



FlashReport

The tongue-tied chameleon: The role of nonconscious mimicry in the behavioral confirmation process



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HIGHLIGHTS

- Interviewer tone was manipulated and applicant tone and performance were measured.
- Mimicry of tone of voice information occurred during a dyadic interaction.
- Performance suffered for applicants with a negative-toned interviewer.
- The effect of interviewer tone on applicant performance was mediated by tone mimicry.
- Behavioral confirmation may occur through the process of nonconscious mimicry.

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ABSTRACT

The current study examines whether mimicry of negative behaviors occurs in ongoing social interactions, and whether mimicry may be a process through which one person's negative expectations lead to another person's expectancy-consistent behaviors. Using a simulated phone interview, applicant participants heard questions from an interviewer in either a neutral or negative tone of voice. Audio-recordings of applicant responses were transcribed to remove all tone information, and coders assessed applicant performance. Audio-recordings were subjected to a low-pass filter to remove recognizable words but retain vocal tone, and different coders assessed applicant tone of voice. Evidence of both behavioral mimicry and expectancy-consistent performance was found. Importantly, interviewer tone had a significant indirect effect on applicant performance through its influence on applicant tone. Nonconscious behavioral mimicry of negative behaviors occurs in social interactions, is not always associated with positive outcomes, and serves as a process through which behavioral confirmation can occur.

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People's behaviors are intertwined during social interactions. For example, nonverbal behaviors may be unwittingly imitated due to nonconscious behavioral mimicry (Chartrand & Bargh, 1999), or expectations may be communicated through nonverbal behaviors and elicit expectancy-consistent performance through behavioral confirmation (Snyder, 1992). In the current research, we propose that these processes are intimately connected. Specifically, a perceiver's negative expectancy-driven behavior may be inadvertently mimicked by a target, leading to behavioral confirmation.

Nonconscious mimicry

Nonconscious mimicry occurs when a target inadvertently reciprocates a perceiver's behavior with an identical or similar behavior. Mimicry of neutral and positive behaviors occurs regularly (Chartrand & Lakin, 2013; Lakin, 2013), but less research has explored whether negative nonverbal behaviors are mimicked, particularly those that occur during ongoing social interactions. People mimic angry facial expressions at a muscular level when they are exposed to pictures of them (e.g., Dimberg, Thunberg, & Elmehed, 2000) and imitate a negative tone of voice when repeating text they heard in a negative tone (Neumann & Strack, 2000). However, negative facial expressions (e.g., frowns and anger expressions) are mimicked less than other facial expressions when watching videotapes (Estow, Jamieson, & Yates, 2007) or not at all in dyadic interactions (Hess & Bourgeois, 2010). People may even implicitly understand that mimicking the negative behaviors of others in social interactions is problematic (as evidenced by their negative evaluations of someone who does; Kavanagh, Suhler,

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Churchland, & Winkielman, 2011). Therefore, one question the current research explores is whether people mimic negative nonverbal behaviors that occur during ongoing social interactions. Some research suggests that this might occur, but social interactions involve demands and self-presentational goals that may inhibit mimicry of negative behaviors (Johnston, 2002).

A provocative second question that is explored in this research is whether mimicry of negative behaviors in expectancy-tinged social interactions can lead to negative consequences. Mimicry of neutral and positive behaviors typically has positive consequences (e.g., Lakin, Chartrand, & Arkin, 2008; van Baaren, Holland, Kawakami, & van Knippenberg, 2004; although see Stel, van Dijk, & Olivier, 2009, and Stel et al., 2010, for counterexamples), but mimicry of expectancy-tinged negative behaviors may have adverse consequences. The goal to affiliate is a strong motivator of mimicry behavior (Lakin & Chartrand, 2003). Thus, in interactions where affiliation needs are salient (e.g., interview situations), it is possible that people will mimic their partner's behaviors even if that mimicry may not be in their best interests (see Leander, Chartrand, & Wood, 2011, for a conceptually related idea using a paradigm where participants themselves were mimicked and conformed to self-stereotypes).

Behavioral confirmation

The self-fulfilling prophecy has been demonstrated in various interactions (Neuberg, 1989; Reich, 2004; Rosenthal & Jacobson, 1968) and may occur without perceivers' or targets' awareness or intention (Chen & Bargh, 1997; Snyder & Stukas, 2007). It occurs when perceivers form expectations about interaction partners, treat their targets in expectancy-congruent ways, and targets unwittingly behave in ways that confirm perceivers' expectations (Darley & Fazio, 1980; Miller & Turnbull, 1986).

