors to use affiliation

as a coping strategy (Snyder & Smith, 1985, cited in Snyder, 1987). Thus, one might expect low self-monitors to mimic more than high self-monitors when they are in a negative mood.

Conclusions

In conclusion, the current research sheds light on both the self-monitoring and the nonconscious mimicry (or the "chameleon effect") literatures. High self-monitors are, indeed, "social chameleons": Not only are they like chameleons for the way they alter their behavior to match that of others, but they are also chameleons of a social breed, for they are particularly likely to mimic when affiliation is desired.

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