Perceivers elicit expectancy-consistent behavior from targets by varying affective climate, effort expended, feedback, and opportunities to respond (Rosenthal, 1994, 2002). Consequently, expectancy mediation research has documented overt and subtle perceiver behaviors (step 2) that mediate the effects of perceivers' expectancies (step 1) on targets' performances (step 3). For example, negative perceiver expectancies lead to negative tone of voice (Blanck & Rosenthal, 1984), reduced warmth (Snyder, Tanke, & Berscheid, 1977), and increased interpersonal distance (Word, Zanna, & Cooper, 1974), which in turn affect target performance.

Mediation of expectancy effects is still an active research question (Jussim & Harber, 2005). In our view, the most interesting theoretical gap may lie *between* the second and third steps of the behavioral confirmation process: the path through which perceivers' biased behaviors elicit expectancy-consistent target behaviors. There are two known processes through which this may occur, and we propose a third. First, perceivers' behaviors impose situational constraints and targets offer situationally constrained responses (Neuberg, 1989). Second, perceivers' behaviors are interpreted consciously by targets, and targets decide consciously to respond in kind (Darley & Fazio, 1980). A third possibility is that perceivers' expectancy-congruent behaviors are perceived by targets, who then unknowingly engage in identical behaviors through the automatic process of behavioral mimicry. Engagement in mimicry has not been examined as a mediator of behavioral confirmation, despite its compatibility with the commonly accepted notion that targets "unwittingly" alter their behavior in response to perceivers' behaviors.

Nonconscious behavioral mimicry as a vehicle for behavioral confirmation

When perceivers hold negative expectations for targets, the nonverbal behaviors they display reflect that negativity (Snyder & Stukas, 2007). Targets may perceive and inadvertently mimic those behaviors.

The negative behaviors displayed by the targets may then confirm the perceivers' negative expectations. Thus, mimicry may be a process through which perceivers' expectancy-congruent behaviors elicit targets' expectancy-confirming performance. This study investigates this possibility.

Specifically, we examine whether mimicry of negative behaviors occurs in a social interaction, the consequences of mimicking a negative behavior, and whether mimicry explains how perceivers' expectancy-congruent behaviors elicit expectancy-confirming behaviors from targets. In a simulated phone interview (Neuberg, 1989; Reich, 2004), participants applied for a hypothetical job. Similar to Word et al. (1974), we manipulated interviewers' expectancy-relevant behaviors rather than expectancies by asking participants scripted questions delivered in a negative or neutral tone of voice. Participants' answers were recorded and coded. Manipulation of perceivers' expectancy-relevant behaviors allowed us to control the behaviors available to be mimicked by targets, follow procedures typically used in mimicry studies, and clearly test our hypotheses about mediation.

We predicted that applicants who heard negatively toned questions would perform worse and use a more negative tone of voice than would applicants who heard neutrally toned questions. Additionally, the relationship between interviewer tone of voice and applicants' performance should be mediated by applicants' tone of voice. Applicants should shift their tone to match the interviewer's tone, and this shift should account for the effects of interviewer tone on applicants' overall interview performance.

Methods

Participants

Fifty-four undergraduates participated for course credit. To control for potential sex effects (Karremans & Verwijmeren, 2008), only women participated.

Procedure

Pilot study

To validate the tone manipulation, each recorded question was rated by 15 participants on the dimensions of enthusiastic/bored, positive/negative, and warm/cold, using 7-point scales. All items showed a similar and significant pattern. On three-item indices (Cronbach's $\alpha = .96$, neutral; .98, negative), participants rated the negative-tone questions ($M = 5.02$, $SD = .86$) as more negative, more cold, and less enthusiastic than the neutral-tone questions ($M = 3.51$, $SD = .72$), $t(14) = 11.93$, $p < .001$, $d = 1.9$. Speech rate did not differ between conditions.

Main study

Participants completed a short questionnaire about job-relevant experiences in a cubicle with a computer and phone. They were asked to present this information before the interview, which would help the interviewer select questions. To motivate performance, the experimenter explained that the best applicant would receive \$50 rather than being "hired." Participants then read a job description for a student manager position at a campus travel agency and prepared for 10 minutes.

An initial neutral-tone audio file prompted participants to begin their introductory speech, which served as baseline data for tone of voice and qualifications and a source to which participants could attribute the treatment they received from the interviewer. The experimenter then played the recorded questions, adding appropriate pauses, coughing, and breathing sounds to enhance realism. Participants were randomly assigned to hear the same female interviewer ask the same 11 questions in either a neutral or negative tone of voice. Following the interview, participants completed another questionnaire and were funnel debriefed.

Dependent measures

Applicant motivation, perceived expectations, and comfort level

To ensure equivalent motivation to affiliate, participants indicated the extent to which they were trying to get along, have a smooth interaction, and get the interviewer to like them. To ensure that interviewer tone conveyed expectations, applicants indicated how well they thought their interviewer expected them to do. Applicants also indicated how comfortable, nervous, and self-conscious they felt during the interview.

Applicant performance

Using 9-point scales, two teams of three coders rated applicants' performance. One team listened to applicants' audio-recorded responses. To remove all tone of voice information from the responses, a second team read their transcribed responses. For a baseline measure of qualifications, coders rated applicants' introductory speeches on six specific job-related dimensions (e.g., interpersonal skills) and two general measures (e.g., expected performance). For an interview performance measure, coders rated applicants' responses to the interview questions on 15 specific job-related dimensions and four general measures (e.g., likelihood of hiring). Composite scores reflecting qualifications and interview performance were created. For each composite, an index of each coder's specific and general performance ratings was created ($r_s = .82-.98$, audio; $.81-.99$, transcribed). Then coders' indexes were averaged (Cronbach's $\alpha = .74-.85$, audio; $.65-.80$, transcribed).

Applicant tone of voice

A third team of coders rated applicants' tone of voice. To remove all content-related information, applicants' responses were put through a low pass filter using PRAAT software (Version, 4.6; Boersma & Weenink, 2013). Low-pass filtering removes all recognizable words but retains vocal tone information; the resulting audio files sound like hearing a conversation through a thick wall. Applicants' introductory speeches and interview responses were coded on the dimensions of cold/warm, monotone/varied, bored/enthusiastic, disinterested/interested, and negative/positive. Composite scores reflecting introductory speech tone and interview tone were created. For each composite, an index of each coder's tone ratings was created ($r_s = .70-.94$). Then coders' indexes were averaged ($\alpha = .66, .69$).

Results

Preliminary analyses

During the funnel debriefing, no participants reported awareness that they mimicked their interviewer's tone. However, four participants in the negative-tone condition indicated suspicion about the hypotheses. Their data were omitted, leaving 25 participants per condition.

There was no difference between conditions in the time participants spent talking during the interview ($M = 377.80$ s, $SD = 132.74$ s), $t(48) = -.95$, $p = .346$, $d = .27$, or in their motivation to affiliate, $t(48) = -1.61$, $p = .115$, $d = .46$. Most participants in the negative-tone (86%) and neutral-tone (87%) conditions correctly identified their condition when asked explicitly during the debriefing. Participants also believed that their interviewers had more negative expectations about them in the negative-tone condition ($M = 4.32$, $SD = 2.25$) than in the neutral-tone condition ($M = 6.16$, $SD = 1.31$), $t(48) = -3.53$, $p = .001$, $d = 1.00$. When asked to rate their experience during the interview, participants in the negative-tone condition did not differ from those in the neutral-tone condition in how comfortable they felt, $t(48) = -.951$, $p = .347$, $d = .03$, how nervous they felt, $t(48) = .164$, $p = .870$, $d = .05$, or how self-conscious they felt, $t(48) = .810$, $p = .422$, $d = .23$. Thus, participants did not appear to respond with panic or greater nervousness when confronted with a negative-tone interviewer.

Participants' tone of voice in the introductory speech did not differ between the negative-tone and neutral-tone conditions, $t(48) = -1.43$, $p = .158$, $d = .40$, nor did their qualifications, $t(48) = -0.053$, $p = .958$, $d = .01$ for audio, $t(48) = -0.676$, $p = .502$, $d = .19$ for transcribed. Measures of pre-interview tone and qualifications clearly measured separate constructs, sharing 3% of their variance using the transcription-based measure, $r(50) = .191$, $p = .184$, and 18% using the audio-based measure, $r(50) = .430$, $p = .002$.

Primary analyses

We predicted that participants' performances would be worse in the negative-tone condition. We first examined the performance measures based on coders who listened to audio-recordings. After controlling for baseline qualifications, $F(1,47) = 13.55$, $p = .001$, partial $\eta^2 = 0.22$, applicants with negative-tone interviewers performed worse ($M = 6.02$, $SD = 0.91$) than did those with neutral-tone interviewers ($M = 6.45$, $SD = .54$), $F(1,47) = 5.11$, $p = .028$, $d = 0.33$. We then examined the transcription-based performance measures and found a similar effect; this effect did not reach a conventional significance level, but showed a stronger effect size. After controlling for baseline transcribed qualifications, $F(1,47) = 19.91$, $p < .001$, partial $\eta^2 = 0.30$, applicants with negative-tone interviewers performed marginally worse ($M = 5.09$, $SD = 0.98$) than did those with neutral-tone interviewers ($M = 5.54$, $SD = 0.78$), $F(1,47) = 2.82$, $p = .100$, $d = 0.51$. Because pre-interview qualifications did not differ, the pattern across these measures suggests that applicants' performance was affected by the interviewer's tone.

We also predicted that participants would mimic the interviewer's tone of voice. After controlling for baseline tone, $F(47) = 35.76$, $p < .001$, partial $\eta^2 = 0.43$, applicants with negative-toned interviewers responded to questions in a more negative tone ($M = 3.50$, $SD = 0.72$) than did those with neutral-tone interviewers ($M = 4.13$, $SD = .74$), $F(1,47) = 7.15$, $p = .010$, $d = 0.87$. Because tone of voice did not differ prior to the interview questions, applicants mimicked the interviewer's tone.

To examine whether the demonstrated effect of the interviewer's tone of voice on applicants' interview performance occurred indirectly through a shift in applicants' tone of voice, we used Preacher and Hayes (2008) bootstrapping procedure. We ran two models to separately examine the audio-based and transcription-based performance measures. Each model included the appropriate pre-interview qualifications and pre-interview tone measures as covariates. The bias-corrected bootstrap estimate of the indirect effect through applicant tone (.23 for audio, .20 for transcribed) was significant in both models, as the 95% confidence intervals did not contain zero (.051 to .518 for audio, .035 to .473 for transcribed). After accounting for the indirect effect through the mediator, the direct effect of interviewer tone on applicant performance was not significant ($b = .15$, $SE = .20$, $t(45) = 0.74$, $p = .463$ for audio; $b = .09$, $SE = .22$, $t(45) = 0.42$, $p = .677$ for transcribed). Thus, interviewer tone of voice affected applicants' performance indirectly through a shift in applicants' tone of voice (i.e., mimicry).

Discussion

This experiment demonstrated that participants in a simulated interview mimicked the negative tone of voice of an interviewer, that the interviewer's tone (manipulated to represent an expectancy-biased behavior) led to a self-fulfilling prophecy in terms of participants' performance, and that the effect of interviewer tone on applicant performance occurred through a shift in applicants' tone of voice. Therefore, tone-of-voice mimicry played a critical role in the behavioral confirmation process.

Theoretical implications

Behavioral mimicry

There are many examples of nonconscious mimicry's positive consequences (Chartrand & Lakin, 2013; Lakin, 2013). However, because researchers have focused almost exclusively on mimicry of positive and neutral behaviors (e.g., foot-shaking), it remained unclear whether people mimic negative behaviors in social interactions, and if so, whether the consequences would be adaptive. The current study demonstrates that people will mimic negative behaviors during social interactions, even when that mimicry causes negative outcomes (e.g., worse performance).

These findings are critically important to the mimicry literature because they necessitate a revision to the prevailing theoretical framework of behavioral mimicry as primarily adaptive (e.g., Lakin, Jefferis, Cheng, & Chartrand, 2003). Future research should investigate which types of negative behaviors are mimicked in social interactions, the circumstances under which negative mimicry occurs, and the potential consequences of that mimicry. At the very least, it is now clear that there is a darker side to behavioral mimicry. Perhaps mimicry processes underlie other detrimental interaction patterns as well, such as escalation of conflict in relationships.

Behavioral confirmation

The current study is also the first to demonstrate that nonconscious behavioral mimicry can serve as a process through which perceivers' expectancy-biased behaviors (step 2) lead targets to unwittingly alter their own behavior to display expectancy-consistent performance (step 3). Mimicry may act alone or in concert with additional mechanisms, such as situational constraints or deliberate reciprocation, to facilitate behavioral confirmation. Future research should further explore these and other mechanisms to fill the theoretical gap between the biased behaviors that communicate perceivers' expectations and the expectancy-confirming behaviors displayed by targets.

Conclusion

The current findings extend the range of mimicked behaviors within social interactions to encompass negative behavior. They also demonstrate that negative consequences will follow negative mimicry. Finally, they illuminate a new way in which a perceiver's subtle expectancy-congruent behaviors yield expectancy-consistent behaviors from targets. The current research therefore expands our understanding of both mimicry and behavioral confirmation and shows that these processes are intimately connected.

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References

- Blanck, P.D., & Rosenthal, R. (1984). Mediation of interpersonal expectancy effects: Counselor's tone of voice. *Journal of Educational Psychology*, 76, 418–426. <http://dx.doi.org/10.1037/0022-0663.76.3.418>.
- Chartrand, T.L., & Bargh, J.A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology*, 76, 893–910. <http://dx.doi.org/10.1037/0022-3514.76.6.893>.
- Chartrand, T.L., & Lakin, J.L. (2013). The antecedents and consequences of human behavioral mimicry. *Annual Review of Psychology*, 64, 285–308. <http://dx.doi.org/10.1146/annurev-psych-113011-143754>.

- Chen, M., & Bargh, J.A. (1997). Nonconscious behavioral confirmation processes: The self-fulfilling consequences of automatic stereotype activation. *Journal of Experimental Social Psychology*, 33, 541–560. <http://dx.doi.org/10.1006/jesp.1997.1329>.
- Darley, J.M., & Fazio, R.H. (1980). Expectancy confirmation processes arising in the social interaction sequence. *American Psychologist*, 35, 867–881. <http://dx.doi.org/10.1037/0003-066X.35.10.867>.
- Dimberg, U., Thunberg, M., & Elmehed, K. (2000). Unconscious facial reactions to emotional facial expressions. *Psychological Science*, 11, 86–89. <http://dx.doi.org/10.1111/1467-9280.00221>.
- Estow, S., Jamieson, J.P., & Yates, J.R. (2007). Self-monitoring and mimicry of positive and negative social behaviors. *Journal of Research in Personality*, 41, 425–433. <http://dx.doi.org/10.1016/j.jrjp.2006.05.003>.
- Hess, U., & Bourgeois, P. (2010). You smile—I smile: Emotion expression in social interaction. *Biological Psychology*, 84, 514–520. <http://dx.doi.org/10.1016/j.biopsycho.2009.11.001>.
- Johnston, L. (2002). Behavioral mimicry and stigmatization. *Social Cognition*, 20, 18–35. <http://dx.doi.org/10.1521/soco.20.1.18.20944>.
- Jussim, L., & Harber, K.D. (2005). Teacher expectations and self-fulfilling prophecies: Knowns and unknowns, resolved and unresolved controversies. *Personality and Social Psychology Review*, 9, 131–155. http://dx.doi.org/10.1207/s15327957pspr0902_3.
- Karremans, J.C., & Verwijmeren, T. (2008). Mimicking attractive opposite-sex others: The role of romantic relationship status. *Personality and Social Psychology Bulletin*, 34, 939–950.
- Kavanagh, L.C., Suhler, C.L., Churchland, P.S., & Winkielman, P. (2011). When it's an error to mirror: The surprising reputational costs of mimicry. *Psychological Science*, 22, 1274–1276. <http://dx.doi.org/10.1177/0956797611418678>.
- Lakin, J.L. (2013). Behavioral mimicry and interpersonal synchrony. In J.L. Hall, & M.L. Knapp (Eds.), *Handbook of Communication Science* (pp. 539–575). Berlin: De Gruyter Mouton.
- Lakin, J.L., & Chartrand, T.L. (2003). Using nonconscious behavioral mimicry to create affiliation and rapport. *Psychological Science*, 14, 334–339. <http://dx.doi.org/10.1111/1467-9280.14481>.
- Lakin, J.L., Chartrand, T.L., & Arkin, R.M. (2008). I am too just like you: The effects of ostracism on nonconscious behavioral mimicry. *Psychological Science*, 19, 816–822. <http://dx.doi.org/10.1111/j.1467-9280.2008.02162.x>.
- Lakin, J.L., Jefferis, V.E., Cheng, C.M., & Chartrand, T.L. (2003). The chameleon effect as social glue: Evidence for the evolutionary significance of nonconscious mimicry. *Journal of Nonverbal Behavior*, 27, 145–162. <http://dx.doi.org/10.1023/A:1025389814290>.
- Leander, N., Chartrand, T.L., & Wood, W. (2011). Mind your mannerisms: Behavioral mimicry elicits stereotype conformity. *Journal of Experimental Social Psychology*, 47(1), 195–201. <http://dx.doi.org/10.1016/j.jesp.2010.09.002>.
- Miller, D.T., & Turnbull, W. (1986). Expectancies and interpersonal processes. *Annual Review of Psychology*, 37, 233–256. <http://dx.doi.org/10.1146/annurev.ps.37.020186.001313>.
- Neuberg, S.L. (1989). The goal of forming accurate impressions during social interactions: Attenuating the impact of negative expectancies. *Journal of Personality and Social Psychology*, 56, 374–386. <http://dx.doi.org/10.1037/0022-3514.56.3.374>.
- Neumann, R., & Strack, F. (2000). "Mood contagion": The automatic transfer of mood between persons. *Journal of Personality & Social Psychology*, 79, 211–223. <http://dx.doi.org/10.1037/0022-3514.79.2.211>.
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavioral Research Methods*, 40, 879–891. <http://dx.doi.org/10.3758/BRM.40.3.879>.
- Reich, D.A. (2004). What you expect is not always what you get: The roles of extremity, optimism, and pessimism in the behavioral confirmation process. *Journal of Experimental Social Psychology*, 40, 199–215. <http://dx.doi.org/10.1016/j.jesp.2003.06.001>.
- Rosenthal, R. (1994). Interpersonal expectancy effects: A 30-year perspective. *Current Directions in Psychological Science*, 3, 176–179. <http://dx.doi.org/10.1111/1467-8721.ep10770698>.
- Rosenthal, R. (2002). Covert communication in classrooms, clinics, courtrooms, and cubicles. *American Psychologist*, 57, 839–849. <http://dx.doi.org/10.1037/0003-066X.57.11.839>.
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. New York: Holt, Rinehart, & Winston.
- Snyder, M. (1992). Motivation foundations for behavioral confirmation. In M.P. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 25. (pp. 67–114). San Diego, CA: Academic Press. [http://dx.doi.org/10.1016/S0065-2601\(08\)60282-8](http://dx.doi.org/10.1016/S0065-2601(08)60282-8).
- Snyder, M., & Stukas, A. (2007). Interpersonal processes in context: Understanding the influence of settings and situations on social interaction. In K. Fiedler (Ed.), *Social communication. Frontiers of social psychology* (pp. 363–388). New York: Psychology Press.
- Snyder, M., Tanke, E.D., & Berscheid, E. (1977). Social perception and interpersonal behavior: On the self-fulfilling nature of social stereotypes. *Journal of Personality & Social Psychology*, 35, 656–666. <http://dx.doi.org/10.1037/0022-3514.35.9.656>.
- Stel, M., van Baaren, R.B., Blascovich, J., van Dijk, E., McCall, C., Pollmann, M.H., et al. (2010). Effects of a priori liking on the elicitation of mimicry. *Experimental Psychology*, 57(6), 412–418. <http://dx.doi.org/10.1027/1618-3169/a000050>.
- Stel, M., van Dijk, E., & Olivier, E. (2009). You want to know the truth? Then don't mimic! *Psychological Science*, 20(6), 693–699. <http://dx.doi.org/10.1111/j.1467-9280.2009.02350>.
- van Baaren, R.B., Holland, R.W., Kawakami, K., & van Knippenberg, A. (2004). Mimicry and prosocial behavior. *Psychological Science*, 15, 71–74. <http://dx.doi.org/10.1111/j.0963-7214.2004.01501012.x>.
- Word, C.O., Zanna, M.P., & Cooper, J. (1974). The nonverbal mediation of self-fulfilling prophecies in interracial interaction. *Journal of Experimental Social Psychology*, 10, 109–120. [http://dx.doi.org/10.1016/0022-1031\(74\)90059-6](http://dx.doi.org/10.1016/0022-1031(74)90059-6).